From:	Philip A. Fedora
To:	rscmembers
Subject:	FW: BES Definition and related changes to the NERC RoP filed at FERC
Date:	Thursday, January 26, 2012 1:54:08 PM
Importance:	High

Sorry – used the wrong link the first time.

From: Philip A. Fedora
Sent: Thursday, January 26, 2012 1:50 PM
To: rcc; 'rsc-members'; cc-members
Cc: jtfc; Philip Raymond
Subject: BES Definition and related changes to the NERC RoP filed at FERC
Importance: High

FYI - The NERC BES Definition FERC filing is directly accessible from the FERC e-library website via the link below:

http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20120125-5142

The corresponding NERC BES FERC RoP filing is directly accessible from the FERC e-library website via the link below:

http://elibrary.ferc.gov/idmws/File_list.asp?document_id=13990970

If you would like to receive e-mail notification when additional documents are added to the above docket(s), you can eSubscribe by docket at:

https://ferconline.ferc.gov/eSubscription.aspx

Don – please distribute to the NYSRC-EC.

Thanks,

Phil

SCHIFF HARDIN LLP
A Limited Liability Partnership

Owen E. MacBride
(312) 258-5680
Email: omacbride@schiffhardin.com

233 SOUTH WACKER DRIVE
SUITE 6600
CHICAGO, ILLINOIS 60606

Tel.: 312.258.5500
Fax: 312.258.5700

www.schiffhardin.com

January 25, 2012

VIA ELECTRONIC FILING

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: North American Electric Reliability Corporation
Docket No. RM__-___-__
Petition of the North American Electric Reliability Corporation for Approval of a Revised Definition of "Bulk Electric System" in the NERC Glossary of Terms Used in Reliability Standards

Dear Ms. Bose:

The North American Electric Reliability Corporation (NERC) hereby submits a "Petition for Approval of a Revised Definition of "Bulk Electric System" in the NERC Glossary of Terms Used in Reliability Standards."

NERC's filing consists of: (1) this transmittal letter, (2) the Petition, which follows this transmittal letter, and (3) Exhibits A, B, C, D, E, F and G, all of which is being transmitted in a single pdf file. The Table of Contents to the Petition lists and identify the Exhibits.

Please contact the undersigned if you have any questions concerning this filing.

Respectfully submitted,

/s/ Owen E. MacBride
Owen E. MacBride

Attorney for North American Electric Reliability Corporation

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION	**)**	**Docket No. RM__-__-____**

PETITION OF THE NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION FOR APPROVAL OF A REVISED DEFINITION OF "BULK ELECTRIC SYSTEM" IN THE NERC GLOSSARY OF TERMS USED IN RELIABILITY STANDARDS

Gerald W. Cauley President and Chief Executive Officer North American Electric Reliability Corporation 3353 Peachtree Road N.E. Suite 600, North Tower Atlanta, GA 30326-1001 (404) 446-2560 David N. Cook Senior Vice President and General Counsel Holly A. Hawkins Assistant General Counsel for Standards and Critical Infrastructure Protection Andrew Dressel, Attorney North American Electric Reliability Corporation 1325 G Street N.W., Suite 600 Washington, D.C. 20005 (202) 400-3000 (202) 644-8099 – facsimile david.cook@nerc.net holly.hawkins@nerc.net andrew.dressel@nerc.net	Owen E. MacBride Debra A. Palmer Schiff Hardin LLP 1666 K Street, N.W., Suite 300 Washington, D.C. 20036-4390 (202) 778-6400 (202) 778-6460 – facsimile omacbride@schiffhardin.com dpalmer@schiffhardin.com

January 25, 2012

TABLE OF CONTENTS

I. INTRODUCTION.....1
II. NOTICES AND COMMUNICATIONS.....4
III. PROPOSED REVISED DEFINITION OF "BULK ELECTRIC SYSTEM".....4
A. Regulatory Framework.....4
B. Directives and Technical and Policy Concerns in Order Nos. 743 and 743-A.....6
C. Discussion of Proposed Revised Definition of "Bulk Electric System".....13
D. Detailed Information to Support an Exception Request.....25
E. Proposed Implementation Plan for Revised Definition of "Bulk Electric System".....32
IV. SUMMARY OF THE RELIABILITY STANDARD DEVELOPMENT PROCEEDINGS..44
A. Development History.....44
B. Issues Raised During the Development Process Including Minority Issues.....46
C. Initial Ballot.....49
D. Balloting and Approval.....56
V. CONCLUSION.....57

List of Exhibits

Exhibit A: Proposed Definition of "Bulk Electric System"

Exhibit B: Current Definition of "Bulk Electric System" (for reference)

Exhibit C: Detailed Information to Support an Exception Request

Exhibit D: Consideration of Comments Report created during the development of the revised definition of "Bulk Electric System"

Exhibit E: The complete development record of the proposed revised definition of "Bulk Electric System"

Exhibit F: The Standard Drafting Team roster and biographical information for NERC Standards Development *Project 2010-17 Definition of Bulk Electric System*

Exhibit G: Technical justification paper for the "Local Network Exclusion" (Exclusion E3 of the BES Definition)

I. INTRODUCTION

The North American Electric Reliability Corporation ("NERC") respectfully requests the Commission to approve, in accordance with §215(d)(1) of the Federal Power Act ("FPA")[1] and the Commission's regulations at 18 C.F.R. §39.5, a revised definition of the term "Bulk Electric System" ("BES Definition") in the NERC *Glossary of Terms Used in Reliability Standards* ("NERC Glossary"). The revised BES Definition is provided in **Exhibit A**. NERC also requests Commission approval of the proposed "Detailed Information to Support an Exception Request" (**Exhibit C**), which will be used in the submittal, review and approval or disapproval of requests for Exceptions from the application of the BES Definition. Finally, NERC requests Commission approval of its plan for implementation of the revised BES Definition.

In Order No. 743 (with clarification provided in Order No. 743-A), the Commission directed NERC to develop, using its Reliability Standard Development Procedure, and file with the Commission, within one year following the effective date of the final rule adopted in that Order, a revised definition of "Bulk Electric System" ("BES").[2] The Commission directed that the revised BES Definition should address the Commission's technical and policy concerns discussed in Order No. 743 and should encompass all facilities necessary for operating an interconnected electric transmission network. The Commission also directed that NERC work with the Regional Entities that would be affected by the revised BES Definition to develop transition plans for implementing the revised BES Definition that will allow a reasonable period of time for affected entities to achieve compliance with applicable Reliability Standards with

[1] 16 U.S.C. §824o.

[2] *Revision to Electric Reliability Organization Definition of Bulk Electric System*, 133 FERC ¶ 61,150 (2011) ("Order No. 743"), at PP 29-33; *Order on Rehearing*, 134 FERC ¶ 61,210 (2011) ("Order No. 743-A").

respect to facilities that are subject to Commission-approved Reliability Standards for the first time based on the revised BES Definition. The transition plans were also required to be filed within one year of the effective date of the final rule adopted in Order No. 743.[3] Further, the Commission directed NERC to develop, through a stakeholder process, and file with the Commission within one year following the effective date of the final rule, a process to exempt facilities from inclusion in the Bulk Electric System through application of the BES Definition.[4]

Order No. 743 specified the effective date of the final rule to be 60 days following the date of its publication in the *Federal Register*. The final rule was published on November 26, 2010;[5] the date sixty days following that date was January 25, 2011. This Petition is being filed within one year following January 25, 2011. Contemporaneously, NERC is filing with the Commission a separate Petition for approval of proposed revisions to the NERC Rules of Procedure ("ROP") including a proposed BES Exception Procedure.[6]

The NERC Board of Trustees voted to adopt the revised BES Definition, Detailed Information to Support an Exception Request, and proposed implementation plan (as well as the proposed Exception Procedure that is being separately filed for approval) on January 18, 2012.

Exhibit A to this Petition is the revised BES Definition. **Exhibit B** is the current

---

[3] Order No. 743 at P 131.

[4] Order No. 743 at P 112-13.

[5] 75 FR 72910 (2010).

[6] Specifically, contemporaneous with this filing, NERC is also filing with the Commission a Petition for approval of proposed new sections 509 and 1703 of the ROP and proposed new Appendix 5C to the ROP, *Procedure for Requesting and Receiving an Exception from the Application of the NERC Definition of Bulk Electric System*. Section III.D of this Petition, below, discusses why the "Detailed Information to Support an Exception Request" was developed through the Reliability Standards development process while the proposed BES Exception Procedure was developed through the ROP amendment process.

definition of "Bulk Electric System" in the NERC Glossary; it is provided for reference. **Exhibit C** is the Detailed Information to Support an Exception Request, which identifies information that will be required to be included in Exception Requests submitted pursuant to the proposed Exception Procedure. **Exhibit D** is the "Consideration of Comments" report created by the Standard Drafting Team ("SDT") during the development of the revised BES Definition. **Exhibit E** is the complete development record of the revised BES Definition. **Exhibit F** is the SDT roster and biographical information for NERC Standards *Project 2010-17 Definition of Bulk Electric System*, which resulted in the revised BES Definition. **Exhibit G** is a technical justification paper for the "Local Network Exclusion," Exclusion E3 of the BES Definition.

NERC is also filing the revised BES Definition with Applicable Governmental Authorities in Canada for approval or review pursuant to each jurisdiction's laws or regulations.

II. NOTICES AND COMMUNICATIONS

Notices and communications with respect to this filing may be addressed to:

Gerald W. Cauley President and Chief Executive Officer North American Electric Reliability Corporation 3353 Peachtree Road N.E. Suite 600, North Tower Atlanta, GA 30326-1001 (404) 446-2560 David N. Cook* Senior Vice President and General Counsel Holly A. Hawkins Assistant General Counsel for Standards and Critical Infrastructure Protection Andrew Dressel, Attorney North American Electric Reliability Corporation 1325 G Street N.W., Suite 600 Washington, D.C. 20005 (202) 400-3000 (202) 644-8099 – facsimile david.cook@nerc.net holly.hawkins@nerc.net andrew.dressel@nerc.net	Owen E. MacBride* Debra A. Palmer Schiff Hardin LLP 1666 K Street, N.W., Suite 300 Washington, D.C. 20036-4390 (202) 778-6400 (202) 778-6460 – facsimile omacbride@schiffhardin.com dpalmer@schiffhardin.com *Persons to be included on the official service list for this proceeding.

III. PROPOSED REVISED DEFINITION OF "BULK ELECTRIC SYSTEM"

A. Regulatory Framework

By enacting the Energy Policy Act of 2005,[7] Congress entrusted the Commission with the duties of approving and enforcing rules to ensure the reliability of the nation's Bulk Power System, and of certifying an Electric Reliability Organization ("ERO") that would be charged with developing and enforcing mandatory Reliability Standards, subject to Commission approval. On July 20, 2006, the Commission certified NERC as the ERO authorized by FPA

[7] Energy Policy Act of 2005, Pub. L. No. 109-58, Title XII, Subtitle A, 119 Stat. 594, 941 (2005) (codified at 16 U.S.C. §824o).

§215.[8] FPA §215 states that all users, owners and operators of the Bulk Power System in the United States will be subject to Commission-approved Reliability Standards.[9]

Section 39.5(a) of the Commission's regulations requires the ERO to file with the Commission for approval each Reliability Standard that the ERO proposes to become mandatory and enforceable in the United States, and each proposed modification to a Reliability Standard. The Commission has the regulatory responsibility to review, approve, and enforce Reliability Standards that protect the reliability of the Bulk Power System. In discharging its responsibility to review, approve and enforce mandatory Reliability Standards, the Commission is authorized to approve those proposed Reliability Standards that meet the criteria detailed by Congress. FPA §215(d)(2) states, "the Commission may approve, by rule or order, a proposed Reliability Standard or modification to a Reliability Standard if it determines that the standard is just, reasonable, not unduly discriminatory or preferential, and in the public interest."

In Order No. 743 (as clarified in Order No. 743-A), the Commission directed NERC to develop a revised BES Definition for the NERC Glossary using NERC's Reliability Standards development process.[10] The directive to use the Reliability Standards development process was consistent with the approach NERC has previously followed, of using the same processes and

---

[8] *Order Certifying North American Electric Reliability Corporation as the Electric Reliability Organization and Ordering Compliance Filing*, 116 FERC ¶ 61,062 (2006) ("ERO Certification Order").

[9] Terms that are capitalized in this Petition, such as "Bulk Power System" and "Reliability Standard," but not separately defined herein, are defined terms from the NERC *Glossary of Terms Used in Reliability Standards* and/or the ROP. On November 29, 2011, NERC filed with the Commission for approval a proposed new Appendix 2, *Definitions Used in the Rules of Procedure*, to the ROP, in which all defined terms used in the ROP and its Appendices are collected. *Petition for Approval of Revisions to the Rules of Procedure of the North American Electric Reliability Corporation*, Docket No. RR12-3-000. As of the date of this Petition, the Commission has not acted on proposed Appendix 2.

[10] Order No. 743 at P 29.

procedures applicable to development of new and revised Reliability Standards in the development of new and revised definitions of terms included in the NERC Glossary that are used in the Reliability Standards. NERC has also submitted new and revised definitions to the Commission for approval in the same way that new and revised Reliability Standards are submitted to the Commission for approval. As shown in this filing, the revised BES Definition is just, reasonable, not unduly discriminatory or preferential, and in the public interest.

When evaluating proposed Reliability Standards, the Commission is expected to give "due weight" to the technical expertise of the ERO. The technical expertise of the ERO is derived from the SDT. For the BES Definition project, the SDT consisted of 14 industry experts with over 360 years of collective industry experience. The SDT included several registered professional engineers, and other members experienced in Bulk Power System operations. Members of the SDT included individuals employed by electric utilities and transmission operators, industry associations and organizations, Regional Entities, industry consulting firms, and a state public utility commission. The SDT roster and detailed biographical information for each of the SDT members is included in **Exhibit F**.

B. Directives and Technical and Policy Concerns in Order Nos. 743 and 743-A

In Order No. 743, the Commission directed NERC to revise its definition of the term "Bulk Electric System." The current definition of Bulk Electric System in the NERC Glossary, which the Commission directed NERC to revise, is:

> As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission lines serving only load with one transmission source are generally not included in this definition.

As stated in P 16 of Order No. 743, the Commission directed NERC:

> to revise the definition of "bulk electric system" through the NERC Standards Development Process to address the Commission's concerns discussed herein. The Commission believes the best way to address these concerns is to eliminate the Regional Entities' discretion to define "bulk electric system" without ERO or Commission review, maintain a bright-line threshold that includes all facilities operated at or above 100 kV except defined radial facilities, and adopt an exemption process and criteria for excluding facilities that are not necessary to operate an interconnected electric transmission network. However, NERC may propose a different solution that is as effective as, or superior to, the Commission's proposed approach in addressing the Commission's technical and other concerns so as to ensure that all necessary facilities are included within the scope of the definition.
>
> .

The Commission gave additional direction, and expressed its technical concerns, in the following paragraphs of Order No. 743.

> **P 30:** "[T]he Commission finds that the current definition of bulk electric system is insufficient to ensure that all facilities necessary for operating an interconnected electric energy transmission network are included under the 'bulk electric system' rubric. Therefore, pursuant to section 215(d)(5) of the FPA, the Commission directs the ERO to modify, through the Standards Development Process, the definition of 'bulk electric system' to address the Commission's technical and policy concerns described more fully herein. The Commission believes the best way to address [its] concerns is to eliminate the regional discretion in the ERO's current definition, maintain the bright-line threshold that includes all facilities operated at or above 100 kV except defined radial facilities, and establish an exemption process and criteria for excluding facilities the ERO determines are not necessary for operating the interconnected transmission network. It is important to note that Commission is not proposing to change the threshold value already contained in the definition, but rather seeks to eliminate the ambiguity created by the current characterization of that threshold as a general guideline."[11]
>
> **P 53:** "[A]lthough the NOPR used the term 'rated at,' the Commission did not intend to require NERC to utilize that term rather than the term 'operated at' which is reflected in the current definition of bulk electric system. While the Commission does not have firm data on the number of facilities that operate at a voltage significantly lower than the rated voltage, we find that the term 'rated at' could generate confusion." (Footnote omitted.)
>
> **P 55:** "[W]e do not seek to modify the second part of the definition through this Final Rule, which states that '[r]adial transmission facilities serving only load with one transmission source are generally not included in this definition.' While

[11] The Commission observed in footnote 39 that "all regions except NPCC currently utilize 100 kV as a general threshold."

commenters would like to expand the scope of the term 'radial' to exclude certain transmission facilities such as tap lines and secondary feeds via a normally open line, we are not persuaded that such categorical exemption is warranted. For example, when the normally 'open' line is 'closed,' it becomes part of the transmission network and therefore should be subject to mandatory Reliability Standards. Commenters also argued that the bright line 100 kV threshold would encourage small utilities to choose not to provide backup service options, reducing overall customer service. We acknowledge these concerns, and direct the ERO to consider these comments regarding radial facilities in crafting an exemption methodology."

P 72: "The current definition has failed to ensure that all facilities necessary for operation of the interconnected transmission network are covered by the Reliability Standards. As discussed above, the current definition allows broad discretion without ERO or Commission oversight, which has resulted in reliability issues such as the exclusion of transmission serving bulk electric generators (including nuclear plants), inconsistency in classification at the seams that compromises the effectiveness of the Reliability Standards, routine TLR events on non-bulk electric system facilities, and the exclusion of elements necessary to operate the interconnected transmission network. Given the inconsistency of the application among regions and the reliability issues created as a result of the current definition, we conclude that it is necessary to direct the ERO to revise the definition of 'bulk electric system' to ensure that all facilities necessary to operate the interconnected transmission network are included and to address the concerns noted herein. We believe that the Commission's proposed approach of adopting a bright-line, 100 kV threshold, along with a NERC-developed, Commission-approved exemption process, as well as eliminating regional variations unless approved by the Commission as provided in Order No. 672, is an appropriate action to ensure bulk electric system reliability." (Footnote omitted.)

P 73: "[M]any facilities operated at 100 kV and above have a significant effect on the overall functioning of the grid. The majority of 100 kV and above facilities in the United States operate in parallel with other high voltage and extra high voltage facilities, interconnect significant amounts of generation sources and operate as part of a defined flow gate, which illustrates their parallel nature and therefore their necessity to the reliable operation of the interconnected transmission system. Parallel facilities operated at 100-200 kV will experience similar loading as higher voltage parallel facilities at any given time and the lower voltage facilities will be relied upon during contingency scenarios. Further . . . 115 kV and 138 kV facilities have either caused or contributed to significant bulk system disturbances and cascading outages. Additionally, the current definition's broad regional discretion has allowed classification inconsistencies to develop within and along the borders of Regional Entities . . . . The proposed 100 kV threshold is intended to ensure facilities necessary for reliable operation are captured by the definition and to avoid entities exempting their facilities by any

means other than through a Commission-approved exemption process." (Footnote omitted.)

P 75: "[W]e believe use of the term 'operated at' rather than 'rated at' together with the exemption methodology that NERC will develop . . . addresses the WPSC's concern that utilities may elect to build facilities below 100 kV to avoid oversight."

P 82: **"**[U]niform Reliability Standards, and uniform implementation, should be the goal and the practice, the rule rather than the exception, absent a showing that a regional variation is superior or necessary due to regional differences. Consistency is important as it sets a common bar for transmission planning, operation, and maintenance necessary to achieve reliable operation. . . . [W]e have found several reliability issues with allowing Regional Entities broad discretion without ERO or Commission oversight. The Commission's proposed approach to addressing these concerns will enable affected entities to pursue exemptions for facilities they believe should not be included in the bulk electric system, and will also allow Regional Entities to add facilities below 100 kV they believe should be included." (Footnote omitted.)

P 96: "In general, the Final Rule identifies the reliability concerns created by the current definition and a method to ensure that certain facilities needed for the reliable operation of the nation's bulk electric system are subject to mandatory and enforceable Reliability Standards, and that exemption methodologies would be developed by NERC and subject to Commission review. From the Commission's review, the material impact assessments implemented by NPCC are subjective in nature, and results from such tests are inconsistent in application, as shown through the exclusion of facilities that clearly are needed for reliable operation. Further, we find that the vast majority of 100 kV and above facilities are part of parallel networks with high voltage and extra high voltage facilities and are necessary for reliable operation. As a result, and consistent with our previous statements in Order No. 672, we find it is best for the ERO to establish a uniform definition that eliminates subjectivity and regional variation in order to ensure reliable operation of the bulk electric system. We further find that the existing NPCC impact test is not a consistent, repeatable, and comprehensive alternative to the bright-line, 100 kV definition we prefer." (Footnote omitted.)

PP 139-141: "The Commission does not agree with the commenters' arguments that 100-199 kV facilities in the Western Interconnection should be treated differently than facilities in the Eastern Interconnection as a threshold matter. The bulk electric system definition should include all facilities that are necessary for operating an interconnected electric transmission network. While commenters have implied that not all 100-199 kV facilities are needed for reliable operation, the Commission notes that 100 kV and some lower voltage facilities are included in some of the WECC Rated Paths. Clearly, these facilities are operationally significant and needed for reliable operation . . . . While the Western

> Interconnection has a higher percentage of transmission facilities above 200 kV compared to the Eastern Interconnection, it is how the lines below 200 kV are interconnected with higher voltages that determines their significance. . . . [C]ommenters have not provided adequate explanation in this proceeding, supported by data and analysis, as to why there is a physical difference upon which to treat the Western Interconnection differently. . . . Order No. 672 details several factors the Commission will consider in determining whether a proposed Reliability Standard is just and reasonable. One of the factors indicates that a 'proposed Reliability Standard should be designed to apply throughout the interconnected North American Bulk-Power System, to the maximum extent this is achievable with a single Reliability Standard.' Moreover, and particularly compelling with respect to the definition of bulk electric system, Order No. 672 indicates that proposed Reliability Standards 'should be clear and unambiguous regarding what is required and who is required to comply.' Eliminating broad regional discretion without ERO or Commission oversight and maintaining a 100kV bright-line definition, coupled with an exemption process, removes any ambiguity regarding who is required to comply and accomplishes the goal of reducing inconsistencies across regions. Commenters have not provided compelling evidence that the proposed definition should not apply to the United States portion of the Western Interconnection as a threshold matter. . . ." (Footnotes omitted.)
>
> **P. 144:** "We expect that our decision to direct NERC to develop a uniform modified definition of 'bulk electric system' will eliminate regional discretion and ambiguity. The change will not significantly increase the scope of the present definition, which applies to transmission, generation and interconnection facilities."
>
> **P 150:** "We disagree with commenters that definitions of 'integrated transmission elements' and 'material impact' are needed to implement this Final Rule. These terms are not defined by the present bulk electric system definition, and defining these terms is not necessary to revise the definition as directed herein. Whether specific facilities have a material impact is not dispositive with respect to whether they are needed for reliable operation. These questions are more appropriately addressed through development of an exemption process at NERC."

In Order No. 743-A, the Commission provided several clarifications to its directives and technical concerns with respect to the definition of "Bulk Electric System."

> **P 11: "**We clarify that the specific issue the Commission directed the ERO to rectify is the discretion the Regional Entities have under the current bulk electric system definition to define the parameters of the bulk electric system in their regions without any oversight from the Commission or NERC. As we explained in the Final Rule, NPCC's use of this discretion has resulted in an impact-based

approach to defining the bulk electric system that allows significant subjectivity in application and thus creates anomalous results. . . . [A]ny region could use its discretion to define the bulk electric system in a way that leads to similar inconsistent and anomalous results." (Footnote omitted.)

P 22: "[W]e disagree with the NYPSC's claim that the Final Rule implicitly acknowledges that various non-jurisdictional facilities are included within the Commission's 'redefinition' of bulk electric system. As we clarify herein, regardless of the 100 kV threshold, facilities that are determined to be local distribution will be excluded from the bulk electric system."

P 30: "[U]niformity, absent a showing that the alternative is more stringent or necessitated by a physical difference, has been a hallmark of the mandatory Reliability Standards construct since its inception. In establishing the framework for developing Reliability Standards, we adopted the principle that proposed Reliability Standards should be 'designed to apply throughout the interconnected North American Bulk-Power System, to the maximum extent this is achievable with a single Reliability Standard.' The same principle holds true for definitions contained within the Reliability Standards." (Footnote omitted.)

P 35-36: "[T]he Commission did not direct or mandate that the bulk electric system definition include a bright-line 100 kV threshold. Instead, the Commission directed NERC to address the inconsistency, lack of oversight and exclusion of facilities that are required for the reliable operation of the interconnected transmission network, outlined by the Commission in Order No. 743 using the technical expertise available to NERC. The Commission suggested that one means to address its concerns would be to, among other things, maintain the 100 kV threshold and radial exclusion contained in the current definition, but left it to NERC's discretion and technical expertise to develop a revised definition. . . . The Commission's suggested solution of a 100 kV threshold paired with an exemption process, in essence, merely clarifies the current NERC definition, which classifies facilities operating at 100 kV or above as part of the bulk electric system."

P 57: "The Commission clarifies that our intent in requiring the ERO to 'eliminate the regional discretion' from the current definition was to prevent the regions from modifying the regional bulk electric system definition without Commission or ERO oversight."

P 68: "The Commission clarifies that the statement in Order No. 743, 'determining where the line between 'transmission' and 'local distribution' lies . . . should be part of the exemption process the ERO develops' was intended to grant discretion to the ERO, as the entity with technical expertise, to develop criteria to determine how to differentiate between local distribution and transmission facilities in an objective, consistent, and transparent manner. This mechanism will allow the ERO to maintain an inventory of the transmission

> facilities subject to the mandatory Reliability Standards, and to exclude local distribution facilities from the bulk electric system definition by applying the criteria." (Footnote omitted.)
>
> **P 102:** "The Commission clarifies that Order No. 743 did not intend to alter the Registry Criteria, shift the evidentiary burden for registration, or otherwise address matters involving the Registry Criteria. Indeed, the Statement of Compliance Registry Criteria currently provides that the Regional Entities may propose registration of entities that do not meet the registry criteria if the Regional Entity believes and can reasonably demonstrate that the organization is a bulk power system owner, or operates, or uses bulk power system assets, and is material to the reliability of the bulk power system. However, we note that while the Registry Criteria will not change, it is possible that additional facilities may come under the revised definition and some entities may be required to register for the first time." (Footnote omitted.)

The Commission's directives and technical and policy concerns with respect to the BES Definition, as reflected in the above-quoted discussion from Order Nos. 743 and 743-A, may be summarized as follows:

- The BES Definition should provide for a consistent, uniform, objective nationwide test to identity those facilities that are part of the BES, and eliminate ambiguity and the potential for subjectivity in the application of the definition.

- The BES Definition should provide for a distinct threshold criteria rather than a "general guideline."

- Regional discretion in determining what facilities comprise the BES should be eliminated, and application of the BES Definition should be overseen by NERC.

- The BES Definition should identify those facilities that are necessary for reliably operating the interconnected transmission network.

- The BES Definition should exclude from the BES facilities used in the local distribution of electricity.

- The existing exclusion of radial facilities from the BES should be maintained, but issues associated with the exclusion of radial facilities, such as the treatment of radial facilities connected by a normally open switch, should be clarified.

As shown in the discussion in the next section of this filing, the revised BES Definition satisfies the Commission's directives and technical and policy concerns articulated in Order Nos. 743 and 743-A.

C. Discussion of Proposed Revised Definition of "Bulk Electric System"

NERC is requesting approval of the following revised definition of "Bulk Electric System":[12]

> **Bulk Electric System (BES)**: Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. This does not include facilities used in the local distribution of electric energy.
>
> **Inclusions:**
>
> - **I1** - Transformers with the primary terminal and at least one secondary terminal operated at 100 kV or higher unless excluded under Exclusion E1 or E3.
>
> - **I2** - Generating resource(s) with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.
>
> - **I3** - Blackstart Resources identified in the Transmission Operator's restoration plan.
>
> - **I4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above.
>
> - **I5** –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.

[12] Capitalized terms used in the BES Definition are terms that are already defined in the NERC Glossary. Those terms are: Balancing Authority, Blackstart Resources, Element, Flowgate, Generator Operator, Generator Owner, Interconnection, Interconnection Reliability Operating Limit (IROL), Load, Real Power, Reactive Power, Transmission, and Transmission Operator.

Exclusions:

- **E1** - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher and:

    a) Only serves Load. Or,

    b) Only includes generation resources, not identified in Inclusion I3, with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,

    c) Where the radial system serves Load and includes generation resources, not identified in Inclusion I3, with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

  Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

- **E2** - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail Load with electric energy if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.

- **E3** - Local networks (LN): A group of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the interconnected system. LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The LN is characterized by all of the following:

    a) Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating);

    b) Power flows only into the LN and the LN does not transfer energy originating outside the LN for delivery through the LN; and

    c) Not part of a Flowgate or transfer path: The LN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western

Interconnection, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

- **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

As a starting point, the revised BES Definition deletes the phrase "As defined by the Regional Reliability Organization" that is included in the current BES Definition. This deletion eliminates the express basis for Regional discretion that is embedded in the current BES Definition. Further, the revised BES Definition establishes a clear, bright-line definition of the BES, based on the 100 kV threshold, with clearly-stated Inclusions and Exclusions that will eliminate discretion in application of the revised BES Definition.

In the revised BES Definition, the "core" definition (the initial paragraph preceding the Inclusions and Exclusions) establishes the fundamental threshold for inclusion of facilities in the BES: that the facilities are operated at 100 kV or higher, if they are Transmission Elements,[13] or are connected at 100 kV or higher, if they are Real Power or Reactive Power resources.[14] The

[13] The current BES Definition includes "associated equipment," and the revised BES Definition does not use that term; however, "associated equipment" remains encompassed by the revised BES Definition through the defined term "Transmission Elements." The NERC Glossary defines "Transmission" as, "An interconnected group of lines and associated equipment for the movement or transfer of electric energy between points of supply and points at which it is transformed for delivery to customers or is delivered to other electric systems;" and defines "Elements" as, "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components."

[14] The NERC Glossary defines Real Power as "The portion of electricity that supplies energy to the load," and defines Reactive Power as follows: "The portion of electricity that establishes and sustains the electric and magnetic fields of alternating-current equipment. Reactive power must be supplied to most types of magnetic equipment, such as motors and transformers. It also must supply the reactive losses on transmission facilities. Reactive power is provided by generators,

core definition also states the 100 kV criterion as a bright-line threshold, rather than as a general guideline as in the current definition (*i.e.*, the phrase "generally operated at" in the current definition is eliminated in the revised BES Definition). Further, the core definition retains the phrase "operated at" [voltages of 100 kV or higher] found in the current BES Definition.[15] Finally, the core definition, in its last sentence, expressly excludes "facilities used in the local distribution of electric energy" from the BES, consistent with §215(a)(1)(B) of the FPA and the Commission's regulations at 18 C.F.R. §39.1[16] and as recognized in Order No. 743-A.[17]. Thus, the core definition places within the BES all Transmission Elements operated at 100 kV or above, and all Real Power and Reactive Power resources connected at 100 kV or above, while establishing an express exclusion for facilities used in the local distribution of electrical energy.

The five Inclusions address five specific facilities configurations to provide clarity that the facilities described in these configurations are included in the BES (unless the facilities are excluded based on one of the specific Exclusions in the BES Definition), and thereby further reduce the potential for the exercise of discretion and subjectivity to exclude such configurations from the BES. The facilities described in Inclusions I1, I2, I4 and I5 are each operated (if transformers – Inclusion I1) or connected (if generating resources, dispersed power producing

---

synchronous condensers, or electrostatic equipment such as capacitors and directly influences electric system voltage. It is usually expressed in kilovars (kvar) or megavars (Mvar)."

[15] *See* Order No. 743 at PP 53 and 75.

[16] While both §215(a)(1) of the FPA and 18 C.F.R. §39.1 define "bulk-power system" rather than "bulk electric system," both provisions expressly exclude "facilities used in the local distribution of electric energy." Although the congruity between the "bulk-power system" and the "Bulk Electric System" has not been resolved, there would be no basis, in light of these provisions, not to exclude "facilities used in the local distribution of electric energy" from the BES Definition.

[17] *See* Order No. 743A at P 22 ("regardless of the 100 kV threshold, facilities that are determined to be local distribution will be excluded from the bulk electric system") and P 68.

resources or Reactive Power resources – Inclusions I2, I4 and I5) at or above the 100 kV threshold. Inclusion I3 encompasses Blackstart Resources identified in a Transmission Operator's restoration plan, which are necessary for the Reliable Operation of the interconnection transmission system and should be included in the BES regardless of their size (MVA) or the voltage at which they are connected.[18] The addition of the Inclusions to the BES Definition will provide for consistency, and eliminate ambiguity, across all Regional Entities, as all facilities meeting the criteria in the five Inclusions will be part of the BES.

Focusing on each of the individual Inclusions in detail, the five Inclusions were added to the BES Definition based on the following considerations:

- Inclusion I1 – Transformers operating at 100 kV or higher are part of the existing definition, but since transformers have windings operating at different voltages, and multiple windings in some circumstances, clarification was required to explicitly identify which transformers are included in the BES. Inclusion I1 includes in the BES those transformers operating at 100 kV or higher on the primary winding and at least one secondary winding, so as to be in concert with the core definition.

- Inclusion I2 – This inclusion mirrors the text of the NERC *Statement of Compliance Registry Criteria* (Appendix 5B of the ROP) for generating units.[19] A basic tenet that was followed in developing the revised BES Definition was to avoid changes to Registrations due to the revised BES Definition if such changes are not technically required for the BES Definition to be complete.[20] The SDT found no technical rationale for changing at this time from the thresholds for generating resources presently specified in the *Statement of Compliance Registry Criteria*. In order to provide clarity on these conditions, the revised BES Definition specifies that the BES includes the generator terminals through the high-side of the step-up transformer connected at a voltage of 100 kV or above.

[18] Blackstart Resources are defined in the NERC Glossary as: "A generating unit(s) and its associated set of equipment which has the ability to be started without support from the System or is designed to remain energized without connection to the remainder of the System, with the ability to energize a bus, meeting the Transmission Operator's restoration plan needs for real and reactive power capability, frequency and voltage control, and that has been included in the Transmission Operator's restoration plan." Under this Inclusion, both the generating unit and its "associated set of equipment" are included in the BES.

[19] *See* §III.c.1 and III.c.2 of Appendix 5B of the ROP.

[20] This is consistent with the Commission's clarification in P 102 of Order No. 743-A.

- Inclusion I3 – Blackstart Resources are vital to the Reliable Operation of the BES. Consequently, Blackstart Resources are included in the BES regardless of their size (MVA) or the voltage at which they are connected. This inclusion is also consistent with the *Statement of Compliance Registry Criteria*.[21]

- Inclusion I4 – This inclusion was added to the BES Definition in order to accommodate the effects of variable generation on the BES. The purpose of this inclusion is to include variable generation (*e.g.*, wind and solar resources). Although this inclusion arguably could be considered subsumed in Inclusion I2 (because the gross aggregate nameplate rating of the power producing resources must be greater than 75 MVA), it was considered appropriate for clarity to add this separately-stated inclusion in order to expressly cover dispersed power producing resources utilizing a system designed primarily for aggregating capacity.

- Inclusion I5 – This inclusion is the technical equivalent of Inclusion I2, for Reactive Power devices. The existing BES Definition is unclear as to how these devices were to be treated. Inclusion I5 addresses this lack of clarity by providing specific criteria for Reactive Power devices, thereby further limiting subjectivity and the potential for discretion in the application of the BES Definition.

Correspondingly, the four Exclusions identify facilities configurations that should not be included in the BES. Exclusion E1 is the exclusion for radial systems. Order Nos. 743 and 743-A made it abundantly clear that the BES Definition should exclude radial facilities from the BES.[22] This Exclusion provides detailed criteria for determining that facilities are properly excluded from the BES as radial facilities, thereby enhancing the clarity of the radial facilities exclusion.[23] The radial exclusion is part of the existing BES Definition and was supported in the work done on the topic prior to Order Nos. 743 and 743-A, as well as being specifically supported by those Orders. Conditions (b) and (c) in Exclusion E1, pertaining to the maximum

[21] *See* §III.c.3 of Appendix 5B of the ROP ("Any generator, regardless of size, that is a blackstart unit material to and designated as part of a transmission operator entity's restoration plan").

[22] *See*, Order No. 743 at PP 16, 30 and 55 and Order No. 743-A at P 35.

[23] Exclusion E1 applies to "[a] group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher." If the facilities emanate from a point of connection less than 100 kV, they would not be part of the BES under the core BES Definition, without the need to consider application of Exclusion E1.

amount of generation allowed on the radial facility while still qualifying for the radial facilities exclusion (aggregate capacity less than or equal to 75 MVA), address the circumstances of small utilities (including municipal utilities and cooperatives). The maximum amount of generation allowed on the radial facility is sufficient to allow small utilities to continue to provide service options that support reliability of the interconnected electric transmission system, while not operating to exclude larger generators from the BES.[24] The maximum amount of generation allowed on the radial facility per Conditions (b) and (c) is consistent with the aggregate capacity threshold presently provided in the *Statement of Compliance Registry Criteria* for registration as a Generator Owner or Generator Operator (75 MVA gross nameplate rating).[25]

Exclusion E1 includes the note, "A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion." This note addresses a common network configuration that required clarification, in which two separate sets of facilities that, each standing alone, would be recognized as radial systems and not included in the BES, are connected by a "normally open switch" – *i.e.*, a switch that is set to the open position – for reliability purposes.

The concept and usage of the "normally open switch" in such configuration is well understood in the electric utility industry. These switches are installed by entities to provide greater reliability to their end-use customers. For example, scheduled maintenance activities on a radial line, or an unscheduled outage impacting the single point of supply to the radial line, could cause the disruption of power supply to the end-use customers served by the line, unless the entity has the ability to switch over to another feed on a temporary basis. The entity's

[24] The interests of small utilities addressed in Conditions (b) and (c) of Exclusion E1 were recognized in P 55 of Order No. 743.

[25] *See* §III.c.2 of Appendix 5B.

operating procedures dictate how and when to operate such a normally open switch. Operation of the normally open switch placed in this configuration is not an arbitrary process, but rather is driven by the objective of maintaining reliability of service to end-use customers served from the radial line. Facilities that otherwise meet the criteria for the radial system exclusion should not be included in the BES solely because the entity maintains a switch of this type, which is normally open, between sets of radial facilities. Further, for a set of radial facilities that are connected by a switch to qualify for the radial exclusion under Exclusion E1, the switch must be identified as "normally open" on source documents such as, for example, prints or one-line diagrams;[26] and must in fact be normally set in the open position. An entity that claimed exclusion of connected radial lines on the grounds that they were connected by a "normally open switch," but did not in fact maintain the switch in the open position except for the maintenance or outage circumstances described above, would be untruthful and could be subject to serious consequences when discovered.

In Order No. 743, the Commission stated that

> While commenters would like to expand the scope of the term 'radial' to exclude certain transmission facilities such as tap lines and secondary feeds via a normally open line, we are not persuaded that such categorical exemption is warranted. For example, when the normally "open" line is "closed," it becomes part of the transmission network and therefore should be subject to mandatory Reliability Standards. . . . [We] direct the ERO to consider these comments regarding radial facilities in crafting an exemption methodology.[27]

The concept that two sets of radial facilities that are normally unconnected to each other should be subject to, and need to comply with, the Requirements of applicable Reliability Standards during the limited time periods when they are connected by the closing of the normally open

[26] Other example source documents could include diagrams displayed within an energy management system or a SCADA system.

[27] Order No. 743 at P 55.

switch in the maintenance-related or outage-related circumstances described above would be fundamentally impractical and unworkable (from both the entity's perspective and the ERO's perspective), and would misapprehend this very common, reliability-driven facilities configuration. As noted, the connecting switch must be normally set in the open position to qualify for Exclusion E1. Further, this configuration is so common that to write the BES Definition to include radial systems connected by a normally open switch in the BES, with the proviso that the owner(s) of the facilities can request an Exception, would undoubtedly result in a veritable flood of Exception Requests.

Moreover, the SDT extensively considered the reliability issues associated with tap lines and tapped facilities feeding separate radial systems and concluded that the real reliability issue associated with these facilities is the coordination of the respective transmission Protection Systems for the transmission facilities feeding the radial systems. However, this reliability issue is adequately addressed by the Requirements of the Protection and Control Reliability Standards, including in particular PRC-001, without providing for the inclusion of these facilities in the BES in the revised BES Definition.

Therefore, based on the above-described considerations, the SDT concluded, and NERC agrees, that this configuration would be more appropriately addressed in the BES Definition, through a specific exclusion (Exclusion E1), rather than through the Exception process.

Exclusion E2 excludes from the BES a generating unit or units on the customer's side of the retail meter that serves all or part of the retail Load, so long as the following two conditions are met: (i) the net capacity provided by the generating unit(s) to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit(s) or the retail Load by a Balancing Authority, or pursuant to a binding obligation with a

Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority. Under these circumstances, the generating unit(s) are not necessary for the Reliable Operation of the interconnected transmission system, and therefore do not need to be included in the BES, because they serve a single retail Load, provide a limited amount of capacity to the BES, and are fully backed up by other resources. The wording of Exclusion E2 is extracted from the *Statement of Compliance Registry Criteria*.[28]

Exclusion E3, the "local network" exclusion, encompasses local networks of transmission Elements operated at between 100 kV and 300 kV that distribute power to Load rather than transfer bulk power across the interconnected system. Local networks provide local electrical distribution service and are not planned, designed or operated to benefit or support the balance of the interconnected transmission network. The purpose of local networks is to provide local distribution service, not to provide transfer capacity for the interconnected transmission network. The design and operation of local networks is such that at the point of connection with the interconnected transmission network, the effect of the local network on the interconnected transmission network is similar to that of a radial facility, in particular that flow always moves in a direction from the interconnected transmission network into the local network. A network that simply supports distribution and does not accommodate bulk power transfers across the interconnected system should not be included in the BES. Exclusion E3 provides detailed criteria for determining that facilities, although operated at or above 100 kV, comprise a local network and therefore are not part of the BES. These criteria are that:

- the local network and its underlying Elements include limited non-retail generation;

[28] *See* the second exclusion following §III.c.4 in Appendix 5B of the ROP.

- power flows only into the local network and it does not transfer energy originating outside the local network for delivery through the local network; and

- the facilities are not part of a Flowgate or transfer path.[29]

The detailed conditions established in Exclusion E3 are sufficient to ensure that such qualifying local networks are being used exclusively for local distribution purposes.

Exhibit G is a technical justification paper for the local network exclusion. As discussed in greater detail in the technical justification paper, the local network exclusion is justified by the following factors:

1. Facilities used in the local distribution of electric energy are to be excluded from the BES.

2. The exclusion for local networks ensures that a candidate for this exclusion must satisfy all of the criteria for this exclusion, thereby demonstrating that the candidate facilities are not performing a transmission function.

3. The limit on connected generation within the local network is consistent with the existing threshold above which a generating plant in aggregate becomes subject to Registration under the NERC *Statement of Compliance Registry Criteria*.

4. The voltage cap applied to the criteria for the local network exclusion, 300 kV, is consistent with the distinction between Extra High Voltage ("EHV") and High Voltage in Reliability Standard TPL-001-2 on transmission planning as approved by the NERC Board of Trustees on August 4, 2011.[30] Use of the 300 kV voltage cap ensures that the local network exclusion cannot be used to exclude EHV facilities, which under TPL-001-2 are held to a higher standard of performance, from the BES.

[29] Flowgate is defined in the NERC Glossary as: "(1) A portion of the Transmission system through which the Interchange Distribution Calculator calculates the power flow from Interchange Transactions, and (2) a mathematical construct, comprised of one or more monitored transmission Facilities and optionally one or more contingency Facilities, used to analyze the impact of power flows upon the Bulk Electric System."

[30] TPL-001-2 was filed with the Commission for approval on October 19, 2011. *Petition of the North American Electric Reliability Corporation for Approval of a Revised Transmission Planning System Performance Requirements Reliability Standard and Five New Glossary Terms and for Retirement of Four Existing Reliability Standards*, Docket No. RM12-1-000 (October 19, 2011).

5. The power flow shifts that would occur on the Elements of a local network are a negligible fraction of that which distributes upon the BES Elements for a given power transfer, and is fully eclipsed by the Load in the local network.

6. The interaction of a local network with the BES is similar in character to that of a radial facility.

Finally, Exclusion E4 encompasses Reactive Power devices owned and operated by a retail customer solely for its own use. Exclusion E4 is the technical equivalent of Exclusion E2 for Reactive Power devices. The existing BES Definition is unclear as to how these devices are to be treated; the revised BES Definition provides specific criteria for Reactive Power devices, in Exclusion E4.

The revised BES Definition satisfies the Commission's directives and addresses its technical and policy concerns as expressed in Order Nos. 743 and 743-A. The explicit basis of authority for Regional Entity discretion in the current definition is eliminated. The core definition establishes the specific threshold criteria (rather than a general guideline) of facilities operated (Transmission Elements) or connected (Real Power or Reactive Power resources) at or above 100 kV, and this threshold value is recognized in the specific facilities configurations described in Inclusions I1, I2, I4 and I5. The core definition in combination with the specific Inclusions and Exclusions provides a detailed set of criteria that can be applied on a uniform, consistent basis across all Regional Entities, eliminates ambiguity, and eliminates the potential for discretion and subjectivity in determining what facilities are part of or not part of the BES. Blackstart Resources, which are necessary for the Reliable Operation of the interconnected transmission system even if they are operated or connected below 100 kV, are expressly included in the BES. Facilities for the local distribution of electric energy are expressly excluded from the BES by the core definition as well as by Exclusion E3 (local networks). The exclusion for radial facilities is maintained, but with more specific, detailed criteria provided for determining what

facilities are radial facilities. Specifically-defined behind-the-meter generating resources and Reactive Power devices are also excluded from the BES.

Additionally, in terms of the Commission's directives and concerns for consistency and the elimination of Regional Entity discretion and subjectivity in determining what facilities comprise the BES, NERC calls the Commission's attention to the proposed BES Exception Procedure, Appendix 5C to the ROP, which is being submitted for the Commission's approval in a separate, contemporaneous filing. Under the proposed BES Exception Procedure, the Regional Entities will conduct initial screenings of Exception Requests emanating from their Regions, and will make Recommendations to NERC as to whether an Exception Request should be approved or disapproved. However, the Regional Entities will not actually make the decisions to approve or disapprove Exception Requests. All decisions to approve or disapprove Exception Requests will be made by NERC in accordance with the processes and procedures specified in proposed Appendix 5C.

In summary, the revised BES Definition provides a detailed, objective set of criteria that can be applied consistently and uniformly on a nationwide basis to identify those facilities that are necessary for the Reliable Operation of the interconnected transmission system, as well as those facilities that are not. The revised BES Definition is just, reasonable, not unduly discriminatory or preferential, and in the public interest, and fully addresses the Commission's directives and technical and policy concerns as detailed in Order Nos. 743 and 743-A. The revised BES Definition should be approved by the Commission.

D. Detailed Information to Support an Exception Request

In addition to developing a revised BES Definition, the SDT for Project 2010-17 was

assigned the task of developing a set of technical criteria to support a BES Exception Request.[31] Based on discussions among the NERC Standards Committee, NERC Reliability Standards program management, the SDT for the BES Definition, and the team that was formed to develop the BES Exception Procedure for the ROP ("BES ROP Team"), this task was assigned to the SDT (as opposed to being assigned to the BES ROP Team) so that the Reliability Standards development process would be followed in the development and establishment of the technical criteria.

Thereafter (as discussed in greater detail in §IV.A and IV.B below), the SDT determined that it was more feasible to develop a common set of data and information that could be used by the Regional Entities and NERC to evaluate and decide Exception Requests. A Submitting Entity would be required to submit the common data and information with the Exception Request, for use by the applicable Regional Entity and NERC in evaluating the Exception Request. The set of common data and information, captioned "Detailed Information to Support an Exception Request," was separated into data and information applicable to transmission entities and data and information applicable to generation entities. The Detailed Information to Support an Exception Request was balloted in the recirculation ballot for the BES Definition and, as described in greater detail in §IV.D below, achieved the necessary quorum of the ballot pool and two-thirds weighted Segment approval. The full text of the Detailed Information to Submit an Exception Request is provided in **Exhibit C** to this Petition.

Under the proposed BES Exception Procedure, Appendix 5C to the ROP, which is being submitted to the Commission for approval in a separate, contemporaneous filing, the Detailed

[31] In P 115 of Order No. 743, the Commission stated that "NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid."

Information to Submit an Exception Request is to be provided by the Submitting Entity as the Section III Required Information required by the Exception Request Form. Section 4.5.3 of proposed Appendix 5C states that "Section III of an Exception Request shall contain the **Detailed Information to Support an Exception Request** as specified on the Exception Request Form" (emphasis in original). Further, section 2.12 of proposed Appendix 5C states that "the Exception Request Form must include Section III.B as adopted by NERC."[32]

The Detailed Information to Support an Exception Request, Section III.B of the Exception Request Form, specifies that the following information must be included in all Exception Requests:

> A one-line breaker diagram identifying the Element(s) for which the exception is requested must be supplied with every request. The diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested.

Additionally, the Detailed Information to Support an Exception Request specifies that "Entities are required to supply the data and studies needed to support their submittal," and provides the following specifications for studies:

- Studies should be based on an Interconnection-wide base case that is suitably complete and detailed to reflect the electrical characteristics and system topology.
- Studies should clearly document all assumptions used.
- Studies should address key performance measures of BES reliability through steady-state power flow, and transient stability analysis as necessary to support the entity's

[32] The information that the Submitting Entity may submit, or may be asked by the Regional Entity and NERC to submit, in support of an Exception Request will not be limited to the Detailed Information to Support an Exception Request. The Submitting Entity will be expected to submit all relevant data, studies and other information that supports its Exception Request, and the Regional Entity and NERC may ask the Submitting Entity to provide other data, studies and information in addition to the Detailed Information to Support an Exception Request and the other information included by the Submitting Entity in the Exception Request.

request, consistent with the methodologies described in the Transmission Planning (TPL) standard and commensurate with the scope of the request.

The Detailed Information to Support an Exception Request then provides separate sets of questions applicable to Transmission Elements and to generation resources. The questions for Exception Requests pertaining to Transmission Elements are:

1. Is there generation connected to the Element(s)?

   If yes, what are the individual gross nameplate values of each unit?
2. How do/does the Element(s) impact permanent Flowgates in the Eastern Interconnection, major transfer paths within the Western Interconnection, or a comparable monitored facility in the ERCOT Interconnection or the Quebec Interconnection?

   Please list the Flowgates or paths considered in your analysis along with any studies or assessments that illustrate the degree of impact.

3. Is/Are the Element(s) included in an Interconnection Reliability Operating Limit (IROL) in the Eastern Interconnection, ERCOT Interconnection, or Quebec Interconnection or a major transfer path rating in the Western Interconnection?

   Please provide the appropriate list for the operating area where the Element(s) is located.

4. How does an outage of the Element(s) impact the over-all reliability of the BES?

   Please provide study results that demonstrate the most severe system impact of the outage of the Element(s) and the rationale for your response.

5. Is/Are the Element(s) used for off-site power supply to a nuclear power plant as designated in a mutually agreed upon Nuclear Plant Interface Requirement (NPIR)?

6. Is/Are the Element(s) part of a Cranking Path identified in a Transmission Operator's restoration plan?

7. Does power flow through the Element(s) into the BES?

   If yes, then using metered or SCADA data for the most recent consecutive two calendar year period, what is the minimum and maximum magnitude of the power flow out of the Element(s)?

   Describe the conditions and the time duration when this occurs?

The questions for Exception Requests pertaining to generation resources are:

1. What is the MW value of the host Balancing Authority's most severe single Contingency and what is the generation resources percent of this value?

   Please provide the values and a reference to supporting documents.

2. Is the generation resource used to provide reliability-related Ancillary Services?

   If so, what reliability-related Ancillary Services are the generation resource supplying?

3. Is the generation resource designated as a must run unit for reliability?

   Please provide the appropriate reference for your operating area?

4. How does an outage of the generation resource impact the over-all reliability of the BES?

   Please provide study results that demonstrate the most severe system impact of the outage of the generator and the rationale for your response.

5. Does the generation resource use the BES to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load?

Two of the overriding directives in Order No. 743 were that (1) the revised BES Definition should identify all facilities necessary for operating an interconnected electric energy transmission network, and (2) the exemption process should identify and exclude facilities that are not necessary for operating the interconnected transmission network.[33] The SDT initially attempted to develop a set of technical criteria for determining whether or not the Elements that are the subject of an Exception Request are necessary for operating the interconnected transmission network. However, the SDT concluded that it was infeasible to develop a single set of criteria that would be applicable to the wide variety of configurations and circumstances likely to be presented by a broad range of Exception Requests. The SDT therefore determined that the more appropriate approach was to develop a detailed set of data and information that can be used by the Regional Entity and NERC in evaluating whether or not the Elements that are the subject

[33] *See, e.g.*, Order No. 743 at PP 16 and 30.

of an Exception Request are necessary for reliably operating the interconnected transmission network.

The Detailed Information to Support an Information Request in fact requires the Submitting Entity to provide specific data and information that can be used by the Regional Entity and NERC in evaluating whether or not the Elements that are the subject of an Exception Request are necessary for reliably operating the interconnected transmission network. Requiring the submission of the Detailed Information to Support an Exception Request is intended to ensure that a consistent baseline of technical information is provided with all Exception Requests, in addition to the specific information and arguments provided by the Submitting Entity in support of its Exception Request. The Submitting Entity remains responsible to present sufficient information and argument to justify the Exception Request.[34] Further, several of the questions and information requirements in the Detailed Information to Support an Exception Request parallel components of one or more Inclusions or Exclusions in the BES Definition and will enable the Regional Entity and NERC to verify that no applicable Inclusions or Exclusions have been overlooked.

The specific questions posed were created by the SDT with the intention of having the responses to the body of questions in a specific section (transmission or generation) complement the general information required for Exception Requests, thereby creating a "big picture" concept while also providing the specific technical analysis which addresses the potential reliability benefit of the Element in question. The availability of this information will allow the

[34] Section 3.2, Burden, in the proposed BES Exception Procedure (which is being filed with the Commission for approval in a separate petition contemporaneously with this Petition) states in part: "The burden to provide a sufficient basis for Approval of an Exception Request in accordance with the provisions of this Exception Procedure is on the Submitting Entity . . . . All evidence provided as part of an Exception Request or response will be considered in determining whether an Exception Request shall be approved or disapproved."

Regional Entity and NERC review panels to utilize their technical expertise by exercising sound engineering judgment to provide informed recommendations on whether or not the Element in question is necessary for reliably operating the interconnected transmission network and therefore should be included in or excluded from the BES. The breadth of industry coverage and technical experience and backgrounds among the SDT members came into play in developing the Detailed Information to Support an Exception Request. The questions to be included in the Detailed Information were debated at length to arrive at the set of information that would be needed by the review panels and, ultimately, to reach a decision on the Exception Request, but with consideration given to the burden that would be placed on the Submitting Entity in compiling, and the Regional Entity and NERC in reviewing, an extensive amount of technical information. The SDT attempted to create a balance in order to produce a set of data and information that would provide sufficient information for the Regional Entity to make a technically appropriate Recommendation and for NERC to make a technically appropriate determination, without overwhelming the review panels and decision makers with unnecessary data.

In order to test whether these objectives were achieved, a number of SDT members conducted "dry runs" compiling the Detailed Information to Support an Exception Request using Elements on their own organizations' systems. The SDT members reported their experiences and observations with the test runs to the full SDT, and this experience was used in refining the list of questions for the Detailed Information to support an Exception Request.

Thereafter, the draft Detailed Information to Support an Exception Request was posted for industry review and comment. The SDT considered the comments that were received from

industry, and made a number of changes, before submitting the Detailed Information to Support an Exception Request for industry approval through balloting by the ballot pool.[35]

The development of the Detailed Information to Support an Exception Request, which must be provided with every Exception Request, represents an equal and effective alternative approach to developing a substantive set of technical criteria for granting and rejecting Exception Requests. The Detailed Information to Support an Exception Request encompasses a wide range of potential configurations and will provide useful information for the Regional Entity and NERC in evaluating and deciding Exception Requests. The Commission should approve the Detailed Information to Support an Exception Request in **Exhibit C** as satisfying the Commission's technical concerns expressed in Order No. 743 with respect to the need for criteria to approve or disapprove Exception Requests.

E. Proposed Implementation Plan for Revised Definition of "Bulk Electric System"

In Order No. 743, the Commission addressed the need to allow a Regional Entity to submit a transition plan that "allows a reasonable period of time for affected entities within that region to achieve compliance with respect to facilities that are subject to Commission-approved Reliability Standards for the first time."[36] The Commission stated:

> 131. . . . We direct NERC to work with the Regional Entities affected by this Final Rule to submit for Commission approval transition plans that allow a reasonable period of time for the affected entities within each region to achieve compliance with respect to facilities that are subject to Commission-approved Reliability Standards for the first time based on a revised bulk electric system definition. The Commission expects that NPCC is the only region that will be significantly affected. Based on ReliabilityFirst's experience in adopting a

[35] Because the Detailed Information to Support an Exception Request was developed and adopted using the Reliability Standards development process, in the future, revisions will be made using the Reliability Standards development process, including industry balloting, rather than using NERC's process for amending the ROP.

[36] Order No. 743 at P 122 (footnote omitted).

> "bright-line" definition for bulk electric system facilities, we expect transition periods not to exceed 18 months from the time the Commission approves a revised definition and exemption process, unless the Commission approves a longer transition period based on specific justification. The Commission directs NERC to file the proposed transition plans within one year of the effective date of the Final Rule.
>
> 132. While the Commission is sensitive to commenters' concerns regarding non-compliance during the transition period, the Commission will not provide a trial period, as we declined to do in Order No. 693, with respect to those facilities that are subject to Commission approved Reliability Standards for the first time. We expect that the transition periods will be long enough for exemption requests to be processed and to allow entities to bring newly-included facilities into compliance prior to the mandatory enforcement date. Additionally, the ERO and Regional Entities may exercise their enforcement discretion during the transition periods. (Footnote omitted.)[37]

Further, in Order No. 743-A, the Commission again addressed the need for and length of a transition period:

> 93. . . . [A]s indicated in Order No. 743, "we expect that the transition periods will be long enough for exemption requests to be processed and to allow entities to bring newly-included facilities into compliance prior to the mandatory enforcement date." We reiterate that we do not expect a large number of exemption requests arising outside NPCC. Thus, our expectation remains that NERC should be able to process any exemption requests in a timely manner, allowing any entity denied an exemption to come into compliance with the relevant reliability Standards within the transition period. (Footnotes omitted.)
>
> 94. With respect to the length of the transition period, as discussed in the Final Rule, we based our determination to establish an 18-month transition period on ReliabilityFirst's prior experience in adopting a revised bulk electric system definition in that region, and continue to believe it is a reasonable transition period. Additionally, we noted that the ERO may request a longer transition period based on a specific justification. This provides sufficient flexibility should the ERO determine that the 18-month transition period is insufficient. (Footnote omitted.)[38]

The SDT for the BES Definition concluded that the revised BES Definition should be effective on the first day of the second calendar quarter after receiving applicable regulatory

[37] Order No. 743 at PP 131-132 (footnote omitted).

[38] Order No. 743-A at PP 93-94.

approval, or, in those jurisdictions where no regulatory approval is required, the revised BES Definition should go into effect on the first day of the second calendar quarter after its adoption by the NERC Board. The existing definition of the BES would be retired at midnight of the day immediately prior to the effective date of the revised BES Definition in the jurisdiction in which the revised BES Definition is becoming effective. The proposed effective date is appropriate in order to provide a reasonable time between the date of regulatory approval, which is not under the control of NERC or the industry, and the effective date of the revised BES Definition.[39]

The SDT further concluded that compliance obligations for all Elements newly-identified to be included in the BES based on the revised BES Definition should begin 24 months after the applicable effective date of the revised BES Definition. That is, the mandatory enforcement date for the Reliability Standard Requirements that have become applicable to Facilities and Elements that are newly-included in the BES due to the revised BES Definition, and to the owners and operators of those Facilities and Elements, will be 24 months after the effective date of the revised BES Definition.

The proposed implementation plan was balloted with the recirculation ballot for the revised BES Definition and, as described in greater detail in §IV.D below, the ballot achieved the required quorum and the necessary weighted Segment approval. The NERC Board approved both the proposed effective date and the proposed date by which owners of newly-included Facilities and Elements must be in compliance with applicable Requirements of Reliability Standards.

[39] For example, if the revised BES Definition were approved by the Commission at its June 2012 meeting, and the effective date were the first day of the first calendar quarter following approval (July 1, 2012), the industry would have only a few weeks before the new BES Definition became effective. With the proposed effective date, the new BES Definition would be effective on October 1, 2012 in this example.

Although the Commission stated in Order Nos. 743 and 743-A that the transition period should not exceed 18 months from the date of Commission approval of the revised Definition, unless the Commission approved a longer transition period based on specific justification, the SDT determined, and the industry ballot pool and the NERC Board agreed, that a somewhat longer transition period is necessary in light of the actions that will need to be completed in connection with the revised BES Definition. In the U.S., the proposed transition period will be between a minimum of approximately 27 months and a maximum of 30 months from the date of Commission approval, depending on the date of Commission approval.[40] The reasons supporting the need for this longer transition period, as articulated by the SDT, include the following:

- Sufficient time is needed to implement transition plans in order to accommodate any changes resulting from the revised BES Definition. As discussed below, and as suggested in Order Nos. 743 and 743-A, only NPCC has identified the need for, and developed, a specific transition plan. The other Regional Entities will implement the revised BES Definition and the proposed BES Exception Procedure, and will adhere to the proposed transition period, but they do not expect an extensive amount of additional facilities to be included in the BES as the result of the revised BES Definition.[41] Nevertheless, the effective date of the revised BES Definition, and the subsequent mandatory enforcement date on which owners of newly-included

[40] In the example given in the preceding footnote, if Commission approval occurred in June 2012, the transition period would be slightly more than 27 months (*i.e.*, the effective date would be October 1, 2012 and newly-included Facilities and Elements would need to be compliant with applicable Reliability Standards by October 1, 2014). To vary the example, if Commission approval occurred in July 2012, the transition period would be slightly less than 30 months (*i.e.*, the effective date would be January 1, 2013 and newly-included Facilities and Elements would need to be compliant with applicable Reliability Standards by January 1, 2015).

[41] This expectation is consistent with the Commission's expectation as stated in Order No. 743, at P 131.

Facilities and Elements are required to be compliant with applicable Reliability Standards, need to be consistent across all Regions.

- Sufficient time is needed to identify and implement any Registration changes resulting from the revised BES Definition, in particular new Registrations of entities owning Facilities and Elements, and revised Registrations of existing Registered Entities owning additional Facilities and Elements, that are identified as included in the BES based on the revised BES Definition.

- Sufficient time is needed for entities to file for Exceptions, and for the Regional Entities and NERC to process those Exceptions to a final determination, pursuant to the proposed BES Exception Procedure. These Exception Requests will include both requests that Facilities and Elements that are included in the BES by the revised BES Definition should be excluded from the BES, and requests that Facilities and Elements that are not included in the BES by the revised BES Definition should be included in the BES. At this time, NERC and the Regional Entities do not have a basis for estimating the numbers of Exception Requests that will be submitted or their complexity, and therefore cannot estimate the time and resources that will be required to process them to completion. Therefore, it is prudent to provide for a somewhat longer transition period so as to increase the likelihood that all Exception Requests can be processed to completion so as (i) to allow owners of newly-included Facilities and Elements time to be compliant with applicable Reliability Standards, and (ii) avoid the need for owners whose Exclusion Exceptions are approved to expend resources on compliance that may prove to be unnecessary.

- Finally, sufficient time must be provided for owners of Facilities and Elements that are newly-included in the BES based on the revised BES Definition to train their personnel on compliance with the Reliability Standards applicable to the newly-included Facilities and Elements, so that these entities can in fact achieve compliance with applicable Reliability Standards by the end of the transition period.

It was not the intent nor the expectation of either the SDT or NERC to either expand or reduce the scope of the BES, or (with the likely exception of the NPCC Region) to increase or decrease the numbers of Elements included in the BES, through the revised BES Definition as compared to the current BES Definition.[42] Nonetheless, there is not a specific basis to determine to what extent Elements currently included in the BES will become not included, nor to what extent Elements currently not included in the BES will no longer be included, until the revised BES Definition becomes effective and entities begin to apply it to their facilities. Nor is there currently a basis to determine the numbers of Exception Requests that will be submitted, and need to be processed, as entities begin to determine whether facilities are included in or excluded from the BES by application of the revised BES Definition. NERC has reviewed the anticipated requirements and activities for implementation of the revised BES Definition with the eight Regional Entities. Although, as noted, there currently is not a basis for estimating the numbers of Exception Requests that will be submitted, none of the Regional Entities believes that it will

[42] As part of its work, the SDT did conduct a detailed and systematic review of the Applicability sections of all Reliability Standards that are currently in effect, pending for approval at FERC, or under development in standard development projects, to ascertain whether revisions to any Applicability sections would be needed based on the revised BES Definition. The SDT determined that no revisions to any Applicability sections would be needed. The SDT also reviewed all existing terms and definitions in the NERC Glossary that refer to the Bulk Electric System, to ascertain if changes to these definitions would be needed based on the revised BES Definition. The SDT determined that no changes to any of these existing definitions in the NERC Glossary would be needed.

require a longer transition period than the transition period proposed by the SDT, balloted by the industry and approved by the NERC Board. As indicated above, only NPCC has seen the need to develop a specific transition plan. The other Regional Entities do not expect an extensive amount of newly-included facilities, and therefore do not expect extensive implementation activities; as a result, they may not need to follow the steps outlined by NPCC. For these reasons, there is not a need for the other Regional Entities to develop and submit separate individual transition plans. However, if circumstances prove to be different than anticipated, a Regional Entity can revisit its initial decision and formulate a detailed plan in response to actual conditions.

NERC believes that the transition plan steps as outlined below are generally appropriate. The objectives of the transition plan are (1) to identify BES Facilities and Elements in the Region based on the revised BES Definition, and register the owners of those Facilities and Elements if they are not already registered, or revise their registrations if necessary to reflect the newly-included and excluded Facilities and Elements; (2) to identify those newly-included BES Facilities and Elements that are not currently compliant, or whose owners are not currently compliant, with applicable Reliability Standards; and (3) to identify specific actions that are necessary to bring newly-included BES Facilities and Elements, and their owners, that are not in compliance with applicable Reliability Standards into compliance by the end of the transition period. The transition plan will include the following specific steps:

Step 1: Identify a Comprehensive List of BES Facilities and Elements

Each U.S. asset owner will be expected to apply the revised BES Definition to all facilities to determine if those facilities are included in the BES pursuant to the revised BES Definition. This analysis should identify facilities that (i) should be included in the

BES or (ii) can be excluded from the BES, based on the revised BES Definition. The analysis should also identify any Exception Requests that the owner intends to submit. This analysis will allow the owner to identify those facilities that need to be added to its Facilities and Elements already included in the BES. A gap analysis (Step 2 below) will then be performed on the newly-included Facilities and Elements.

Step 2: Perform a Gap Analysis

Each U.S. asset owner and each Functional Entity owning or operating Facilities and Elements that have been newly-identified for inclusion in the BES will be expected to perform a gap analysis for both (i) Registration (and Certification, if applicable) and (ii) compliance with applicable Reliability Standards. The gap analysis should identify (i) any additional Registrations and/or Certifications that are required due to the newly-included Facilities and Elements (*e.g.*, reliability functions for which the entity is not currently registered on the Compliance Registry but should be registered based on the newly-included Facilities and Elements), and (ii) additional compliance obligations for the entity, *i.e.*, the applicable Requirements of Reliability Standards with which the entity must now become compliant due to the inclusion of the new Facilities and Elements in the BES.

Step 3: Develop Implementation Plans

An entity with newly-included Facilities or Elements may need to develop a Registration implementation plan (which may include the need for Certification or a revision to an existing Certification), a compliance implementation plan, or both. In either case, the entity should submit its implementation plan(s) to the applicable Regional Entity for review and concurrence. The implementation plans should be structured so that they can

be nominally completed by, or prior to, the end of the transition period (*i.e.*, by the date by which newly-included Facilities and Elements, and their owners, must be compliant with applicable Reliability Standards). The Regional Entity may approve exceptions to this deadline for specific Facilities and Elements, and their owners, for which the implementation plan identifies, and the Regional Entity concurs in, a need for a longer amount of time to achieve compliance.

Step 3a: Develop Registration Implementation Plan

A Registration plan for impacted entities will be developed, in coordination with other impacted entities (*e.g.*, Transmission Owners and/or Transmission Operators with Balancing Authorities) and in consultation with the Regional Entity, to determine the new, additional or modified Registrations required due to implementation of the revised BES Definition. The Registration implementation plan should identify any new Registrations associated with the newly-included Facilities and Elements. For Facilities and Elements that are newly-included in the BES as a result of the revised BES Definition, the Registration implementation plan must identify what Registered Entity or Registered Entities will be responsible for performing each of the reliability functions required by the Reliability Standards that are applicable to the newly-included Facilities and Elements. The Registration implementation plan should identify whether any new or modified Joint Registration Organization agreements, Coordinated Functional Registrations, or other contractual arrangements will be entered into with respect to the newly-included Facilities and Elements.

The Registration implementation plan should also take into account any Certification requirements (*i.e.*, Certification of the entity to perform a new reliability function that requires Certification, or Certification of the entity to perform an existing reliability function in an expanded Footprint) and any preparation and Certification Team reviews needed for entities that will require new or amended Certifications. The Registration implementation plan should identify any instances in which it is anticipated that achieving Certification will require an amount of time longer than the time remaining to the end of the transition period.

NERC and the Regional Entities will work to register entities who become required to register based on application of the revised BES Definition, and to modify existing Registrations that are necessary based on the revised BES Definition, promptly after the need for the new or modified Registration is identified, and will encourage entities that identify the need to register or to modify existing Registrations to do so promptly. NERC and the Regional Entities recognize that Registration may result in the entity, at the time of Registration, being not in compliance with newly-applicable Reliability Standards. The entity's compliance implementation plan, discussed below in Step 3b, should detail the actions the entity will take, and the time period required, to come into compliance with the Requirements of Reliability Standards that become applicable to the entity and to newly-included Facilities and Elements due to the revised BES Definition.

Step 3b: Develop a Compliance Implementation Plan

A compliance implementation plan should be developed for each newly-included Facility or Element, and its owner and operator, identified in the gap analysis as not currently in compliance with applicable Reliability Standards, detailing the actions to be taken to bring the Facility or Element, and its owner and operator, into compliance. The compliance implementation plan should reflect all applicable existing or newly-required Registrations (*e.g.*, new registered functions). The compliance implementation plan should identify both (1) all newly-included Facilities and Elements, based on the revised BES Definition, for which the owner is not initially compliant with applicable Reliability Standard Requirements and therefore requires time to achieve compliance with those Requirements, and (2) all situations in which the entity is required to register for the first time, or to register for new reliability functions, based on the revised BES Definition, and the Reliability Standard Requirements with which the entity must come into compliance due to the new or modified Registration. The compliance implementation plans should identify activities the entity needs to perform to achieve compliance, including training its personnel in the Requirements of newly-applicable Reliability Standards and the time required, or milestone dates, for these activities. The compliance implementation plan should specifically identify those newly-included Facilities and Elements, and those new or modified Registrations, for which the entity projects that a time period longer than the time to the end of the transition period will be needed to achieve compliance with applicable Reliability Standards. As noted earlier, the extension of the completion of compliance activities beyond the end of the transition period (*i.e.*,

beyond 24 months after the effective date of the revised BES Definition) will require concurrence of the Regional Entity.

Step 4: Complete Implementation Plans and Certify Completion

The actions required by the implementation plans will nominally have to be completed by the end of the transition period, except for specific Facilities and Elements for which the implementation plan identifies, with Regional Entity approval, the need for a longer time period. Each entity that adopted a Registration implementation plan or a compliance implementation plan should, upon completion of the activities described in the plan, provide a statement of completion to the applicable Regional Entity.[43]

NERC and Regional Entity Resource Requirements

In their 2012 Business Plans and Budgets, the Regional Entities and NERC did not provide for specific, incremental resources to perform incremental work that could result from the revised BES Definition (including processing Exception Requests). Specific incremental resources were not budgeted because (1) the business plan and budget preparation cycle requires the Regional Entities and NERC to have their proposed business plans and budgets essentially completed by late June or early July of the preceding year; (2) as of mid-year 2011, the revised BES Definition and the proposed BES Exception Procedure were still under development; (3) the proposed BES Definition and BES Exception Procedure were required to be filed with the Commission for approval in late January, 2012, and, although NERC and the Regional Entities have no control over the timing of the Commission's review and approval of these proposals, it

[43] Beginning with the 2013 NERC and Regional Entity Annual Compliance Monitoring and Enforcement Implementation Plans, the Annual Implementation Plans will identify specific compliance monitoring activities that will be employed to verify the entities' completion of their compliance implementation plans and achievement of compliance with the newly-applicable Reliability Standard Requirements.

was reasonable to assume that Commission review and approval could take six months or longer following the submission date, with the effective date of the revised BES Definition and the new BES Exception Procedure occurring some time after the date of the Commission's order; and (4) if NERC or a Regional Entity began to experience a need for significant additional resources in the latter part of 2012, it would have the options of drawing on its working capital reserves or filing a supplemental budget and funding request with the Commission. In their 2013 business plans and budgets, which will be prepared during the first half of 2012 and filed with the Commission for approval in late August 2012, NERC and the Regional Entities will provide for specific incremental resources (if any) projected to be needed for additional activities resulting from adoption of the revised BES Definition and the BES Exception Procedure.

IV. SUMMARY OF THE RELIABILITY STANDARD DEVELOPMENT PROCEEDINGS

A. Development History

On December 17, 2010, NERC received, and the Standards Committee accepted, a standards authorization request ("SAR") proposing to revise the definition of "Bulk Electric System" in North America for the NERC Glossary. The SAR was posted for one industry comment period and approved by the Standards Committee for standard development on March 11, 2011 as *Project 2010-17: Definition of Bulk Electric System*.

A SDT was selected using the approved nomination and acceptance criteria. The assigned SDT posted the draft BES Definition for a 30-day industry comment period from April 28, 2011 to May 27, 2011. There were 154 sets of comments submitted, including comments from more than 279 different people from approximately 213 entities representing all 10 of the industry Segments. The comments primarily addressed the need for:

- Explicit wording on the inclusion of Reactive Power resources in the bright-line core BES Definition.
- Clarification on the exclusion of local distribution facilities.
- Clarification of transformer windings considered to be a part of the BES.
- Technical justification of the generator thresholds.
- Clarification on the need to include Cranking Paths in the BES Definition.
- Clarification of radial systems.
- Clarification of local networks.

Based on its consideration of the comments, the SDT revised the draft BES Definition and re-posted it for a second round of industry comment (concurrent with an initial ballot) for a 45-day period running from August 26, 2011 to October 10, 2011. This time there were 113 sets of comments, including comments from approximately 255 different people from approximately 156 entities representing all 10 industry Segments. The comments primarily focused on:

- How to interpret multiple terminal transformers within the BES Definition.
- Difficulties with circular references to the *Statement of Compliance Registry Criteria.*
- The need to exclude small generators from the Reactive Power inclusion.
- The need to clarify the language for generation on the customer's side of the retail meter.
- The need to clarify the language dealing with power flows into a local network.

The SDT was also assigned the task of concurrently developing the technical criteria to support a BES Exception Request. As noted earlier, the SDT was assigned this task so that the Reliability Standards development process would be followed in establishing the technical criteria. The first draft of the technical criteria was posted for a 30-day period from May 11, 2011 to June 10, 2011. In response, there were 91 sets of comments, including comments from

more than 75 different people from approximately 45 entities representing 8 of the 10 industry Segments. Comments stated that the attempt to develop continent-wide criteria for use in the Exception process was not an acceptable or workable approach.

The SDT then developed a new approach that utilized the collection of a common set of data and information ("Detailed Information to Support an Exception Request") that would be weighed by the ERO in assessing the Exception Requests. The Detailed Information to Support an Exception Request was posted for a 45-day period from August 26, 2011 to October 10, 2011. There were 72 sets of comments received, including comments from approximately 137 different people from approximately 83 entities representing all 10 industry Segments.

B. Issues Raised During the Development Process including Minority Issues

During the development process, the SDT considered the following comments, issues, and concerns. The following discussion summarizes those issues and describes how the SDT resolved those issues.

Threshold values – Commenters wanted the revised BES Definition to address threshold values, as the values contained in the NERC *Statement of Compliance Registry Criteria* were never technically justified. The deadline that the SDT was working under (specifically, to complete the development process and produce a revised BES Definition within a time frame that would allow it to be adopted by the NERC Board and filed with the Commission for approval by January 25, 2012) did not allow for such analysis; therefore, the SDT split the project into two phases – the first to directly address the Commission directives in Order No. 743, and the second to address the additional concerns raised by industry in a non-deadline environment. The majority of commenters agreed with this approach.

Cranking Paths – The first posting of the revised BES Definition had Cranking Paths for Blackstart Resources included in the BES Definition. A number of commenters complained that this was improperly bringing distribution level Elements into the BES, as many Cranking Paths are at the distribution level. Commenters also pointed out that this was an illusory proposition as intended Cranking Paths are not always the ones used in actual restoration. The SDT was concerned about the possibility of having Blackstart Resources without a "guaranteed" path to the BES – what would be the value of a Blackstart Resource if it could not connect to the BES? The solution was to delete Cranking Paths from the BES Definition in this phase of the project and to take up the issue in Phase 2 of the project. This approach would maintain status quo on this topic, consistent with Order Nos. 743 and 743-A, while providing for a full discussion and consideration of the issue in a less time constrained environment.

Distribution vs. Transmission – Some commenters were concerned about the delineation of distribution facilities in the BES Definition. The SDT originally had commented that the BES Definition identifies transmission and therefore if a facility is not included in the BES Definition the facility was considered to be distribution. However, commenters wanted an explicit statement on this topic. The SDT added a sentence to the BES Definition to address this matter: "This does not include facilities used in the local distribution of electric energy."

Evaluation criteria – Commenters expressed a desire for hard and fast guidance on how an Exception Request was going to be evaluated. The SDT attempted to develop such hard and fast values that could be used in evaluating Exception Requests. However, the SDT struggled with the development of these criteria and asked the industry for assistance. There was a lack of response from the industry, which the SDT construed as indicating that the industry was struggling with this concept as well. Therefore, the SDT took a different path and developed a

series of data and information points that a Submitting Entity should provide to support Exception Requests. This list was designed to allow for a consistent set of data to be presented for use in the evaluation of Exception Requests thus leading to consistency in decision making. In addition, the SDT documented that the Detailed Information to Support an Exception Request would be reviewed during Phase 2 of the project to see if improvements needed to be made.

Contiguous BES – A number of commenters stated that the BES should be contiguous. The SDT understood the sensitivity of the industry to such a condition but once again recognized that this is an issue requiring a great deal of technical analysis which was not possible in the project timeframe based on the Commission-established deadline for NERC to submit a revised BES Definition. For purposes of Phase 1 of the project, the SDT noted that the current BES Definition does not directly address the issue of contiguity. Given the indication in Order Nos. 743 and 743-A toward maintaining the status quo, at least in most of the Regions, the SDT did not attempt to resolve this complex issue in Phase 1. Rather, the issue of contiguity will be addressed in Phase 2. This approach was accepted by the majority of commenters, after the NERC Legal department provided input that Reliability Standards and Requirements could be written and enforced against Elements that are considered material to the reliability of the interconnected transmission system, such as *e.g.*, Protection Systems and control systems, even if those Elements are not included in the BES based on the BES Definition.[44]

Minority Issues

The minority issues are issues raised by commenters during the development process that the SDT chose not to address in the manner that a minority of commenters preferred.

[44] The Legal Department advice was not intended as a determination that Elements such as Protection Systems and control systems are not included in the BES under the revised BES Definition, but rather specified that applicable Reliability Standard Requirements could be enforced against such Elements even if they were determined to not be included in the BES.

Threshold values – Some commenters thought that the threshold value issue should be resolved in Phase 1 of the project and that the BES Definition should not move forward until this issue was resolved. This was an untenable position as the SDT was under a constraint to produce a revised BES Definition within a time frame consistent with the deadline established by Order No. 743, and this time frame did not allow for the in-depth analysis required to resolve such an issue. Splitting the project into two phases, with the threshold values to be addressed in Phase 2, was not acceptable to these minority commenters. The SDT attempted to assuage the commenter's fears by getting the proper approvals in place to proceed with Phase 2 prior to the completion of Phase I. The SDT received approval from the Standards Committee that Phase 2 of the project would continue to be considered as a high-priority project and that the same SDT that worked on Phase 1 would continue on in Phase 2. The phased project plan was endorsed by the NERC Members Representative Committee and the Board of Trustees. Assurances were also received from all appropriate bodies that they would support the SDT in obtaining any assistance required for in-depth technical analysis from relevant NERC standing committees.

Distribution vs. Transmission – A few commenters continue to suggest that the seven-factor test should be employed to determine distribution facilities. The SDT rejected this approach as the sole determination of distribution facilities, based on the reception such a test received in previous Commission proceedings where it was suggested that this test be the sole determining factor for distribution facilities. The SDT pointed out that such a test could be utilized by a Submitting Entity making an Exception Request but that other information should be supplied to support the request.

C. Initial Ballot

NERC conducted an initial ballot on both the BES Definition and the Detailed

Information to Support an Exception Request from September 30, 2011 through October 10, 2011. With a 92.97% quorum participating in the ballot, the proposed BES Definition achieved a weighted segment vote of 71.68%. The Detailed Information to Support an Exception Request achieved an 89.53% quorum and a weighted segment vote of 64.03%.

There were 75 negative ballots submitted for the initial ballot of the BES Definition and all of those ballots included a comment, which necessitated a recirculation ballot.

There were 88 negative ballots submitted for the initial ballot of the Detailed Information to Support a BES Exception Request and all of those ballots included a comment, which necessitated a recirculation ballot.

As discussed below, many of the comments related to the Exception Request process rather than to the proposed BES Definition. There were four main themes to the comments provided in the initial balloting:

1. **Lack of guidance for the Exception Request evaluation process** – The SDT understood the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would have preferred to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it became obvious to the SDT that a simple approach was not achievable. If the SDT could have come up with a simple approach, it would have been supplied within the bright-line criteria. The SDT directly solicited assistance on this topic in the first posting of the technical criteria and received very little in the form of substantive comments from stakeholders.

The SDT recognized that there are so many individual variables that will apply to specific cases that there is no way to cover all of them in a set of bright-line criteria. There are always going to be extenuating circumstances that may influence individual cases. One could take this

statement to say that Regional discretion has not been removed from the BES Definition as directed by Order No. 743. However, the SDT would disagree with this interpretation. The Exception Request Form has to be taken in concert with the changes to the Rules of Procedure and looked at as a single package. When one looks at the proposed Exception Procedure, it becomes clear that the role of the Regional Entity has been drastically reduced. The role of the Regional Entity is now one of reviewing the Exception Request for completeness and making a Recommendation to NERC on whether the Exception Request should be approved or disapproved. The Regional Entity plays no role in actually approving or disapproving the Exception Request, other than providing a Recommendation. NERC, not the Regional Entity, will make the final determination. Moreover, the Exception Procedure in proposed Appendix 5C of the NERC Rules of Procedure, sections 5.2.4 and 5.3, provides an added check by requiring review and provision of an opinion by an independent Technical Review Panel of a Regional Entity's proposed Disapproval of an Exception Request. The Technical Review Panel's evaluation becomes part of the Exception Request record submitted to NERC. Finally, section 7.0 of proposed Appendix 5C provides NERC the option to remand a rejected Exception Request to the Regional Entity with the directive to conduct a substantive review of the Exception Request, if NERC determines the Regional Entity should not have rejected the Exception Request.

Commenters also pointed out that the specific types of studies to be provided with an Exception Request, and how the Regional Entity should interpret the information, are not provided in the proposed Exception Procedure, and therefore the Regional Entity has no basis for determining what is an acceptable submittal. The SDT, however, again noted that the variations that will occur among Exception Requests negate the ability to establish specific, hard and fast

criteria. However, there will be a great deal of professional and technical experience involved on behalf of Submitting Entities, Regional Entities and NERC in the Exception Request process. The SDT believed that Submitting Entities, Regional Entities and NERC will be able to determine what types of information is important to support Exclusion Requests and Inclusion Requests under the Exception Procedure.

Commenters pointed to a lack of specific guidelines in the Exception Procedure for NERC to follow in making its decision. The SDT reiterated the problem with providing a single set of hard and fast rules, in light of there being so many variables to take into account. The SDT believed that providing a single set of criteria that would have to be inflexibly applied to every Exception Request would inappropriately constrain NERC's ability to address the particular facts and circumstances of individual Exception Requests. Moreover, section 3.1 of proposed Appendix 5C states the fundamental principle that the evaluation of an Exception Request must be based on whether the Elements are necessary for the Reliable Operation of the interconnected transmission system. "Reliable Operation" is defined in the Rules of Procedure as "operating the Elements of the Bulk Power System within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or Cascading failures of such system will not occur as a result of a sudden disturbance, including a Cyber Security Incident, or unanticipated failure of system Elements."[45] The SDT concluded that the technical expertise of the NERC review team, the visibility of the Exception Request process, and the overriding requirement of "Reliable Operation" will result in appropriate decision making on Exception

[45] This is the definition of "Reliable Operation" in proposed Appendix 2 to the Rules of Procedure as filed with the Commission on November 29, 2011, and is taken from the definition of the term in FPA §215(a)(4) and 18 C.F.R. §39.1.

Requests while providing NERC with the flexibility to consider the particular facts and circumstances of each Exception Request.

Finally, the SDT noted that the draft SAR for Phase 2 of this project calls for a review of the Detailed Information to Support an Exception Request after 12 months of experience with Exception Requests. The SDT believes that this time period will allow both industry and the ERO to see if the data and information required by the Detailed Information to Support an Exception Request are appropriate and complete and to suggest changes to questions and information required by the Detailed Information to Support an Information Request based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this issue and the filing deadline that the SDT was working under for Phase I of this project, the SDT believed it reached a fair and equitable resolution of this difficult issue for Phase 1.

2. **Will a single "negative" response to the checklist questions mean a request will be denied** - Some commenters asked whether a "yes" or "no" response to a single item on the Exception Request Form will mandate a Disapproval of the Exception Request. The SDT referred to text in section 3.2 of the then-current draft of the Exception Procedure stating that no single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved. In its final version of the proposed Exception Procedure, the BES ROP Team revised this text to the following text, which the Team viewed as a functionally equivalent but more encompassing statement: "All evidence provided as part of an Exception Request or response will be considered in determining whether an Exception Request shall be approved or disapproved."

3. **Lack of certainty that Phase 2 would start** - The SDT has obtained the proper approvals for Phase 2 even prior to the completion of Phase I. The SDT received approval from the NERC Standards Committee that Phase 2 of the project would continue to be considered as a high-priority project and that the same SDT that worked on Phase 1 would continue in Phase 2. The phased project plan was endorsed by the NERC Members Representative Committee and the Board of Trustees. Assurances were also received from all appropriate bodies that they would assist the SDT in receiving any assistance required for in-depth technical analysis from relevant NERC standing committees. In fact, Phase 2 activities have started.

4. **How to weigh the Exclusions against the Inclusions in the BES Definition** - The application of the proposed BES Definition is a three-step process that when properly applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. In step 1, the core BES definition is used to establish the bright line of 100 kV, the overall demarcation point between BES and non-BES Elements:

> Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. This does not include facilities used in the local distribution of electric energy.

To fully appreciate the scope of the core definition, an understanding of the term Element is needed. Element as defined in the NERC Glossary of Terms as:

> Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An Element may be comprised of one or more components."[46]

Thus, an Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Moreover, the NERC Glossary definition of "Transmission" encompasses "an interconnected group of lines and associated equipment for the

[46] This is also the definition of Element in proposed Appendix 2 of the Rules of Procedure.

movement or transfer of electric energy between points of supply and points at which it is transformed for delivery to customers or is delivered to other electric systems."

Step 2 of the BES Definition provides additional clarification for the purposes of identifying specific Elements that are included in the BES through the application of the core definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step 3 of the BES Definition is to evaluate specific situations for potential exclusion from the BES (*i.e.*, classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion from the BES of transmission Elements from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. Exclusion E1 only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 can supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of Real Power resources that reside behind the retail meter (on the customer's side), if the enumerated conditions (i) and (ii) are met, and supersedes Inclusion I2.

Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices, and supersedes Inclusion I5.

In the event that the BES Definition designates an Element as BES that is not necessary for the Reliable Operation of the interconnected transmission network, or designates an Element

as non-BES that is necessary for the Reliable Operation of the interconnected transmission network, the BES Exception Procedure in proposed Appendix 5C may be utilized on a case-by-case basis to either exclude or include, respectively, the Element from or in the BES.

5. **Assurance that threshold values would be addressed in Phase 2** – As described earlier, the SDT has separated the project into two phases which will enable the SDT to address the concerns of both industry stakeholders and regulatory authorities. In Phase 2, the SDT will consider all recommendations for modifications to the technical aspects of the BES Definition. This will allow the SDT, in conjunction with the NERC technical standing committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

D. Balloting and Approval

The SDT addressed all of the ballot comments[47] and made several clarifying changes to the proposed BES Definition and the Detailed Information to Support an Exception Request, and posted both documents for a recirculation ballot from November 10, 2011 through November 21, 2011. The SDT posted its Consideration of Comments reports to the second posting and initial ballot comments as part of the recirculation posting.

A 95.92% quorum participated in the recirculation ballot and the proposed BES definition achieved a weighted Segment approval vote of 81.32%. Therefore, the proposed BES Definition achieved at least a 75% quorum of the ballot pool and a two-thirds weighted Segment vote, as required by the NERC *Standard Processes Manual*.

A 93.02% quorum participated in the recirculation ballot for the proposed Detailed

[47] *See* **Exhibit D** for Consideration of Comments and **Exhibit E** for the complete development history.

Information to Support an Exception Request, and it achieved a weighted Segment approval vote of 81.48%. Therefore, the proposed Detailed Information to Support an Exception Request achieved the required 75% quorum of the ballot pool and a two-thirds weighted Segment vote.

The NERC Board of Trustees adopted the proposed BES Definition, the Detailed Information to Support an Exception Request, and the SDT's proposed implementation plan, on January 18, 2012.

V. CONCLUSION

For the reasons set forth in this Petition, the North American Electric Reliability Corporation requests the Commission to (1) approve the revised definition of "Bulk Electric System" in **Exhibit A**, and the retirement of the current BES Definition on midnight of the day immediately preceding the effective date of the revised BES Definition; (2) approve the "Detailed Information to Support an Exception Request in **Exhibit C**; (3) approve the implementation plan described in §III.E of this Petition; and (4) accept this filing as compliance with Order Nos. 743 and 743-A.

Respectfully submitted,

Gerald W. Cauley President and Chief Executive Officer North American Electric Reliability Corporation 3353 Peachtree Road N.E. Suite 600, North Tower Atlanta, GA 30326-1001 (404) 446-2560 David N. Cook Senior Vice President and General Counsel Holly A. Hawkins Assistant General Counsel for Standards and Critical Infrastructure Protection Andrew Dressel, Attorney North American Electric Reliability Corporation 1325 G Street N.W., Suite 600 Washington, D.C. 20005 (202) 400-3000 (202) 644-8099 – facsimile david.cook@nerc.net holly.hawkins@nerc.net andrew.dressel@nerc.net	/s/Owen E. MacBride Owen E. MacBride Debra A. Palmer Schiff Hardin LLP 1666 K Street, N.W., Suite 300 Washington, D.C. 20036-4390 (202) 778-6400 (202) 778-6460 – facsimile omacbride@schiffhardin.com dpalmer@schiffhardin.com

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF A REVISED DEFINITION OF "BULK ELECTRIC SYSTEM"
IN THE NERC GLOSSARY OF TERMS USED IN RELIABILITY STANDARDS

EXHIBIT A

PROPOSED DEFINITION OF "BULK ELECTRIC SYSTEM"

Proposed Definition of "Bulk Electric System"

Bulk Electric System: Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. This does not include facilities used in the local distribution of electric energy.

Inclusions:

- **I1** - Transformers with the primary terminal and at least one secondary terminal operated at 100 kV or higher unless excluded under Exclusion E1 or E3.

- **I2** - Generating resource(s) with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.

- **I3** - Blackstart Resources identified in the Transmission Operator's restoration plan.

- **I4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above.

- **I5** –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.

Exclusions:

- **E1** - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher and:

    a) Only serves Load. Or,

    b) Only includes generation resources, not identified in Inclusion I3, with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,

    c) Where the radial system serves Load and includes generation resources, not identified in Inclusion I3, with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

    Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

- **E2** - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail Load with electric energy if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.

- **E3** - Local networks (LN): A group of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the interconnected system. LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The LN is characterized by all of the following:

    a) Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating);

    b) Power flows only into the LN and the LN does not transfer energy originating outside the LN for delivery through the LN; and

    c) Not part of a Flowgate or transfer path: The LN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

- **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF A REVISED DEFINITION OF "BULK ELECTRIC SYSTEM"
IN THE NERC GLOSSARY OF TERMS USED IN RELIABILITY STANDARDS

EXHIBIT B

CURRENT DEFINITION OF "BULK ELECTRIC SYSTEM" (FOR REFERENCE)

Current Definition of "Bulk Electric System"

As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition.

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF A REVISED DEFINITION OF "BULK ELECTRIC SYSTEM"
IN THE NERC GLOSSARY OF TERMS USED IN RELIABILITY STANDARDS

EXHIBIT C

DETAILED INFORMATION TO SUPPORT AN EXCEPTION REQUEST

Detailed Information to Support an Exception Request

Entities that have Element(s) designated as excluded, under the BES definition and designations, do not have to seek exception for those Elements under the Exception Procedure.

General Instructions:

A one-line breaker diagram identifying the Element(s) for which the exception is requested must be supplied with every request. The diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested.

Entities are required to supply the data and studies needed to support their submittal. Studies should:

- Be based on an Interconnection-wide base case that is suitably complete and detailed to reflect the electrical characteristics and system topology
- Clearly document all assumptions used
- Address key performance measures of BES reliability through steady-state power flow, and transient stability analysis as necessary to support the entity's request, consistent with the methodologies described in the Transmission Planning (TPL) standard and commensurate with the scope of the request

Supporting statements for your position from other entities are encouraged.

List any attached supporting documents and any additional information that is included to support the request:

Detailed Information to Support an Exception Request

For Transmission Elements:

1. Is there generation connected to the Element(s)?

   ☐ Yes ☐ No

   If yes, what are the individual gross nameplate values of each unit?

   Description/Comments:

2. How do/does the Element(s) impact permanent Flowgates in the Eastern Interconnection, major transfer paths within the Western Interconnection, or a comparable monitored facility in the ERCOT Interconnection or the Quebec Interconnection?

   Please list the Flowgates or paths considered in your analysis along with any studies or assessments that illustrate the degree of impact:

3. Is/Are the Element(s) included in an Interconnection Reliability Operating Limit (IROL) in the Eastern Interconnection, ERCOT Interconnection, or Quebec Interconnection or a major transfer path rating in the Western Interconnection?

   ☐ Yes ☐ No

   Please provide the appropriate list for the operating area where the Element(s) is located:

4. How does an outage of the Element(s) impact the over-all reliability of the BES? Please provide study results that demonstrate the most severe system impact of the outage of the Element(s) and the rationale for your response:

Detailed Information to Support an Exception Request

5. Is/Are the Element(s) used for off-site power supply to a nuclear power plant as designated in a mutually agreed upon Nuclear Plant Interface Requirement (NPIR)?

   ☐ Yes ☐ No

   Description/Comments:

6. Is/Are the Element(s) part of a Cranking Path identified in a Transmission Operator's restoration plan?

   ☐ Yes ☐ No

   Description/Comments:

7. Does power flow through the Element(s) into the BES?

   ☐ Yes ☐ No

   If yes, then using metered or SCADA data for the most recent consecutive two calendar year period, what is the minimum and maximum magnitude of the power flow out of the Element(s)? Describe the conditions and the time duration when this occurs?

Detailed Information to Support an Exception Request

For Generation Resources:

1. What is the MW value of the host Balancing Authority's most severe single Contingency and what is the generation resources percent of this value?

   Please provide the values and a reference to supporting documents:

2. Is the generation resource used to provide reliability-related Ancillary Services?

   ☐ Yes ☐ No

   If so, what reliability-related Ancillary Services are the generation resource supplying:

3. Is the generation resource designated as a must run unit for reliability?

   ☐ Yes ☐ No

   Please provide the appropriate reference for your operating area:

4. How does an outage of the generation resource impact the over-all reliability of the BES? Please provide study results that demonstrate the most severe system impact of the outage of the generator and the rationale for your response:

5. Does the generation resource use the BES to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load?

   ☐ Yes ☐ No

   Description/Comments:

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF A REVISED DEFINITION OF "BULK ELECTRIC SYSTEM"
IN THE NERC GLOSSARY OF TERMS USED IN RELIABILITY STANDARDS

EXHIBIT D

CONSIDERATION OF COMMENTS REPORT

CREATED DURING THE DEVELOPMENT OF THE

REVISED DEFINITION OF "BULK ELECTRIC SYSTEM"

Consideration of Comments on Definition of Bulk Electric System— Project 2010-17

Following the development of this report, the leadership of the BES Definition SDT and Rules of Procedure teams met with the leadership of the Standards Program and the Standards Committee and determined that the BES Definition SDT will assume responsibility for working with stakeholders to identify what evidence is needed to support a request for an exception to the BES definition.

The BES Definition team will solicit stakeholder input to identify the evidence an entity will need to provide when submitting a request for an exception to the definition of BES. While the determination of what evidence will be needed to support a request for a BES Definition Exception will be developed using NERC's standard development process, a decision on where the final product will reside - in the definition of BES, or as an attachment (e.g., a procedure identifying what evidence to produce when applying for a BES exception) to the Rules of Procedure will be made jointly by the leadership of the Standards Program and the Standards Committee at a later stage. Given the time constraints of this project, having all the technical clarity associated with this project developed by a single team seemed the most efficient decision.

The Definition of Bulk Electric System Drafting Team thanks all commenters who submitted comments on the SAR and proposed modification to the definition of Bulk Electric System. These standards were posted for a 30-day public comment period from December 17, 2010 through January 21, 2011. The stakeholders were asked to provide feedback on the standards through a special Electronic Comment Form. There were 82 sets of comments, including comments from more than 175 different people from approximately 129 companies representing 10 of the 10 Industry Segments as shown in the table on the following pages.

http://www.nerc.com/filez/standards/Project2010-17_BES.html

Prior to the issuance of Order 743a, the SDT carefully weighed the many suggestions received in these comments as well as reviewing numerous documents from Regional Entities and other sources in coming up with a revised definition shown here:

Bulk Electric System (BES): All Transmission Elements operated at 100 kV or higher, Real Power resources as described below, and Reactive Power resources connected at 100 kV or higher unless such designation is modified by the list shown below.

Inclusions:

- I1 - Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings of 100 kV or higher unless excluded under Exclusions E1 and E3.

- I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above.
- I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.
- I4 - Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage.
- I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.

Exclusions:

- E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and:
  a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or,
  b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or,
  c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.
- E2 - A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.
- E3 - Local distribution networks (LDNs): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:
  a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;
  b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;
  c) Power flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN;
  d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and
  e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a

comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

The SDT has made corresponding changes to the appropriate wording of the SAR and is now asking the Standards Committee for approval to move this project to the definition development phase.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 609-452-8060 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

[1] The appeals process is in the Reliability Standards Development Procedures: http://www.nerc.com/standards/newstandardsprocess.html.

Index to Questions:

1. Should the following be classified as part of the BES? 16
   - Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, with both primary and secondary windings of 100 kV or higher 16
2. Should the following be classified as part of the BES? 30
   - Individual generation resources (including GSU transformers and the associated generator interconnecting line lead(s)) greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above 30
3. Should the following be classified as part of the BES? 46
   - Generation plants (including GSU transformers and the associated generator interconnecting line lead(s))with aggregate capacity greater than 75 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above 46
4. Should the following be classified as part of the BES? 59
   - Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's (TOP's) restoration plan 59
5. Should the following be classified as part of the BES? 71
   - Transmission Elements or Facilities operated at voltages below 100kV where the exemption process deems the Element or Facility to be included in the BES 71
6. Should the following be classified as part of the BES? 81
   - Individual generation resources greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where the exemption process deems the generation resources to be included in the BES 81
7. Should the following be classified as part of the BES? 94
   - Generation plants with aggregate capacity greater than 75 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where the exemption process deems the generation plants to be included in the BES 94
8. Should the following be excluded from the Elements and Facilities classified as part of the BES? 106
   - Any radial Transmission Element or System, connected from one Transmission source to a Load-serving Element and/or generation resources not included in items 2, 3, 4, 6, and 7 above are excluded from the BES 106
9. Should the following be excluded from the Elements and Facilities classified as part of the BES? 119
   - Elements and Facilities identified through application of the exemption process, consistent with the criteria, where the exemption process deems that the Element or Facility should be excluded from the BES (with concurrence from the ERO) 119

10. Should the following be excluded from the Elements and Facilities classified as part of the BES? 129
    - Generating plant control and operation functions which include relays and systems that control and protect the unit for boiler, turbine, environmental, and/or other plant restrictions 129
11. Do you believe that the proposed definition of BES, accompanied by a separate BES Definition Exception Process meets the reliability-related intent of the directives in Order 743? 138
12. If you have a proposal for an equally efficient and effective method of achieving the reliability- related intent of the directives in Order 743, please provide your proposal here. 157
13. Please provide any other information that you feel would be helpful to the drafting team working on the definition of BES. 171

The Industry Segments are:

1 — Transmission Owners
2 — RTOs, ISOs
3 — Load-serving Entities
4 — Transmission-dependent Utilities
5 — Electric Generators
6 — Electricity Brokers, Aggregators, and Marketers
7 — Large Electricity End Users
8 — Small Electricity End Users
9 — Federal, State, Provincial Regulatory or other Government Entities
10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Guy Zito	Northeast Power Coordinating Council										X

Additional Member	Additional Organization	Region	Segment Selection
1.	Alan Adamson	New York State Reliability Council, LLC	NPCC	10
2.	Gregory Campoli	New York Independent System Operator	NPCC	2
3.	Kurtis Chong	Independent Electricity System Operator	NPCC	2
4.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1
5.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC	3
6.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10
7.	Dean Ellis	Dynegy Generation	NPCC	5
8.	Brian Evans-Mongeon	Utility Services	NPCC	8
9.	Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC	5
10.	Brian L. Gooder	Ontario Power Generation Incorporated	NPCC	5
11.	Kathleen Goodman	ISO - New England	NPCC	2
12.	Chantel Haswell	FPL Group, Inc.	NPCC	5
13.	David Kiguel	Hydro One Networks Inc.	NPCC	1
14.	Michael R. Lombardi	Northeast Utilities	NPCC	1

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
15.		Randy MacDonald	New Brunswick System Operator	NPCC	2								
16.		Bruce Metruck	New York Power Authority	NPCC	6								
17.		Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10								
18.		Robert Pellegrini	The United Illuminating Company	NPCC	1								
19.		Si Truc Phan	Hydro-Quebec TransEnergie	NPCC	1								
20.		Saurabh Saksena	National Grid	NPCC	1								
21.		Michael Schiavone	National Grid	NPCC	1								
22.		Bohdan Dackow	US Power Generating Company (USPG)	NPCC	NA								
2.	Group	Charles W. Long	SERC EC Planning Standards Subcommittee		X									X

Additional Member		Additional Organization	Region	Segment Selection
1.	Pat Huntley	SERC Reliability Corporation	SERC	10
2.	Bob Jones	Southern Company Services	SERC	1
3.	Darrin Church	Tennessee Valley Authority	SERC	1
4.	Jim Kelley	PowerSouth Energy Cooperative	SERC	1
5.	John Sullivan	Ameren Services Co.	SERC	1
6.	Phil Kleckley	South Carolina Electric & Gas Co.	SERC	1

3.	Group	Patricia Hervochon	Public Service Enterprise Group Company		X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Jim Hubertus	PSE&G	RFC	1, 3
2.	Scott Slickers	PSEG Fossil	RFC	5
3.	Jim Hebson	PSEG ER&T	RFC	6
4.	Dominic Grasso	PSEG Power CT	NPCC	5
5.	Peter Dolan	PSEG ER&T	NPCC	6
6.	Dominic DiBari	PSEG Fossil Odessa Ector Power Partners	ERCOT	5
7.	Eric Schmidt	PSEG ER&T	ERCOT	6

4.	Group	Carol Gerou	MRO's NERC Standards Review Subcommittee											X

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10

	Additional Member	Additional Organization	Region	Segment Selection
1.	Mahmood Safi	Omaha Public Utility District	MRO	1, 3, 5, 6
2.	Chuck Lawrence	American Transmission Company	MRO	1
3.	Tom Webb	Wisconsin Public Service Corporation	MRO	3, 4, 5, 6
4.	Jason Marshall	Midwest ISO Inc.	MRO	2
5.	Jodi Jenson	Western Area Power Administration	MRO	1, 6
6.	Ken Goldsmith	Alliant Energy	MRO	4
7.	Alice Ireland	Xcel Energy	MRO	1, 3, 5, 6
8.	Dave Rudolph	Basin Electric Power Cooperative	MRO	1, 3, 5, 6
9.	Eric Ruskamp	Lincoln Electric System	MRO	1, 3, 5, 6
10.	Joe DePoorter	Madison Gas & Electric	MRO	3, 4, 5, 6
11.	Scott Nickels	Rochester Public Utilties	MRO	4
12.	Terry Harbour	MidAmerican Energy Company	MRO	6, 1, 3, 5
13.	Richard Burt	Minnkota Power Cooperative, Inc.	MRO	1, 3, 5, 6

5.	Group	Al DiCaprio	IRC Standards Review Committee		X							

	Additional Member	Additional Organization	Region	Segment Selection
1.		Bill Phillips	MISO	MRO	2
2.		James Castle	NYISO	NPCC	2
3.		Matt Goldberg	ISO-NE	NPCC	2
4.		Greg Van Pelt	CAISO	WECC	2
5.		Charles Yeung	SPP	SPP	2
6.		Dan Rochester	IESO	NPCC	2
7.		Mark Thompson	AESO	WECC	2
8.		Steve Myers	ERCT	ERCOT	2

6.	Group	Frank Gaffney	Florida Municipal Power Agency	X		X	X	X	X	X			

	Additional Member	Additional Organization	Region	Segment Selection
1.	Tim Beyrle	City of New Smyrna Beach	FRCC	4
2.	Greg Woessner	KUA	FRCC	3

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10

3.	Jim Howard	Lakeland Electric	FRCC	3
4.	Lynne Mila	City of Clewiston	FRCC	3
5.	Joe Stonecipher	Beaches Energy Services	FRCC	1
6.	Cairo Vanegas	FPUA	FRCC	4
7.	Randy Hahn	Ocala Electric Utility	FRCC	3

7.	Group	Denise Koehn	Bonneville Power Administration	X		X		X	X				

Additional Member	Additional Organization	Region	Segment Selection
1.	Sara Sundborg	BPA, Transmission, Technical Operations	WECC	1
2.	John Anasis	BPA, Transmission, Technical Operations	WECC	1
3.	Jim Gronquist	BPA, Transmission, Technical Operations	WECC	1
4.	James O'Brien	BPA, Transmission, Technical Operations	WECC	1
5.	Siraji Hirsi	BPA, Transmission, Technical Operations	WECC	1
6.	Daniel Goodrich	BPA, Transmission, Technical Operations	WECC	1
7.	Lorissa Jones	BPA, Transmission Reliability Program	WECC	1

8.	Group	Doug Hohlbaugh	FirstEnergy Corp	X		X	X	X	X				

Additional Member	Additional Organization	Region	Segment Selection
1. Rob Martinko	FirstEnergy Corp	RFC	1, 3, 4, 5, 6

9.	Group	Mike Garton	Electric Market Policy	X		X		X	X				

Additional Member	Additional Organization	Region	Segment Selection
1.	Michael Gildea	Dominion Resources Services, Inc.	NPCC	5
2.	Louis Slade	Dominion Resources Services, Inc.	SERC	3
3.	Connie Lowe	Dominion Resources Services, Inc.	RFC	5
4.	John Loftis	Dominion Virginia Power	SERC	1

10.	Group	Jim Case	SERC OC Standards Review Group	X		X							

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10

Additional Member	Additional Organization	Region	Segment Selection
1.	Gerald Beckerle	Ameren	SERC	1, 3
2.	Andy Burch	EEI	SERC	1, 5
3.	Randy Castello	Mississippi Power	SERC	1, 3, 5
4.	Dan Roethemeyer	Dynegy	SERC	5
5.	Melinda Montgomery	Entergy	SERC	1, 3
6.	Sam Holeman	Duke Energy	SERC	1, 3, 5
7.	Joel Wise	TVA	SERC	1, 3, 5, 9
8.	Alvis Lanton	SIPC	SERC	1, 3, 5
9.	Hamid Zakery	Dynegy	SERC	5
10.	John Neagle	AECI	SERC	1, 3
11.	Mike Hirst	Cogentrix	RFC	5, 6
12.	Tim Hattaway	PowerSouth	SERC	1, 3, 5, 9
13.	Robert Thomasson	BREC	SERC	1, 3, 5, 9
14.	Shardra Scott	Gulf Power	SERC	1, 3, 5
15.	Patrick Woods	EKPC	SERC	1, 3, 5, 9
16.	Alisha Ankar	Prairie Power	SERC	1, 3, 5
17.	Bill Hutchison	SIPC	SERC	1, 3, 5
18.	J. T. Wood	Southern	SERC	1, 3, 5
19.	John Troha	SERC	SERC	10

11.	Individual	Sandra Shaffer	PacifiCorp	X		X		X	X				
12.	Individual	Sylvain Clermont / Alain Pageau	Hydro-QuÃ©bec	X									
13.	Individual	William J. Gallagher	Transmission Access Policy Study Group	X		X	X	X	X				
14.	Individual	John Cummings	PPL Energy Plus					X	X				

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
15.	Individual	Jack Cashin	Competitive Suppliers			X		X	X				
16.	Individual	Marty Kaufman	ExxonMobil Research and Engineering	X				X		X			
17.	Individual	John Seelke	NERC Staff										
18.	Individual	Janet Smith	Arizona Public Service Company	X		X		X	X				
19.	Individual	Brian J. Murphy	NextEra Energy Inc.	X		X		X	X				
20.	Group	David Dworzak	Edison Electric Institute	X									
http://www.eei.org/whoweare/ourmembers/USElectricCompanies/Pages/USMemberCoLinks.aspx													
21.	Individual	Brent Ingebrigtson	LG&E and KU Energy LLC	X		X		X	X				
22.	Individual	Steve Alexanderson	Central Lincoln			X	X						
23.	Individual	David Thorne	Pepco Holdings Inc.	X		X							
24.	Individual	Martyn Turner	LCRA Transmission Services Corporation	X									
25.	Individual	David W Proebstel	PUD No.1 of Clallam County			X							
26.	Individual	Joe Petaski	Manitoba Hydro	X		X		X	X				
27.	Individual	Kevin Koloini	American Municipal Power				X						
28.	Individual	Robert Beadle	North Carolina EMC			X	X	X					
29.	Individual	Jim Uhrin	ReliabilityFirst										X

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
30.	Individual	Elroy Switlishoff	on behalf of Teck Metals Ltd.	X				X					
31.	Individual	Rex A Roehl	Indeck Energy Services					X					
32.	Individual	Samuel Stonerock	Southern California Edison	X		X		X					
33.	Individual	Patrick Farrell	Southern California Edison Company	X		X		X	X				
34.	Individual	E Switlishoff	on behalf of Catalyst Paper Corporation	X		X							
35.	Individual	Jeff Mead	City of Grand Island					X					
36.	Individual	Michelle D'Antuono	Occidental Energy Ventures Corp					X					
37.	Individual	Manny Robledo	City of Anaheim			X	X						
38.	Individual	Josh Dellinger	Glacier Electric Cooperative	X		X							
39.	Individual	Kathleen Goodman	ISO New England Inc.		X								
40.	Individual	Ed Davis	Entergy Services	X		X		X	X				
41.	Individual	John D. Martinsen	Snohomish County PUD	X		X	X		X				
42.	Individual	Rick Paschall	PNGC Power			X							
43.	Individual	Bud Tracy	Blachly-Lane Electric Co-op			X					X		
44.	Individual	Dave Hagen	Clearwater Power Co.			X					X		
45.	Individual	Dave Sabala	Douglas Electric Cooperative			X							

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
46.	Individual	Dave Markham	Central Electric Cooperative, Inc. (Redmond Oregon)			X							
47.	Individual	Heber Carpenter	Raft River Rural Electric Cooperative			X							
48.	Individual	Jon Shelby	Northern Lights Inc.			X							
49.	Individual	Ken Dizes	Salmon River Electric Cooperative	X		X							
50.	Individual	Ray Ellis	Okanogan Country Electric Cooperative			X							
51.	Individual	Richard Reynolds	Lost River Electric			X							
52.	Individual	Rick Crinklaw	Lane Electric Cooperative			X							
53.	Individual	Roger Meader	Coos-Curry Electric Cooperative			X							
54.	Individual	Roman Gillen	Consumer's Power Inc.	X		X							
55.	Individual	Steve Eldrige	Umatilla Electric Co-op	X		X							
56.	Individual	Marc Farmer	West Oregon Electric Cooperative			X							
57.	Individual	Michael Henry	Lincoln Electric Cooperative			X							
58.	Individual	Bryan Case	Fall River Electric Cooperative			X							
59.	Individual	Jonathan Appelbaum	United Illuminating Company	X									
60.	Individual	David Burke	Orang and Rockland Utilities, Inc.	X		X							

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
61.	Individual	Andrew Z. Pusztai	american Transmission company	X									
62.	Individual	John A. Gray	The Dow Chemical Company										
63.	Individual	Brian Evans-Mongeon	Utility Services	X		X	X	X	X		X	X	
64.	Individual	Barry Lawson	National Rural Electric Cooperative Association (NRECA)			X	X						
65.	Individual	Andrew Gallo	City of Austin dba Austin Energy	X		X	X	X	X				
66.	Individual	Laura Lee	Duke Energy	X		X		X	X				
67.	Individual	Hertzel Shamash	The Dayton Power and Light Company	X		X		X					
68.	Individual	Michael Moltane	ITC Holdings Corp	X									
69.	Individual	Bill Keagle	BGE	X									
70.	Individual	Amir Hammad	Constellation Power Source Generation, Inc. (“CPSG”) filing on behalf of Constellation Energy Group, Inc. (“CEG”), Constellation Energy Commodities Group, Inc. (“CCG”), Constellation Energy Control and Dispatch, LLC (“CDD”), Constellation NewEnergy, Inc., (“CNE”) and Constellation Energy Nuclear Group, LLC, (“CENG”)			X		X	X				
71.	Individual	Shaun Anders	City Water Light and Power (CWLP) - Springfield, IL	X		X		X					

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
72.	Individual	Steven Grega	Lewis County PUD					X					
73.	Individual	Thad Ness	American Electric Power (AEP)	X		X		X	X				
74.	Individual	Marc M. Butts	Southern Company	X		X		X	X				
75.	Individual	David Angell	Idaho Power	X		X		X					
76.	Individual	John P. Hughes	Electricity Consumers Resource Council (ELCON)							X			
77.	Individual	Dan Rochester	Independent Electricity System Operator		X								
78.	Individual	Jeff Nelson	Springfield Utility Board			X							
79.	Individual	Jack Stamper	Clark Public Utilities	X									
80.	Individual	Allen Mosher	APPA			X	X						
81.	Individual	Alice Ireland	Xcel Energy	X		X		X	X				
82.	Individual	Paul Cummings	City of Redding			X	X	X	X				
83.	Individual	Manny Robledo	City of Anaheim			X	X						

1. Should the following be classified as part of the BES?

- **Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, with both primary and secondary windings of 100 kV or higher**

Summary Consideration: Stakeholders who responded to this question were evenly divided with about half the respondents indicating support for the proposal, and the other half disagreeing with at least some part of the proposal.

The SDT has clarified the definition based on industry comments regarding the classification of transformers.

Included in the BES: I1 - Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings of 100 kV or higher unless excluded under Exclusions E1 and E3.

Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and:

a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or,
b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or,
c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.

Excluded from the BES: E3 - Local distribution networks (LDN): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:

a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;
b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;
c) Power flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN;
d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and
e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Organization	Yes or No	Question 1 Comment
Northeast Power Coordinating Council	No	1. Exclusions should be applied to radial non-transmission facilities serving a distribution function. Step-down transformers with the low-side terminals serving non-BES facilities, which are serving a distribution function, should not be part of the definition of BES. 2. Transformers, other than GSUs, with both primary and secondary winding above 100kV, and performing a transmission function, should be classified as BES. 3. Transformers other than GSUs, with both primary and secondary windings above 100kV, and only providing a distribution function should be classified as non-BES. 4. Transformers other than GSUs, with their secondary windings or both primary and secondary windings operated below 100kV should not be included in the definition of BES.

Response:

1. The SDT has excluded local distribution networks as shown:

- Excluded from the BES: E3 - Local distribution networks (LDNs): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:
  a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;
  b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;
  c) Power flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN;
  d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and
  e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

The SDT agrees with your suggestion and has incorporated it in its latest proposal.

2. The SDT agrees with your suggestion and has incorporated it in its latest proposal:

Included in the BES: I1 - Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, with two windings of 100 kV or higher unless excluded under items E1 and E3.

Excluded from the BES: Any radial system which is described as connected from a single Transmission source originating with an automatic interruption

Organization	Yes or No	Question 1 Comment
device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5. 3. The SDT feels that your comment does not illustrate a readily identifiable bright-line designation as there is no definition for distribution. However, the SDT has determined that such transformers on a radial system will be non-BES. 4. The SDT agrees with your suggestion and has incorporated it in its latest proposal.		
Electric Market Policy	No	Dominion could respond yes if the sentence read "All transformers, including Generator Step-up (GSU) transformers and Phase Angle Regulators, with both primary and secondary windings of 100 kV or higher.
ExxonMobil Research and Engineering	No	Transformers like all elements should be included based on their function; however, the use of an element's rating or operating voltage may provide a good guideline for selecting elements to review for inclusion in the BES.
Response: The SDT does not share your view on the inclusion of all transformers and feels that transformers used in Transmission and generation should be included. The SDT agrees that operating voltage is a good guideline for applying the definition of BES.		
PacifiCorp	No	In Order No. 743, the Commission directed NERC to adopt an exemption process for excluding facilities from the definition of the BES that are not necessary to operate an interconnected electric transmission network. In order to determine which facilities may be excluded, there must be criteria and a methodology that may be applied to identify which facilities are "necessary" to operate an interconnected electric transmission network and which "transmission and generation" facilities are not. In other words, there must be a clear way to determine what makes a particular facility is "necessary" for bulk system operation. Application of the criteria and methodology will result in the identification of the facilities that may be excluded. The comment questions asked in this questionnaire cannot be answered in a meaningful way absent this methodology. Significant efforts have been undertaken by the WECC Bulk Electric System Definition Task Force (BESDTF) over the course of the past year to identify some initial criteria and methodologies. These efforts are ongoing and should be supported by the NERC drafting team. For example: Transformers should not be included or excluded solely based on their voltage classifications (high side and low side). Transformers which are necessary to operate the interconnected network should be included as part of the regulated BES. Transformers which are not "necessary for the operation of the interconnected network" should be excluded. A methodology needs to be developed to determine which transformers may be excluded as part of the

Organization	Yes or No	Question 1 Comment
		regulated BES.
Response: The SDT is aware of the WECC Bulk Electric System Definition Task Force's efforts and has considered that work. The SDT has revised the definition and included specific inclusion and exclusion designations. Bright-line designations will be developed as part of this project and the process will handle any exceptions and those will be addressed through the revision of the Rules of Procedure which is a separate parallel effort to the development of the BES definition by another team. Your comments will be forwarded to the Rules of Procedure Team.		
Hydro-Québec	No	For questions 1 to 10, refer to questions 11 to 13.
Response: Please see responses to questions 11 to 13.		
National Rural Electric Cooperative Association (NRECA)	No	This should not be dependent only on the voltage, but also on where the transformer, etc., is located on the system. For example, if such a transformer is on a radial line of any transmission voltage that is serving only load, then it should not be considered part of the BES.
Orange and Rockland Utilities, Inc.	No	Exclusions should be applied to radial non-transmission facilities serving a distribution function. Step-down transformers with the low-side terminals serving non-BES facilities, which are serving a distribution function, should not be part of the definition of BES. Transformers, other than GSUs, with both primary and secondary winding above 100kV should be classified as BES. However, it is our belief that transformers with either a primary or secondary winding below 100kV should not be included directly or through the separate BES Definition Exception Process.
City of Anaheim	No	Transformers with secondary windings of 100kV or less should not be part of the BES if they feed radial load or radial distribution systems; provided, however, to eliminate any reliability gaps, such transformers should be classified as "Distribution" equipment subject to DP standards, and the PRC and vegetation management standards should be made applicable to Distribution Providers and including this equipment. This is consistent with the NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for radial transmission facilities that function as Distribution and are not required for the reliable operation of the BES.
Southern California Edison Company	No	The presence of an Automatic Fault Interrupting Device (or in the instance of a ring bus or breaker-and-a-half configuration) allows the transformer to be considered as a separate unit serving the function of providing connection and transformation of the high-side to the low-side. Where the electric facilities on the low-side are below 100kV, the transformer is simply an extension of non-BES facilities, providing delivery and connectivity from the BES sources.

Organization	Yes or No	Question 1 Comment
PPL Energy Plus	No	Certain transformers with primary and secondary windings greater than 100 kV may serve transmission lines with only radial load and should therefore be excluded from the BES definition (without requiring application for an exemption on a case-by-case basis). The BES definition should be modified to incorporate this exclusion.
LG&E and KU Energy LLC	No	Certain transformers connected with both primary and secondary windings of 100 kV or higher serving only radial load should be excluded from the BES definition (without requiring application for an exemption on a case-by-case basis). The BES definition should be modified to incorporate this exclusion.
Central Lincoln	No	While we believe the SAR is on the right track here, we note that many transformers with both windings above 100 kV may be installed on radial systems. We also note that the FERC order excepted "defined radial facilities," and expect NERC to provide a definition for "radial" so that facilities that meet this criteria may be excluded by inspection rather than by going through an exemption process. It should also be clarified that transformer protection systems are part of the BES only if installed to protect BES transformers.
PUD No.1 of Clallam County	No	
Lewis County PUD	No	
Response: The SDT agrees with your suggestion and has incorporated it in its latest proposal. • Included in the BES: I1 - Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings of 100 kV or higher unless excluded under Exclusions E1 and E3. Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.		
American Municipal Power	No	
Occidental Energy Ventures Corp	No	This would require further study in order to answer in the affirmative.
Response: Thank you for your comment.		

Organization	Yes or No	Question 1 Comment
Indeck Energy Services	No	The threshold issue is whether the equipment affects the reliability of the Bulk Power System, as defined in the FPA. By requesting a BES definition that greatly expands the jurisdiction of the NERC Standards beyond the scope of the BPS, FERC and NERC are outside of their legal jurisdiction. NERC is responsible to the FPA through the FERC, but not to the FERC instead of the FPA. NPCC had the correct approach until FERC required it to register every entity down to 20 MW. Reliability is the issue, and in a 30,000+ MW system like NYISO, a 20, 50 or 150 MW piece of equipment cannot cause a Reportable Disturbance (under NERC's definition), so how can it have a significant impact on reliability? Deferring the development of the exemption process to a separate, and possibly much delayed, process of modifying the Rules of Procedure is disingenuous.
Response: The SDT has been tasked with coming up with a revised definition of the Bulk Electric System. The SDT is following through on this charge. Bright-line designations will be developed as part of this project and the ROP process will handle any exemptions or inclusions and those will be addressed through the revision of the Rules of Procedure which is a separate parallel effort to the development of the BES definition utilizing a different team.		
Glacier Electric Cooperative	No	I think it depends on the transformer. If the loss of the transformer would significantly affect the reliability of the grid, then, yes, it should be included. However, if the loss of the transformer would not significantly affect the reliability of the grid, then, no, it should not be included no matter what voltage it is connected at.
ReliabilityFirst	Yes	In some cases, facilities that need included do not have both windings operated at 100 kV or higher. This needs further detail and definition to be helpful in determining if the facility is included or excluded. An example of this is a distribution transformer (e.g. 138/34 kV) tapped from a BES line with a high side protective device (such as a circuit switcher or ground switch), in which case the BES line to which it is connected will trip (and may or not lockout) for a fault in the transformer. Should the distribution transformer lockout the BES line to which it is connected, and then it should be included in the BES. If the distribution transformer only trips the BES line to which it is connected (and successfully recloses), it could be argued whether it should be included in the BES or not. But this issue needs to be addressed in the revised BES definition.
Response: The SDT feels that your comment does not illustrate a readily identifiable bright-line designation. Bright-line designations will be developed as part of this project and the ROP process will handle any exemptions or inclusions and those will be addressed through the revision of the Rules of Procedure; which is a separate parallel effort to the development of the BES definition. Your comments will be forwarded to the Rules of Procedure Team.		
Snohomish County PUD	No	We note that many transformers with both windings above 100 kV may be installed on radial systems or local networks used to provide local distribution service. Transformers installed on such systems should not be part of the BES regardless of operating voltage. We also note that in Order No. 743, FERC made clear that it
PNGC Power	No	

Organization	Yes or No	Question 1 Comment
Blachly-Lane Electric Co-op	No	does not intend the Standards Drafting Team to change the exception for radial facilities, and expects the standards development process to provide a definition for “radial” so that facilities that meet this criteria may be excluded by inspection rather than by going through an exemption process. The Standards Drafting Team should also clarify that transformer protection systems are part of the BES only if installed to protect “BES transformers” (transformer with both windings above 200kV).
Clearwater Power Co.	No	
Douglas Electric Cooperative	No	
Central Electric Cooperative, Inc. (Redmond Oregon)	No	
Raft River Rural Electric Cooperative	No	
Northern Lights Inc.	No	
Salmon River Electric Cooperative	No	
Okanogan Country Electric Cooperative	No	
Lost River Electric	No	
Lane Electric Cooperative	No	
Coos-Curry Electric Cooperative	No	
Consumer's Power Inc.	No	
Umatilla Electric Co-op	No	
West Oregon Electric Cooperative	No	
Lincoln Electric Cooperative	No	

Organization	Yes or No	Question 1 Comment
Fall River Electric Cooperative	No	
Response: The SDT agrees with your suggestion and has incorporated it in its latest proposal. • Included in the BES: I1 - Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings of 100 kV or higher unless excluded under Exclusions E1 and E3. Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5. The SDT has discussed this issue and will be seeking guidance from FERC staff in regards to the directives in FERC Order No. 743 and how they potentially apply to Protection Systems. Protection Systems are not currently within the scope of the SAR for this project and any significant expansion could potentially jeopardize the ability of the SDT to complete this project and file in accordance with the Commission directed time requirements in FERC Order No. 743.		
Utility Services	No	Initially, yes; however, such a classification could be exempted upon a NERC review of the technical justification for exemption. We suggest that the BES definition be changed to: All Transmission and Generation Elements operated at voltages of 100 kV or higher; unless modified by the BES Exemption Process. We note that the term Facility, as defined in the NERC Glossary, implies that it is part of the BES. We suggest that the BES definition just use the term Element since Facility is already defined as being a part of the BES. We envision the BES Exemption Process containing 3 sub-processes; one for Exclusion, one for Exemption, and one for Inclusion. Each sub-process will establish provisions and guidelines for the three different tasks. In order to ensure consistency across the continent, it is our view that NERC will be the facilitator of these processes. We believe that NERC may choose to provide that some of these tasks may be performed at the regional levels through the existing delegation agreements. For "Exclusion", we envision NERC establishing a first set of Exclusions, with FERC's acceptance, that Registered Entities can utilize as a means to justify not registering within the ERO or as a means to not have

Organization	Yes or No	Question 1 Comment
		to meet the compliance obligations of specific reliability standards and or requirements. NERC would also be in a position to add or remove Exclusions provided such was performed through notification to the industry and industry's acceptance. If a Registered Entity uses a listed accepted Exclusion, it would be our expectation that the RE would be treated in a manner similar to an unregistered organization, in that penalties or sanctions could not be assessed during the exclusionary period. NERC would have the ability to revoke an RE's use of an Exclusion prospectively only. However, If NERC or the Regional Entity determined that a Registered Entity intentionally claimed an accepted Exclusion; and it turned out to be knowingly false, the Registered Entity would be subject to penalties and or sanctions appropriate to the period of the falsehood. In order for Elements to be "Included" or "Exempted", we envision that NERC will establish a set of criteria including outlining the types of permissible technical studies or documentation necessary to seek inclusion or an exemption. We feel that any inclusion or exemption should be handled on an Element by Element basis, not by broad application of a set of Elements. Each should be judged based upon its technical merits of the Element(s) involved. While an inclusion or exemption is pending, the Registered Entity shall not be subject to the performance obligations under the any reliability standard(s) associated with the Element(s) being considered. For Inclusion, any Registered Entity may submit Element(s) with the appropriate materials meeting the criteria for Inclusion. For there to be consistency within the ERO, NERC must be the evaluator of the requests. We believe there must be a measurable, not subjective, improvement in the reliability of the transmission system for the Element(s) to be included. All Registered Entities, including applicable RCs, BAs, TOPs, and Regional Entities, who would be impacted by the proposed Inclusion must be provided sufficient notice and time to participate in the consideration process. NERC shall render a decision following the timely submission from the potentially impacted Registered Entities. For an Exemption to be granted, any Registered Entity may submit Element(s) with the appropriate materials meeting the criteria for Exemption. For there to be consistency within the ERO, NERC must be the evaluator of the requests. We believe there must be no measurable, not subjective, decrease in the reliability of the transmission system for the Element(s) to be included. All Registered Entities, including applicable RCs, BAs, TOPs, and Regional Entities, who would be impacted by the proposed exemption must be provided sufficient notice and time to participate in the consideration process. NERC shall render a decision following the timely submission from the potentially impacted

Organization	Yes or No	Question 1 Comment
		Registered Entities. We note that BES Exemption Process must be an active and ongoing aspect of the ERO program. With the addition of new or deletion of existing Transmission and Generation Elements, Facilities, or systems; it needs to be recognized that Exclusions, Inclusions, and Exemptions could possibly need alteration over time. By establishing appropriate guidelines and processes, the ERO will be able to monitor and maintain information of what is the bulk electric system or BES.
Response: The SDT thanks you for your comments on the inclusion of transformers. The SDT agrees with your view that a briefer, more concise definition is beneficial and has incorporated it in the latest proposal. The SDT agrees with the use of the term, "Elements" rather than "Facilities" and has corrected its use throughout the proposal. The SDT does not share your view of the BES exception process. Bright-line designations will be developed as part of this project and the ROP process will handle any exceptions and those will be addressed through the revision of the Rules of Procedure which is a separate parallel effort to the development of the BES definition utilizing a different team. Your comments will be forwarded to the Rules of Procedure Team.		
The Dow Chemical Company		The Dow Chemical Company ("Dow") recommends that NERC finalize a basic framework for identifying BES facilities before evaluating individual facilities or types of facilities. Such a framework is recommended by Dow in response to questions #11 and #12 below.
Response: See response to Q11 & 12.		
Constellation Power Source Generation, Inc. ("CPSG") filing on behalf of Constellation Energy Group, Inc. ("CEG"), Constellation Energy Commodities Group, Inc. ("CCG"), Constellation Energy Control and Dispatch, LLC ("CDD"), Constellation NewEnergy, Inc., ("CNE") and Constellation Energy Nuclear Group, LLC, ("CENG")	Yes	Constellation firmly believes that the classifications found in the Compliance Registry Criteria - Section III (Rules of Procedure Appendix 5B), such as that cited in this question, provide a useful basis to create a comprehensive, revised BES definition. Further, we propose that the BES drafting team incorporate the criteria directly into the revised BES definition, replacing the term "bulk power system" in each criterion with "greater than 100 kV." This would then include assets that are currently registered as BES elements as well as those that may have been previously excluded due to Regional exemption variances. Structuring the revised BES definition to clarify both the inclusions and exclusions, can, ideally, eliminate the need for an onerous exemption process as well as eliminate the need for Section III of the Registry Criteria. Please see our response to question 12 for more detail on a proposed alternative approach to structuring the BES definition revision.
Response: The SDT agrees and has incorporated as one of its goals that it will not drive a change in the registry criteria if at all possible. .		

Organization	Yes or No	Question 1 Comment
The SDT agrees with your suggestion and has incorporated it in its latest proposal. Please see response to Question 12.		
Florida Municipal Power Agency	Yes	In general, yes, unless it is part of a radial Element that is excluded from the BES. See FMPA response to Question 12 below. Throughout these comments, FMPA refers to "Elements" and not to "facilities." This is because "Facility" is defined in the NERC Glossary as "[a] set of electrical equipment that operates as a single Bulk Electric System Element...." Because these comments (and the BES definition) address whether Elements are or are not part of the BES, it is incorrect to refer to the Elements in question as "Facilities," because a Facility is defined as a BES Element.
Transmission Access Policy Study Group	Yes	
Response: The SDT agrees with your suggestion and has incorporated it in its latest proposal. • Included in the BES: I1 - Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings of 100 kV or higher unless excluded under Exclusions E1 and E3. Excluded from the BES: Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5. See response to Q12. The SDT agrees with the use of the term, "Elements" rather than "Facilities" and has corrected its use throughout the proposal.		
NERC Staff	Yes	Please see additional comments in Attachment 3 at the end of this report.
Response: Please see response to Q13.		
Public Service Enterprise Group Company	Yes	The PSEG Companies consider transformers with primary and secondary windings of greater than 100 kV, and which are not GSU transformers to be part of the BES.

Organization	Yes or No	Question 1 Comment
Competitive Suppliers	Yes	EPSA believes that it is appropriate that transformers other than generator step-up transformers, including Phase Angle Regulators, with primary and secondary windings of 100 kV or higher should be classified as part of the BES under the proposed definition for Project 2010-17.
SERC EC Planning Standards Subcommittee	Yes	
MRO's NERC Standards Review Subcommittee	Yes	Yes, since FERC has directed the bright-line criteria is 100kV or above.
IRC Standards Review Committee	Yes	
Bonneville Power Administration	Yes	
FirstEnergy Corp	Yes	
SERC OC Standards Review Group	Yes	
Arizona Public Service Company	Yes	AZPS agrees that Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, with both primary and secondary windings of 100 kV or higher should be classified as part of the BES.
Pepco Holdings Inc.	Yes	Transformers with primary greater than 100kv (connected to a BES facility) but a secondary less than 100kv are not specially addressed. They should be specially “excluded” and not part of an exemption process.
LCRA Transmission Services Corporation	Yes	ERCOT, this would include the 138:345-kV autotransformers.
Manitoba Hydro	Yes	
North Carolina EMC	Yes	

Organization	Yes or No	Question 1 Comment
on behalf of Teck Metals Ltd.	Yes	
Southern California Edison	Yes	SCE currently reports on many of its transformers with both primary and secondary windings of 100kV or higher.
on behalf of Catalyst Paper Corporation	Yes	
City of Grand Island	Yes	
ISO New England Inc.	Yes	
Entergy Services	Yes	
United Illuminating Company	Yes	
American Transmission company	Yes	
City of Austin dba Austin Energy	Yes	
Duke Energy	Yes	Only those transformers that are not a radial Transmission Element should be included.
The Dayton Power and Light Company	Yes	
ITC Holdings Corp	Yes	
BGE	Yes	No comment.
City Water Light and Power (CWLP) - Springfield, IL	Yes	
American Electric Power (AEP)	Yes	

Organization	Yes or No	Question 1 Comment
Southern Company	Yes	Only non-radial networked transformers with both primary and secondary voltages >_100kV should be included in the BES definition.
Idaho Power	Yes	
Independent Electricity System Operator	Yes	Conditional on having an exemption criteria/process which must still be developed.
Springfield Utility Board	Yes	If BOTH primary AND secondary windings are 100kV or higher
Clark Public Utilities	Yes	
Xcel Energy	Yes	
City of Redding	Yes	Only if the elements or facilities are shown through engineering studies to be necessary to reliably operate an interconnected transmission system.
Response: Thank you for your response. Please see the summary consideration immediately under the question. Several stakeholders made suggestions that were adopted by the drafting team.		

2. Should the following be classified as part of the BES?

- **Individual generation resources (including GSU transformers and the associated generator interconnecting line lead(s)) greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above**

Summary Consideration: Most Stakeholders who responded to this question disagreed with at least some part of the proposal.

The SDT has discussed the history and determination of the 20 MVA threshold for inclusion of generating units in the Statement of Compliance Registry Criteria and subsequently into a draft definition of the BES. Two Regional Entities (FRCC and RFC) specifically use this criterion in each of their current BES definitions. The 20 MVA unit is a low enough level to capture most generating units that have an effect on the reliability of the BES and that may be dispatched by Balancing Authorities, but allows for the exclusion of smaller units, such as 10 MVA units, connected to the BES that may not be dispatched by Balancing Authorities. The SDT believes that the 20 MVA threshold for inclusion of generating units connected at 100 kV and above is proper for inclusion in the BES since there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria. The SDT also has carefully discussed the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable. The SDT believes it does not make sense to include generation in the BES without including the Facilities to transfer power from a generating unit to the BES. The GSUs and line leads must be a part of the BES the same as other Facilities are part of the BES.

Commenters have suggested other thresholds (anywhere from 0 to 100 MVA) for generation plants to be included into the BES definition. However, as of this date commenters have not submitted technical justification upon which to base a significant departure from the generation MVA thresholds included in the NERC Statement of Compliance Registry Criteria.

Included in the BES: I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above.

Included in BES: I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.

Included in the BES: I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.

Excluded from the BES: E2 - A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing

Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	Some generators act as a local load modifier, regardless of connected voltage. The power generated is consumed locally and does not flow up onto the BES, nor does its operation materially impact any BES transmission facilities. If a generator functions as a local load modifier and does not materially impact the BES, meaning that it is not necessary to maintain BES reliability, then it should be excluded from the definition of BES under the BES Exemption Process.
Orange and Rockland Utilities, Inc.	No	Some generators act as a local load modifier, regardless of connected voltage. The power generated is consumed locally and does not flow up onto the BES, nor does its operation materially impact any BES transmission facilities. If a generator functions as a local load modifier and does not materially impact the BES, meaning that it is not necessary to maintain BES reliability, then it should be excluded from the definition of BES under the BES Exemption process.
Response: The SDT has discussed the behind-the-meter customer generation issues and has addressed it in the revised BES definition. Excluded from the BES: E2 - A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in items I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
Public Service Enterprise Group Company	No	The concept of a stand-alone generator connected through a single GSU transformer to the grid at greater than 100kV should be included as part of the BES. However, the term "generation resources" is too vague leading to possible misinterpretation as to what associated generator resource elements are to be included within the BES. All those "resources" and any connected element would be part of the BES? The definition should clearly describe (with examples) of the intent of what should be included within the BES scope.. (e.g. Would a station service transformer connected at 26kV which is part of the generation "resource" be included as a BES element)?
Response: The SDT has discussed what constitutes a "generation resource" including balance of generation plant controls and auxiliary equipment and believes that balance of plant equipment is not within the scope of this project. The term "generation resource" is no longer used in the revised definition. Certain equipment, such as protection systems and under-frequency Load shed controls, may not be part of the BES, but may be subject to specific NERC standards requirements. Generation plant controls should be treated in a similar fashion.		

Organization	Yes or No	Question 2 Comment
Electric Market Policy	No	Dominion does not agree that a generation resource should be classified as part of the BES.Dominion supports the criteria for registering owners, operators, and users of the bulk power system, as indicated in the current Statement of Compliance Registry Criteria .
Response: The SDT has carefully considered this matter, and believes that generating units and plants are an integral part of the BES, without which it could not function, and therefore, should be included in the BES.		
SERC OC Standards Review Group	No	We do not agree with the inclusion of GSU transformers and associated interconnecting line leads. Lines and transformers should be included based upon the voltage and not the function they serve. We support the inclusion of all non-radial lines operated at a voltage of 100 kV or higher as well as all transformers with both primary and secondary windings operated at 100 kV or higher. We do not support generic inclusions of any radial lines or transformers with primary or secondary windings operated below 100kV. Our response in question 13 amplifies this statement.
Response: The SDT has carefully discussed the inclusion of GSU transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable. The SDT believes it does not make sense to include generation in the BES without including the Facilities to transfer power from a generating unit to the BES. The GSUs and line leads must be a part of the BES the same as other Facilities are part of the BES. Please also see the response to Q13.		
PacifiCorp	No	In Order No. 743, the Commission directed NERC to adopt an exemption process for excluding facilities from the definition of the BES that are not necessary to operate an interconnected electric transmission network. In order to determine which facilities may be excluded, there must be criteria and a methodology that may be applied to identify which facilities are “necessary” to operate an interconnected electric transmission network and which “transmission and generation” facilities are not. In other words, there must be a clear way to determine what makes a particular facility is “necessary” for bulk system operation. Application of the criteria and methodology will result in the identification of the facilities that may be excluded. The comment questions asked in this questionnaire cannot be answered in a meaningful way absent this methodology. Significant efforts have been undertaken by the WECC Bulk Electric System Definition Task Force (BESDTF) over the course of the past year to identify some initial criteria and methodologies. These efforts are ongoing and should be supported by the NERC drafting team. For example: Generation units should not be included or excluded solely based on a their gross nameplate rating and the operating voltage at which they are connected to transmission facilities. Generation resources which are necessary to operate the interconnected network should be included as part of the regulated BES. Generating units which are not “necessary for the operation of the interconnected network” should be excluded. A methodology needs to be developed to

Organization	Yes or No	Question 2 Comment
		determine which generating units may be excluded as part of the regulated BES.
Central Lincoln	No	The generation resources so described should be presumed to be part of the BES unless or until they have been through the exemption process and as a result have been classified as non-BES.
PUD No.1 of Clallam County	No	The generation resources so described should be presumed to be part of the BES unless or until they have been through the exemption process and as a result have been classified as non-BES. The 20 MVA threshold is too low for many parts of the system. The interconnecting source impedance and adjacent facilities may have a more significant impact on the BES than the MVA of a machine. A 100 MVA plant connected to a high fault duty/low source impedance system may create little to thermal or transient stability concerns even under delayed clearing. However a 25 MVA plant connected to a low fault duty/high source impedance system may create concerns on a weak system. or above.
Snohomish County PUD	No	The generation resources described should not be presumed to be part of the BES. The criteria above are intended to identify GO/GOP registration as a user/owner/operator rather than to identify BES elements. On this score, we note there has been considerable confusion between the NERC Statement of Registry Criteria, which is merely intended to establish a list of entities that may presumptively be required to comply with Reliability Standards, and the BES definition, which defines which facilities are ultimately protected by Reliability Standards. In defining the BES, those concepts should be kept separate.
Response: The SDT believes the revised definition contains enough criteria (both for exceptions and inclusions) to determine most, if not all, of the Elements that will be part of the BES. The SDT also believes that the criteria for including generating units 20 MVA and greater that are connected to the BES at 100 kV and above provides the "bright-line" criteria that will eliminate the ambiguity the Commission cited in Order 743. The separate exception process will be drafted by the Rules of Procedure Drafting Team with the DBES SDT developing the bright-line criteria. There will be coordination between the two groups in this effort.		
Hydro-Québec		For questions 1 to 10, refer to questions 11 to 13.
Response: Please see response to Q11 to Q13.		
City of Redding	No	The NERC Registration Criteria thresholds were a good start at the time of implementation of the compliance program, however there is no engineering evidence that all of the facilities are necessary to reliably operate an interconnected transmission system.
Independent Electricity System	No	To be totally consistent with the 100 kV bright line approach, any Elements and Facilities that are not operated at voltages of 100 kV or higher should be excluded unless otherwise determined to be included

Organization	Yes or No	Question 2 Comment
Operator		through the exemption/inclusion process being developed.
Lewis County PUD	No	20MVA generation resources should not be part of the BES. This size generating resource is too small to affect the BES. Suggest the minimum size BES resource be changed to 100MVA for a single generator. If a smaller threshold is used then the RE or BA should demonstrate to the GO than this resource is critical to the BES
ITC Holdings Corp	No	20 MVA is too small a unit to be included in the BES definition. The definition should include units or plants with 75 MVA or more
Glacier Electric Cooperative	No	Once again, I believe it depends on the facility and whether or not it has a significant impact on the grid.
American Municipal Power	No	Suggest 50 MVA
Arizona Public Service Company	No	The minimum size should be 50 MVA connected to 200 kV or higher. Small generators or plants do not materially impact the reliability of the BES and do not need to be included.
PPL Energy Plus	No	The 20 MVA threshold appears to be arbitrary and will include many small generation facilities that have minimal impact on BES reliability, A 200 MVA aggregate threshold for generating units at the same site would be more appropriate. Generators that are smaller than 200 MVA are not likely to have a significant impact on the BES and should be excluded from the definition (without requiring application for an exemption on a case-by-case basis). The BES definition should be modified to incorporate this exclusion.(See also response to Question 8.)
LG&E and KU Energy LLC	No	
Response: The SDT has carefully considered this threshold, and believes that the 20 MVA unit is a low enough level to capture most generating units that have an effect on the reliability of the BES and may be dispatched by Balancing Authorities, but allows the exclusion of smaller units, such as 10 MVA units, connected to the BES that may not be dispatched by Balancing Authorities. The SDT believes the 20 MVA threshold for inclusion of generating units connected to the BES is proper.		
ExxonMobil Research and Engineering	No	I have reservations about the removal of the ability to use the net rating of a generation asset as the generator rating (i.e. the use of gross rating of a machine instead of net rating of the energy provided to the BES). Many industrial companies have back up power agreements with utilities to cover the loss of internal generation assets. The requirement to ensure that this back up power can be provided should be part of the NERC requirements for Transmission Operators and Balancing Authorities (e.g. the VAR-001 requirement for TOPs to obtain the necessary reactive resources to cover normal and contingency operations). The reliability goals and strategy of some large electricity consumers that this change is targeting differ from the bulk

Organization	Yes or No	Question 2 Comment
		electric system. For instance, a petrochemical facility that utilizes generation to offset the load seen by the BES may desire to disconnect from the bulk electric system during an event in order to preserve the stability of the private use network that supplies electricity to the equipment that control its chemical processes. As history has demonstrated, the most dangerous activities that petrochemical facilities undertake are the shutdown and startup of their processes. As a side note, the term 'directly connected' should be added to the NERC glossary. The concept of 'directly connected' is the key to understanding which generators are included in the BES and which generators are exempted.
Response: The SDT has carefully considered "behind-the-meter" generation, and considers it to be an exclusion to the BES. The SDT agrees with the language currently contained in the Statement of Compliance Registry Criteria regarding the exemption of net capacity associated with a retail meter. Excluded from the BES: A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority. With the revised definition and designations, the SDT does not believe that the term 'directly connected' needs to be utilized or defined.		
on behalf of Teck Metals Ltd.	No	
Indeck Energy Services	No	Same response as Question 1
on behalf of Catalyst Paper Corporation	No	
Clark Public Utilities	No	
Response: Please see response to Question 1.		
City of Grand Island	No	This is a registration criteria issue. Can this project directly cause changes in the registration criteria? 20 MVA is too low. That size of generator can not affect the Adequate Level of Reliability of the BES. 100 MVA is appropriate for this region.
Response: The goal of the SDT is not to change registration criteria if at all possible. In this case, the SDT has adopted the registration criteria and no changes are necessary.		

Organization	Yes or No	Question 2 Comment
The SDT has carefully considered this threshold, and believes that the 20 MVA unit is a low enough level to capture most generating units that have an effect on the reliability of the BES and may be dispatched by Balancing Authorities, but allows the exclusion of smaller units, such as 10 MVA units, directly connected to the BES that may not be dispatched by Balancing Authorities. The SDT believes the 20 MVA threshold for inclusion of generating units directly connected to the BES is proper.		
City of Anaheim	No	Unless the generator is required to maintain BES reliability, i.e. black start, etc., the GSU and gen tie should be excluded from the BES; provided, however, to eliminate any reliability gaps, such generation-tie equipment should be classified as "Generator" equipment subject to GO/GOP standards, and the PRC and vegetation management standards should be made applicable to GO/GOPs and this equipment. This is consistent with the NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for non-critical generation-tie transmission elements that are not required for the reliable operation of the BES.
Response: The SDT has carefully discussed the inclusion of GSU transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable. The SDT believes it does not make sense to include generation in the BES without including the Facilities to transfer power from a generating unit to the BES. The GSUs and line leads must be a part of the BES the same as other Facilities are part of the BES. The SDT has carefully considered additional Facilities that may be included in the BES due to this project and the ramifications on registration of GO/GOPs and TO/TOPs. However, the SDT must satisfy the Commission Order and do what is best for reliability of the BES. The development of the BES definition is not meant to result in registration of GO/GOPs as TO/TOPs. That issue will be addressed as needed in Project 2010-07: Generator Requirements at the Transmission Interface.		
PNGC Power	No	The generation resources described should not be presumed to be part of the BES. The criteria above are intended to identify GO/GOP registration as a user/owner/operator rather than to identify BES elements. On this score, we note there has been considerable confusion between the NERC Statement of Registry Criteria, which is merely intended to establish a list of entities that may presumptively be required to comply with Reliability Standards, and the BES definition, that defines which facilities are ultimately protected by Reliability Standards. In defining the BES, those concepts should be kept separate. In general, we do not believe that every generator rated at, or greater than, 20MVA should automatically be 'assumed' to be part of the BES. We do believe that some of the Mandatory Reliability Standards should apply however. This leads to an issue which might be somewhat philosophical, but, in this case, has real-world implications. We do not believe that the BES is contiguous. That is, say every generator which is greater than 20MVA is assumed to be part of the BES, does that mean that all the lines and equipment associated with this generator are also part of the BES? We do not think so, hence the possibility that the BES is non-contiguous. We also believe that some of the Mandatory Reliability Standards can apply to non-BES facilities, and equipment. A good example is the UFLS standards. As you might realize some UFLS relays are on lines rated well below 100kV. So in this case, a generator rated at 20MVA might not be part of the BES, but still the standards that apply to
Blachly-Lane Electric Co-op	No	
Clearwater Power Co.		
Douglas Electric Cooperative		
Central Electric Cooperative, Inc. (Redmond Oregon)	No	
Raft River Rural Electric Cooperative	No	
Northern Lights Inc.	No	

Organization	Yes or No	Question 2 Comment
Salmon River Electric Cooperative	No	a generator could still apply.
Okanogan Country Electric Cooperative	No	
Lost River Electric	No	
Lane Electric Cooperative	No	
Coos-Curry Electric Cooperative	No	
Consumer's Power Inc.	No	
Umatilla Electric Co-op	No	
West Oregon Electric Cooperative	No	
Lincoln Electric Cooperative	No	
Fall River Electric Cooperative	No	
Response: The SDT has carefully considered this threshold, and believes that the 20 MVA unit is a low enough level to capture most generating units that have an effect on the reliability and adequacy of the BES and may be dispatched by Balancing Authorities, but allows the exclusion of smaller units, such as 10 MVA units, directly connected to the BES that are not dispatched by Balancing Authorities. The SDT believes the 20 MVA threshold for inclusion of generating units directly connected to the BES is proper. The SDT also believes that the criteria of including generating units 20 MVA and greater that are connected to the BES at 100 kV and above provides the "bright-line" criteria that will eliminate the ambiguity the Commission cited in Order 743. The SDT has carefully discussed the inclusion of GSU transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable. The SDT believes it does not make sense to include generation in the BES without including the Facilities to transfer power from a generating unit to the BES. The GSUs and line leads must be a part of the BES the same as other Facilities are part of the BES.		
United Illuminating Company	No	Any Generator connected at 100 kV or above should be part of BES. There should not be a MVA threshold
Response: The SDT has carefully considered this threshold, and believes that the 20 MVA unit is a low enough level to capture most generating units that have		

Organization	Yes or No	Question 2 Comment
an effect on the reliability of the BES and may be dispatched by Balancing Authorities, but allows the exclusion of smaller units, such as 10 MVA units, directly connected to the BES that may not be dispatched by Balancing Authorities. The SDT believes the 20 MVA threshold for inclusion of generating units directly connected to the BES is proper. The SDT also believes that the criteria of including generating units 20 MVA and greater that are connected to the BES at 100 kV and above provides the "bright-line" criteria that will eliminate the ambiguity the Commission cited in Order 743.		
Southern Company	No	Lines and transformers should be included based upon the voltage and not the function they serve. We support the inclusion of all non-radial lines operated at a voltage of 100 kV or higher as well as all transformers with both primary and secondary windings operated at 100 kV or higher. We do not support generic inclusions of any radial lines or transformers with primary or secondary windings operated below 100kV. Our response in question 13 amplifies this statement. Individual, non-blackstart, generator resources of 20MVA are too small to impact the reliability of the BES. We recommend single resource (unit) inclusion threshold be increased to 75MVA to match the threshold indicated in Q3 below for the aggregated case. Units smaller than 75MVA could be included using the "exemption process" or the NERC Compliance Registry Criteria could be changed.
Response: Lines and transformers are discussed as part of Questions 1 and 5. The SDT has carefully considered this threshold, and believes that the 20 MVA unit is a low enough level to capture most generating units that have an effect on the reliability of the BES and may be dispatched by Balancing Authorities, but allows the exclusion of smaller units, such as 10 MVA units, directly connected to the BES that may not be dispatched by Balancing Authorities. The SDT believes the 20 MVA threshold for inclusion of generating units connected to the BES is proper.		
The Dow Chemical Company		As discussed in response to question #12 below, issues relating to the registry criteria applicable to generation resources should not be revisited at this time.
Response: See response to Q12.		
Bonneville Power Administration	Yes	Generation resources should also define how wind generation is included in this clarification (by turbine, by string, etc)
Response: Wind generating units would be included or excluded based upon the criteria for dispersed generation, generating units, and multiple generating units. Included in the BES: I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.		
Florida Municipal Power Agency	Yes	1. For the sake of clarity and consistency, the BES should track the Statement of Compliance Registry Criteria

Organization	Yes or No	Question 2 Comment
Transmission Access Policy Study Group	Yes	wherever possible. In this case, for example, generation resources with respect to which an entity is registered as a Generator Owner or Generator Operator should be included in the BES, while non-registered generation resources should not be included in the BES. 2. FMPA' proposal, as further explained in response to the questions below, is introduced here in the interests of clarity. FMPA proposes that the BES definition should establish the universe of Elements that are, absent other factors, considered part of the BES. FMPA supports continuing to use a general 100 kV threshold, and basing the inclusion of generators in the BES on whether the generation is registered pursuant to the Statement of Compliance Registry Criteria. There is one "exclusion" in the definition proposed by FMPA, i.e., the existing exclusion for radial transmission serving only load with one transmission source (with a proposed clarification). Unlike the definition proposed in the draft SAR, therefore, but like the current definition, FMPA' proposal treats radial transmission Elements serving only load with one transmission source like sub-100 kV Elements, in that they are presumed to be non-BES unless a showing has been made, on a case-by-case basis, that a particular radial Element is necessary for operating the interconnected electric transmission network. The current definition of the BES excludes "radial transmission facilities serving only load with one transmission source," and FERC stated in Order 743 that it did not intend to require a change to that exclusion. It is very important that radial transmission serving only load with one transmission source remain excluded from the BES; if such radials instead had to go through an exemption process, as the SDT's proposed definition suggests, the burden on small entities and on NERC and the Regional Entities would be staggering since it would be presumed that the radial would be part of the BES until exempted (opt-out), where it should be that the radial should be excluded from the BES unless there is a determination that it should be part of the BES (opt-in). 3. As explained in more detail in response to Question 8 below, FMPA supports adding the clarification that radials serving generation that is not registered pursuant to the Statement of Compliance Registry Criteria are covered by the exclusion of radials serving only load with one transmission source. Of course, the application of the definition of the BES is dynamic. For example, in considering whether new generation connected by what had previously been a radial to load should be registered, NERC may also reevaluate the exclusion of the radial. 4. FMPA' proposed definition of the BES is: In general, the Bulk Electric System includes all Transmission Elements operated at voltages of 100 kV or higher, and all generation resources registered pursuant to the Statement of Compliance Registry Criteria. Radial Transmission Elements serving only load with one Transmission source are generally not included in this definition. A radial Transmission Element may be considered as "serving only load" for purposes of the foregoing general exclusion even if it connects generation, so long as that generation is not registered pursuant to the Statement of Compliance Registry Criteria. An Element that nominally meets the general BES criteria, but which an entity demonstrates, on a case-by-case basis, is not necessary for operating the interconnected electric transmission network, shall be exempted from the BES pursuant to the NERC exemption process. An Element that does not nominally meet the general BES criteria, but which NERC demonstrates, on a case-by-case basis, is necessary for

Organization	Yes or No	Question 2 Comment
		operating the interconnected electric transmission network, shall be included in the BES pursuant to the NERC inclusion process. 5. As FMPA' proposed definition suggests, FMPA proposes that entities be able to seek "exemptions" for Elements nominally included in the BES; obtaining an exemption would require a demonstration that the Element to be exempted is not necessary for operating the interconnected electric transmission network. Elements for which NERC has approved exemptions would not be part of the BES. Conversely, FMPA proposes that NERC have the authority, upon a case-by-case demonstration that a particular Element that is not nominally included in the BES is necessary for operating the interconnected electric transmission network, to add such an Element to the BES. 6. Please see also FMPA' Official Comment Form for BES Definition Exception Process, submitted today.
Response: **1.** The SDT agrees that the definition should track the registry criteria. One of the basic tenets of the SDT scope is to not expand the registry criteria if at all possible. **2.** The SDT has revised the definition and included specific inclusion and exclusion criteria that address these issues. The SDT also believes that the revised definition provides the "bright-line" criteria that will eliminate the ambiguity the Commission cited in Order 743. The separate exception process will be drafted by the Rules of Procedure Team with the DBESSDT developing the criteria. There will be coordination between the two groups in this effort. **3.** See response to Q8. **4.** See response to #2 above. **5.** The separate exception process will be drafted by the Rules of Procedure Team with the DBESSDT developing the criteria. There will be coordination between the two groups in this effort. **6.** See response to definition exception process.		
ReliabilityFirst	Yes	It is recommended that the term "directly connected" be defined and examples of this term are included in the ERO definition. Also, most wind farms have multiple transformations when connected to the BES and the intent should be to capture these wind farms in the BES, so more specific language is most likely needed in the definition to capture them.
Response: The SDT has revised the definition and "directly connected" is no longer utilized in the revised draft definition. The SDT has addressed the issue of wind generation in the revised draft definition. Included in the BES: I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.		

Organization	Yes or No	Question 2 Comment
NERC Staff	Yes	Please see additional comments at the end of this report.
Response: Please see response to Q13.		
Constellation Power Source Generation, Inc. (“CPSG”) filing on behalf of Constellation Energy Group, Inc. (“CEG”), Constellation Energy Commodities Group, Inc. (“CCG”), Constellation Energy Control and Dispatch, LLC (“CDD”), Constellation NewEnergy, Inc., (“CNE”) and Constellation Energy Nuclear Group, LLC, (“CENG”)	Yes	Constellation firmly believes that the classifications found in the Compliance Registry Criteria - Section III (Rules of Procedure Appendix 5B), such as that cited in this question, provide a useful basis to create a comprehensive, revised BES definition. Further, we propose that the BES drafting team incorporate the criteria directly into the revised BES definition, replacing the term “bulk power system” in each criterion with “greater than 100 kV.” This would then include assets that are currently registered as BES elements as well as those that may have been previously excluded due to Regional exemption variances. Structuring the revised BES definition to clarify both the inclusions and exclusions, can, ideally, eliminate the need for an onerous exemption process as well as eliminate the need for Section III of the Registry Criteria. Please see our response to question 11 for more detail on a proposed alternative approach to structuring the BES definition revision.
Response: The SDT agrees that the definition should track the registry criteria. One of the basic tenets of the SDT scope is to not expand the registry criteria if at all possible The SDT agrees and has made the suggested change. See response to Q11.		
Occidental Energy Ventures Corp	Yes	Many generator interconnection lines are operated at voltages greater than 100KV, but have traditionally not been considered part of the the transmission system. Rather these lines have been considered part of the generation system and, for quite some time, have been constructed and operated according to interconnection agreements which specify design and protection criteria. The BES definition should not be constructed in either a direct or implied manner that would alter the interconnection line status as being part of the Generation Facilities. Otherwise, it could result in registration of GO/GOPs as TO/TOPs. The issue of what additional standards, if any, should apply to these generation interconnection lines is the subject of Project 2010-07 and should be resolved by that standards development effort, not by a definition change. The proposed definition appears not to violate the inclusion of the interconnection line as part of the Generation Facility while still providing for these lines to be part of the BES, however, some clarification might be advisable (e.g., a statement that interconnection lines are part of the Generation Facility or are Generation Elements).

Organization	Yes or No	Question 2 Comment
Response: The SDT has carefully considered additional Facilities that may be included in the BES due to this project and the ramifications on registration of GO/GOPs and TO/TOPs. However, the SDT must satisfy the Commission Order and do what is best for reliability of the BES. The development of the BES definition is not meant to result in registration of GO/GOPs as TO/TOPs. That issue will be addressed as needed in Project 2010-07: Generator Requirements at the Transmission Interface.		
American Transmission company	Yes	For clarity, ATC suggests that the (gross nameplate rating) be changed to read "(gross generator nameplate rating)" and further classified as part of the BES given that a fault or outage of the individual generator resource greater than 20 MVA would not maintain an Adequate Level of Reliability of the BES.
Response: The SDT discussed this and does not agree with the suggested wording change.		
LCRA Transmission Services Corporation	Yes	The 20 MVA threshold is too low. Should consider the region's or area's reserve margin to determine the appropriate level of individual generator loss. Leave this to the region to determine.
Response: The SDT has carefully considered this threshold, and believes that the 20 MVA unit is a low enough level to capture most generating units that have an effect on the reliability of the BES and may be dispatched by Balancing Authorities, but allows the exclusion of smaller units, such as 10 MVA units, connected to the BES that may not be dispatched by Balancing Authorities. The SDT believes the 20 MVA threshold for inclusion of generating units connected to the BES is proper. The SDT's goal is to "eliminate the regional discretion in the ERO's current definition", which is specifically stated in the Commission's Order.		
Utility Services	Yes	Initially, yes; however, such a classification could be exempted upon a NERC review of the technical justification for exemption.
Response: The SDT believes the revised definition will contain enough criteria to determine most, if not all, of the Facilities that will be part of the BES. The exception process will be handled through the revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. Your comments will be forwarded to the Rules of Procedure Team.		
Xcel Energy	Yes	Xcel Energy believes that clarity should be added as to what constitutes an individual generation resource and a generating plant, especially as it pertains to multiple owner facilities and aggregating facilities such as wind or solar farms (which may also have multiple owners for discreet facilities that tie into a common bus). Discussion and controversy in other NERC and regional forums and standard development teams indicates that this is not well defined. It may be that the Statement of Compliance Registry needs to be enhanced if it forms the foundation for which these items are to be understood.

Organization	Yes or No	Question 2 Comment
Response: The new wording for generating units in the revised definition has addressed this issue. The Statement of Compliance Registry Criteria should agree with the BES definition, as they are intended not to be in conflict with each other. Included in the BES: I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above. Included in BES: I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above. Included in the BES: I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.		
MRO's NERC Standards Review Subcommittee	Yes	The SAR DT should use caution if the above statement is to be used within a guideline or rational box. The use of the word “interconnecting line leads may be somewhat ambiguous and lead to other confusion. GSU should be spelled out as a “generator step up transformer” and properly used within the statement: Individual generation resources (including Generator Step Up transformers and the associated generator interconnecting line lead(s)) greater than 20 MVA (gross nameplate rating) directly connected via a Generator Step-Up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above. For clarity, the NSRS suggests that the (gross nameplate rating) be changed to read “(gross generator nameplate rating)” and further classified as part of the BES given that a fault or outage of the individual generator resource greater than 20 MVA would not maintain an Adequate Level of Reliability of the BES.
Response: The term “interconnecting lines leads” has been deleted in the revised definition. Included in the BES: I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above. Included in BES: I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above. All acronyms used in the definition and supporting materials will be spelled out. The SDT discussed the wording change to the term “gross generator nameplate rating” and does not agree with the suggested wording change.		
SERC EC Planning Standards Subcommittee	Yes	
IRC Standards Review	Yes	

Organization	Yes or No	Question 2 Comment
Committee		
FirstEnergy Corp	Yes	
Competitive Suppliers	Yes	
Pepco Holdings Inc.	Yes	
Manitoba Hydro	Yes	Increasing numbers of small generators could create reliability issues if excluded.
North Carolina EMC	Yes	
Southern California Edison	Yes	SCE currently reports on individual generation resources (including GSU transformers and the associated generator interconnecting line lead(s)) greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above. SCE does not feel a blanket inclusion of all the listed equipment is needed.
Southern California Edison Company	Yes	A GSU transformer is clearly an extension of the functionality provided by the Generator Interconnection Elements, namely, to move bulk power from the BES generator to the BES network, and hence, the classification of the GSU transformer should match that of the Generator Interconnection Elements.
Entergy Services	Yes	
City of Austin dba Austin Energy	Yes	
Duke Energy	Yes	
The Dayton Power and Light Company	Yes	
BGE	Yes	No comment.
City Water Light and Power (CWLP) - Springfield, IL	Yes	

Organization	Yes or No	Question 2 Comment
American Electric Power (AEP)	Yes	
Idaho Power	Yes	
Springfield Utility Board	Yes	"directly connected" is important.
Response: Thank you for your response. Please see the summary consideration immediately under the question. Several stakeholders made suggestions that were adopted by the drafting team.		

3. Should the following be classified as part of the BES?

- **Generation plants (including GSU transformers and the associated generator interconnecting line lead(s))with aggregate capacity greater than 75 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above**

Summary Consideration: While many commenters did agree with the proposal, most commenters who responded to this question disagreed with some aspect of the proposal.

The SDT believes that generation plants larger than 75 MVA connected above 100kV need to be included within the BES definition. This threshold is based on the generation threshold values found in the NERC Statement of Compliance Registry Criteria. Also, two Regional Entities (FRCC and RFC) specifically use this criterion in each of their current BES definitions. The 75 MVA plant is a low enough level to capture most generating plants that would have an effect on the reliability of the interconnected Transmission network.

Commenters have suggested other thresholds (anywhere from 0 to 300 MVA) for generation plants to be included into the BES definition. However, as of this date commenters have not submitted technical justification upon which to base a significant departure from the generation MVA thresholds included in the NERC Statement of Compliance Registry Criteria.

Included in BES: I3 – Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.

Included in BES: I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.

Excluded from BES: E2 - A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.

Organization	Yes or No	Question 3 Comment
Northeast Power Coordinating Council	No	Refer to the response Question 2 above. The answer depends on whether the generator output is consumed locally or is necessary to maintain the reliability of the BES.
PUD No.1 of Clallam County	No	See comments to question2.
Orange and Rockland Utilities, Inc.	No	Refer to the response Question 2 above. The answer depends on whether the generator output is consumed locally or is necessary to maintain the reliability of the BES.

Organization	Yes or No	Question 3 Comment
City of Redding	No	As in question 2, there is no engineering evidence that all of the facilities are necessary to reliably operate an interconnected transmission system.
Response: Please see response to Q2.		
Electric Market Policy	No	Dominion does not agree that generation plants should be classified as part of the BES.Dominion supports the criteria for registering owners, operators, and users of the bulk power system, as indicated in the current Statement of Compliance Registry Criteria .
Response: Dominion makes the suggestion that all generators be excluded from the BES, however, Dominion does not provide a technical justification for this significant departure. The SDT believes that generation plants larger than 75 MVA connected above 100kV need to be included within the BES definition. The exception process should allow for the possibility that certain generating plants larger than 75 MVA can be excluded if it can be proven that such plants are not necessary for operating the interconnected Transmission network. Additionally, the Commission in its Order 743 suggests that the revised BES definition should include exception processes for exclusion/inclusion of various Elements. The process for such exclusions/inclusions will be developed as part of the revision to the NERC Rules of Procedure by a different team in a parallel effort to the development of this BES definition.		
SERC OC Standards Review Group	No	We do not agree with the inclusion of GSU transformers and associated interconnecting line leads. Lines and transformers should be included based upon the voltage and not the function they serve. We support the inclusion of all non-radial lines operated at a voltage of 100 kV or higher as well as all transformers with both primary and secondary windings operated at 100 kV or higher. We do not support generic inclusions of any radial lines or transformers with primary or secondary windings operated below 100kV. Our response in question 13 amplifies this statement.
Response: SERC has not provided justification for excluding all GSU transformers and associated interconnecting lines leads from the BES. The SDT believes that generation plants larger than 75 MVA connected above 100kV including GSU transformers and interconnecting line leads need to be included within the BES. The SDT has revised the definition and included specific inclusion and exclusion criteria that address these issues. Included in BES: I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.		
PacifiCorp	No	In Order No. 743, the Commission directed NERC to adopt an exemption process for excluding facilities from the definition of the BES that are not necessary to operate an interconnected electric transmission network.

Organization	Yes or No	Question 3 Comment
		In order to determine which facilities may be excluded, there must be criteria and a methodology that may be applied to identify which facilities are "necessary" to operate an interconnected electric transmission network and which "transmission and generation" facilities are not. In other words, there must be a clear way to determine what makes a particular facility is "necessary" for bulk system operation. Application of the criteria and methodology will result in the identification of the facilities that may be excluded. The comment questions asked in this questionnaire cannot be answered in a meaningful way absent this methodology. Significant efforts have been undertaken by the WECC Bulk Electric System Definition Task Force (BESDTF) over the course of the past year to identify some initial criteria and methodologies. These efforts are ongoing and should be supported by the NERC drafting team. For example: Generation plants should not be included or excluded solely based on a their gross nameplate rating and the operating voltage at which they are connected to transmission facilities. Generation plants which are necessary to operate the interconnected network should be included as part of the regulated BES. Generating plants which are not "necessary for the operation of the interconnected network" should be excluded. A methodology needs to be developed to determine which generating plants may be excluded as part of the regulated BES.
Response: The SDT acknowledges that commenters will need to reserve judgment on the exception process, which is being developed as a modification to the NERC Rules of Procedure (ROP). This exception process will be a parallel effort to this BES definition development. The SDT further acknowledges the work of WECC and other regional entities (e.g., RFC, FRCC, and NPCC) in proposing the BES definition, bright lines, and exclusion/inclusion criteria and processes. The work of these regional entities has greatly helped the SDT. The SDT believes that generation plants larger than 75 MVA connected above 100kV need to be included within the BES definition. The exception process should allow for the possibility that certain generating plants larger than 75 MVA can be excluded if it can be proven that such plants are not necessary for operating the interconnected Transmission network. Additionally, the Commission in its Order 743 suggests that the revised BES definition should include exception processes for exclusion/inclusion of various Elements. The process for such exclusions/inclusions will be developed as part of the revision to the NERC Rules of Procedure by a different team in a parallel effort to the development of this BES definition.		
PPL Energy Plus	No	See response to Questions 2 and 8.
LG&E and KU Energy LLC	No	See response to Questions 2 and 8.
Response: See response to Q2 & Q8.		
ExxonMobil Research and Engineering	No	I have reservations about the removal of the ability to use the net rating of a generation asset as the generator rating (i.e. the use of gross rating of a machine instead of net rating of the energy provided to the BES). Many industrial companies have back up power agreements with utilities to cover the loss of internal generation assets. The requirement to ensure that this back up power can be provided should be part of the NERC requirements for Transmission Operators and Balancing Authorities (e.g. the VAR-001 requirement for

Organization	Yes or No	Question 3 Comment
		TOPs to obtain the necessary reactive resources to cover normal and contingency operations). The reliability goals and strategy of some large electricity consumers that this change is targeting differ from the bulk electric system. For instance, a petrochemical facility that utilizes generation to offset the load seen by the BES may desire to disconnect from the bulk electric system during an event in order to preserve the stability of the private use network that supplies electricity to the equipment that control its chemical processes. As history has demonstrated, the most dangerous activities that petrochemical facilities undertake are the shutdown and startup of their processes. As a side note, the term 'directly connected' should be added to the NERC glossary. The concept of 'directly connected' is the key to understanding which generators are included in the BES and which generators are exempted.
Response: The SDT's proposed BES definition has exclusion criteria that address these issues. Excluded from BES: E2 - A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
Arizona Public Service Company	No	The minimum plant size should be 300 MVA. Smaller plants do not materially impact the reliability of thle BES.
Response: The SDT appreciates the suggestion of a 300 MVA generation threshold for materiality of impact, however, as of this date sufficient technical justification has not been submitted upon which to base a significant departure from the generation MVA thresholds included in the NERC Statement of Compliance Registry Criteria. The SDT believes that generation plants larger than 75 MVA connected above 100kV need to be included within the BES definition. The exception process should allow for the possibility that certain generating plants larger than 75 MVA can be excluded if it can be proven that such plants are not necessary for operating the interconnected Transmission network. Additionally, the Commission in its Order 743 suggests that the revised BES definition should include exception processes for exclusion/inclusion of various Elements. The process for such exclusions/inclusions will be developed as part of the revision to the NERC Rules of Procedure by a different team in a parallel effort to the development of this BES definition.		
Central Lincoln	No	The generation resources so described should be presumed to be part of the BES unless or until they have been through the exemption process and as a result have been classified as non-BES.
Response: Thank you for your response. The SDT agrees.		
American Municipal Power	No	Suggest 125 MVA

Organization	Yes or No	Question 3 Comment
Response: The SDT appreciates the suggestion of a 125 MVA generation threshold, however, as of this date sufficient technical justification has not submitted upon which to base a significant departure from the generation MVA thresholds included in the NERC Statement of Compliance Registry Criteria. The SDT believes that generation plants larger than 75 MVA connected above 100kV need to be included within the BES definition. The exception process should allow for the possibility that certain generating plants larger than 75 MVA can be excluded if it can be proven that such plants are not necessary for operating the interconnected Transmission network. Additionally, the Commission in its Order 743 suggests that the revised BES definition should include exception processes for exclusion/inclusion of various Elements. The process for such exclusions/inclusions will be developed as part of the revision to the NERC Rules of Procedure, in a parallel effort to the development of this BES definition.		
Indeck Energy Services	No	Same Response as Question 1
Response: See response to Q1.		
City of Grand Island	No	75 MVA aggregate is too low. 200 MVA aggregate is appropriate for this region.
Response: The SDT appreciates the suggestion of a 200 MVA generation threshold however, as of this date sufficient technical justification has not been submitted upon which to base a significant departure from the generation MVA thresholds included in the NERC Statement of Compliance Registry Criteria. The SDT believes that generation plants larger than 75 MVA connected above 100kV need to be included within the BES definition. The exception process should allow for the possibility that certain generating plants larger than 75 MVA can be excluded if it can be proven that such plants are not necessary for operating the interconnected Transmission network. Additionally, the Commission in its Order 743 suggests that the revised BES definition should include exception processes for exclusion/inclusion of various Elements. The process for such exclusions/inclusions will be developed as part of the revision to the NERC Rules of Procedure by a different team in a parallel effort to the development of this BES definition.		
City of Anaheim	No	Unless the generator is required to maintain BES reliability, i.e. black start, etc., the GSU and gen tie should be excluded from the BES; provided, however, to eliminate any reliability gaps, such generation-tie equipment should be classified as "Generator" equipment subject to GO/GOP standards, and the PRC and vegetation management standards should be made applicable to GO/GOPs and this equipment. This is consistent with the NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for non-critical generation-tie transmission elements that are not required for the reliable operation of the BES.
Response: The SDT appreciates the City's suggestions, however; the City's recommendations go beyond the SAR scope of work given to the SDT. The SDT has not been charged with determining the applicability of various standards. Also, as of this date sufficient justification has not been submitted demonstrating that GSU transformers and interconnecting generation ties should be excluded from the BES. The SDT believes that generation plants larger than 75 MVA connected above 100kV need to be included within the BES definition. The exception process		

Organization	Yes or No	Question 3 Comment
should allow for the possibility that certain generating plants larger than 75 MVA can be excluded if it can be proven that such plants are not necessary for operating the interconnected Transmission network. Additionally, the Commission in its Order 743 suggests that the revised BES definition should include exception processes for exclusion/inclusion of various Elements. The process for such exclusions/inclusions will be developed as part of the revision to the NERC Rules of Procedure by a different team in a parallel effort to the development of this BES definition.		
Snohomish County PUD	No	The generation resources described should not be presumed to be part of the BES. The criteria above are intended to identify those entities that are required to register as user, owner or operator of the bulk system, and not to define a BES device. As noted in our response to question 2, Snohomish is concerned that the enforcement process to date has frequently conflated registry criteria and definitions of the BES.
Response: Snohomish has not provided justification for varying from a 75 MVA bright line for determining BES generation plants. Further, as of this date, the SDT has not received sufficient technical justification upon which to base a significant departure from the generation MVA thresholds included in the NERC Statement of Compliance Registry Criteria. The SDT believes that generation plants larger than 75 MVA connected above 100kV need to be included within the BES definition. The exception process should allow for the possibility that certain generating plants larger than 75 MVA can be excluded if it can be proven that such plants are not necessary for operating the interconnected Transmission network. Additionally, the Commission in its Order 743 suggests that the revised BES definition should include exception processes for exclusion/inclusion of various Elements. The process for such exclusions/inclusions will be developed as part of the revision to the NERC Rules of Procedure by a different team in a parallel effort to the development of this BES definition.		
PNGC Power	No	Please see our response to Question 2 .
Blachly-Lane Electric Co-op	No	
Clearwater Power Co.	No	
Douglas Electric Cooperative	No	
Central Electric Cooperative, Inc. (Redmond Oregon)	No	
Raft River Rural Electric Cooperative	No	
Northern Lights Inc.	No	

Organization	Yes or No	Question 3 Comment
Salmon River Electric Cooperative	No	
Okanogan Country Electric Cooperative	No	
Lost River Electric	No	
Lane Electric Cooperative	No	
Coos-Curry Electric Cooperative	No	
Consumer's Power Inc.	No	
Umatilla Electric Co-op	No	
West Oregon Electric Cooperative	No	
Lincoln Electric Cooperative	No	
Fall River Electric Cooperative	No	
Response: See response to Q2.		
Glacier Electric Cooperative	No	Once again, I believe it depends on the facility and its importance to the grid. Some 75 MVA plants will have a greater impact than others. The ones that are truly important to the grid should be include, but the ones that are not should not be. I believe more of an analytical approach would be much more accurate in determing which facilities truly should be part of the BES than the bright-line approach that is being attempted.
United Illuminating Company	No	Any goupr of Generators connected at 100 kV or above should be part of BES. There should not be a MVA threshold
Response: The SDT believes that generation plants larger than 75 MVA connected above 100kV need to be included within the BES definition. The exception process – for exclusions/inclusions – should allow for the possibility that certain generating plants larger than 75 MVA can be excluded if it can be proven that such		

Organization	Yes or No	Question 3 Comment
plants are not necessary for operating the interconnected Transmission network. Additionally, the Commission in its Order 743 suggests that the revised BES definition should include exception processes for exclusion/inclusion of various Elements. The process for such exclusions/inclusions will be developed as part of the revision to the NERC Rules of Procedure, in a parallel effort to the development of this BES definition.		
Lewis County PUD	No	75MVA generation resources should not be part of the BES. This size generating resource is too small to affect the BES. Suggest the minimum size BES resource be changed to 150MVA. If a smaller threshold is used then the RE or BA should demonstrate to the GO than this resource is critical to the BES.
Response: The SDT appreciates the suggestion of a 150 MVA threshold for materiality of impact, however, sufficient technical justification has not been submitted upon which to base a significant departure from the generation MVA thresholds included in the NERC Statement of Compliance Registry Criteria. The SDT believes that generation plants larger than 75 MVA connected above 100kV need to be included within the BES definition. The exception process should allow for the possibility that certain generating plants larger than 75 MVA can be excluded if it can be proven that such plants are not necessary for operating the interconnected Transmission network. Additionally, the Commission in its Order 743 suggests that the revised BES definition should include exception processes for exclusion/inclusion of various Elements. The process for such exclusions/inclusions will be developed as part of the revision to the NERC Rules of Procedure by a different team in a parallel effort to the development of this BES definition.		
Independent Electricity System Operator	No	Same comment as in Q3, above.
Response: It is assumed that the commenter is referring to Q2. See SDT response to Q2.		
The Dow Chemical Company		As discussed in response to question #12 below, issues relating to the registry criteria applicable to generation resources should not be revisited at this time.
Response: See response to Q12.		
Constellation Power Source Generation, Inc. (“CPSG”) filing on behalf of Constellation Energy Group, Inc. (“CEG”), Constellation Energy Commodities Group, Inc. (“CCG”), Constellation Energy Control and Dispatch, LLC (“CDD”), Constellation	Yes	Constellation firmly believes that the classifications found in the Compliance Registry Criteria - Section III (Rules of Procedure Appendix 5B), such as that cited in this question, provide a useful basis to create a comprehensive, revised BES definition. Further, we propose that the BES drafting team incorporate the criteria directly into the revised BES definition, replacing the term “bulk power system” in each criterion with “greater than 100 kV.” This would then include assets that are currently registered as BES elements as well as those that may have been previously excluded due to Regional exemption variances. Structuring the revised BES definition to clarify both the inclusions and exclusions, can, ideally, eliminate the need for an onerous exemption process as well as

Organization	Yes or No	Question 3 Comment
NewEnergy, Inc., ("CNE") and Constellation Energy Nuclear Group, LLC, ("CENG")		eliminate the need for Section III of the Registry Criteria. Please see our response to question 11 for more detail on a proposed alternative approach to structuring the BES definition revision.
Response: the SDT agrees that the Registry Criteria is a valuable resource for deliberations on a BES definition and has utilized it whenever possible. The SDT agrees and has made the suggested change. See response to Question 11.		
Occidental Energy Ventures Corp	Yes	Many generator interconnection lines are operated at voltages greater than 100KV, but have traditionally not been considered part of the the transmission system. Rather these lines have been considered part of the generation system and, for quite some time, have been constructed and operated according to interconnection agreements which specify design and protection criteria. The BES definition should not be constructed in either a direct or implied manner that would alter the interconnection line status as being part of the Generation Facilities. Otherwise, it could result in registration of GO/GOPs as TO/TOPs. The issue of what additional standards, if any, should apply to these generation interconnection lines is the subject of Project 2010-07 and should be resolved by that standards development effort, not by a definition change. The proposed definition appears not to violate the inclusion of the interconnection line as part of the Generation Facility while still providing for these lines to be part of the BES, however, some clarification might be advisable (e.g., a statement that interconnection lines are part of the Generation Facility or are Generation Elements).
Response: The SDT appreciates the Occidental's suggestions, however; the recommendations go beyond the SAR scope of work given to the SDT. The SDT has not been charged with determining the applicability of various standards.		
American Transmission company	Yes	For clarity, ATC suggests that the ". . . aggregate capacity greater than 75 MVA . . . " wording be changed to read, ". . . aggregate generator capacity greater than 75 MVA. . . and further classified as part of the BES given that a fault or outage of the aggregate generator capacity greater than 75 MVA would not maintain an Adequate Level of Reliability of the BES.
Response: The SDT appreciates the ATC's concern; however, ATC has not provided rationale for the change.		
Xcel Energy	Yes	Xcel Energy believes that clarity should be added as to what constitutes an individual generation resource and a generating plant, especially as it pertains to multiple owner facilities and aggregating facilities such as wind or solar farms (which may also have multiple owners for discreet facilities that tie into a common bus). Discussion and controversy in other NERC and regional forums and standard development teams indicates

Organization	Yes or No	Question 3 Comment
		that this is not well defined. It may be that the Statement of Compliance Registry needs to be enhanced if it forms the foundation for which these items are to be understood.
Response: The SDT has revised the BES definition and has included specific inclusion and exclusion criteria that addresses dispersed generation plants (including wind and solar farms, which may contain multiple owners). Included in BES: I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above. The SDT has not been charged with making changes to NERC's Statement of Compliance Registry Criteria and has adopted a goal of not changing that criteria if at all possible.		
Bonneville Power Administration	Yes	There needs to be additional clarity on the definition of generation plant. Wind generation needs to be incorporated.
Response: The SDT has revised the BES definition and has included specific inclusion and exclusion criteria that addresses dispersed generation plants (including wind and solar farms). Included in BES: I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.		
NERC Staff	Yes	Please see additional comments at the end of this document.
Response: These comments were submitted in response to the concepts paper and were considered		
MRO's NERC Standards Review Subcommittee	Yes	See question 2 for similar comments and it is apparent that the SDT is trying to model the BES definition on the Statement of Compliance Registry Criteria (v5). Recommend that this question be struck. Question 2 above addresses connection requirements of Generators. For clarity, NSRS suggests that the ". . . aggregate capacity greater than 75 MVA . . . " wording be changed to read, ". . . aggregate generator capacity greater than 75 MVA. . . and further classified as part of the BES given that a fault or outage of the aggregate generator capacity greater than 75 MVA would not maintain an Adequate Level of Reliability of the BES.
Response: The SDT appreciates the comments; however, the SDT has not received sufficient technical justification upon which to base a significant departure from the generation MVA thresholds included in the NERC's Statement of Compliance Registry Criteria. MRO has not provided a rationale for making the language change.		
ReliabilityFirst	Yes	It is recommended that the term "directly connected" be defined and examples of this term are included in the

Organization	Yes or No	Question 3 Comment
		ERO definition.
Response: The SDT has revised the definition and the term "directly connected" is no longer utilized.		
SERC EC Planning Standards Subcommittee	Yes	
Public Service Enterprise Group Company	Yes	Yes, but see comments in section 2 above.
IRC Standards Review Committee	Yes	
Florida Municipal Power Agency	Yes	See FMPA response to Question 2 above.
FirstEnergy Corp	Yes	
Transmission Access Policy Study Group	Yes	See TAPS response to Question 2 above.
Competitive Suppliers	Yes	
Pepco Holdings Inc.	Yes	
LCRA Transmission Services Corporation	Yes	See comment to item 2 above.
Manitoba Hydro	Yes	
North Carolina EMC	Yes	
on behalf of Teck Metals Ltd.	Yes	
Southern California Edison	Yes	SCE currently reports on generation plants (including GSU transformers and the associated generator interconnecting line lead(s))with aggregate capacity greater than 75 MVA (gross nameplate rating) directly

Organization	Yes or No	Question 3 Comment
		connected via a step-up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above. SCE does not feel a blanket inclusion of all the listed equipment is needed.
Southern California Edison Company	Yes	A GSU transformer is clearly an extension of the functionality provided by the Generator Interconnection Elements, namely, to move bulk power from the BES generator to the BES network, and hence, the classification of the GSU transformer should match that of the Generator Interconnection Elements.
on behalf of Catalyst Paper Corporation	Yes	
Entergy Services	Yes	
Utility Services	Yes	Initially, yes; however, such a classification could be exempted upon a NERC review of the technical justification for exemption.
City of Austin dba Austin Energy	Yes	
Duke Energy	Yes	
The Dayton Power and Light Company	Yes	
ITC Holdings Corp	Yes	
BGE	Yes	No comment.
City Water Light and Power (CWLP) - Springfield, IL	Yes	
American Electric Power (AEP)	Yes	
Southern Company	Yes	However, considering today's transmission network and typical plant size, the plant size that can impact the reliability should be reevaluated. Particularly Wind Farms with dozens of small generators could have an impact on the BES if enough exist. Therefore, the 75 MVA threshold should work in this instance.

Organization	Yes or No	Question 3 Comment
Idaho Power	Yes	
Springfield Utility Board	Yes	"directly connected" is important.
Clark Public Utilities	Yes	
Response: Thank you for your response. Please see the summary consideration immediately under the question. Several stakeholders made suggestions that were adopted by the drafting team.		

4. Should the following be classified as part of the BES?

- **Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's (TOP's) restoration plan**

Summary Consideration: There was no consensus amongst commenters who responded to this question. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, to meet a Transmission Operator's restoration plan requirements for real and reactive power capability, frequency, and voltage control. The portion of the electric system that can be isolated and then energized to deliver electric power from a Blackstart Resource is essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT has included Blackstart Resources and the corresponding designated blackstart Cranking Paths indentified in the Transmission Operator's restoration plan as BES Elements.

Organization	Yes or No	Question 4 Comment
SERC EC Planning Standards Subcommittee	No	A blackstart designation should not necessarily make it part of the BES.
Southern Company	No	
Response: The SDT disagrees. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for real and reactive power capability, frequency, and voltage control. The portion of the electric system that can be isolated and then energized to deliver electric power from Blackstart Resources are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT has included Blackstart Resources and the corresponding designated blackstart Cranking Paths indentified in the Transmission Operator's restoration plan as BES Elements.		
Public Service Enterprise Group Company	No	Including these in the definition of BES would impose compliance obligations for these assets even if below 100kV at the same level as assets at or above the 100kV level. Blackstart Resources and Cranking Paths below 100kV do not impact the reliability of the BES and thus should not be required to comply with all standards as if they did. For example, 26kV cranking path protection systems typically only trip the 26kV, not 100kV or higher BES transmission facilities, thus do not impact the BES, and should not be required to meet

Organization	Yes or No	Question 4 Comment
		BES compliance standards for system protection. That assets can have different impacts and thus different levels of required compliance is expressly recognized in the recently stakeholder approved CIP-002-4 draft standard where blackstart cranking paths must be included as critical assets subject to CIP protections only to the point where two or more path options exist. Rather than include all Blackstart Resources and the designated Blackstart Cranking Paths indentified in the Transmission Operator's (TOP's) restoration plan in the blanket definition of BES, the drafting team should be directed to develop a definition that states that these assets are not part of the BES except where specifically identified in a requirement of a standard as needing to be compliant. For example, a standard requiring testing of Blackstart units would result in a Blackstart unit being deemed BES for purposes of that standard only.
FirstEnergy Corp	No	Blackstart generation and cranking paths do not need to be defined as being part of the BES. Rather, they are more appropriately reflected as supporting and restoring operation of the BES. Not all aspects of the BES reliability standards pertain to BES facilities. For example, UFLS and UVLS installed on a distribution system are important to arrest BES reliability concerns but they are not needed in what defines the BES. Similarly, blackstart generation and Cranking Paths do not need to be inclusive of what defines the BES but are important aspects of a restoration plan to re-establish a functioning BES.
American Transmission company	No	Blackstart Resources and designated blackstart Cranking Paths should not be classified as part of the BES, except those Elements and/or Facilities that are rated 100 kV or more and with a gross generator nameplate rating of 20 MVA or more.
City of Austin dba Austin Energy	No	Just because a unit can be used for black start should not - by definition - mean it is part of the BES. For example, there may be a very small unit which can be used for black start and the operating utility should not have to comply with all the NERC Standards all the time when that asset becomes "important" only during a black start event. Additionally, protective systems associated with small black start units would have to fulfill the same reliability requirements as any other BES generator even though those protective systems would have little purpose during a black start event.
Response: The SDT disagrees. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for real and reactive power capability, frequency, and voltage control. The portion of the electric system that can be isolated and then energized to deliver electric power from Blackstart Resources are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT has included Blackstart Resources and the corresponding designated blackstart Cranking Paths indentified in the Transmission Operator's restoration plan as BES Elements.		

Organization	Yes or No	Question 4 Comment
Again, Facilities identified as necessary for blackstart capability (both Blackstart Resources and the blackstart Cranking Path) in a Transmission Operator's restoration plan should be designated as part of the BES, and be subject to the corresponding NERC Standards referencing the BES. A review of the NERC Reliability Standards will be undertaken once the BES Definition is finalized to clearly delineate responsibilities for owners and operators of BES designated Facilities.		
MRO's NERC Standards Review Subcommittee	No	This question is irrelevant to the scope of this project. A Blackstart Resource may be a 10 MVA unit connected at the distribution level of voltage and within the TOP's Restoration Plan. Just because the unit is within the TOP's Restoration Plan does not make it a BES connected asset. CIP-002-4 is already industry approved and may "push" both large and small entities to remove these units from the TOP's Restoration Plan due to the Critical Asset label. If the Blackstart Resource is connected via GSU at 100 kV then it would be part of the BES. If the SDT is worried that a Blackstart Resource will not be maintained or tested, those requirements are within EOP-005-1 (and yet to be approved EOP-005-2). Blackstart Resources and designated blackstart Cranking Paths should not be classified as part of the BES, except those Elements and/or Facilities that are rated 100 kV or more and with a gross nameplate rating of 20 MVA or more.
Response: The SDT disagrees. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for real and reactive power capability, frequency, and voltage control. The portion of the electric system that can be isolated and then energized to deliver electric power from Blackstart Resources are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT has included Blackstart Resources and the corresponding designated blackstart Cranking Paths indentified in the Transmission Operator's restoration plan as BES Elements. For example, BES generation may require external Interconnections and Facilities in order to provide power to auxiliary equipment within the plant during times of system restoration.		
IRC Standards Review Committee	No	NERC Standards EOP-00-2 stipulates the requirements for testing Blackstart Resource and Cranking Paths. This testing requirement ensures that the facilities critical to system restoration are functional when needed. Inclusion of any resources or transmission paths as BES Elements/Facilities intended for use for system restoration should be determined using the criteria 1-3, above.
Response: The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without		

Organization	Yes or No	Question 4 Comment
connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for real and reactive power capability, frequency, and voltage control. The portion of the electric system that can be isolated and then energized to deliver electric power from Blackstart Resources are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT has included Blackstart Resources and the corresponding designated blackstart Cranking Paths indentified in the Transmission Operator's restoration plan as BES Elements. A review of the NERC Reliability Standards will be conducted once the BES Definition is finalized in order to clearly delineate responsibilities for owners and operators of BES designated Facilities.		
PacifiCorp	No	In Order No. 743, the Commission directed NERC to adopt an exemption process for excluding facilities from the definition of the BES that are not necessary to operate an interconnected electric transmission network. In order to determine which facilities may be excluded, there must be criteria and a methodology that may be applied to identify which facilities are "necessary" to operate an interconnected electric transmission network and which "transmission and generation" facilities are not. In other words, there must be a clear way to determine what makes a particular facility is "necessary" for bulk system operation. Application of the criteria and methodology will result in the identification of the facilities that may be excluded. The comment questions asked in this questionnaire cannot be answered in a meaningful way absent this methodology. Significant efforts have been undertaken by the WECC Bulk Electric System Definition Task Force (BESDTF) over the course of the past year to identify some initial criteria and methodologies. These efforts are ongoing and should be supported by the NERC drafting team. For example: Blackstart Resources and designated blackstart Cranking Paths should be included only if they are deemed necessary to restore the interconnected electric transmission network.
ISO New England Inc.	No	1. Revise the statement, "Blackstart Resources and the designated blackstart Cranking identified in the Transmission Operator's (TOP's) restoration plan." to "Blackstart Resources "material to" and designated as part of a Transmission Operator's (TOPs) restoration plan." Reason - Some regions have many blackstart units that are not material to a TOPs restoration plan. These units need not register and be subjected to the NERC Standards. Only those deemed material (i.e., "key facilities") should be classified as part of the BES. See NERC Registry Criteria for reference to "material" in describing, and qualifying, what constitutes Blackstart Resources." 2. NERC Standard EOP-00-2 stipulates the requirements for testing Blackstart Resources and Cranking Paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed. Designating these facilities as BES Elements or Facilities beyond the 100 kV bright line criterion will impose unnecessary requirements for these facilities which may not contribute to the BES reliability for everyday operations. If indeed any of these facilities are deemed necessary to support BES reliability for everyday operation, they will be identified through either the 100 kV bright line criterion or the

Organization	Yes or No	Question 4 Comment
		exemption/inclusion process.
Response: The SDT disagrees. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for real and reactive power capability, frequency, and voltage control. The portion of the electric system that can be isolated and then energized to deliver electric power from Blackstart Resources are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT has included Blackstart Resources and the corresponding designated blackstart Cranking Paths indentified in the Transmission Operator's restoration plan as BES Elements. The SDT assumes that the Blackstart Resources and designated blackstart Cranking Paths included in the Transmission Operator's restoration plans are those deemed necessary or required to reliably restore the system, or they wouldn't be included in the plan, subjecting them to the NERC Standard testing requirements.		
Arizona Public Service Company	No	With all of the new NERC Standards in place, a blackout should be an extremely rare event; therefore, classifying Blackstart units or Cranking Paths is not needed.
Response: The SDT disagrees. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for real and reactive power capability, frequency, and voltage control. The portion of the electric system that can be isolated and then energized to deliver electric power from Blackstart Resources are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT has included Blackstart Resources and the corresponding designated blackstart Cranking Paths indentified in the Transmission Operator's restoration plan as BES Elements. Again, the Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. This determination is based on the reliable restoration of the system, independent of likelihood of the assumed occurrence of the need for restoration.		
Independent Electricity System Operator	No	NERC Standards EOP-00-2 stipulates the requirements for testing Blackstart Resource and Cranking Paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed. Designating these facilities as BES Elements or Facilities beyond the 100 kV bright line criterion will impose unnecessary requirements for these facilities which may not contribute to the BES reliability at times other than during system restoration. If indeed any of these facilities are deemed necessary to support bulk power system reliability at times other than during system restoration, they will be identified through either the 100 bright line criterion or the exemption/inclusion process.

Organization	Yes or No	Question 4 Comment
American Electric Power (AEP)	No	Should be re-written to state that only those Blackstart Resources in the Transmission Operator's (TOP's) restoration plan be classified as part of the BES.
City Water Light and Power (CWLP) - Springfield, IL	No	CWLP feels that blackstart resources and cranking paths not otherwise qualified as a part of the BES based on other criteria should not be included in the definition of BES solely based on their status as blackstart-capable units. Requirements for blackstart resources and cranking paths are already addressed by existing and proposed EOP standards and we feel that arbitrarily classifying these elements as part of the BES may create undue burden on Transmission Owners when the same reliability result can be achieved through more directed effort in the EOP standards. Further, while such blackstart resources and cranking paths may support operation of the BES, they need not be strictly included in the definition of BES to achieve the desired reliability result.
City of Grand Island	No	Not across the board. Generator criteria from questions 2 and 3 can apply to blackstart generators as well. Otherwise the exception process can be used.
Southern California Edison	No	SCE does not feel a blanket inclusion of all the listed equipment is needed.
Pepco Holdings Inc.	No	To remain consistent with the proposed definition of facilities 100kv and above, this should not be included. Inclusion would not result in a more reliable system or reduce risk.
Electric Market Policy	No	Dominion does not agree that Blackstart Resources should be classified as part of the BES.Dominion supports the criteria for registering owners, operators, and users of the bulk power system, as indicated in the current Statement of Compliance Registry Criteria .
Central Lincoln	No	The generation resources so described should be presumed to be part of the BES unless or until they have been through the exemption process and as a result have been classified as non-BES.
Lewis County PUD	No	
Entergy Services	No	
The Dayton Power and Light Company	No	
Snohomish County PUD	No	The generation resources so described should be presumed to be part of the BES unless they have been

Organization	Yes or No	Question 4 Comment
PNGC Power	No	demonstrated through performance-based studies to present no substantial threat of separation events, cascading outages, or voltage instability on the bulk system.
Blachly-Lane Electric Co-op	No	
Clearwater Power Co.	No	
Douglas Electric Cooperative	No	
Central Electric Cooperative, Inc. (Redmond Oregon)	No	
Raft River Rural Electric Cooperative	No	
Northern Lights Inc.	No	
Salmon River Electric Cooperative	No	
Okanogan Country Electric Cooperative	No	
Lost River Electric	No	
Lane Electric Cooperative	No	
Coos-Curry Electric Cooperative	No	
Consumer's Power Inc.	No	
Umatilla Electric Co-op	No	
West Oregon Electric Cooperative	No	

Organization	Yes or No	Question 4 Comment
Lincoln Electric Cooperative	No	
Fall River Electric Cooperative	No	
Response: The SDT disagrees. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for real and reactive power capability, frequency, and voltage control. The portion of the electric system that can be isolated and then energized to deliver electric power from Blackstart Resources are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT has included Blackstart Resources and the corresponding designated blackstart Cranking Paths indentified in the Transmission Operator's restoration plan as BES Elements. Again, Facilities critically identified as necessary for blackstart capability (both Blackstart Resources and the blackstart Cranking Path) in a Transmission Operator's restoration plan should be designated as part of the BES, and be subject to the corresponding NERC Standards referencing the BES.		
BGE	No	This proposal as written could lead to a reduction in the number of blackstart units which rely on cranking paths of less than 100 kV and not currently classified as BES, thereby reducing BES reliability.
Response: The SDT disagrees. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for real and reactive power capability, frequency, and voltage control. The portion of the electric system that can be isolated and then energized to deliver electric power from Blackstart Resources are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT has included Blackstart Resources and the corresponding designated blackstart Cranking Paths indentified in the Transmission Operator's restoration plan as BES Elements. The Transmission Operator will remain responsible for maintaining a viable restoration plan, regardless of the BES definition.		
Constellation Power Source Generation, Inc. ("CPSG") filing on behalf of Constellation Energy Group, Inc. ("CEG"), Constellation Energy Commodities Group, Inc. ("CCG"), Constellation Energy Control and Dispatch, LLC	No	This proposal as written could lead to a reduction in the number of blackstart units which rely on cranking paths of less than 100 kV and not currently classified as BES, thereby reducing BES reliability. To account for this potential gap, Constellation firmly believes that the classifications found in the Compliance Registry Criteria - Section III (Rules of Procedure Appendix 5B), such as that cited in this question, provide a useful basis to create a comprehensive, revised BES definition. Further, we propose that the BES drafting team incorporate the criteria directly into the revised BES definition, replacing the term "bulk power system" in each criterion with "greater than 100 kV." This would then include

Organization	Yes or No	Question 4 Comment
("CDD"), Constellation NewEnergy, Inc., ("CNE") and Constellation Energy Nuclear Group, LLC, ("CENG")		assets that are currently registered as BES elements as well as those that may have been previously excluded due to Regional exemption variances. As an example, the Compliance Registry Criteria includes any generator, regardless of size, that is a blackstart unit material to and designated as part of a transmission operator entity's restoration plan. The Compliance Registry also includes transmission as elements above 100kV or that is critical as defined by the Regional Entity (excluding radial facilities as described in the current BES definition). Structuring the revised BES definition to clarify both the inclusions and exclusions, can, ideally, eliminate the need for an onerous exemption process. Please see our response to question 12 for more detail on a proposed alternative approach to structuring the BES definition revision.
Response: The SDT disagrees. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for real and reactive power capability, frequency, and voltage control. The portion of the electric system that can be isolated and then energized to deliver electric power from Blackstart Resources are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT has included Blackstart Resources and the corresponding designated blackstart Cranking Paths indentified in the Transmission Operator's restoration plan as BES Elements. The SDT agrees and has made the suggested change and replaced the term "bulk power system" in each criterion with "greater than 100 kV." Please see response to Q12.		
The Dow Chemical Company		As discussed in response to question #12 below, issues relating to the registry criteria applicable to generation resources should not be revisited at this time.
Response: Please see response to Q12.		
ReliabilityFirst	Yes	It is recommended that the term "cranking path" be defined and examples of this term be provided. Also, does the term "cranking paths" include all paths or just the primary path if there are multiple paths available?
Response: The NERC Glossary of Terms defines 'Cranking Path' as "A portion of the electric system that can be isolated and then energized to deliver electric power from a generation source to enable the startup of one or more other generating units".		
NERC Staff	Yes	Please see additional comments at the end of this document.

Organization	Yes or No	Question 4 Comment
Response: See response to Q13.		
Springfield Utility Board	Yes	
Clark Public Utilities	Yes	
Xcel Energy	Yes	
City of Redding	Yes	
City of Anaheim	Yes	
Northeast Power Coordinating Council	Yes	
Florida Municipal Power Agency	Yes	See FMPA response to Question 2 above.
Bonneville Power Administration	Yes	Blackstart resources should never be allowed to be excluded through any technical studies.
SERC OC Standards Review Group	Yes	
Transmission Access Policy Study Group	Yes	See TAPS response to Question 2 above.
PPL Energy Plus	Yes	Blackstart Resources and the designated blackstart Cranking Paths identified in the TOP's restoration plan are a special case and warrant inclusion in the BES definition regardless of voltage because of their importance to BES reliability. However, this would not be the case for other facilities operated below 100 kV.
LG&E and KU Energy LLC	Yes	
Competitive Suppliers	Yes	
ExxonMobil Research and Engineering	Yes	

Organization	Yes or No	Question 4 Comment
LCRA Transmission Services Corporation	Yes	This is critical for system restoration.
PUD No.1 of Clallam County	Yes	Based on the current Reliability Standards practices it may be advantageous to reduce the number of blackstart generation and cranking paths to limit exposure to BES applicable standards. At this time if a registered entity has multiple blackstart units, it may be advantageous to reduce or decommission the number to avoid compliance risks. The current requirements may ultimately reduce the number of blackstart units and reduce BES electric reliability. It may make more sense to identify subset of critical blackstart projects and associated cranking paths as BES elements. The generation resources so described should be presumed to be part of the BES unless or until they have been through the exemption process and as a result have been classified as non-BES.
Manitoba Hydro	Yes	
American Municipal Power	Yes	
North Carolina EMC	Yes	
on behalf of Teck Metals Ltd.	Yes	
Indeck Energy Services	Yes	
Southern California Edison Company	Yes	
on behalf of Catalyst Paper Corporation	Yes	
Occidental Energy Ventures Corp	Yes	
City of Anaheim	Yes	
Glacier Electric Cooperative	Yes	These resources are significant to the BES and should be included.

Organization	Yes or No	Question 4 Comment
United Illuminating Company	Yes	
Orange and Rockland Utilities, Inc.	Yes	
Utility Services	Yes	
Duke Energy	Yes	
ITC Holdings Corp	Yes	Yes, but the Blackstart Resources identified as the PRIMARY resources in the System Restoration Plan should be the focus.
Idaho Power	Yes	
Response: Thank you for your response.		

5. Should the following be classified as part of the BES?

- **Transmission Elements or Facilities operated at voltages below 100kV where the exemption process deems the Element or Facility to be included in the BES**

Summary Consideration: Most commenters who responded to this question indicated disagreement with the proposal however there was no consensus amongst the alternate proposals offered, and the proposals suggesting other thresholds were not supported with any technical justification. The SDT has reviewed the industry comments on this issue, debated the topic, and has come to an agreement that the bright-line designation for Transmission Elements is 100kV and above. Any deviations from the bright-line designation (beyond those identified in the revised definition of BES), including Transmission Elements operated below 100kV, will be handled through the Rules of Procedure process that is being developed by a separate team.

Organization	Yes or No	Question 5 Comment
SERC EC Planning Standards Subcommittee	No	We prefer a bright-line rule of 100 kV. The exception process should not be used to include facilities operated at voltages below 100 kV.
Arizona Public Service Company	No	There are no practical cases where the facilities below 100 kV impact the major load centers or BES.
North Carolina EMC	No	Transmission elements or facilities operated at voltages below 100kV should only be included in the BES if identified by the RRO as critical to the BES.
Southern California Edison Company	No	The Exemption Process should apply to transmission elements or facilities greater than 100kV only. Facilities operated below 100kV are generally used for distribution purposes.
BGE	No	This proposal as written could lead to the inclusion of elements or facilities which have no material reliability impact on the interconnected transmission system.
Southern Company	No	We prefer a bright-line rule of 100 kV. The exception process should not be used to include facilities operated at voltages below 100 kV.
ExxonMobil Research and Engineering	Yes	It is conceivable that, in some areas, the Bulk Electric System may include transmission assets that are rated and operated at 69kV or below.
Response: The SDT appreciates the preference of several entities to utilize strict bright-line criteria of Facilities at 100kV and above that would be considered for inclusion in the BES. The SDT has carefully considered this matter, and believes that the exception process must allow for the possibility that certain Facilities		

Organization	Yes or No	Question 5 Comment
operated at voltages below 100kV could have appreciable influence over the reliable operation of the interconnected network Transmission grid, thereby warranting examination through an exception process for inclusion in the BES. The SDT expects that these exceptions for Facilities operated at voltages below 100kV will be relatively rare. The criteria for such inclusion will be developed as part of this project and the ROP process will be handled by a separate team through the revision to the Rules of Procedure, in an effort parallel to the development of the BES definition.		
ITC Holdings Corp	No	PRC023 has developed a process for specification of critical lines below 100 kV. This same process should be used to include below 100 kV lines in the BES
Florida Municipal Power Agency	No	This Question refers to including an Element in the BES through the exemption process, suggesting that the SDT is contemplating a single process for including nominally non-BES Elements in the BES and for exempting nominally BES Elements from the BES. While it would make sense for the two processes to be similar, they cannot be identical: The burden should be on the entity requesting an exemption to show that an Element that is nominally part of the BES is nevertheless not necessary for operating the interconnected electric transmission network and thus should be exempted from the BES. In contrast, with respect to transmission operated at voltages below 100 kV, it is NERC that must show, on a case-by-case basis, that transmission that is not nominally part of the BES is nevertheless necessary for operating the interconnected electric transmission network and thus should be included in the BES.Transmission operated at voltages below 100 kV should only be classified as part of the BES if the inclusion process, assessing each Element on a case-by-case basis, based on a uniform set of criteria, results in a finding that the particular Element should be included in the BES.
Transmission Access Policy Study Group	No	
Response: The process for inclusions and exclusions will be developed by a separate team as part of the revision to the Rules of Procedure, in an effort parallel to the development of the BES definition. Your comments will be forwarded to the Rules of Procedure Team.		
FirstEnergy Corp	No	We do not agree with an "exemption process" being associated with "including facilities". We suggest keeping the exemption process separate from the identification of critical sub 100kV facilities that will be included in the BES. We do agree that a consistent continent-wide approach for identifying these facilities is a worthwhile goal but should be a secondary priority to establishing the BES definition and BES exemption process.
Response: The SDT envisions an “exception process”, and regrets the use of “exemption” in the original SAR. The processes for inclusions and exclusions will be developed by a separate team as part of the revision to the Rules of Procedure, in an effort parallel to the development of the BES definition. Your comments will be forwarded to the Rules of Procedure Team.		
American Electric Power (AEP)	No	Exemption processes are distinctly different than inclusion processes, and clarification is needed to address their differences. There should be two distinct processes. Until details of such processes and their related criteria are better defined, it is difficult to provide substantive comments.

Organization	Yes or No	Question 5 Comment
MRO's NERC Standards Review Subcommittee	No	FERC has directed (in section 30 of FERC Order 743) that NERC have an established "exemption" process to remove this judgment from the Regions in defining what the BES is. However, the applicable process should be called an "exception" process, not an "exemption" process that infers the concept of "exclusion" and further classified as part of the BES given that a fault or an outage on the Transmission Element or Facility at voltages below 100kV would not maintain an Adequate Level of Reliability of the BES.
PacifiCorp	No	In paragraph 121 of Order No. 743, the Commission states that it agrees that the ERO should develop a parallel process for including as part of the bulk electric system "critical" facilities, operated at less than 100 kV, that the Regional Entities determine are necessary for operating the interconnected transmission network. (emphasis added) Further, the Commission stated that "[w]e believe that it would be worthwhile for NERC to consider formalizing the criteria for inclusion of critical facilities operated below 100 kV in developing the exemption process." (emphasis added) PacifiCorp believes that it is appropriate to use the same criteria to determine what elements or facilities should be included in the definition of Bulk Electric System as those used to determine what elements or facilities should be excluded from the definition. However, the formal process used for exclusion (i.e. the exemption process) of facilities above 100 kV should not be the same process as the process for inclusion of sub-100 kV facilities. As PacifiCorp understands it, per the Commission, the exemption process will require a facility-by-facility approval by NERC for exemption whereas inclusion of sub-100 kV facilities will involve a Regional Entity determination that such facilities must be included. These should therefore be separate processes.
Central Lincoln	No	Including elements through an exemption process is bound to create confusion and misunderstandings between the registrants and REs. Please include such elements through an inclusion process. It should also be clarified that registrants are not required to put all sub-100 kV elements through this process; the burden should be on the RE to include elements of particular concern.
PUD No.1 of Clallam County	No	
Response: The SDT acknowledges that the term "exemption" is inappropriate in the context of these proposed "inclusions", and subsequent drafts will refer to the "exception" process suggested by the Commission in its Order 743. The process for such inclusions will be developed by a separate team through the revision to the Rules of Procedure, in an effort parallel to the development of the BES definition.		
Pepco Holdings Inc.	No	Some details on the exemption process must be known before accepting this. Who can submit an exemption (DP, GO, GOP, TO, TOP, RC, etc)? How do interested parties get informed? Can others intervene?
Occidental Energy Ventures Corp	No	Until the expemtion process is finalized, it is not prudent to answer in the affirmative.
Entergy Services	No	Our response to this question depends on the details of the "exemption process", including what entity has the

Organization	Yes or No	Question 5 Comment
		final decision and how it is implemented. Please see our response to Q13 below.
City Water Light and Power (CWLP) - Springfield, IL	No	While CWLP agrees with the general concept of inclusion by exception (as opposed to exemption), we have concerns regarding the lack of detailed definition of this process, especially the administrative process for disputes regarding inclusion of elements in the BES. Without firm administrative rules for resolving disputes based on technical justification, we cannot support this measure currently.
Manitoba Hydro		It is confusing to use the term "exemption process" to determine what is included. Abstain until exemption process has been defined.
Duke Energy		There is not enough information available at this time to adequately evaluate this question. It would be necessary to have a list of exemption criteria or more detail on the exemption process to address this question. This is one of the reasons that the exemption criteria should be developed through the standards development process along with the definition.
Xcel Energy		Xcel Energy does not disagree that there may be situations where elements below 100KV may need to be included, but we have concerns about the exemption process. This undeveloped process presents itself as a wild card to entities, and will most likely present inconsistencies between regions based upon each Region's preference. Additionally, does the Regional Methodology require any approval (e.g. ERO) other than the Region's own process? The "exclusions" process indicates that the ERO has the final approval authority to exclude an item from the BES. Why would the same not apply for including something into the BES based on the Region's Methodology?
IRC Standards Review Committee	Yes	We generally support the concept but we need to assess the criteria for the exception, which have not been developed. Further, the wording seems to present a circular argument. We suggest the following revised wording to more clearly convey this criterion:Transmission Elements or Facilities operated at voltages below 100kV that are deemed to be included in the BES as determined by the exception/inclusion process.
Response: The SDT acknowledges that commenters will need to reserve judgment on the exception process, which is being developed by a separate team as a modification to the Rules of Procedure in an effort parallel with the development of the BES definition.		
American Municipal Power	No	
on behalf of Teck Metals Ltd.	No	

Organization	Yes or No	Question 5 Comment
on behalf of Teck Metals Ltd.	No	
on behalf of Catalyst Paper Corporation	No	
Idaho Power	No	
Response: Thank you for your response.		
Indeck Energy Services	No	Same Response as Question 1
Utility Services	Yes	See the answer to Question 1.
Response: See Response to Question 1.		
Snohomish County PUD	No	Snohomish agrees that certain Elements or Facilities operated at voltages below 100 kV may need to be classified as part of the BES if engineering studies demonstrate those Elements or Facilities to be necessary to the reliable operation of the bulk transmission system. We disagree, however, that inclusion of such facilities should be part of the exemption process. The exemption process should be focused on facilities operating at voltages above 100 kV that nonetheless are exempt because they are local distribution facilities or are demonstrated by engineering analysis to be unnecessary for the reliable operation of the interconnected bulk transmission grid. The inclusion of facilities below 100 kV should be a separate process in which the RRO is required to demonstrate that the facility has a material impact on the interconnected bulk transmission system despite its low operating voltage
Response: The SDT acknowledges that the term "exemption" is inappropriate in the context of proposed "inclusions" and "exclusions", and subsequent drafts will refer to the "exception" process suggested by the Commission in its Order 743. The process for such inclusions and exclusions will be developed as part of the revision to the Rules of Procedure by a separate team, in an effort parallel to the development of the BES definition. The SDT appreciates the preference of several entities to utilize strict bright-line criteria of facilities greater than 100kV that would be considered for inclusion in the BES. The SDT has carefully considered this matter, and believes that the exception process must allow for the possibility that certain Facilities operated at voltages below 100kV could have appreciable influence over the reliable operation of the interconnected network Transmission grid, thereby warranting examination through an exception process for inclusion in the BES. The SDT expects that these exceptions for Facilities operated at voltages below 100kV will be relatively rare.		
Lewis County PUD	No	Including elements through an exemption process is bound to create confusion and misunderstandings between the registrants and REs. Please include such elements through an inclusion process. It should also be clarified that registrants are not required to put all sub-100 kV elements through this process; the burden of

Organization	Yes or No	Question 5 Comment
		proof should be on the RE to include elements less than 100kV.
PNGC Power	No	Including elements through an exemption process is bound to create confusion and misunderstandings between the registrants and REs. Please include such elements through an inclusion process. It should also be clarified that registrants are not required to put all sub-100kV elements through this process; the burden should be on the RE to include elements of particular concern.
Blachly-Lane Electric Co-op	No	
Clearwater Power Co.	No	
Douglas Electric Cooperative	No	
Central Electric Cooperative, Inc. (Redmond Oregon)	No	
Raft River Rural Electric Cooperative	No	
Northern Lights Inc.	No	
Salmon River Electric Cooperative	No	
Okanogan Country Electric Cooperative	No	
Lost River Electric	No	
Lane Electric Cooperative	No	
Coos-Curry Electric Cooperative	No	
Consumer's Power Inc.	No	
Umatilla Electric Co-op	No	
West Oregon Electric	No	

Organization	Yes or No	Question 5 Comment
Cooperative		
Lincoln Electric Cooperative	No	
Fall River Electric Cooperative	No	
Central Lincoln	No	
PUD No.1 of Clallam County	No	
Response: The SDT acknowledges that the term "exemption" is inappropriate in the context of these proposed "inclusions", and subsequent drafts will refer to the "exception" process suggested by the Commission in its Order 743. The process for such inclusions will be developed by a separate team through the revision to the Rules of Procedure, in an effort parallel to the development of the BES definition.		
Constellation Power Source Generation, Inc. ("CPSG") filing on behalf of Constellation Energy Group, Inc. ("CEG"), Constellation Energy Commodities Group, Inc. ("CCG"), Constellation Energy Control and Dispatch, LLC ("CDD"), Constellation NewEnergy, Inc., ("CNE") and Constellation Energy Nuclear Group, LLC, ("CENG")	No	Although Constellation believes that it may be appropriate to include some of the elements above in the BES, this proposal will lead to the inclusion of elements or facilities which have no material impact on the interconnected transmission system. Furthermore, the use of an exemption process to include assets is confusing. Constellation proposes that the BES drafting team structure the revised BES definition to clarify both the inclusions and exclusions as completely as possible. If a separate "opt-in" process is deemed necessary (in anticipation of a few exceptions to the definition) then the drafting team should develop criteria for such a process.Using this approach the sentence above would then read "Transmission Elements or Facilities operated at voltages below 100kV where a Regional Entity deems the Element or Facility to be included in the BES."
Response: The SDT appreciates the preference of several entities to utilize strict bright-line criteria of Facilities at 100kV or above that would be considered for inclusion in the BES. The SDT has carefully considered this matter, and believes that the exception process must allow for the possibility that certain Facilities operated at voltages below 100kV could have appreciable influence over the reliable operation of the interconnected network Transmission grid, thereby warranting examination through an exception process for inclusion in the BES. The SDT expects that these exceptions for Facilities operated at voltages below 100kV will be relatively rare. The criteria for such inclusion will be developed as part of this project and the ROP process will be handled by a separate team through the revision to the Rules of Procedure, in an effort parallel to the development of the BES definition. The SDT acknowledges that the term "exemption" is inappropriate in the context of proposed "inclusions" and "exclusions", and subsequent drafts will refer to the "exception" process suggested by the Commission in its Order 743.		

Organization	Yes or No	Question 5 Comment
Springfield Utility Board	No	Why would an entity want to include an element in the definition of the BES? If an entity has a 69kV line that the ERO believes should be part of the BES but the entity does not want it part of the BES who initiates and pays for the exemption process? Does the ERO have the ability to initiate the process? If the owner of the Transmission Element or Facility is the only one that can initiate and exemption process and they do not want to what is the remedy if the line is necessary for bulk electric system reliability?
Response: The bright-line designation will be developed as part of this project and the ROP process will be handled through the revision to the Rules of Procedure by a separate team in an effort parallel to the development of the BES definition. Your comments will be forwarded to the Rules of Procedure Team.		
National Rural Electric Cooperative Association (NRECA)		Without exemption criteria to review, it is too early to explicitly answer this question. However, the concept appears to be logical as long as it is also paired with the ability of an entity that owns facilities above 100kV to appeal the inclusion of its facilities as part of the BES. Such an appeal would need to be supported by a technical justification demonstrating why certain facilities should not be classified as part of the BES.In addition, it is critical for exemption criteria to be based on operating voltage, not design voltage. Using design voltage in the criteria would provide a disincentive to build for future expansion. This could have significant negative impacts on BES reliability.
Response: The process for such inclusions and exclusions will be developed by a separate team as part of the revision to the Rules of Procedure, in an effort parallel to the development of the BES definition. Your comments will be forwarded to the Rules of Procedure Team.		
The Dow Chemical Company		Dow recommends that NERC finalize a basic framework for identifying BES facilities before evaluating individual facilities or types of facilities. Such a framework is recommended by Dow in response to questions #11 and #12 below.
Response: See responses to Q11 & 12.		
Orange and Rockland Utilities, Inc.		Refer to the response to Question 13.
Northeast Power Coordinating Council		Refer to the response to Question 13.
NERC Staff	Yes	Please see additional comments at the end of this document.
Response: See response to Q13.		

Organization	Yes or No	Question 5 Comment
SERC OC Standards Review Group	Yes	We think the process should be an “exception” rather than an “exemption”.
City of Grand Island	Yes	Exemption process should be termed “exception” process. Exception means not conforming to general rule, whereas exemption primarily means exclusion. This process will be difficult to develop and administer and is counter productive to “bright line” philosophy. Thus the bright lines should be at a high level resulting in fewer challenges. The exception process must consider the impact of a fault or outage of that facilities on the Adequate Level of Reliability (NERC defined term) of the BES.
American Transmission company	Yes	However, the applicable process should be called an “exception” process, not an “exemption” process that infers the concept of “exclusion” and further classified as part of the BES given that a fault or an outage on the Transmission Element or Facility at voltages below 100kV would not maintain an Adequate Level of Reliability of the BES.
Response: The SDT acknowledges that the term “exemption” is inappropriate in the context of these proposed “inclusions”, and subsequent drafts will refer to the “exception” process suggested by the Commission in its Order 743. The process for such inclusions will be developed by a separate team through the revision to the Rules of Procedure, in an effort parallel to the development of the BES definition.		
City of Redding	Yes	If the exemption process is based on reliable engineering studies.
City of Anaheim	Yes	
Public Service Enterprise Group Company	Yes	No Comment
Bonneville Power Administration	Yes	
Electric Market Policy	Yes	Dominion conceptually supports an exemption process whereby NERC or the RRO could apply to have an element included or excluded from the BES definition. Such process recognizes that it may be necessary to include elements that do not meet the bright line criteria but are necessary for operating an interconnected transmission network. Such process should be developed through the existing NERC standards development process and include a robust appeals process for the owner/operator of any element so included or excluded.
LCRA Transmission Services Corporation	Yes	

Organization	Yes or No	Question 5 Comment
PPL Energy Plus	Yes	Yes, PPL Energy Plus supports an exemption process provided the Exemption process follows FERCs Order 743 paragraph 115: "NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid."
LG&E and KU Energy LLC	Yes	
ReliabilityFirst	Yes	It is recommended that the exemption process be defined and criteria setup so that a common approach across the ERO can be used to include these facilities.
Southern California Edison	Yes	SCE currently reports on transmission elements or facilities operated at voltages below 100kV that are interconnected with other utilities.
Glacier Electric Cooperative	Yes	Yes - this is assuming that the exemption process is an accurate way to truly determine whether or not a facility is significant to the grid.
ISO New England Inc.	Yes	
United Illuminating Company	Yes	
City of Austin dba Austin Energy	Yes	This answer assumes that an appropriate engineering study is performed to determine that the asset is necessary for the reliability of the BES.
The Dayton Power and Light Company	Yes	
Independent Electricity System Operator	Yes	We generally support the concept but we need to assess the criteria for the exception, which have not been developed. Further, the wording seems to present a circular argument. We suggest the following revised wording to more clearly convey this criterion:Transmission Elements or Facilities operated at voltages below 100kV that are deemed to be included in the BES as determined by the exception/inclusion process
Clark Public Utilities	Yes	
Response: The SDT thanks you for your comments.		

6. Should the following be classified as part of the BES?

- **Individual generation resources greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where the exemption process deems the generation resources to be included in the BES**

Summary Consideration: Most commenters who responded to this question indicated disagreement with the proposal, however there was no consensus amongst the alternate proposals offered, and the proposals suggesting other thresholds were not supported with any technical justification. The SDT has reviewed the industry comments on this issue, debated the topic, and come to an agreement that the bright-line designation for individual generating units is 20 MVA and 100 kV. Any deviations from the bright-line designation would be handled through the pending Rules of Procedure process. Included in the BES: I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above.

Organization	Yes or No	Question 6 Comment
SERC EC Planning Standards Subcommittee	No	We prefer a bright-line rule of 100 kV. The exception process should not be used to include facilities operated at voltages below 100 kV.
Public Service Enterprise Group Company	No	The intent of the BES definition is to address the reliability of the bulk electric system and associated elements. The generation connected at less than 100kV should not be classified as BES - it should be considered to be within the same category as radial connected facilities serving load (which is not included as part of the BES).
Response: In Order No. 743, the Commission directed NERC to adopt an inclusion process for including in the BES definition Facilities operated at voltages below 100 kV. The Commission believes that NERC should "consider formalizing the criteria for inclusion of critical facilities operated below 100 kV in developing the exemption process." The DBES SDT and NERC Rules of Procedure team are responding to FERC's directive.		
Florida Municipal Power Agency	No	See FMPA response to Question 5 above. Generation resources of any size directly connected via a step-up transformer(s) to transmission operated at voltages below 100 kV should only be classified as part of the BES if the generation resource is registered pursuant to the Statement of Compliance Registry Criteria or if the inclusion process, assessing each generation resource on a case-by-case basis based on a uniform set of criteria, results in a finding that the particular generation resource should be included in the BES. The standards for registering a generator should be the same as those for including it in the BES.
Transmission Access Policy Study Group	No	
Response: The SDT agrees with the comment that designation of these generators as BES would occur only if the pending Rules of Procedure process deems them to be BES, and such a designation would necessarily warrant registration per the terms of the NERC Statement of Compliance Registry Criteria (SCRC).		

Organization	Yes or No	Question 6 Comment
The scope of the SDT does not extend to revisions of the SCRC; however, recommendations for revision of the SCRC may result from the definition development.		
PacifiCorp	No	In Order No. 743, the Commission directed NERC to adopt an exemption process for excluding facilities from the definition of the BES that are not necessary to operate an interconnected electric transmission network. In order to determine which facilities may be excluded, there must be criteria and a methodology that may be applied to identify which facilities are "necessary" to operate an interconnected electric transmission network and which "transmission and generation" facilities are not. In other words, there must be a clear way to determine what makes a particular facility is "necessary" for bulk system operation. Application of the criteria and methodology will result in the identification of the facilities that may be excluded. The comment questions asked in this questionnaire cannot be answered in a meaningful way absent this methodology. Significant efforts have been undertaken by the WECC Bulk Electric System Definition Task Force (BESDTF) over the course of the past year to identify some initial criteria and methodologies. These efforts are ongoing and should be supported by the NERC drafting team. For example: Generation units should not be included or excluded solely based on a their gross nameplate rating and the operating voltage at which they are connected to transmission facilities. Generation units which are necessary to operate the interconnected network should be included as part of the regulated BES. Generating units which are not "necessary for the operation of the interconnected network" should be excluded. A methodology needs to be developed to determine which generating units may be excluded as part of the regulated BES.
Response: The SDT believes that the criteria enumerated in the current Statement of Compliance Registry Criteria should be the template (or "methodology" as used in the comment) for defining the bright-line exception criteria in Project 2010-17. The SDT plans to review past efforts of Regional Entities to develop their own BES definition.		
ExxonMobil Research and Engineering	No	See comments on questions 2 and 3.
Response: See response to Q2 & Q3.		
Arizona Public Service Company	No	Individual generation resources less than 50 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100 kV do not materially impact the reliability of the BES and therefore, should not be classified as part of the BES.
Response: The SDT believes that the criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the bright-line exception criteria in Project 2010-17. The comment provides no technical justification for departing from existing practices defined by the Statement of Compliance Registry Criteria.		

Organization	Yes or No	Question 6 Comment
Pepco Holdings Inc.	No	Some details on the exemption process must be known before accepting this. Who can submit an exemption (DP, GO, GOP, TO, TOP, RC, etc)? How do interested parties get informed? Can others intervene? Would the other facilities completing the connection to a BES facility be automatically included?
Response: The SDT acknowledges that commenters will need to reserve judgment on the pending Rules of Procedure process, which is to be developed in an effort parallel with this BES definition development. The SDT believes that the criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the bright-line criteria in Project 2010-17. The SDT will coordinate its efforts with the NERC ROP team developing the Rules of Procedure process to develop a single coordinated implementation plan that will define the responsibilities of various parties.		
American Municipal Power	No	
on behalf of Teck Metals Ltd.	No	
on behalf of Catalyst Paper Corporation	No	
Idaho Power	No	
Clark Public Utilities	No	
Response: Thank you for your response.		
Indeck Energy Services	No	Same Response as Question 1
Response: See response to Q1.		
Southern California Edison	No	SCE currently reports on generation resources greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages above 100kV. SCE does not feel it is necessary to report on generation below 100kV.
Response: In Order No. 743, the Commission directed NERC to adopt an inclusion process for including in the BES definition Facilities operated at voltages below 100 kV. The Commission believes that NERC should "consider formalizing the criteria for inclusion of critical facilities operated below 100 kV in developing the exemption process."		
Southern California Edison Company	No	In SCE's system, generation resources are used to offset load being served by distribution facilities. This means that generation does not flow through step-up transformers into the 100kV and above system.

Organization	Yes or No	Question 6 Comment
		Therefore, those generation resources which are used to provide power to local load within a distribution system should not be included as part of the BES. The Exemption Process should not be applied to such resources.
Response: The SDT believes that such generation resources will be excluded as part of the BES unless the Facilities are otherwise deemed material to the reliability of the BES by a ROP to the pending Rules of Procedure exception process. In a section in the revised BES definition on Local Distribution Networks, the SDT is considering the issue of generation resources used to offset Load being served by distribution Facilities.		
ISO New England Inc.	No	1. Yes - There are situations as envisioned in the Registry Criteria clause, i.e., "Any generator, regardless of size, that is material to the reliability of the bulk power system" where reliability would be threatened without such inclusion. Similarly, cases can be made for materiality to the reliability of the bulk power system for units < 20 MVA directly connected at 100 kV or greater and for units < 20 MVA connected at any voltage level. The exemption process developed should account for any and all situations where a generator, or group of generators, may be deemed material to support a BES function such as riding through an UFLS event. Just as UFLS Relays have been stated to be material to the reliability of the bulk power system, despite their location on the lower voltage distribution systems, any size generator at any voltage level may be found, through an analysis, to have a supporting role in protecting the BES during a postulated system disturbance. 2. No - In general small generators connected at voltages of 100 kV and greater and those larger generators connected at voltages less than 100 kV do not impact the reliability of the BES and to classify them as BES and require them to register with NERC and abide by all NERC Reliability Standards would place an undue burden on the Generator Owners/Operators with little or no perceived reliability benefit. A more reasonable process would allow a systematic analysis to define the material need of such otherwise exempted generators and allow these generators to be registered on a "requirement basis", a process which FERC has encouraged, and is an approach recognized in NERC's "Statement of Registry Criteria" (See "Notes to Above Criteria" #4, page 10).
Electric Market Policy	No	Dominion does not agree that a generation resource should be classified as part of the BES. Dominion supports the criteria for registering owners, operators, and users of the bulk power system, as indicated in the current Statement of Compliance Registry Criteria.
Constellation Power Source Generation, Inc. ("CPSG") filing on behalf of Constellation Energy Group, Inc. ("CEG"), Constellation Energy Commodities Group, Inc.	No	Although Constellation believes that it may be appropriate to include some of the elements above in the BES, this proposal will lead to the inclusion of elements or facilities which have no material impact on the interconnected transmission system. Furthermore, the use of an exemption process to include assets is confusing. Constellation proposes that the BES drafting team structure the revised BES definition to clarify both the inclusions and exclusions as completely as possible. If a separate "opt-in" process is deemed necessary (in anticipation of a few exceptions to the definition) then the drafting team should develop criteria

Organization	Yes or No	Question 6 Comment
("CCG"), Constellation Energy Control and Dispatch, LLC ("CDD"), Constellation NewEnergy, Inc., ("CNE") and Constellation Energy Nuclear Group, LLC, ("CENG")		for such a process. Using this approach the sentence above would then read "Individual generation resources greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where a Regional Entity deems the generation resources to be included in the BES."
Response: The SDT agrees that criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the bright-line exception criteria in Project 2010-17. FERC Order No. 743 states that changes to the BES definition "will not significantly increase the scope of the present definition, which applies to transmission, generation and interconnection facilities."		
Snohomish County PUD	No	The NERC GOTO Task Force considered the issue of whether dedicated interconnection facilities connecting BES generation to the BES transmission system should also be classified as BES. The Task Force concluded that it is unnecessary to classify such facilities as part of the BES and that reliability would not be compromised as long as those interconnection facilities are required to comply with few reliability standards, primarily those related to vegetation management. The standards drafting group should follow the recommendation of the GOTO Task Force when considering the status of interconnection facilities and should consider those recommendations when considering related questions such as the status of radial lines that both interconnect a generator and serve distribution functions.
Response: The SDT acknowledges the work of Project 2010-07 Generator Requirements at the Transmission Interface regarding the classification rationale for generation interconnection Facilities and has considered it in the development process of the BES definition. The subject of this question was focused upon the generating elements themselves, rather than the associated interconnection Facilities. The SDT has carefully considered this matter, and believes that the pending Rules of Procedure exception process must allow for the possibility that certain generating units larger than 20 MVA yet connected below 100kV could have appreciable influence over the reliable operation of the interconnected network Transmission grid, thereby warranting a submittal through the ROP process for inclusion in the BES. The SDT expects that these exceptions for generating units larger than 20 MVA, yet connected to the grid at below 100kV, will be relatively rare. Additionally, the Commission in its Order No. 743 suggests that the revised BES definition should include exception processes for inclusion of these sorts of Elements. The process for such inclusions will be developed as part of the revision to the Rules of Procedure, in an effort parallel to the development of this BES definition.		
Central Lincoln	No	Including elements through an exemption process is bound to create confusion and misunderstandings between the registrants and REs. Please include such elements through an inclusion process. It should also be clarified that registrants are not required to put all sub-100 kV elements through this process; the burden should be on the RE to include elements of particular concern.
PUD No.1 of Clallam County	No	
PNGC Power	No	

Organization	Yes or No	Question 6 Comment
Blachly-Lane Electric Co-op	No	
Clearwater Power Co.	No	
Douglas Electric Cooperative	No	
Central Electric Cooperative, Inc. (Redmond Oregon)	No	
Raft River Rural Electric Cooperative	No	
Northern Lights Inc.	No	
Salmon River Electric Cooperative	No	
Okanogan Country Electric Cooperative	No	
Lost River Electric	No	
Lane Electric Cooperative	No	
Coos-Curry Electric Cooperative	No	
Consumer's Power Inc.	No	
Umatilla Electric Co-op	No	
West Oregon Electric Cooperative	No	
Lincoln Electric Cooperative	No	

Organization	Yes or No	Question 6 Comment
Fall River Electric Cooperative	No	
Response: The SDT agrees. In Order No. 743, the Commission directed NERC to adopt an inclusion process for including in the BES definition Facilities operated at voltages below 100 kV. The Commission believes that NERC should "consider formalizing the criteria for inclusion of critical facilities operated below 100 kV in developing the exemption process."		
ITC Holdings Corp	No	The lower limit for BES generators should be 75 MVA. As long as this Plant is connected to the 100 kV or greater, it should be included. Below 100 kV, only if it meets the critical test.
Response: The SDT believes that criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the bright-line exception criteria in Project 2010-17. FERC Order No. 743 states that changes to the BES definition "will not significantly increase the scope of the present definition, which applies to transmission, generation and interconnection facilities." As envisioned, Regional Entities will be able to request the inclusion of Elements below 100 kV in the pending Rules of Procedure exception process and will bear the burden of proof that such Elements are critical Facilities.		
BGE	No	This proposal as written could lead to the inclusion of elements or facilities which have no material reliability impact on the interconnected transmission system.
Response: The SDT believes that criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the bright-line exception criteria in Project 2010-17. In addition, potential registrants may use the pending Rules of Procedure exception process to demonstrate the lack of materiality.		
City Water Light and Power (CWLP) - Springfield, IL	No	While CWLP agrees with the general concept of inclusion by exception (as opposed to exemption), we have concerns regarding the lack of detailed definition of this process, especially the administrative process for disputes regarding inclusion of elements in the BES. Without firm administrative rules for resolving disputes based on technical justification, we cannot support this measure currently.
Response: NERC is obligated under Order No. 743 to develop an exception process (including revisions to the NERC ROP) and implementation plan to administer a revised BES definition and associated exception criteria, and a dispute resolution process. The SDT acknowledges that commenters will need to reserve judgment on the pending Rules of Procedure exception process, which is to be developed in an effort parallel with this BES definition development.		
Lewis County PUD	No	I find it hard to believe that elements connected at less than 100kV are part of the BES. The burden of proof to include elements in the BES should be on the RE not the owner of such facilities.
Response: In Order No. 743, the Commission directed NERC to adopt an inclusion process for including in the BES definition Facilities operated at voltages below 100 kV. The Commission believes that NERC should "consider formalizing the criteria for inclusion of critical facilities operated below 100 kV in developing the exemption process." Thus, as envisioned, Regional Entities will be able to request the inclusion of Elements below 100 kV in the pending Rules of Procedure		

Organization	Yes or No	Question 6 Comment
exception process and will bear the burden of proof that such Elements are critical Facilities.		
American Electric Power (AEP)	No	Please see response provided to question 5.
Response: See response to Q5.		
Southern Company	No	We prefer a bright-line rule of 100 kV. The exception process should not be used to include facilities operated at voltages below 100 kV.
Response: The SDT believes that the criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the "bright-line" exception criteria in Project 2010-17. In Order No. 743, the Commission also directed NERC to adopt an inclusion process for including in the BES definition Facilities operated at voltages below 100 kV. The Commission believes that NERC should "consider formalizing the criteria for inclusion of critical facilities operated below 100 kV in developing the exemption process." As envisioned, Regional Entities will be able to request the inclusion of Elements below 100 kV in the pending Rules of Procedure exception process and will bear the burden of proof that such Elements are critical Facilities.		
Independent Electricity System Operator	No	Again, we need to assess the criteria for the exception, which have not been developed. Also, the proposed wording seems to present a circular argument. We suggest to change the wording as follows: Individual generation resources greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV that are deemed to be included in the BES as determined by the exception/inclusion process.
Response: The SDT acknowledges that commenters will need to reserve judgment on the exception process, which is to be developed as a modification to the Rules of Procedure in an effort parallel with this BES definition development. The SDT notes the suggested language in this comment, and has considered it in the development of the revised definition of BES.		
Springfield Utility Board	No	"directly connected" is important.
Response: The SDT has revised the definition and that term is no longer utilized. Included in the BES: I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above.		
Manitoba Hydro		Abstain until exemption process has been defined.
Occidental Energy Ventures Corp	No	Until the exemption process is finalized, it is not prudent to answer in the affirmative.

Organization	Yes or No	Question 6 Comment
Duke Energy		There is not enough information available at this time to adequately evaluate this question. It would be necessary to have a list of exemption criteria or more detail on the exemption process to address this question. This is one of the reasons that the exemption criteria should be developed through the standards development process along with the definition.
Response: The SDT acknowledges that commenters will need to reserve judgment on the pending Rules of Procedure exception process, which is to be developed in a parallel effort with this BES definition development. Nonetheless, the SDT believes that criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the bright-line exception criteria in Project 2010-17. The exception criteria (now included in the revised definition of BES) provides for both inclusions and exclusions. FERC Order No. 743 states that changes to the BES definition "will not significantly increase the scope of the present definition, which applies to transmission, generation and interconnection facilities."		
Northeast Power Coordinating Council		Refer to the response to Question 13.
Response: See response to Q13.		
Entergy Services		Our response to this question depends on the details of the "exemption process", including what entity has the final decision and how it is implemented. Please see our response to Q13 below.
Orange and Rockland Utilities, Inc.		The purpose of this question is hard to ascertain. The BES exemption process has not yet been finalized or approved. So, it is somewhat difficult to know a priori whether any individual generation resources greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV should or should not be classified as part of the BES definition. This document uses both "exemption process" and "exception process". Recommend that the phraseology be standardized on "exception process" as the exception (not the exemption) can be to include or exclude elements and facilities. Refer to the response to Question 13.
Response: The SDT acknowledges that commenters will need to reserve judgment on the pending Rules of Procedure exception process, which is to be developed in an effort parallel with this BES definition development. Nonetheless, the SDT believes that criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the bright-line exception criteria in Project 2010-17. The exception criteria will provide for both inclusions and exclusions. FERC Order No. 743 states that changes to the BES definition "will not significantly increase the scope of the present definition, which applies to transmission, generation and interconnection facilities." See response to Q13.		

Organization	Yes or No	Question 6 Comment
Xcel Energy		Xcel Energy does not disagree that there may be situations where generators greater than 20 MVA individually or 75 MVA in aggregate are connected via step up Transformers below 100 KV that may need to be included, but we have concerns about the exemption process. This undeveloped process presents itself as a wild card to entities, and will most likely present inconsistencies between regions based upon each Region's preference. Additionally, does the Regional Methodology require any approval (e.g. ERO) other than the Region's own process? The "exclusions" process indicates that the ERO has the final approval authority to exclude an item from the BES. Why would the same not apply for including something into the BES based on the Region's Methodology?
Response: The SDT acknowledges that commenters will need to reserve judgment on the pending Rules of Procedure exception process, which is to be developed in an effort parallel with this BES definition development. Nonetheless, the SDT believes that criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the bright-line exception criteria in Project 2010-17. The exception criteria will provide for both inclusions and exclusions. The SDT notes that a stated purpose of Order No. 743 was to eliminate the regional discretion allowed in the existing definition of BES and remove any ambiguity regarding who is required to comply and accomplish the goal of reducing inconsistencies across regions. As per FERC Order No. 672, any regional variations must be approved by FERC, and generally must be more "stringent" than NERC criteria. As envisioned, Regional Entities will be able to question the outcome of bright-line criteria in the BES definition in the pending Rules of Procedure exception process and will bear the burden of proof that such Elements are critical Facilities or not. FERC Order No. 743 states that changes to the BES definition "will not significantly increase the scope of the present definition, which applies to transmission, generation and interconnection facilities."		
The Dow Chemical Company		As discussed in response to question #12 below, issues relating to the registry criteria applicable to generation resources should not be revisited at this time.
Response: See response to Q12.		
City of Grand Island	Yes	See comments for items 2 and 5.
Response: See response to Q2 & Q5.		
NERC Staff	Yes	Please see additional comments at the end of this document.
Response: See response to Q13.		
PPL Energy Plus	Yes	Yes, PPL Energy Plus supports an exemption process provided the Exemption process follows FERCs Order 743 paragraph 115: "NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid." As written, however, the 20 MVA threshold does not appear to have been developed per FERC's requirements
LG&E and KU Energy LLC	Yes	

Organization	Yes or No	Question 6 Comment
		for the reasons discussed in the response to Questions 2 and 8.
Response: The SDT is committed to drafting a BES definition and exception criteria that will enable the pending Rules of Procedure exception process "that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid." The SDT believes that the criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the bright-line exception criteria in Project 2010-17.		
Utility Services	Yes	See the answer to Question 1.
Response: See response to Q1.		
American Transmission company	Yes	However, the applicable process should be called an "exception" process, not an "exemption" process that infers the concept of "exclusion" and further classified as part of the BES given that a fault or an outage on individual generation resources greater than 20MVA would not maintain an Adequate Level of Reliability of the BES.
Response: The SDT has adopted the use of the terms "exception criteria" and "exception process."		
SERC OC Standards Review Group	Yes	We think the process should be an "exception" rather than an "exemption". This question seems illogical since the last part of the question assumes the generator is already part of the BES through the determination of the exemption process. If the question was actually generators less than 20 MVA, we don't agree.
Response: The SDT has adopted the use of the terms "exception criteria" and "exception process." The SDT believes that the criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the bright-line exception criteria in Project 2010-17.		
IRC Standards Review Committee	Yes	Again, we need to assess the criteria for the exception, which have not been developed. Also, the proposed wording seems to present a circular argument. We suggest to change the wording as follows: Individual generation resources greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV that are deemed to be included in the BES as determined by the exception/inclusion process.
Response: The SDT acknowledges that commenters will need to reserve judgment on the pending Rules of Procedure exception process, which is to be developed in an effort parallel with this BES definition development. The SDT notes the suggested language in this comment, and has considered it in the development of the revised definition of BES., Included in the BES: I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage		

Organization	Yes or No	Question 6 Comment
of 100 kV or above.		
MRO's NERC Standards Review Subcommittee	Yes	FERC has directed (in section 30 of FERC Order 743) that NERC have an established “exemption” process to remove this judgment from the Regions in defining what the BES is. However, the applicable process should be called an “exception” process, not an “exemption” process that infers the concept of “exclusion” and further classified as part of the BES given that a fault or an outage on individual generation resources greater than 20MVA would not maintain an Adequate Level of Reliability of the BES.
Response: The SDT has adopted the use of the terms “exception criteria” and “exception process” in its work. Note, however, that neither term is used in the proposed definition of BES.		
City of Redding	Yes	If the exemption process is based on engineering studies targeted to identify those facilities necessary to reliably operate the interconnected transmission system.
City of Anaheim	Yes	
Bonneville Power Administration	Yes	
LCRA Transmission Services Corporation	Yes	
North Carolina EMC	Yes	
ReliabilityFirst	Yes	It is recommended that the exemption process be defined and criteria setup so that a common approach across the ERO can be used to include these facilities.
Glacier Electric Cooperative	Yes	Yes - Once again, this is assuming that the exemption process is an accurate way to truly determine whether or not a facility is significant to the grid.
United Illuminating Company	Yes	Any Generator directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where the exemption process deems the generation resources to be included in the BES should be part of BES . There should not be a MVA threshold
City of Austin dba Austin Energy	Yes	This answer assumes that an appropriate engineering study is performed to determine that the asset is necessary for the reliability of the BES.

Organization	Yes or No	Question 6 Comment
The Dayton Power and Light Company	Yes	
Response: Thank you for your response. This criterion was not changed, but is now embedded in the revised definition of BES.		

7. Should the following be classified as part of the BES?

- **Generation plants with aggregate capacity greater than 75 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where the exemption process deems the generation plants to be included in the BES**

Summary Consideration: Most commenters who responded to this question indicated disagreement with the proposal however there was no consensus amongst the alternate proposals offered, and the proposals suggesting other thresholds were not supported with any technical justification. The SDT has reviewed the industry comments on this issue, debated the topic, and come to an agreement that the bright-line designation for multiple generating units is 75 MVA and 100 kV as shown below. Any deviations from the bright-line designation would be handled through the Rules of Procedure process.

Included in BES: I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.

Several comments indicated that local distribution networks should be excluded, and the drafting team adopted this suggestion and added the following to the list of "Exclusions" from the 100 kV threshold that are included in the revised definition of BES.

Excluded from the BES: E3 - Local distribution networks (LDN): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the Interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:

a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;
b) Limits on connected generation: The LDN, nor its underlying Elements, includes no more than a total of 75 MVA generation;
c) Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN;
d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and
e) Not part of a Flowgate or Transfer Path: The LDN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Organization	Yes or No	Question 7 Comment
SERC EC Planning Standards Subcommittee	No	We prefer a bright-line rule of 100 kV. The exception process should not be used to include facilities operated at voltages below 100 kV.

Organization	Yes or No	Question 7 Comment
BGE	No	This proposal as written could lead to the inclusion of elements or facilities which have no material reliability impact on the interconnected transmission system.
Response: The SDT has reviewed the industry comments on this issue, debated the topic, and come to an agreement that the bright-line designation for multiple generating units is 75 MVA and 100 kV. Any deviations from the bright-line designation will be handled through the Rules of Procedure process. The process for such inclusions will be developed as part of the revision to the Rules of Procedure by another team, in an effort parallel to the development of this BES definition.		
IRC Standards Review Committee	No	Same comment as in Q6, above.
Public Service Enterprise Group Company	No	See the response to item 6 above.
Snohomish County PUD	No	See response to question 6
Independent Electricity System Operator	No	Same comment as in Q6, above.
Response: See response to Q6.		
Florida Municipal Power Agency	No	See FMPA responses to Questions 5 and 6 above.
Transmission Access Policy Study Group	No	
Response: See responses to Q5 & Q6.		
Electric Market Policy	No	Dominion does not agree that generation plants should be classified as part of the BES.
Response: The SDT finds no basis for the exclusion of generation plants from the BES, and continues to believe that generation is an integral part of the BES which any core BES definition must necessarily include.		
PacifiCorp	No	In Order No. 743, the Commission directed NERC to adopt an exemption process for excluding facilities from the definition of the BES that are not necessary to operate an interconnected electric transmission network.

Organization	Yes or No	Question 7 Comment
		In order to determine which facilities may be excluded, there must be criteria and a methodology that may be applied to identify which facilities are "necessary" to operate an interconnected electric transmission network and which "transmission and generation" facilities are not. In other words, there must be a clear way to determine what makes a particular facility is "necessary" for bulk system operation. Application of the criteria and methodology will result in the identification of the facilities that may be excluded. The comment questions asked in this questionnaire cannot be answered in a meaningful way absent this methodology. Significant efforts have been undertaken by the WECC Bulk Electric System Definition Task Force (BESDTF) over the course of the past year to identify some initial criteria and methodologies. These efforts are ongoing and should be supported by the NERC drafting team. For example: Generation plants should not be included or excluded solely based on a their gross nameplate rating and the operating voltage at which they are connected to transmission facilities. Generation plants which are necessary to operate the interconnected network should be included as part of the regulated BES. Generating plants which are not "necessary for the operation of the interconnected network" should be excluded. A methodology needs to be developed to determine which generating plants may be excluded as part of the regulated BES.
Response: The SDT acknowledges that commenters will need to reserve judgment on the process, which is to be developed as a modification to the Rules of Procedure by another team in an effort parallel with this BES definition development. The SDT acknowledges the work of the WECC BESDTF, and in keeping with the concepts of that work, envisions that the process will identify for inclusion in the BES only those generators that are necessary to operate the interconnected network.		
ExxonMobil Research and Engineering	No	See comments on questions 2 and 3.
Response: See responses to Q2 & Q3.		
Arizona Public Service Company	No	Generation plants with aggregate capacity of less than 300 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100 kV do not materially impact the reliability of the BES and therfore, should not be classified as part of the BES.
Response: The SDT appreciates the suggestion of a 300 MVA threshold for materiality of impact; however, it sees no technical justification upon which to base a significant departure from the generation MVA thresholds included in the NERC Statement of Compliance Registry Criteria. The SDT has reviewed the industry comments on this issue, debated the topic, and come to an agreement that the bright-line designation for multiple generating units is 75 MVA and 100 kV. Any deviations from the bright-line designation will be handled through the Rules of Procedure process. The process for such inclusions will be developed as part of the revision to the Rules of Procedure by another team, in an effort parallel to the development of this BES definition.		

Organization	Yes or No	Question 7 Comment
Pepco Holdings Inc.	No	Some details on the exemption process must be known before accepting this. Who can submit an exemption (DP, GO, GOP, TO, TOP, RC, etc)? How do interested parties get informed? Can others intervene? Would the other facilities completing the connection to a BES facility be automatically included?
American Municipal Power	No	
on behalf of Teck Metals Ltd.	No	
on behalf of Catalyst Paper Corporation	No	
Occidental Energy Ventures Corp	No	Until the exemption process is finalized, it is not prudent to answer in the affirmative.
Idaho Power	No	
Springfield Utility Board	No	
Clark Public Utilities	No	
Response: The SDT acknowledges that commenters may need to reserve judgment on the exception process, which is to be developed as a modification to the Rules of Procedure in an effort parallel with this BES definition development.		
North Carolina EMC	No	Generation facilities operated at voltages below 100kV should only be included in the BES if identified by the RRO as critical to the BES.
Response: The SDT envisions that the exception process that would be used to possibly include such Facilities will identify for inclusion in the BES only those generating plants that are essential to the reliable operation of the interconnected system. This process is being developed as a revision to the NERC Rules of Procedure by another team in an effort parallel to the development of this BES definition.		
Indeck Energy Services	No	Same Response as Question 1
Utility Services	Yes	See the answer to Question 1.

Organization	Yes or No	Question 7 Comment
Response: See response to Q1.		
Southern California Edison	No	SCE currently reports on generation plants with aggregate capacity greater than 75 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages above 100kV. SCE does not feel it is necessary to report on generation below 100kV.
Response: While the definition of the BES is a different matter than data reporting for generation plants, the SDT has incorporated a BES designation it believes will address your concerns. Included in BES: I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.		
Southern California Edison Company	No	In SCE's system, generation resources are used to offset load being served by distribution facilities. This means that generation does not flow through step-up transformers into the 100kV and above system. Therefore, those generation resources which are used to provide power to local load within a distribution system should not be included as part of the BES. The Exemption Process should not be applied to such resources.
Response: In its latest revision of the BES definition, the SDT has incorporated a designation for local distribution networks (LDN) for exclusion from the BES. • Excluded from the BES: E3 - Local distribution networks (LDNs): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following: a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices; b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation; c) Power flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN; d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
ISO New England Inc.	No	See the comments provided in response to question 7.

Organization	Yes or No	Question 7 Comment
Response: This is Q7. The SDT assumes that this is a typo and should have referred to a different question.		
PUD No.1 of Clallam County	No	Including elements through an exemption process is bound to create confusion and misunderstandings between the registrants and REs. Please include such elements through an inclusion process. It should also be clarified that registrants are not required to put all sub-100 kV elements through this process; the burden should be on the RE to include elements of particular concern.
Central Lincoln	No	
PNGC Power	No	
Blachly-Lane Electric Co-op	No	
Clearwater Power Co.	No	
Douglas Electric Cooperative	No	
Central Electric Cooperative, Inc. (Redmond Oregon)	No	
Raft River Rural Electric Cooperative	No	
Northern Lights Inc.	No	
Salmon River Electric Cooperative	No	
Okanogan Country Electric Cooperative	No	
Lost River Electric	No	
Lane Electric Cooperative	No	
Coos-Curry Electric Cooperative	No	

Organization	Yes or No	Question 7 Comment
Consumer's Power Inc.	No	
Umatilla Electric Co-op	No	
West Oregon Electric Cooperative	No	
Lincoln Electric Cooperative	No	
Fall River Electric Cooperative	No	
Response: The SDT acknowledges that the term "exemption" is inappropriate in the context of these proposed "inclusions", and subsequent drafts will refer to the "exception" process suggested by the Commission in its Order 743. The process for such inclusions will be developed as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition.		
ITC Holdings Corp	No	Only included if the plant is deemed Critical by the PRC023 test.
Response: The SDT is aware of the test proposed under PRC-023, however, in this definition, the SDT is striving to develop "bright-line" characteristic criteria that will be used to make definitional inclusions and exclusions, and this will be paired with an "exception process" which will be developed as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition. The SDT will forward the suggestion of a "PRC-023 test" to the team tasked with development of the revision to the Rules of Procedure.		
Constellation Power Source Generation, Inc. ("CPSG") filing on behalf of Constellation Energy Group, Inc. ("CEG"), Constellation Energy Commodities Group, Inc. ("CCG"), Constellation Energy Control and Dispatch, LLC ("CDD"), Constellation NewEnergy, Inc., ("CNE") and Constellation Energy Nuclear Group, LLC, ("CENG")	No	Although Constellation believes that it may be appropriate to include some of the elements above in the BES, this proposal will lead to the inclusion of elements or facilities which have no material impact on the interconnected transmission system. Furthermore, the use of an exemption process to include assets is confusing. Constellation proposes that the BES drafting team structure the revised BES definition to clarify both the inclusions and exclusions as completely as possible. If a separate "opt-in" process is deemed necessary (in anticipation of a few exceptions to the definition) then the drafting team should develop criteria for such a process. Using this approach the sentence above would then read "Generation plants with aggregate capacity greater than 75 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where a Regional Entity deems the generation plants to be included in the BES."
Response: The SDT has reviewed the industry comments on this issue, debated the topic, and come to an agreement that the bright line designation for multiple		

Organization	Yes or No	Question 7 Comment
generating units is 75 MVA and 100 kV. Any deviations from the bright line designation will be handled through the Rules of Procedure process. The SDT is striving to develop "bright-line" characteristic criteria that will be used to make definitional inclusions and exclusions, and this will be paired with the "exception process" which will be developed as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition. The SDT acknowledges that the term "exemption" is inappropriate in the context of these proposed "inclusions", and subsequent drafts will refer to the "exception" process suggested by the Commission in its Order 743. The process for such inclusions will be developed as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition.		
City Water Light and Power (CWLP) - Springfield, IL	No	While CWLP agrees with the general concept of inclusion by exception (as opposed to exemption), we have concerns regarding the lack of detailed definition of this process, especially the administrative process for disputes regarding inclusion of elements in the BES. Without firm administrative rules for resolving disputes based on technical justification, we cannot support this measure currently.
Response: The SDT acknowledges that the term "exemption" is inappropriate in the context of these proposed "inclusions", and subsequent drafts will refer to the "exception" process suggested by the Commission in its Order 743. The SDT is striving to develop "bright-line" characteristic criteria that will be used to make definitional inclusions and exclusions as part of the revised definition of BES. The SDT acknowledges that commenters may need to reserve judgment on the process until more clarity is provided via the development of the revision to the Rules of Procedure.		
Lewis County PUD	No	I find it hard to believe that elements connected at less than 100kV are part of the BES. The burden of proof to include elements in the BES should be on the RE not the owner of such facilities.
Southern Company	No	We prefer a bright-line rule of 100 kV. The exception process should not be used to include facilities operated at voltages below 100 kV.
Response: The SDT agrees that the bright-line designation for multiple generating units is 75 MVA and 100 kV. Any deviations from the bright-line designations identified in the final BES definition will be handled through the Rules of Procedure process. (The SDT is striving to develop "bright-line" characteristic criteria that will be used to make definitional inclusions and exclusions as part of the revised definition of BES.) The process for approving such inclusions will be developed as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition.		
American Electric Power (AEP)	No	Please see response provided to question 5.
Response: See response to Q5.		
Orange and Rockland Utilities,		The purpose of this question is hard to ascertain. The BES exemption process has not yet been finalized or approved. So, it is somewhat difficult to know a priori whether any generation plants with aggregate capacity

Organization	Yes or No	Question 7 Comment
Inc.		greater than 75MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV should or should not be classified as part of the BES definition. This document uses both "exemption process" and "exception process". Recommend that the phraseology be standardized on "exception process" as the exception (not the exemption) can be to include or exclude elements and facilities. Refer to the response to Question 13.
Response: The SDT acknowledges that commenters may need to reserve judgment on the exception process until more clarity is provided via the development of the revision to the Rules of Procedure. The SDT acknowledges that the term "exemption" is inappropriate in the context of these proposed "inclusions", and subsequent drafts will refer to the "exception" process suggested by the Commission in its Order 743. Any deviations from the bright-line designations identified in the final BES definition will be handled through the Rules of Procedure process. (The SDT is striving to develop "bright-line" characteristic criteria that will be used to make definitional inclusions and exclusions as part of the revised definition of BES.) Also, see response to Q13.		
The Dow Chemical Company		As discussed in response to question #12 below, issues relating to the registry criteria applicable to generation resources should not be revisited at this time.
Response: See response to Q12.		
Manitoba Hydro		Abstain until exemption process has been defined.
Duke Energy		There is not enough information available at this time to adequately evaluate this question. It would be necessary to have a list of exemption criteria or more detail on the exemption process to address this question. This is one of the reasons that the exemption criteria should be developed through the standards development process along with the definition.
Response: Thank you for your response. The revised definition of BES includes both a "bright-line" characteristic and a list of criteria that will be used to make definitional inclusions and exclusions to that bright line,		
Entergy Services		Our response to this question depends on the details of the "exemption process", including what entity has the final decision and how it is implemented. Please see our response to Q13 below.
Northeast Power Coordinating Council		Refer to the response to Question 13.

Organization	Yes or No	Question 7 Comment
NERC Staff	Yes	Please see additional comments at the end of this document.
Response: See response to Q13.		
Xcel Energy		Xcel Energy does not disagree that there may be situations where generators greater than 20 MVA individually or 75 MVA in aggregate are connected via step up Transformers below 100 KV that may need to be included, but we have concerns about the exemption process. This undeveloped process presents itself as a wild card to entities, and will most likely present inconsistencies between regions based upon each Region's preference. Additionally, does the Regional Methodology require any approval (e.g. ERO) other than the Region's own process? The "exclusions" process indicates that the ERO has the final approval authority to exclude an item from the BES. Why would the same not apply for including something into the BES based on the Region's Methodology?
Response: A separate Rules of Procedure (ROP) team is undertaking to develop a process for Facilities that do not fit within the bright-line definition. The details of the process are still under discussion and development. However, the SDT expects that ERO will have an oversight role on the Regional Process.		
ReliabilityFirst	Yes	It is recommended that the exemption process and the term "directly connected" be defined and criteria setup so that a common approach for including plants of this size be used across the ERO for reviewing these facilities and making this determination.
Response: The SDT believes that the phrase "directly connected" has been addressed in the latest revision. The SDT replaced this term with more descriptive language. Included in BES: I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.		
City of Grand Island	Yes	See comments for items 3 and 5.
Response: See responses to Q3 & Q5.		
PPL Energy Plus	Yes	Yes, PPL Energy Plus supports an exemption process provided the Exemption process follows FERCs Order 743 paragraph 115: "NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid." As written, however, the 75 MVA does not appear to have been developed per FERC's requirements for the reasons discussed in the response to Questions 2 and 8.
LG&E and KU Energy LLC	Yes	

Organization	Yes or No	Question 7 Comment
Response: The exception process will be developed as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition. Also, see response to Questions 2 and 8.		
SERC OC Standards Review Group	Yes	We think the process should be an "exception" rather than an "exemption". This question seems illogical since the last part of the question assumes the generation plant is already part of the BES through the determination of the exemption process If the question was actually generation plants less than75 MVA, we don't agree.
American Transmission company	Yes	The applicable process should be called an "exception" process, not an "exemption" process that infers the concept of "exclusion" and further classified as part of the BES given that a fault or an outage on the generation resource with aggregate capacity greater than 75 MVA would not maintain an Adequate Level of Reliability of the BES.
MRO's NERC Standards Review Subcommittee	Yes	However, the applicable process should be called an "exception" process, not an "exemption" process that infers the concept of "exclusion" and further classified as part of the BES given that a fault or an outage on the generation resource with aggregate capacity greater than 75 MVA would not maintain an Adequate Level of Reliability of the BES.
Response: The SDT acknowledges that the term "exemption" is inappropriate in the context of these proposed "inclusions", and subsequent drafts will refer to the "exception" process suggested by the Commission in its Order 743. The process for such inclusions will be developed as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition.		
City of Redding	Yes	See question 6 comments
Response: See response to Q6.		
City of Anaheim	Yes	
Bonneville Power Administration	Yes	
LCRA Transmission Services Corporation	Yes	

Organization	Yes or No	Question 7 Comment
Glacier Electric Cooperative	Yes	Yes - Once again, this is assuming that the exemption process is an accurate way to truly determine whether or not a facility is significant to the grid.
United Illuminating Company	Yes	Generation Plants directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where the exemption process deems the generation resources to be included in the BES should be part of BES . There should not be a MVA threshold
City of Austin dba Austin Energy	Yes	This answer assumes that an appropriate engineering study is performed to determine that the asset is necessary for the reliability of the BES.
The Dayton Power and Light Company	Yes	
Response: Thank you for your response.		

8. Should the following be excluded from the Elements and Facilities classified as part of the BES?

- **Any radial Transmission Element or System, connected from one Transmission source to a Load-serving Element and/or generation resources not included in items 2, 3, 4, 6, and 7 above are excluded from the BES**

Summary Consideration: Most commenters who responded to this question indicated agreement with the proposal. The SDT agrees with the majority of industry comments and has developed "bright-line" exclusions for designated radial systems (only serving Load and designated generation resources) as part of the revised BES definition in the NERC Glossary without going through the exception process being developed separately as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition.

The revised definition includes a list of "Inclusions" and "Exclusions" from the 100 kV threshold and no longer references any 'exemption process'. Based on stakeholder comments, the following "Exclusions," relative to radial systems, has been added to the revised definition of BES:

- Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and:
  - d) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or,
  - e) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or,
  - f) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.

Based on stakeholder comments, the following "Exclusions," relative to local distribution networks, has been added to the revised definition of BES:

- Excluded from the BES: E3 - Local distribution networks (LDNs): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:
  - a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;
  - b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;
  - c) Power flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN;
  - d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and
  - e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Organization	Yes or No	Question 8 Comment
Electric Market Policy	No	Dominion supports bright line exclusions of radial lines regardless of their kV rating. Radial lines to/from solely generation facilities and radial lines to/from load are comparable in terms of their impact on an interconnected transmission network. There are situations where these radials make a meaningful and required contribution to the operation of an interconnected transmission network and there are other locations/situations where these radials do not. Therefore, radial lines should only be specifically included in the definition of BES after the RRO has demonstrated that inclusion of the radial is necessary to operate an interconnected transmission network and the owner/operator of the radial line has had the opportunity to exercise its aforementioned appeal rights.
Independent Electricity System Operator	Yes	Classification of all radial facilities operated at voltages of 100 kV and above as part of the BES by default would be unnecessary and administratively inefficient, and could potentially lead to delays in the review and approval of other exemption requests. As such, the proposed definitions should be revised to clearly define what radial Transmission Elements will not be included as part of the BES. This would be consistent with FERC's intention expressed in Paragraph 55 of Order 743 to not alter the part of the approved definition that deals with "radial transmission facilities serving only load". Additionally, to ensure a common understanding of the meaning of "radial" and to promote consistency in its application, we believe "radial" should be defined after seeking stakeholder input and added to the NERC Glossary.
MRO's NERC Standards Review Subcommittee	Yes	However, the NSRS agrees that a radial transmission element or system directly connected from one Transmission source to a Load-serving Element and/or generation resources are excluded as part of the BES given that a fault or an outage of the radial transmission element or system would not impact the Adequate Level of Reliability of the BES.
SERC EC Planning Standards Subcommittee	Yes	The definition should clearly state that these elements are excluded. It currently implies that the exception process would have to be applied to exclude radial elements.
Florida Municipal Power Agency	Yes	Radial Transmission Elements connected from one Transmission source to a Load-serving Element and/or generation resources not included in items 2, 3, 4, 6, and 7 above should be excluded from the BES. It is very important that the exclusion of radial transmission serving only load with one transmission source be recognized as a categorical exclusion from the BES definition, not merely as grounds for requesting an exemption. In that way, such radials do not have to go through an exemption process, but are treated the same as sub-100 kV Transmission, as they are today. In other words, such Elements could be included in the BES only if a case-by-case assessment pursuant to the inclusion process demonstrates that a particular radial Element is necessary for operating the interconnected electric transmission network. If every such Element instead had to go through a case-by-case exemption process in order to be exempted from the BES, there would be a staggering burden on small entities and on NERC to process exemption requests for all of
Transmission Access Policy Study Group	Yes	

Organization	Yes or No	Question 8 Comment
		the radials serving only load with one transmission source that are excluded from the BES under the current definition. Order 743 does not require NERC to impose any new burdens on entities who own radials serving only load that are currently excluded from the BES.FMPA supports adding to the current exclusion a specification that "A radial Transmission Element may be considered as 'serving only load' for purposes of the foregoing general exclusion even if it connects generation, so long as that generation is not registered pursuant to the Statement of Compliance Registry Criteria." We believe that this formulation captures the generation intended in this Question's reference to "generation resources not included in items 2, 3, 4, 6, and 7 above." The FERC-approved Compliance Registry Criteria recognize that a small generator, so long as it is not a "blackstart unit material to and designated as part of a transmission operator entity's restoration plan," is not material to the reliability of the BES. It follows, therefore, that if a radial line would not be included in the BES but for the presence of this inconsequential generation, the presence of such non-registered generation does not cause the line to become necessary for operating an interconnected electric transmission system. For example, rooftop photovoltaic cells are now common enough that allowing their presence to prevent a radial from being excluded would render the exclusion of radials to load meaningless. Of course, the application of the definition of the BES is dynamic. For example, in considering whether new generation connected by what had previously been a radial to load should be registered, NERC may also reevaluate the exclusion of the radial.There is no basis for differentiating between radials serving only load, and radials serving load with insignificant generation. Neither is necessary for operating an interconnected electric transmission network, and so both should be excluded from the BES absent a specific demonstration as to the materiality of a particular radial.Finally, it may be appropriate for Registered Entities to have the option of submitting to NERC an informational filing listing their excluded radials. Whether or not a Registered Entity submits such an informational filing to NERC, a Registered Entity's claimed exclusion of a radial serving only load and/or unregistered generation should apply unless and until the radial is added to the BES through the inclusion process (see FMPA comments on BES exemption process submitted today).
SERC OC Standards Review Group	Yes	We assume the question was meant to read: Any radial Transmission Element or System, connected from one Transmission source to a Load-serving Element and/or generation resources not included in items 2, 3, 4, 6 and 7 above. Any ac transmission Facility composed of Transmission Line(s), substation Facilities, and transformers that is connected to BES ac Transmission Facilities at only one point by automatic interruption devices (e.g., circuit breaker or fuse), and is not capable of being switched so as to be simultaneously connected to BES ac transmission Facilities at a second point, should be considered an "excluded radial transmission Facility."
Southern Company	Yes	
Response: The SDT agrees and has developed "bright-line" exclusions for designated radial systems (only serving Load and designated generation resources) as part of the revised BES definition in the NERC Glossary without going through the exemption process being developed separately as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition.		

Organization	Yes or No	Question 8 Comment
Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5. Any deviations from the bright-line designation would be handled through the Rules of Procedure process.		
PPL Energy Plus	No	a) By not allowing exclusion of the generators listed under Items 2,3,4,6,&7, this exclusion is really a blanket inclusion of all generators over 20MVA. This blanket inclusion is discriminatory because it does not take into consideration FERC's orders in Order 743 paragraph 38 that states it is the parallel nature of the lines (and generator lead lines are not parallel to the Interconnected Network) that justify their inclusion in the BES, NOT the radial nature of their service. The blanket inclusion of items 2,3,4,6&7 also does not appear to account for FERC Order 743 in paragraph 120 that encourages exclusion of radial facilities. b)Further, for the reasons provided in brackets beside the quoted text below, the stated exemption (which is really a blanket inclusion of items 2,3,4,6&7) appears to ignore FERC Order 743 paragraph 73 which recognizes that Network Transmission Facilities with specific characteristics should be included in the BES and most generator lead lines fail to meet the criteria laid out by FERC: i.most 100 kV lines are parallel to other HV/EHV lines and are significantly loaded by failure of the HV/EHV lines. [this is not the case with 20 MVA generators] ii.connect "significant" generation. [less than 200 MVA is generally not significant to the BES] iii.may be part of a defined transfer path or flowgate. [rarely if ever for a generator] iv.are capable of causing or contributing to major disturbances. [rarely if ever will this apply to a generator since an N-1 will take out most generators and the reliability of the Interconnected Network is rarely affected by an N-1.]
LG&E and KU Energy LLC	No	
PacifiCorp	No	In Order No. 743, the Commission stated that it believes that the best way to address their concerns is to eliminate the Regional Entities' discretion to define "bulk electric system" without ERO or Commission review, maintain a bright-line threshold that includes all facilities operated at or above 100 kV except defined radial facilities, and adopt an exemption process and criteria for excluding facilities that are not necessary to operate an interconnected electric transmission network. PacifiCorp believes that the correct interpretation of this

Organization	Yes or No	Question 8 Comment
		sentence is that certain defined radial facilities may be excluded from the definition of BES without going through the exemption process. The Commission, in paragraph 119 of Order No. 743, does state that the ERO "could track exemptions for radial facilities," however, PacifiCorp believes that this step is unnecessary and would be unduly burdensome for both NERC and registered entities. Therefore a clear definition of excluded radial transmission elements must be developed and should be defined in the NERC Glossary or in the BES definition itself.
Springfield Utility Board	No	This question is unclear. There is no NERC definition of "radial" or "Radial". Does this mean transmission systems normally operated radially but that could be operated in such a way that the system was not radial that are owned by an LSE/DP and not a TOP/TO (for example) or transmission system? If radial includes systems "normally operated radial" then "Yes".
Lewis County PUD	No	We note that "radial" and "one Transmission source" are not presently defined. Any radial Transmission Element or System, connected from one Transmission source to a Load-serving Element and/or generation resources less than 150MVA should be excluded from the BES.We object to requiring such elements to go through an exemption process to become excluded.
Constellation Power Source Generation, Inc. ("CPSG") filing on behalf of Constellation Energy Group, Inc. ("CEG"), Constellation Energy Commodities Group, Inc. ("CCG"), Constellation Energy Control and Dispatch, LLC ("CDD"), Constellation NewEnergy, Inc., ("CNE") and Constellation Energy Nuclear Group, LLC, ("CENG")	Yes	Constellation believes that the BES definition should incorporate exclusions where possible to eliminate the need for going through an exclusion process for common facilities that should not be classified as BES.
FirstEnergy Corp	Yes	Needs to be directly identified in the BES definition and not subject to the exemption process.
Response: The SDT agrees and has developed "bright-line" exclusions for designated radial systems (only serving Load and designated generation resources) as part of the revised BES definition in the NERC Glossary without going through the exception process being developed separately as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition.		

Organization	Yes or No	Question 8 Comment
Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.		
United Illuminating Company	No	Generator Resources should not be excluded. Load connected by a single radial line can be excluded.
Response: The current Compliance Registry Criteria already excludes certain generator resources from registration. The SDT agrees with this concept and is continuing that line of thought in the revised definition. The SDT agrees.		
ITC Holdings Corp	No	
National Rural Electric Cooperative Association (NRECA)		Without explicit exemption criteria to review, it is too early to answer this question. Final exemption criteria must provide for consistency across all Regional Entities when determining the inclusion or exclusion of radial facilities as part of the BES. All exemption criteria must be explicit and unambiguous in order to provide as much certainty as possible. Work done by the Regional Entities on exemption criteria should be reviewed to determine is usefulness to the SDT.The SDT should consider that load-serving radial transmission lines of any voltage should be excluded from the BES, especially since these lines are localized and do not affect the integrity of the BES, i.e., load flow, power flow and short circuit studies.The SDT must also pay particular attention to the PRC standards and it applicability to radial facilities.
Response: Thank you for your response.		
The Dow Chemical Company		Dow recommends that NERC finalize a basic framework for identifying BES facilities before evaluating individual facilities or types of facilities. Such a framework is recommended by Dow in response to questions #11 and #12 below.
Response: See responses to Q11 & 12.		

Organization	Yes or No	Question 8 Comment
Central Lincoln	Yes	We note, however, that “radial” and “one Transmission source” are not presently defined and are not treated the same way by the various REs. Please define “radial” in terms of a normal operating mode and clarify that “one Transmission source” may branch out to have multiple paths to generation upstream of the radial tap.As noted elsewhere, we object to requiring such elements to go through an exemption process to become excluded.
PUD No.1 of Clallam County	Yes	
PNGC Power	Yes	
Blachly-Lane Electric Co-op	Yes	
Clearwater Power Co.	Yes	
Douglas Electric Cooperative	Yes	
Central Electric Cooperative, Inc. (Redmond Oregon)	Yes	
Raft River Rural Electric Cooperative	Yes	
Northern Lights Inc.	Yes	
Salmon River Electric Cooperative	Yes	
Okanogan Country Electric Cooperative	Yes	
Lost River Electric	Yes	
Lane Electric Cooperative	Yes	
Coos-Curry Electric Cooperative	Yes	
Consumer's Power Inc.	Yes	

Organization	Yes or No	Question 8 Comment
Umatilla Electric Co-op	Yes	
West Oregon Electric Cooperative	Yes	
Lincoln Electric Cooperative	Yes	
Fall River Electric Cooperative	Yes	
Response: The SDT agrees and has developed "bright-line" exclusions for designated radial systems (only serving Load and designated generation resources) as part of the revised BES definition in the NERC Glossary without going through the exception process being developed separately as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition. Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5. Radial systems will be clearly described in the exclusion designations.		
Xcel Energy		Xcel Energy has provided a diagram to Ed Dobrowolski on 1/21/11 that lays out a scenario that should be considered and worked through as part of the development of the definition and exemptions. As stated in questions 2 & 3 it is unclear as to how treatment of facilities would occur, especially if there are multiple/separate owners of each wind farm, even thought they aggregate to a common bus that connects to the transmission system. Treatment of the bus and breakers between each wind farm and the transformer also needs to be contemplated and addressed in the definition or exclusion process.
Response: See responses to Q2 & Q3.		
Indeck Energy Services	Yes	Same Response as Question 1

Organization	Yes or No	Question 8 Comment
Response: See response to Q1.		
NERC Staff		Please see additional comments at the end of this document.
Response: See response to Q13.		
ExxonMobil Research and Engineering	Yes	NERC should follow the model of RFC and provide an appendix that provides examples of what type of radial feeds are exempted. NERC should also utilize IEEE C37.95: Guide for the Protective Relaying of Utility-Consumer Interconnections Section 4, which details typical interconnection facilities, as a reference when developing their concept of the BES. Addressing typical interconnection facility configurations will assist the NERC SDT in developing a clear and concise definition that provides a precise line of demarcation between elements of the BES and end use customer facilities.
Response: The SDT believes that a bright-line definition such as provided in the latest revision is more useful than examples in appendices.		
Pepco Holdings Inc.	Yes	Radial transmission element or system and load-serving elements need to be defined.
Manitoba Hydro	Yes	Radial tranmission elements and systems should be excluded, but a clear NERC definition of radial is required.
Duke Energy	Yes	Radial Transmission Element or System needs to be more clearly defined.
Response: The SDT believes that with the revisions made to the proposed definition that no other definitions will be required.		
Idaho Power	Yes	This should be expanded to transmission elements or systems that source load servering stations.Two examples are: 1.) The non-radial transmission system serving a metro area load at 138 kV where 230 kV and higher voltage systems surround the area and provide the bulk electric system transfer, and 2.) The non-radial transmission loops that serve rural area load at 138 kV that are essentially tangential to the bulk electric transfer path.
Response: The SDT has discussed this at length and has drafted exclusions for local distribution networks that should address these concerns and that will be available for review and comments. Excluded from the BES: E1 - Local Distribution Networks (LDN): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the Interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level		

Organization	Yes or No	Question 8 Comment
of service to retail customer Load. The LDN is characterized by all of the following: a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices; b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation; c) Power flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN; d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Public Service Enterprise Group Company	Yes	See the response to item 6 above.
Response: See response to Q6.		
Northeast Power Coordinating Council	Yes	
City of Redding	Yes	However, the NERC GO/TO work should incorporated.
City of Anaheim	Yes	Transmission elements serving radial load, radial distribution systems, or non-GO/GOP generation connected to such radial lines and excluded from BES; provided, however, to eliminate any reliability gaps, such radial transmission elements should be classified as "Distribution" equipment subject to DP standards, and the PRC and vegetation management standards should be made applicable to Distribution Providers and this equipment. This is consistent with the NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for radial transmission facilities that function as Distribution and are not required for the reliable operation of the BES.
IRC Standards Review Committee	Yes	
Bonneville Power Administration	Yes	

Organization	Yes or No	Question 8 Comment
Competitive Suppliers	Yes	The consideration and criteria about whether radials should be included as elements of the BES or not, needs to ensure consistency across the Regional Entities, based upon the future revised BES definition and the exemption criteria. Much of the consideration from the prior questions is based on generators and their size as measured by their capacity and connection voltage. While EPSA believes that there are some facilities that should be included (but not all) the "Yes" response to this question is really dependent on the exemption criteria developed by the Standard Drafting Team for radial lines. The "bright-line" criteria from earlier questions are not sufficient to make an assertion about what is necessary for reliability with respect to radial lines. Criteria about generators and their connections is one piece for ensuring reliability. Further bright-line criteria need to be determined for load-serving elements on par with the generator criteria relevant for reliability. The BES definition additionally needs to recognize that load and generation can have similar affects on the BES because both can affect BES voltage and frequency. As written, the BES definition appears to apply to generation but not load when in fact the BES sees the difference between load and generation mainly as the direction of power flow.
Arizona Public Service Company	Yes	
LCRA Transmission Services Corporation	Yes	
American Municipal Power	Yes	
North Carolina EMC	Yes	Radial facilities meeting the above criteria should be automatically exempted from classification as a part of the BES and should not be required to go through a separate exemption process.
ReliabilityFirst	Yes	As long the facility is purely radial and could under no circumstance or system topology (i.e. via switching or re-configuration) trip/lockout a BES facility.
on behalf of Teck Metals Ltd.	Yes	Parallel transmission lines from a single source (substation) to a singe load should be excluded from the BES, with the consent/request of the owner of the connected load (and/or all customers that constitute the connected load).
Southern California Edison	Yes	SCE currently does not report on any radial Transmission Element or System, connected from one Transmission source to a Load-serving Element and/or generation resources not included in items 2, 3, 4, 6, and 7 and believes the above should be excluded.

Organization	Yes or No	Question 8 Comment
Southern California Edison Company	Yes	
on behalf of Catalyst Paper Corporation	Yes	Parallel transmission lines from a single source (substation) to a singe load should be excluded from the BES, with the consent/request of the owner of the connected load (and/or all customers that constitute the connected load).
City of Grand Island	Yes	
Occidental Energy Ventures Corp	Yes	The existing exclusion for radial lines serving load should be maintained. If clarification of the existing language concerning radials is required, the exclusion and definition of “radial systems,” including the explanation of “normal operations,” contained in the BES Concept Document seems to accurately reflect radials serving load or small generators that should be excluded from the BES. FERC orders directing change in the BES definition support maintaining this exclusion.
City of Anaheim	Yes	Transmission elements serving radial load, radial distribution systems, or non-GO/GOP generation connected to such radial lines and excluded from BES; provided, however, to eliminate any reliability gaps, such radial transmission elements should be classified as "Distribution" equipment subject to DP standards, and the PRC and vegetation management standards should be made applicable to Distribution Providers and this equipment. This is consistent with the NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for radial transmission facilities that function as Distribution and are not required for the reliable operation of the BES.
Glacier Electric Cooperative	Yes	I don't think a radial transmission system would ever have a significant impact on the BES, so they should be excluded.
ISO New England Inc.	Yes	Per FERC Order 743, paragraph 55, the Commission declared, "As we stated in the NOPR, we do not seek to modify the second part of the definition through this Final Rule, which states that "radial transmission facilities" serving only load with one transmission source are generally not included in this definition.” ISO-NE maintains that this definition of radial should be the default position and only in cases where other radial configurations are to be considered should they be examined as part of any exemption or exclusion methodology that is developed by NERC in accordance with Order 743.
Entergy Services	Yes	

Organization	Yes or No	Question 8 Comment
Snohomish County PUD	Yes	FERC Order No. 743 is clear that FERC did not intend to disturb the existing exemption for radial facilities. Accordingly, radial systems should be excluded from the BES. This should not change if the radial system is used to interconnect a BES generator for reasons set forth in the GOTO Task Force report.
Orange and Rockland Utilities, Inc.	Yes	
American Transmission company	Yes	ATC agrees that a radial transmission element or system directly connected from one Transmission source to a Load-serving Element and/or generation resources are excluded as part of the BES given that a fault or an outage of the radial transmission element or system would not maintain an Adequate Level of Reliability of the BES.
Utility Services	Yes	
City of Austin dba Austin Energy	Yes	
The Dayton Power and Light Company	Yes	
BGE	Yes	BGE believes that the BES definition should incorporate exclusions where possible to eliminate the need for going through an exclusion process for common facilities which should not be classified as BES.
City Water Light and Power (CWLP) - Springfield, IL	Yes	
American Electric Power (AEP)	Yes	Yes, and we believe that this exclusion should be applied to both Transmission and Generation.
Clark Public Utilities	Yes	
Response: Thank you for your comments. The revised definition includes a list of “Inclusions” and “Exclusions” from the 100 kV threshold and no longer references any ‘exemption process’. Based on stakeholder comments, the drafting team added “Exclusions,” to the BES definition relative to radial systems and local distribution networks.		

9. Should the following be excluded from the Elements and Facilities classified as part of the BES?

- **Elements and Facilities identified through application of the exemption process, consistent with the criteria, where the exemption process deems that the Element or Facility should be excluded from the BES (with concurrence from the ERO)**

Summary Consideration: The majority of the industry responded positively to this question. However, the SDT understands that the process is still in development and that may affect actual responses. The SDT is striving to develop a revised "bright-line" definition that contains certain inclusions/exclusions and that should remove any confusion. A separate Rules of Procedure (ROP) team is undertaking to develop a separate process for Facilities that entities may choose to follow for their unique/special circumstances that do not fit within the definition and its designation.

Organization	Yes or No	Question 9 Comment
IRC Standards Review Committee	No	We find this exclusion criteria to be redundant. We believe that the proposed definition together with the basic inclusion criteria suffice to provide a bright line framework for determining Elements/Facilities that should be included as BES. Having this exclusion criteria confuses the bright line approach and does not add any value to the basic definition and inclusion criteria.
Independent Electricity System Operator	No	We find this exclusion criteria to be redundant. We believe that the proposed definition together with the basic inclusion criteria suffice to provide a bright line framework for determining Elements/Facilities that should be included as BES. Having this exclusion criteria confuses the bright line approach and does not add any value to the basic definition and inclusion criteria.
Electric Market Policy	Yes	Dominion conceptually supports an exemption process whereby NERC or the RRO could apply to have an element included or excluded from the BES definition. Such process recognizes that it may be necessary to include elements that do not meet the bright line criteria but are necessary for operating an interconnected transmission network. Such process should be developed through the existing NERC standards development process and include a robust appeals process for the owner/operator of any element so included or excluded.
Constellation Power Source Generation, Inc. ("CPSG") filing on behalf of Constellation Energy Group, Inc. ("CEG"), Constellation Energy Commodities Group, Inc. ("CCG"), Constellation Energy Control and Dispatch, LLC	Yes	Constellation recognizes the value in clarifying the Definition of Bulk Electric System into a bright line threshold consistently applied across the regions. However, we are concerned that the current approach of a simple, all inclusive definition coupled with an exception criteria and process will not draw on the fundamentals underpinning the existing definition and create a cumbersome and unnecessary exception process. As an alternative, we propose that the standard drafting team utilize the -Section III (Rules of Procedure Appendix 5B) along with definition threshold language to develop a more comprehensive definition. Regardless of approach, any elements and facilities found to meet the criteria for exemption should be exempted. The development of such criteria should be part of the BES drafting team's

Organization	Yes or No	Question 9 Comment
("CDD"), Constellation NewEnergy, Inc., ("CNE") and Constellation Energy Nuclear Group, LLC, ("CENG")		responsibility.
Response: Your comments are noted. The SDT is striving to develop a "bright-line" definition that will contain certain inclusions/exclusions and that should remove any confusion. A separate Rules of Procedure (ROP) team is undertaking to develop a separate process for Facilities that entities may choose to follow for their unique/special circumstances that do not fit within the definition and its designation.		
Occidental Energy Ventures Corp	No	Until the exemption process is finalized, it is not prudent to answer in the affirmative.
Manitoba Hydro		Abstain until exemption process has been defined.
Response: The SDT understands that the process is still in development and how that may affect your response.		
National Rural Electric Cooperative Association (NRECA)		Without specific exemption criteria to review, it is too early to explicitly answer this question. However, the concept appears to be logical. All exemption criteria must be explicit and unambiguous in order to provide as much certainty as possible. Work done by the Regional Entities on exemption criteria should be reviewed to determine is usefulness to the SDT.
PacifiCorp	Yes	In Order No. 743, the Commission directed NERC to adopt an exemption process for excluding facilities from the definition of the BES that are not necessary to operate an interconnected electric transmission network. In order to determine which facilities may be excluded, there must be criteria and a methodology that may be applied to identify which facilities are "necessary" to operate an interconnected electric transmission network and which "transmission and generation" facilities are not. In other words, there must be a clear way to determine what makes a particular facility is "necessary" for bulk system operation. Application of the criteria and methodology will result in the identification of the facilities that may be excluded. The comment questions asked in this questionnaire cannot be answered in a meaningful way absent this methodology. Significant efforts have been undertaken by the WECC Bulk Electric System Definition Task Force (BESDTF) over the course of the past year to identify some initial criteria and methodologies. These efforts are ongoing and should be supported by the NERC drafting team.
Response: The SDT is striving to develop a "bright-line" definition that will contain certain inclusions/exclusions and that should remove any confusion. A separate Rules of Procedure (ROP) team is undertaking to develop a separate process for Facilities that entities may choose to follow for their unique/special		

Organization	Yes or No	Question 9 Comment
circumstances that do not fit within the definition and its designation. Work done by Regional Entities is one of many inputs to the SDT deliberations.		
Xcel Energy		This undeveloped process presents itself as a wild card to entities, and will most likely present inconsistencies between regions based upon each Region's preference. Additionally, does the Regional Methodology require any approval (e.g. ERO) other than the Region's own process? The "exclusions" process indicates that the ERO has the final approval authority to exclude an item from the BES. Why would the same not apply for including something into the BES based on the Region's Methodology?
MRO's NERC Standards Review Subcommittee	Yes	This will give the industry a clear set of criteria to follow which is FERC approved. If a Regional Entity has a need to alter this process there are processes in place for them to pursue a variance. However, the applicable process should be called an "exception" process to avoid the connotation that "exemption" process has for the "inclusion" aspect of the process. NSRS believes the exemption process, review and approval, would be best handled by the Regional Entity (RE) since they have more knowledge on the transmission system in their region. The "who" and "what" will have to be spelled out clearly in the criteria for the exception process.
Response: A separate Rules of Procedure (ROP) team is undertaking to develop a process for Facilities that do not fit within the bright-line definition. The details of the process are still under discussion and development. However, the SDT expects that ERO will have an oversight role on the Regional Process.		
The Dow Chemical Company		Dow recommends that NERC finalize a basic framework for identifying BES facilities before evaluating individual facilities or types of facilities. Such a framework is recommended by Dow in response to questions #11 and #12 below.
Response: See responses to Q11 & 12.		
Entergy Services		Our response to this question depends on the details of the "exemption process", including what entity has the final decision and how it is implemented. Please see our response to Q13 below.
Northeast Power Coordinating Council	Yes	Refer to the response to Question 13.
FirstEnergy Corp	Yes	Yes, but the process should be simple, rarely used with a high threshold for removing any 100kV and above facility from the normally defined BES. Please see our Question 13 response for further views.

Organization	Yes or No	Question 9 Comment
NERC Staff	Yes	Please see additional comments at the end of this document.
Orange and Rockland Utilities, Inc.	Yes	Refer to the response to Question 13.
Response: See response to Q13.		
Florida Municipal Power Agency	Yes	It is important to maintain the distinction between "exclusions" and "exemptions." The SDT seems at times to use the words interchangeably. An exclusion is a categorical carve-out from the BES definition, such that excluded Elements are treated the same as sub-100 kV Transmission. FMPA proposes the following exclusion, which would retain the existing exclusion of radials serving only load with one Transmission source, clarified to add radials serving inconsequential generation to the exclusion:Radial Transmission Elements serving only load with one Transmission source are generally not included in this definition. A radial Transmission Element may be considered as "serving only load" for purposes of the foregoing general exclusion even if it connects generation, so long as that generation is not registered pursuant to the Statement of Compliance Registry Criteria. To obtain an exemption, on the other hand, an entity must go through the NERC exemption process. If the owner or operator of an Element that is nominally part of the BES can demonstrate to NERC that the particular Element meets the criteria for demonstrating that it is not necessary for operating the interconnected electric transmission network, that Element should be granted an exemption and thus considered non-BES. (See also FMPA comments on BES exemption process submitted today.)Requests for exemptions should be decided by NERC, not the Regional Entities, in order to foster continent-wide uniformity.
Transmission Access Policy Study Group	Yes	
Response: Your comments are noted. The SDT is striving to develop a "bright-line" definition that will contain certain inclusions/exclusions and that should remove any confusion. A separate Rules of Procedure (ROP) team is undertaking to develop a separate process for Facilities that entities may choose to follow for their unique/special circumstances that do not fit within the definition and its designation.		
Pepco Holdings Inc.	Yes	1. The proposed BES definition should be expanded to contain more specific criteria for what is excluded (and included) to minimize the need for exemptions. The exemption process should only be needed for a few special situations that are not covered in the criteria. 2. The exemption process should rest with the regional entity.
Response: 1. Your comments are noted. The SDT is striving to develop a "bright-line" definition that will contain certain inclusions/exclusions and that should remove any confusion. **2**. A separate Rules of Procedure (ROP) team is undertaking to develop a process. Regional entities are expected to have an important role in the exception		

Organization	Yes or No	Question 9 Comment
process. However, as directed by FERC, it is expected that the ERO would have an oversight and/or approval role. The details of the process are still under discussion and development.		
Indeck Energy Services	Yes	Same Response as Question 1
Utility Services	Yes	See the answer to Question 1.
Response: see response to Q1.		
PUD No.1 of Clallam County	Yes	We agree with this except for the parenthetical. If the exemption process itself is approved by the ERO, there should be no reason to get ERO concurrence on every exempted element. Such a process will bog down the system so that the process will take years. Concurrence with the RE should be sufficient. The ERO should only become involved in the event of disagreement between the registrant and the RE.
Central Lincoln	Yes	
PNGC Power	Yes	
Blachly-Lane Electric Co-op	Yes	
Clearwater Power Co.	Yes	
Douglas Electric Cooperative	Yes	
Central Electric Cooperative, Inc. (Redmond Oregon)	Yes	
Raft River Rural Electric Cooperative	Yes	
Northern Lights Inc.	Yes	
Salmon River Electric Cooperative	Yes	
Okanogan Country Electric Cooperative	Yes	

Organization	Yes or No	Question 9 Comment
Lost River Electric	Yes	
Lane Electric Cooperative	Yes	
Coos-Curry Electric Cooperative	Yes	
Consumer's Power Inc.	Yes	
Umatilla Electric Co-op	Yes	
West Oregon Electric Cooperative	Yes	
Lincoln Electric Cooperative	Yes	
Fall River Electric Cooperative	Yes	
Lewis County PUD	Yes	
Response: A separate Rules of Procedure (ROP) team is undertaking to develop an exception process. Regional entities are expected to have an important role in the exception process. However, as directed by FERC, it is expected that the ERO would have an oversight and/or approval role. The details of the process are still under discussion and development.		
United Illuminating Company	Yes	NERC should specify the technical criteria to determine the exemption of a facility. NERC could either directly or delegate to the The Regional Entity to oversee the exemption process and verify consistency and maintain lists.
Response: A separate Rules of Procedure (ROP) team is undertaking to develop an exception process. Regional entities are expected to have an important role in the exception process. However, as directed by FERC, it is expected that the ERO would have an oversight and/or approval role. The details of the process are still under discussion and development.		
American Transmission company	Yes	However, the applicable process should be called an “exception” process to avoid the connotation that “exemption” process has for the “inclusion” aspect of the process. ATC believes the exemption process, review and approval, would be best handled by the Regional Entity (RE) since they have more knowledge on the transmission system in their region. The “who” and “what” will have to be spelled out clearly in the criteria

Organization	Yes or No	Question 9 Comment
		for the exception process. For consistency, it is appropriate for the ERO to monitor and concur with the exceptions.
Response: A separate Rules of Procedure (ROP) team is undertaking to develop an exception (inclusion/exclusion) process. Regional entities are expected to have an important role in the exception process. However, as directed by FERC, it is expected that the ERO would have an oversight and/or approval role. The details of the process are still under discussion and development.		
City Water Light and Power (CWLP) - Springfield, IL	Yes	CWLP generally agrees with this point, but would like to see a firm, detailed administrative process for resolving disputes for exemptions with technical justification as the guiding principle.
Response: A separate Rules of Procedure (ROP) team is undertaking to develop an exception process for Facilities that do not fit within the bright-line definition. The details of the process are still under discussion and development.		
American Electric Power (AEP)	Yes	As noted in our response to question 5, we believe that an exemption process is needed, though substantive comments cannot be made until details of such a process and its related criteria are provided.
Response: See response to Q5.		
Springfield Utility Board	Yes	Who can apply? Who pays for the process? Is there a time frame for approval? Is the registered entity required to meet reliability requirements for the Element or Facility while it is in the exemption process? Part of the concern is that there are Elements and Facilities that are not necessary for the reliability for the BES but if they were included as part of the BES definition would significantly harm the entity financially to meet compliance with no measurable impact to reliability.
Response: A separate Rules of Procedure (ROP) team is undertaking to develop an exception process for Facilities that do not fit within the bright-line definition. The details of the process are still under discussion and development. The SDT will forward your comments to the ROP team for consideration as part of their process.		
City of Redding	Yes	The key element is a good exemption process based on sound engineering principles.
City of Anaheim	Yes	
SERC EC Planning Standards Subcommittee	Yes	

Organization	Yes or No	Question 9 Comment
Public Service Enterprise Group Company	Yes	No Comment
Bonneville Power Administration	Yes	
PPL Energy Plus	Yes	Yes, PPL Energy Plus support an exemption process for facilities (such as radial generation service and 100 kV looped load service) provided the Exemption process follows FERCs Order 743 paragraph 115: "NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid."
LG&E and KU Energy LLC	Yes	
ExxonMobil Research and Engineering	Yes	There should be an exemption process. There should also be a documented process for appealing the determination of whether or not a facility is part of the BES.
Arizona Public Service Company	Yes	
LCRA Transmission Services Corporation	Yes	
American Municipal Power	Yes	
North Carolina EMC	Yes	If elements or facilities meet one of the BES definition classifications identified in Questions 1-7 above, the owner of the facility or element should be able to apply for an exemption through the exemption process. In other words, the criteria outlined in Questions 1-7 should be considered a "bright-line" criteria for inclusion in the BES. If a facility meets one or more of these criteria, it can only be excluded from the BES by applying for an exemption through the exemption process.
ReliabilityFirst	Yes	However, the exemption process and criteria needs to be clearly defined so that a common approach across the ERO is used when this determination is made.
on behalf of Teck Metals Ltd.	Yes	
Southern California Edison	Yes	SCE agrees Elements and Facilities identified through application of the exemption process, consistent with the criteria, where the exemption process deems that the Element or Facility should be excluded from the BES (with concurrence from the ERO).

Organization	Yes or No	Question 9 Comment
Southern California Edison Company	Yes	
on behalf of Catalyst Paper Corporation	Yes	
City of Grand Island	Yes	
Glacier Electric Cooperative	Yes	Yes - This is assuming that the exemption process is an accurate way to truly determine whether or not a facility is significant to the grid. I think such an analytical method will be much more effective and accurate than a bright-line approach.
ISO New England Inc.	Yes	We generally support this approach, subject to the assessment of the detailed exemption/inclusion criteria and process.
Snohomish County PUD	Yes	If the Element or Facility is demonstrated through engineering studies performed as part of the exemption process to be unnecessary for the reliable operation of the interconnected bulk transmission system, the Element or Facility should not be classified as part of the BES regardless of its operating voltage.
City of Austin dba Austin Energy	Yes	
Duke Energy	Yes	
The Dayton Power and Light Company	Yes	
ITC Holdings Corp	Yes	
BGE	Yes	No comment.
Southern Company	Yes	Yes, provided the evaluation method is clear, understandable, and technically based.
Idaho Power	Yes	

Organization	Yes or No	Question 9 Comment
Clark Public Utilities	Yes	
Response: Thank you for your response.		

10. Should the following be excluded from the Elements and Facilities classified as part of the BES?

- **Generating plant control and operation functions which include relays and systems that control and protect the unit for boiler, turbine, environmental, and/or other plant restrictions**

Summary Consideration: Most commenters who responded to this question indicated agreement with the proposal. The SDT has discussed generator plant controls and operation functions and feels that they should not be included in the BES definition. It was determined that balance of plant equipment, including control and operation functions, fall within the scope of existing reliability standards. However, the SDT believes the inclusion of generator leads and the GSU for some configurations have been established by the SDT through discussions of the elements and resources material integral to the reliable operation of the BES. The bright-line designation will be developed as part of this project and the ROP process will be handled through the revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition.

The revised BES definition includes the following "Inclusions" as elements of the BES:

Included in the BES: I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above.

Included in the BES: I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.

Organization	Yes or No	Question 10 Comment
Bonneville Power Administration	No	However, if the generator is not part of BES, then the plant control and operation functions should not be included in the BES as well.
Glacier Electric Cooperative	No	Once again, it depends on the facility's significant impact to the grid.
Manitoba Hydro		If there is an impact to frequency or voltage response or facility ratings it should be included.
City of Austin dba Austin Energy	Yes	This response assumes the question refers to devices within the plant itself. In other words, the relays, etc. within the plant and used to protect the generation assets should not be included in the definition of BES. Additionally, many generation units have a design basis allowing some equipment to trip without impact to the generation output.
City of Redding	Yes	Only the relays and protection schemes that protect BES equipment (example is a BES substation bus), not power plant equipment. Exception could be a RMR unit.

Organization	Yes or No	Question 10 Comment
Response: The SDT has discussed generator plant controls and operation functions and feels that they should not be included in the BES definition. It was determined that balance of plant equipment, including control and operation functions, fall within the scope of existing reliability standards.		
Duke Energy	No	Boiler, turbine, environmental or other control systems that are designed to automatically trip a BES facility in the normal system configuration, when operating correctly for their intended function, should be included in the BES definition.
ReliabilityFirst		Several of these examples listed could in fact force a unit or units out of service, thereby causing a negative impact (such as lowering frequency, etc.) to the BES. However, there should be some additional thought for exclusion of balance of plant facilities, such as the boiler, turbine, and environmental and auxiliary equipment (i.e. scrubber, baghouse, precipitator, fuel/ash coal handling, cooling water, etc.), if they cannot trip the unit off-line.
Response: The SDT has discussed generator plant controls and operation functions including those associated with balance of plant equipment such as boiler, turbine, environmental and other control systems and feels that they should not be included in the BES definition. It was determined that balance of plant equipment, including control and operation functions, fall within the scope of existing reliability standards.		
LCRA Transmission Services Corporation	No	
American Municipal Power	No	
Response: Thank you for your response.		
NERC Staff	No	Please see additional comments at the end of this document.
Response: See response to Q13.		
The Dow Chemical Company		As discussed in response to question #12 below, issues relating to the registry criteria applicable to generation resources should not be revisited at this time.
Response: See response to Q12.		
Competitive Suppliers		Plant controls and other systems on the generation side from the point of interconnection should not be included in the BES definition because they do not significantly affect the reliability of the interconnected

Organization	Yes or No	Question 10 Comment
		electric network. EPSA recommends that the standards drafting team develop a BES exemption criteria that considers the impact of all equipment (including lead lines and GSUs) on the generator side from the point of interconnection on the reliability of the BES.
Response: The SDT has discussed generator plant controls and operation functions and feels that they should not be included in the BES definition. It was determined that balance of plant equipment, including control and operation functions, fall within the scope of existing reliability standards. The bright-line designation will be developed as part of this project and the process will be handled through the revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. Your comments will be forwarded to the Rules of Procedure Team.		
Arizona Public Service Company	Yes	The above description for defining the exclusion is vague and too difficult to determine where the exclusion applies for a Generator. AZPS recommends identifying exclusions for all systems which are not electrically/magnetically connected to generation elements including the GSU, line leads and the generator or its protection systems.
City of Anaheim	Yes	Unless the generator is required to maintain BES reliability, i.e. black start, etc., the GSU and gen tie should be excluded from the BES; provided, however, to eliminate any reliability gaps, such generation-tie equipment should be classified as "Generator" equipment subject to GO/GOP standards, and the PRC and vegetation management standards should be made applicable to GO/GOPs and this equipment. This is consistent with the NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for non-critical generation-tie transmission elements that are not required for the reliable operation of the BES.
Response: The inclusion of generator leads and the GSU for some configurations have been established by the SDT through discussions of the elements and resources material integral to the reliable operation of the BES. Included in the BES: I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above. Included in the BES: I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.		
Indeck Energy Services	Yes	Same Response as Question 1
Response: See response to Q1.		
Springfield Utility Board	Yes	Individual loads equal to or below 25 MW (one customer on a line) served by Transmission Facilities greater than 100kV and the Transmission Facilities themselves should be excluded for the same reason. Entity registration is based on aggregate loads. But a 10 MW load may served by an LSE that has a 200 MW peak

Organization	Yes or No	Question 10 Comment
		is part of the BES while the same 10 MW load served by a 20 MW LSE would not be part of the BES. From a reliability perspective this is inconsistent. Either a facility is or isn't necessary for the reliability of the BES. If a facility isn't necessary because an entity does not meet registration thresholds then the same facility should be excluded from the BES for an entity that is registered.
Response: The SDT has decided to stay with the limits in the NERC Statement of Compliance Registry Criteria with regard to the size of generators that will be included in the BES.		
City of Anaheim	Yes	Unless the generator is required to maintain BES reliability, i.e. black start, etc., the GSU and gen tie should be excluded from the BES; provided, however, to eliminate any reliability gaps, such generation-tie equipment should be classified as "Generator" equipment subject to GO/GOP standards, and the PRC and vegetation management standards should be made applicable to GO/GOPs and this equipment. This is consistent with the NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for non-critical generation-tie transmission elements that are not required for the reliable operation of the BES.
Northeast Power Coordinating Council	Yes	These systems are internal protection systems and will not impact the reliability of the BES.
SERC EC Planning Standards Subcommittee	Yes	
Public Service Enterprise Group Company	Yes	The relays and systems described above should not be classified as part of the BES. The intent of the BES definition and applicable standards should not include these items as this would further confuse the BES boundary scope rather than clarify what should be included. The described functions and controls by themselves do not add to BES reliability.
MRO's NERC Standards Review Subcommittee	Yes	This will give our industry a clear defining line of what is a BES Facility and what it is comprised of.
IRC Standards Review Committee	Yes	
Florida Municipal Power Agency	Yes	Excluding such generating plant control and operation functions, which have to do with mechanical energy, rather than electric energy, would be consistent with Section 215 of the Federal Power Act, which states that the Bulk Power System includes “electric energy from generation facilities needed to maintain transmission system reliability.” There are standards, such as PRC-024, FAC-008, and FAC-009, regulating total unit performance and ratings, which necessarily covers component performance as well. Therefore, no purpose
Transmission Access Policy Study Group	Yes	

Organization	Yes or No	Question 10 Comment
		would be served by including these types of items in a granular way in the BES definition.
FirstEnergy Corp	Yes	Yes these should be excluded from the BES definition. If there is a reliability need related to these devices a standard could be written even though they are not included within the BES definition. Our position is similar to our prior stated view on the blackstart and cranking path.
Electric Market Policy	Yes	
SERc OC Standards Review Group	Yes	
PacifiCorp	Yes	
PPL Energy Plus	Yes	Excluding these generator components is correct.
LG&E and KU Energy LLC	Yes	
Central Lincoln	Yes	
Pepco Holdings Inc.	Yes	
PUD No.1 of Clallam County	Yes	
North Carolina EMC	Yes	Only relay elements and systems for generating units that meet or exceed the 20 MVA nameplate BES criteria should be included in this classification.
on behalf of Teck Metals Ltd.	Yes	
Southern California Edison	Yes	SCE believes generating plant control and operation functions which include relays and systems that control and protect the unit for boiler, turbine, environmental, and/or other plant restrictions should not be included in the BES definition.
Southern California Edison Company	Yes	

Organization	Yes or No	Question 10 Comment
on behalf of Catalyst Paper Corporation	Yes	
City of Grand Island	Yes	
Occidental Energy Ventures Corp	Yes	
ISO New England Inc.	Yes	
Entergy Services	Yes	
Snohomish County PUD	Yes	The BES by statutory definition can include only those Facilities and Elements that are necessary for the reliable operation of the interconnected bulk transmission system. While the facilities identified in question 10 may be necessary for the protection of plant equipment or to meet regulatory obligations related to environmental protection, they cannot be classified as BES facilities in the absence of a clear demonstration that the facilities are material to the reliable operation of the bulk system because the failure of those facilities could threaten cascading failures, separation events, or instability on the interconnected bulk transmission system.
PNGC Power	Yes	
Blachly-Lane Electric Co-op	Yes	
Clearwater Power Co.	Yes	
Douglas Electric Cooperative	Yes	
Central Electric Cooperative, Inc. (Redmond Oregon)	Yes	
Raft River Rural Electric Cooperative	Yes	
Northern Lights Inc.	Yes	

Organization	Yes or No	Question 10 Comment
Salmon River Electric Cooperative	Yes	
Okanogan Country Electric Cooperative	Yes	
Lost River Electric	Yes	
Lane Electric Cooperative	Yes	
Coos-Curry Electric Cooperative	Yes	
Consumer's Power Inc.	Yes	
Umatilla Electric Co-op	Yes	
West Oregon Electric Cooperative	Yes	
Lincoln Electric Cooperative	Yes	
Fall River Electric Cooperative	Yes	
United Illuminating Company	Yes	The Generator Protection systems for the Electrical Interconnection should not be excluded from the BES.
Orange and Rockland Utilities, Inc.	Yes	These systems are internal protection systems and will not impact the reliability of the BES.
American Transmission company	Yes	
Utility Services	Yes	Utility Services believes that these systems are internal protection systems and will not impact the reliability the BES. .
The Dayton Power and Light	Yes	

Organization	Yes or No	Question 10 Comment
Company		
ITC Holdings Corp	Yes	
BGE	Yes	No comment.
Constellation Power Source Generation, Inc. (“CPSG”) filing on behalf of Constellation Energy Group, Inc. (“CEG”), Constellation Energy Commodities Group, Inc. (“CCG”), Constellation Energy Control and Dispatch, LLC (“CDD”), Constellation NewEnergy, Inc., (“CNE”) and Constellation Energy Nuclear Group, LLC, (“CENG”)	Yes	
City Water Light and Power (CWLP) - Springfield, IL	Yes	
Lewis County PUD	Yes	These elements have little to do with the BES and should be excluded.
American Electric Power (AEP)	Yes	Given the vast diversity of plant auxiliary systems, together with their built-in redundancies, component failures in these systems would have negligible impact on BES reliability. In support of this, RFC’s definition of BES does well by seeking to maintain electric system reliability without over-reaching, by allowing the exemption of the devices mentioned in question 10.
Southern Company	Yes	Generator protection systems and operational control systems for generating plants are not critical to the BES operation. Generator protection systems should be included. However, we do not believe that other plant control systems such as boiler controls and operational control systems, etc should be included for generating plants as they are not critical to the BES operation.
Idaho Power	Yes	

Organization	Yes or No	Question 10 Comment
Independent Electricity System Operator	Yes	
Clark Public Utilities	Yes	
Xcel Energy	Yes	
Response: Thank you for your response.		

11. Do you believe that the proposed definition of BES, accompanied by a separate BES Definition Exception Process meets the reliability-related intent of the directives in Order 743?

Summary Consideration: Most commenters who responded to this question indicated disagreement with the proposal, indicating a preference to have more details in the definition. The SDT will develop the BES definition and associated criteria. The SDT intends to develop criteria that will be explicit enough so that the owners/operators of the vast majority of Facilities will not have to seek a case-by-case exception on whether their Facilities are part of the BES. This includes addressing radial Transmission serving only Load.

A separate ROP team will develop the procedures for seeking an exception that is not clearly addressed by the definition and criteria. The SDT understands the importance of the exception process being developed in parallel with the BES definition and associated criteria and will closely coordinate with the ROP team that is responsible for developing that process. As the SDT develops the modified BES definition and associated criteria, it will carefully consider Canadian-specific issues and the current NERC Statement of Compliance Registry Criteria.

Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and:

a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or,
b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or,
c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.

Excluded from the BES: E3 - Local distribution networks (LDNs): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:

a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;
b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;
c) Power flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN;
d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and
e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Organization	Yes or No	Question 11 Comment
Public Service Enterprise Group Company	No	There is still room for misinterpretation. The definition of the BES should be as explicit as possible since it affects the majority of the standards.
Response: The SDT is developing a bright-line BES definition and associated criteria that will address as many Facilities as possible.		
Florida Municipal Power Agency	No	The proposed definition abandons the current exclusion of radials serving only load with one transmission source that Order 743 specifically left in place, and instead conflates "excluded" Elements with Elements for which an "exemption" can be sought. The proposed definition would thus require entities to seek an exemption, presumably on a case-by-case basis, for every > 100 kV radial serving only load with one transmission source. FERC did not intend to direct such a result in Order 743, but rather intended to allow the current exclusion of such radials to load to continue.Furthermore, to comply with Order 743, the new BES definition and exemption/inclusion processes must ensure uniformity throughout the United States. Thus there must be a uniform process; clear criteria for exemption and inclusion; and a right to appeal decisions to a higher body within NERC and/or to FERC.
Transmission Access Policy Study Group	No	
Response: The SDT has proposed the following radial exclusion from the BES as part of its revised definition. The SDT believes that this will address your concern. Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.		
Electric Market Policy	No	See comments at bottom of questionnaire (Q13).
Response: See response to Q13.		
PPL Energy Plus	No	For the reasons discussed above, the proposed BES definition does not take into account FERC's desire to only include Facilities in the BES that have an impact on the reliability of the Interconnected Electric Network.
LG&E and KU Energy LLC	No	

Organization	Yes or No	Question 11 Comment
Response: The SDT assumes that you are referring to responses that you provided to earlier questions. See above responses.		
Competitive Suppliers	No	The intent of the directives in Order 743 is to, "direct NERC to develop a uniform modified definition of Bulk-electric system [that] will eliminate regional discretion and ambiguity". In Order 743 the Commission also finds that the exemption process needs to work with the definition. Paragraph 115 from the BES final rule states "NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid. The ERO also should determine any related changes to its Rules of Procedures (ROP) that may be required to implement the exemption process, and file the proposed exemption process and rule changes with the Commission." This section does not direct NERC to use the ROP modification process to develop "separate" exemption criteria. It only recommends that NERC modify its ROP for any related changes to implement the exemption process, not for developing the exemption criteria. BES exemption criteria need to be developed through the NERC standards development procedure by the Standard Drafting Team (SDT) that is modifying the BES definition. The exemption criteria need to be done by the same group that forms the definition so that the exemptions are crafted to fit with the new BES definition. The definition and the exemption criteria need to be meshed and work together.
Response: The SDT will develop the BES definition and associated criteria. A separate Rules of Procedure (ROP) team will develop the procedures for seeking an exception that is not clearly addressed by the definition and criteria. The SDT will closely coordinate with the ROP team.		
PacifiCorp	No	The proposed definition does not meet the reliability-related intent of the directives in Order 743 in two respects. First, the second clause of the first sentence of the proposed definition re-introduces the ambiguity that the Commission believes a bright-line threshold will eliminate. The first sentence states that the BES is "all Transmission and Generation Elements and Facilities operated voltages of 100 kV or higher necessary to support bulk power system reliability." (emphasis added). PacifiCorp understands that the intent of this language is to indicate that only some subset of 100 kV facilities (those necessary for reliability) are included in the definition of the BES. However, this language is ambiguous in that it does not make it clear that the only way to exempt 100 kV and above facilities (other than certain defined radial facilities) from the definition is to utilize the exemption process. Second, the proposed definition does not make it clear that certain defined radial facilities may be excluded from the definition without utilizing the exemption process. PacifiCorp proposes the following:Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher except [defined radial facilities]. Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher may be excluded if they are not necessary to operate an interconnected electric transmission network. Transmission and Generation Elements and Facilities operated at voltages of 100 kV or lower must be included if they are necessary to operate an interconnected electric transmission network. The criteria for determining whether Elements and

Organization	Yes or No	Question 11 Comment
		Facilities are necessary to operate an interconnected electric transmission network are defined in the BES definition exemption process.
Response: The SDT is developing criteria that will be explicit enough so that the owners/operators of the vast majority of Facilities will not have to seek a case-by-case decision on whether their Facilities are part of the BES. This includes addressing radial Transmission serving only Load. Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.		
ExxonMobil Research and Engineering	No	The proposed definition is over reaching and can potentially expand the scope of the BES beyond the point to which NERC was intended to have the authority to govern. The proposed definition does not directly address the line of demarcation between customer owned facilities and elements of BES.
Response: The SDT is developing a BES definition and associated criteria that it believes will address your concerns and those of others in this regard.		
NERC Staff	No	Please see additional comments at the end of this document.
Entergy Services	No	Please see our response to Q13 below.
Response: See response to Q13.		
Arizona Public Service Company	No	Radial transmission systems operated below 100 kV should not be included as part of the BES and should not have to go through the exception process.
Response: The SDT is developing a BES definition and associated criteria that it believes will address your concerns and minimize the need for owners/operators to have to have to go through an exception process. Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and:		

Organization	Yes or No	Question 11 Comment
a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.		
Xcel Energy	No	
Manitoba Hydro	No	No. The proposed definition includes the wording '...necessary to support bulk power system reliability' which increases ambiguity and reduces the 100kV and above bright line distinction. This wording should be removed. Manitoba Hydro suggests the following: Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher except defined radial facilities. Elements and Facilities operated at voltages of 100kV or higher, including Radial Transmission systems, may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process.
Response: The SDT has revised the definition and the wording is no longer utilized.		
Indeck Energy Services	No	Same Response as Question 1
Response: See response to Q1.		
Southern California Edison	No	SCE believes that the 100kV brightline threshold is sufficient.
Response: Thank you for your comment. Please see the revised definition – it includes a detailed list if inclusions/exclusions to minimize the need to use the BES Exception Process.		
City of Grand Island	No	This question is premature given that the BES Exception Process has not been developed.
Occidental Energy Ventures Corp	No	Until the expemtion process is finalized, it is not prudent to answer in the affirmative.
Response: The SDT understands the importance of this process being developed in parallel with the BES definition and associated criteria.		
Central Lincoln	No	The order was to provide a definition that excepted radial facilities and to create an exemption process for

Organization	Yes or No	Question 11 Comment
PUD No.1 of Clallam County	No	other facilities not necessary for operating the interconnected network. The SAR proposes to treat the two the same. This will cause unneeded expense, delay, and uncertainty for those radial facilities that could simply be eliminated by inspection. This would work against reliability by misdirecting resources toward the elements tied up in the process, and possibly away from the elements that should be included.The SAR also fails to meet the order by failing to apply it to all entity types. We fail to see how a bright line is achieved if DPs, PSEs, and IAs work from a definition different from all the other types of registered entities. Please edit the SAR to include all entity types.
PNGC Power	No	
Blachly-Lane Electric Co-op	No	
Clearwater Power Co.	No	
Douglas Electric Cooperative	No	
Central Electric Cooperative, Inc. (Redmond Oregon)	No	
Raft River Rural Electric Cooperative	No	
Northern Lights Inc.	No	
Salmon River Electric Cooperative	No	
Okanogan Country Electric Cooperative	No	
Lost River Electric	No	
Lane Electric Cooperative	No	
Coos-Curry Electric Cooperative	No	
Consumer's Power Inc.	No	
Umatilla Electric Co-op	No	

Organization	Yes or No	Question 11 Comment
West Oregon Electric Cooperative	No	
Lincoln Electric Cooperative	No	
Fall River Electric Cooperative	No	
Lewis County PUD	No	
Response: The SDT is developing criteria that will be explicit enough so that the owners/operators of the vast majority of Facilities will not have to seek a case-by-case decision on whether their Facilities are part of the BES. This includes addressing radial Transmission serving only Load. Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in inclusions I2, I3, I4 and I5.		
The Dow Chemical Company	No	Order No. 743 correctly recognizes that local distribution facilities are expressly excluded from the definition of "Bulk-Power System" set forth in Section 215 of the Federal Power Act. See Order No. 743 at P 37. As such, local distribution facilities must also be excluded from the definition of BES adopted by NERC. That is not the case with respect to the proposed definition, which makes no mention whatsoever of local distribution facilities. Instead, the proposed definition simply provides that certain facilities, including "Radial Transmission systems, may be excluded . . . if approved through the BES definition exemption process." While this language presumably is an acknowledgement that Radial Transmission lines perform a local distribution function and should be excluded, numerous other types of facilities also perform a local distribution function and should also be excluded regardless of their voltage.For example, Dow and certain of its subsidiaries, including Union Carbide Corporation, own and operate electrical facilities at a number of industrial sites within the U.S. In all cases, a tie line or lines connect the industrial site to the electric transmission grid. Power is delivered from the electric transmission grid to the industrial site through the tie line(s). Lines within the industrial site then deliver power to individual manufacturing plants within the site. Additionally, cogeneration facilities are located at a number of industrial sites owned by Dow and Union

Organization	Yes or No	Question 11 Comment
		Carbide Corporation, principally in Texas and Louisiana. These cogeneration facilities generate power that is primarily distributed within the industrial site and used for manufacturing plant operations. In some instances, excess power not required for plant operations is delivered into the electric transmission grid through the tie line(s) connecting the industrial site to the grid.While the tie lines and internal lines at these industrial sites can be fairly significant in terms of voltage, they do not perform anything that resembles a transmission function. Rather than transmit power long distances from generation to load centers, the tie lines and internal lines perform a local distribution function consisting of the distribution of power brought in from the grid or generated internally to different manufacturing plants within each industrial site. In some cases, the facilities also perform an interconnection function to the extent they enable excess power from cogeneration facilities to be delivered into the grid. The voltage of the tie lines and internal lines at these industrial sites is dictated by the load and basic configuration of each site. Higher voltage lines (>100 kV) are used to reduce line losses while meeting applicable load requirements. That does not mean that such lines perform a transmission function. Indeed, just as a line that delivers power into a home, or from a home to an accompanying garage, is considered a distribution facility and not a transmission facility, the same is true of lines that deliver power into industrial sites owned by Dow or its subsidiaries (even though such lines also may be used to deliver excess power to the transmission grid) or within those sites. The definition of BES adopted by NERC should explicitly provide for these types of local distribution facilities to be categorically excluded.
City of Redding	No	The current definition goes to far; local goverments, cities, and citizens have been given the right to decide the level of reliability of their distribution system. FERC & NERC were not given jurisdiction over local distribution facilities. Note: many local distribution facilities are operated above 100 kV.

Response: The SDT is developing a BES definition and associated criteria that it believes will address your concerns.

- Excluded from the BES: E3 - Local distribution networks (LDNs): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:
  a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;
  b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;
  c) Power flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN;
  d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and
  e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and

Organization	Yes or No	Question 11 Comment
is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
National Rural Electric Cooperative Association (NRECA)	No	It is too early to determine the effectiveness of the proposed BES definition and BES criteria included in the draft SAR. However, the concept of a BES definition and BES criteria, along with BES exemption criteria, appears, at least from a preliminary standpoint, to be a satisfactory direction to begin the process. The concepts presented in the draft SAR should not preclude any other potential direction for the SDT to explore at this point in the process.The proposed BES definition in the SAR should be considered only as an alternative for the SDT to consider in its work, not a final definition or a definition that precludes other proposed definitions.
Response: The SDT considers the proposed BES definition in the SAR as a starting point for SDT consideration.		
Duke Energy	No	The high level direction does, but the details need to be defined before this question can be answered affirmatively.
Response: The SDT is developing a BES definition and associated criteria that it believes will address your concerns.		
American Electric Power (AEP)	No	It's not clear how the criteria in the concept paper will be related back to the overall definition of BES. We recommend that the finalized criteria be included verbatim in the definition, or that the definition refer to an official companion document. The definition cannot automatically include all equipment (both primary-voltage and the associated auxiliary equipment) by default.
Response: The SDT considers the concept paper one of the starting points for SDT consideration. The finalized criteria will be included in the definition.		
Springfield Utility Board	No	SUB appreciates the work to provide a clearer definition of the BES, but the proposed language is ambiguous.The existing definition is:"As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition."The proposed definition is: "Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher necessary to support bulk power system reliability. Elements and Facilities operated at voltages of 100kV or higher, including Radial Transmission systems, may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process."Looking at the first sentence, 100kV or higher facilities are part of the BES ONLY if they are necessary to support bulk power system reliability. As written, if an registered entity determines that a 100kV or higher facility is not necessary for BPS system reliability then the facility may be excluded. If the intent is to

Organization	Yes or No	Question 11 Comment
		assume that all 100kV and above facilities are necessary for BPS reliability, SUB strongly disagrees.To avoid confusion, SUB suggests that the first sentence state: "Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher." The language "necessary to support bulk power system reliability." should be deleted. Turning to the second sentence:"Elements and Facilities operated at voltages of 100kV or higher, including Radial Transmission systems, may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process."The approved April 2010 NERC Glossary of Terms includes definitions for "Elements", "Facilities", and "Transmission", but does not have a definition for "Radial" or "Radial Transmission", "Radial Transmission systems", Transmission systems", or "systems". SUB does not know what this language is intended to mean.If the language "Radial Transmission systems" means an Transmission Element or Facility normally operated open then SUB agrees with this language. If all Elements or Facilities are outright excluded from being excluded from the BES because they could "potentially" be operated closed, this language has little value as most facilities have the "potential" to operated closed.SUB has concerns that EROs are making interpretation of language, such as "radial", without going through a required interpretation public process and are just "announcing" what language means. Is is not uncommon for an ERO to announce a definition for an undefined term and then tell registered entities that they need to request a formal interpretation from NERC in order to modify an informal ERO interpretation. SUB would like to eliminate this confusion - starting with the BES definition which is confusing and may perpetuate an informal interpretation process. SUB proposes that the second sentence read:"Elements and Facilities operated at voltages of 100kV or higher, including Radial Transmission systems, may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process. Radial Transmission systems include Elements or Facilities normally operated open." Lastly, why would an entity want to include an Element or Facility that would otherwise be excluded? If an ERO determines that an Element or Facility below 100kV is necessary for reliability would the ERO be ability to initiate an exemption process to include the Element or Facility without the owners knowledge or consent? What if the owner is not a Registered Entity? This inclusion language for elements below 100kV is unclear in terms of the application, implementation, or intent.
Response: The proposed BES definition included in the SAR is only a starting point for the SDT. The SDT intends to address the issues you have identified in its efforts to develop a BES definition and associated criteria. The initial thinking is that for Facilities captured as BES by the definition/criteria, if an owner/operator believed those Facilities should not be considered BES, that owner/operator would need to technically demonstrate why such Facilities should be excluded. In addition, for Facilities that are not captured as BES by the definition/criteria, if the ERO or a Regional Entity believed those Facilities should be considered as BES, then the ERO or the Regional Entity would need to technically demonstrate why such Facilities should be included. It is the intent of the SDT that the BES definition and associated criteria it develops will address the vast majority of Facilities and minimize the need for technical demonstration by owners/operators or		

Organization	Yes or No	Question 11 Comment
the ERO and regional Entities.		
Electricity Consumers Resource Council (ELCON)	No	The Electricity Consumers Resource Council (ELCON) appreciates the opportunity to submit the following comments on the draft concept document prepared by the Regional Bulk Electric System Definition Coordination Group (RBESCG), a team of representatives of the Regional Entities (REs).ELCON is the national group representing the interests of large industrial consumers of electricity. Many ELCON member facilities are Registered Entities. One or more ELCON members are registered as: BA, IA, GO, GOP, TO, TOP, TSP, PA, RP, LSE, and PSE. However, the most common registered functions of large industrial end users are GO, GOP and PSE by virtue of the need to supply a complex industrial process with low-cost thermal energy and/or low-cost electric energy.The stated purpose of the concept document is to provide a "common approach" for: o Defining the BES and therefore improve the clarity, reduce ambiguity and establish a universal method (i.e., bright line) for distinguishing between BES and non-BES Elements and Facilities. o Identifying BES Elements and Facilities so as to establish a "repeatable" method for applying NERC Reliability Standard requirements and facilitate consistent application of compliance efforts across regional boundaries.CommentsELCON members have always supported fair and effective reliability efforts at NERC. However, the expansion of the standards compliance responsibility implied by the NERC Concept Document goes too far. As written, this proposal could have the effect of devaluing a large number of industrial owned electrical power assets by forcing industrials to meet new and unnecessary compliance obligations. Many will be forced to choose to either accept a significant new cost or fire sale their assets to local providers increasing the purchaser's market power in the process. ELCON feels the addition of new compliance obligations should not be done in such a wholesale manner but instead done on an exception and as needed basis that factors in both a realistic appraisal of the underlying risk and the economic burden imposed on the registered entity relative to the expected benefits. Specific recommendations and concerns are: 1. An Overarching "Principle" for the Identification of BES Elements and Facilities Must be the Guidance Provided by FERC That Significant Expansion of the Compliance Registry is Not Contemplated.In FERC's March 18, 2010 Notice of Proposed Rulemaking (NOPR) on the Revision to Electric Reliability Organization Definition of Bulk Electric System, the Commission stated regarding the revision to the BES definition:"This proposal would eliminate the discretion provided in the current definition for a Regional Entity to define "bulk electric system" within a region. Importantly, however, we emphasize that we are not proposing to eliminate all regional variations and we do not anticipate that the proposed change would affect most entities." Â¶ 16."... the Commission does not believe that the proposal would have an immediate effect on entities in any Regional Entity other than NPCC." Â¶ 27.Similarly, in Order No. 743, the Commission stated:"We expect that our decision to direct NERC to develop a uniform modified definition of 'bulk-electric system' will eliminate

Organization	Yes or No	Question 11 Comment
		regional discretion and ambiguity. The change will not significantly increase the scope of the present definition, which applies to transmission, generation and interconnection facilities. The proposed exemption process will provide sufficient means for entities that do not believe particular facilities are necessary for operating the interconnected transmission system to apply for an exemption." Â¶ 144.One area where the proposed BES definition and exception process will significantly expand the Compliance Registry is the criteria applicable to behind-the-meter generation (primarily cogeneration facilities). We urge that the BES definition should not change the currently applicable 20 MVA / 75 MVA generation size threshold applicable to generation facilities or the manner in which that threshold is currently applied, with behindâ€theâ€meter cogeneration facilities evaluated based on the net capacity actually provided to the grid. 2. A Second Overarching "Principle" for the Identification of BES Elements and Facillities Is the Need to Clarify Which Facilities Perform a True Transmission Function and Excluding Facilities That Perform a Local Distribution Function, As Required by Law.Congress stated in Federal Power Act section 215:SEC. 215. ELECTRIC RELIABILITY.''(a) DEFINITIONS.-For purposes of this section:''(1) The term 'bulk-power system' means-''(A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and''(B) electric energy from generation facilities needed to maintain transmission system reliability.The term does not include facilities used in the local distribution of electric energy.There has been little attempt by NERC to clarify what in fact are "facilities used in the local distribution of electric energy" even though any plain English application of the term makes such a determination self-evident. The proposed BES definition should expressly exclude facilities used in the local distribution of electric energy, and the identification of such facilities is independent of the identification of BES transmission. Facilities used for local distribution are NOT the residual of any determination of what are BES transmission facilities. 3. A Third Overarching "Principle" for the Identification of BES Elements and Facilities Must be Recognition of the Risk Imposed by the Element or Facility, and the Economic Burden of the Owner/Operator of the Element of Facility.The efforts of the BES Standards Drafting Team follow the release of two important policy documents. First, on January 18, 2011, the White House issued an Executive Order ("Improving Regulation and Regulatory Review") by President Obama regarding improvements to federal regulations and the review of existing regulations to ensure, among other things, that a regulation be proposed or adopted "only upon reasoned determination that its benefits justify its costs," and that regulations be tailored "to impose the least burden on society." Second, the NERC Planning Committee issued on January 10, 2011, "Risk-Based Reliability Compliance - White Paper Concept Discussion," which attempts to advance "processes and procedures to prioritize [NERC's] efforts and 'tiering' elements of its programs to maximize their value and optimize the benefit/cost of effort from stakeholders." This white paper complements the President's Executive Order.ELCON believes that BES exclusion criteria and process should recognize and exclude elements and facilities in which the risk to bulk electric system reliability is at most theoretical or speculative, and where the compliance burden clearly outweighs the benefits. Such a determination should recognize the

Organization	Yes or No	Question 11 Comment
		historical record of the element or facility in terms of the owner or operator's coordination with the BA or control area, and transmission operators. This principle should be applied to the development of exclusion/inclusion criteria for private lines that connect loads and behind-the-meter generation to true BES Elements and Facilities. 4. An Additional Principle for the Identification of BES Elements and Facilities Should Be the Explicit Recognition on How the Element or Facility is Actually Operated or Used, Not Its Physical or Nominal Rating That May be Irrelevant to Reliability Considerations.In Order No. 743, FERC clarified that it did not intend to require NERC to utilize the term "rated at" rather than the term "operated at" for the voltage threshold in the revised BES definition. A principle for the identification of BES Elements and Facilities should be such recognition and not exclusively on the rated value of an Element or Facility. This principle should be used to retain the exclusion in the Statement of Compliance Registry Criteria (Revision 5.0) for "net capacity provided to the bulk power system" in the context of the 20 MVA generating unit and 75 MVA generating plant thresholds. The "net capacity" applies to capacity "put" of a behind-the-meter generator whose predominant function is to serve load at the same site. 5. An Additional Principle for the Identification of BES Elements and Facilities Should be the Exclusion of PSEs That Do Not Own or Operate Physical Assets and Whose Power Transactions Are Exclusively Financial in Nature.Many PSEs that operate in FERC jurisdictional organized wholesale markets (i.e., ISOs and RTOs) do not own, operate or lease physical assets and are currently bombarded with data requests that assume that they own or control such assets. An example of a superfluous data request is to prove that adequate reactive power has been procured to support the load. This is a question that should not have been asked and displays a profound ignorance of the operation of ISO/RTO markets. One potential solution to this problem is to create two subsets of PSEs: one that owns and operates physical assets that are used to serve their loads, and a second that does not.Some Regional Entities have also begun to ask questions that require PSEs to reveal the details of specific commercial transactions. This raises a broader question on what NERC and regional compliance staffs and auditors "need to know" and whether such questions are an abuse of their enforcement authority. 6. Any Attempt to Make Demand Side Management (DSM) Measures an Element or Facility of BES Will Be Shortsighted and Counterproductive.Proposals that unilaterally and arbitrarily remove exclusions for generation and transmission, including the application of new compliance obligations to DSM programs, go far beyond what FERC intended in its guidance for revisions. Any new requirement concerning voluntary DSM adds cost to a process that so far has only acted to support reliability with performance equal to and sometimes superior to traditional providers. How is it that a potential resource that can contribute to maintaining reliability is now so quickly identified as a risk? We warn against the overzealous pursuit of control over every asset and resource on the electric system. This mindset will only breed cynicism and end the willingness of potentially dispatchable loads to cooperate with the real operators and owners of the BES.A recently issued FERC study highlights the potential value to reliability of DSM (in the form of dispatchable

Organization	Yes or No	Question 11 Comment
		demand response) (See Joseph H. Eto et al., Use of Frequency Response Metrics to Assess the Planning and Operating Requirements for Reliable Integration of Variable Renewable Generation, LBNL-4142E, December 2010). To reliably integrate greater amounts of wind energy resources to the bulk electric system, the study recommended the:"Expanded use of demand response that is technically capable of providing frequency control (potentially including smart grid applications), starting with broader industry appreciation of the role of demand response in augmenting primary and secondary frequency control reserves." 7. Revising the Definition of BES Does Not Justify Shifting the Plenary Burden for BPS Reliability from Utilities to Utility Customers. A BES Principle Should Recognize That the Obligation to Serve Applies in One Direction.The only reason the bulk power system exists is to deliver electric power to residential households, commercial businesses, government facilities and industrial facilities of all sizes. The value of a reliable BPS is dependent on the needs of end use customers. Nothing in the legislative history of section 215 of the Federal Power Act suggests that Congress wittingly intended to change that relationship. The burden of complying with NERC Reliability Standards is a cost of doing business for utility providers of generation, transmission and distribution services. Generation and interconnection facilities of industrial customers are almost never intended for or used to "operate the interconnected transmission network." Those facilities are integral to a manufacturing process, including purchasing power from the grid. They were built in expectation that the BPS was prudently planned and operated by utilities. The rare exceptions are administered under applicable tariffs or contracts, and are already Registered Entities. Part of NERC's effort should include defining the line between a BES asset that is used to deliver power and an End User asset that's sole purpose is to serve the End User's load. The NERC Functional Model includes a vague definition of End-use Customer. The problem is determining the scope of an end-use device. If an industrial company owns a 138 kV to 13.8 kV transformer that feeds its plant, is that an end-use device or a transmission asset that is used to transmit power to the low voltage distribution network within the manufacturing facility? Any work to revise the definition of the BES should also include a clarification of its boundaries. We believe that NERC should not expand the scope of the BES to include assets within end-use customer's private use networks. (See our recommendation #2 above) 8. An Additional BES Principle Should be that BES Elements and Facilities be Limited to Only Functions Currently Specified in the NERC Functional Model (Version 5).NERC's development of the revised BES definition and exclusion/inclusion criteria and processes should be limited to functions specified in the NERC Functional Model (Version 5). 9. NERC is Encouraged to Propose a "Different Solution" That is as Effective as, or Superior to, the Commission's Proposed Approach. The Proposed Principles for the Exclusion of Elements and Facilities from the BES Should Include a Process for Categorical Exclusion Based on Common Physical Characteristics.The Commission stated in Order No. 743 regarding its proposed revision of the BES definition (and presumably the exclusion/inclusion criteria and processes):"... NERC may propose a different solution that is as effective as, or superior to, the Commission's proposed approach in addressing the Commission's

Organization	Yes or No	Question 11 Comment
		technical and other concerns so as to ensure that all necessary facilities are included within the scope of the definition." Â¶ 16.In addition, specific to the exclusion of Elements and Facilities from the BES, the Final Rule did not adopt the exclusion process proposed in the NOPR (i.e., facility-by-facility review). In the Final Order, FERC directed NERC to develop an exclusion process "with practical application that is less burdensome than the NOPR proposal." FERC has also allowed NERC to consider concerns (mainly industrials') regarding "exclusion categories" in developing the exclusion process and criteria. Â¶ 120.ELCON interprets the Commission's statements to mean that the agency is open to developing a more efficient compliance process, including processes that minimize unnecessary regulatory burdens on potential Registered Entities and the administrative costs of NERC and RE compliance operations. In the spirit of "streamlining" NERC and the REs' review of smaller entities, ELCON recommends the addition of a principle on the exclusion of Elements and Facilities from the BES that encourages a process for categorical exclusion of entities based on common physical characteristics.
Response: The SDT considers the proposed BES definition in the SAR as a starting point for SDT consideration. As it develops a modified BES definition and associated criteria, it is carefully reviewing and considering the NERC Statement of Compliance Registry Criteria. The SDT has considered your comments in developing a modified BES definition and associated criteria. The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions while addressing most, if not all, of the provided suggestions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. NERC will follow the due process established for changes to the Glossary of terms. This new definition addresses radial Loads, generation, and local distribution networks.		
Constellation Power Source Generation, Inc. ("CPSG") filing on behalf of Constellation Energy Group, Inc. ("CEG"), Constellation Energy Commodities Group, Inc. ("CCG"), Constellation Energy Control and Dispatch, LLC ("CDD"), Constellation NewEnergy, Inc., ("CNE") and Constellation Energy Nuclear Group, LLC, ("CENG")	Yes	Paragraph 115 from the BES final rule states "NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid. The ERO also should determine any related changes to its Rules of Procedures (ROP) that may be required to implement the exemption process, and file the proposed exemption process and rule changes with the Commission." This section does not direct NERC to use the ROP modification process to develop "separate" exemption criteria. It only recommends that NERC modify its ROP for any related changes to implement the exemption process, not the exemption criteria itself. The compliance implications and technical nature of such criteria make it imperative that industry input be considered in a transparent stakeholder process. It is appropriate for NERC to develop aspects such as the administrative management, the role and interaction of the regions, an appeal process, etc. However, due to the technical aspects of BES operation, the drafting team members are best suited to devise criteria for non-BES facilities to warrant inclusion in the BES.As currently proposed, the definition language and the exception criteria are not being developed in the properly coordinated fashion. This should change. Further, Constellation is not convinced that creation of a definition and an exception process is the best course to respond to the FERC directives. In question 12, an alternative approach is proposed.

Organization	Yes or No	Question 11 Comment
City Water Light and Power (CWLP) - Springfield, IL	Yes	CWLP feels, again, that the lack of a firm, detailed administrative process for exemptions hampers the proposed BES definition in meeting the intent of Order 743
American Transmission company	Yes	However, ATC does not want to appear to endorse any separate BES Definition Exception and Inclusion Processes until one has been clearly proposed and meets the reliability-related intent of the Order 743 directives. Furthermore, ATC believes the separate Exception and Inclusion Processes should be subject to the same Standards Development review and approval process as the associated BES definition.
MRO's NERC Standards Review Subcommittee	Yes	However, NSRS does not want to appear to endorse any separate BES Definition Exception Process until one has been clearly proposed and meets the reliability-related intent of the Order 743 directives. Furthermore, NSRS believes the separate Exception Process should be subject to the Standards ("Definition") Development Process as the associated BES definition.
Response: The SDT is developing the BES definition and associated criteria. A separate Rules of Procedure (ROP) team will develop the procedures for seeking an exception that is not clearly addressed by the definition and criteria. The SDT will closely coordinate with the ROP team.		
APPA	Yes	I agree that the proposed definition meets the intent of Order 743. However, the separate development of exception criteria ouside of the standards development process does raise concerns. See response to Question 12.
Response: See response to Q12.		
Pepco Holdings Inc.		See comments above and below.
Response: See responses above and below.		
Hydro-QuÃ©bec		For the Canadian entities, it is important to consider that the definition of the Bulk Electric System must also be approved by the Canadian regulators.
Response: The SDT is aware of the issues related to Canadian utilities and regulators and will consider those as it develops a modified BES definition and associated criteria.		
Utility Services	Yes	However, Utility Services would like to suggest alternative definitions for Bulk Electric System and BES Exemption Process. We have presented our proposed definitions in the answer to Question 1. While the proposed definition may meet the Order, Utility Services believes that the definition can be made cleaner and

Organization	Yes or No	Question 11 Comment
		easier to read
Response: See response to Q1.		
United Illuminating Company	Yes	Order 743 focused on the definition of BES and the exemption process. Although not part of the SAR or ORDER 743, UI suggests NERC provide an explanation in the implementation plan of the impact on the registry criteria. Will the Registry Criteria serve as another filter for identifying which entities willbe part of Compliance Monitoring
Response: As the SDT develops a modified BES definition and associated criteria, it will be carefully reviewing and considering the NERC Statement of Compliance Registry Criteria.		
Northeast Power Coordinating Council	Yes	A qualified "Yes". The BES exemption process has not yet been written. So, it is somewhat difficult to know in advance that this approach meets the reliability-related intent of the directives in Order 743. While in general agreement with this conclusion, there is concern that the BES definition and BES exception process do not yet adequately address a "point-of-demarcation" between the BES Facilities and Elements and non-BES facilities and elements (lower case). Propose to add two new terms for the NERC Glossary of Terms in our reply to Question 13, in order to identify a point-of-demarcation and more fully respond to this question.
Orange and Rockland Utilities, Inc.	Yes	
Response: The SDT will consider your concerns in its deliberations as it moves forward in revising the definition. .		
City of Anaheim	Yes	
IRC Standards Review Committee	Yes	The definition is critically dependent on the detailed exemption/inclusion criteria and process, which has not been developed.
Bonneville Power Administration	Yes	
FirstEnergy Corp	Yes	However, BES definition changes are needed to establish a bright-line for the BES.
SERc OC Standards Review Group	Yes	
LCRA Transmission Services Corporation	Yes	

Organization	Yes or No	Question 11 Comment
American Municipal Power	Yes	
North Carolina EMC	Yes	
ReliabilityFirst	Yes	A single and uniform definition that includes exemption criteria and an exemption process must be the result of this effort. Then this material must be consistently used by all of the Regional Entities across the ERO in order to achieve the directives set forth in Order 743.
on behalf of Teck Metals Ltd.	Yes	
Southern California Edison Company	Yes	
on behalf of Catalyst Paper Corporation	Yes	
City of Anaheim	Yes	
Glacier Electric Cooperative	Yes	I have not seen the BES Definition Exception Process, but I trust it will be an accurate method.
ISO New England Inc.	Yes	
Snohomish County PUD	Yes	While Snohomish believes FERC substantially overstepped its statutory authority in Order No. 743 for the reasons set forth in its comments and petition for rehearing filed with FERC in that docket, we nonetheless support FERC's underlying goal to assure reliable operation of the interconnected bulk transmission system. Within the constraints imposed by FERC, we believe the approach of defining the BES and then establishing an exemption process to exclude Facilities and Elements that are not necessary for the reliable operation of the interconnected bulk transmission system should meet FERC's reliability goals while mitigating the excessive compliance costs that will arise from blunt application of a 100-kV brightline threshold. Nothing stated in these comments, however, should be interpreted as withdrawing or waiving any objection Snohomish has made to Order No. 743.
City of Austin dba Austin Energy	Yes	
The Dayton Power and Light	Yes	

Organization	Yes or No	Question 11 Comment
Company		
ITC Holdings Corp	Yes	As long as the PRC023 Critical criteria is used for below 100 kV is used for inclusion.
BGE	Yes	No comment.
Southern Company	Yes	The framework appears to be in place to respond to the directive; however, the details of the “exemption process” remain to be fully developed.
Idaho Power	Yes	
Independent Electricity System Operator	Yes	The definition is critically dependent on the detailed exemption/inclusion criteria and process, which has not been developed. We advocate that the revised BES definition and the exemption/inclusion process and criteria be developed at the same time and preferably by the same drafting team to ensure consistency in approach, since these issues are very closely interrelated.
Clark Public Utilities	Yes	
Response: Thank you for your response. Please see the revised definition –it includes a detailed list if inclusions/exclusions to minimize the need to use the BES Exception Process.		

12. If you have a proposal for an equally efficient and effective method of achieving the reliability- related intent of the directives in Order 743, please provide your proposal here.

Summary Consideration: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations (included within the body of the definition), will provide a bright-line definition, clarity, and consistency across the regions while addressing most, if not all, of the provided suggestions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. NERC will follow the due process established for changes to the Glossary of terms. This new definition addresses radial Loads, generation, and local distribution networks. Furthermore, the SDT has utilized many resources to provide this clarity including the Compliance Registry Criteria and the WECC BESDTF recommendations.

Organization	Question 12 Comment
Public Service Enterprise Group Company	The BES definition impacts many standards and has been the source of misunderstanding with subsequent requests for interpretations. In this one case, a stand alone interpretive descriptive document with clear lines of demarcation using example one lines and associated notes in lieu of a three sentence description that attempts to describe all elements of the BES could be considered.
Manitoba Hydro	Manitoba Hydro supports a true bright-line threshold that includes all facilities operated at or above 100kV except defined radial facilities. There should be no regional differences in the definition or exemption process and the regional discretion should be removed from the BES definition.
ReliabilityFirst	The ERO and the Regional Entities should develop and propose the common BES definition and exemption process, submit it to FERC, and allow for the FERC process, whereby the industry provides its comments, etc., to be used to finalize this definition, exemption process and criteria.
United Illuminating Company	The BES definition should be very clear and simple.
ITC Holdings Corp	Exclusion criteria should be determined at the NERC level and implemented continent wide by the Regions, rather than allowing each Region to come up with their own policy and criteria on exclusions.
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition.	
MRO's NERC Standards Review	Proposed Bulk Electric System definition: Facilities operated at voltages of 100 kV or higher necessary to support the

Organization	Question 12 Comment
Subcommittee	interconnected transmission network reliability (Note see the NERC approved exemption process for Facilities that are and are not considered part of the BES). Rational:1. NERC defines Facilities as "a set of electrical equipment that operates as a single BES Element. Since Element is part of the Facilities NERC definition it is not needed to be repeated. 2. Section 30 of FERC Order 743 "all facilities operated at or above 100kV" should be included in the bright-line criteria. 3. This new language eliminates the ambiguity as directed in FERC Order 743 whereby the Region cannot establish other bright-line criteria for what the BES is. 4. This reinforces foot note 41 by stating exactly what "reliability" of the BES needs to be reinforced. The "interconnected transmission reliability should also be used in any "exemption criteria" that the SDT formulates in the future. 5. The removal of bulk power system reliability is still a somewhat ambiguous term and FERC has stated that the BPS definition is not within the scope of this FERC Order. 6. Note that the NERC defined term of Facility contains the word BES. So, as written, a Facility is energized at 100kV or above. The capitalized word of Facility cannot be used in the inclusion process since those facilities would be below the 100kV level.
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. Section 30 of FERC Order 743 directs the ERO to include exclusions as deemed appropriate, such as radials. The SDT agrees that the term BPS is not in scope and also stipulates that this work is focused on defining the BES. The SDT recognized the problem with Facility and has corrected that in the revised work.	
City of Anaheim	Transmission elements serving radial load, radial distribution systems, or non-GO/GOP generation connected to such radial lines and excluded from BES; provided, however, to eliminate any reliability gaps, such radial transmission elements should be classified as "Distribution" equipment subject to DP standards, and the PRC and vegetation management standards should be made applicable to Distribution Providers and this equipment. This is consistent with the NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for radial transmission facilities that function as Distribution and are not required for the reliable operation of the BES. Transformers with secondary windings of 100kV or less should not be part of the BES if they feed radial load or radial distribution systems; provided, however, to eliminate any reliability gaps, such transformers should be classified as "Distribution" equipment subject to DP standards, and the PRC and vegetation management standards should be made applicable to Distribution Providers and including this equipment. This is consistent with the NERC Reliability Functional

Organization	Question 12 Comment
	Model and is more efficient than requiring TO/TOP registration for radial transmission facilities that function as Distribution and are not required for the reliable operation of the BES. Unless the generator is required to maintain BES reliability, i.e. black start, etc., the GSU and gen tie should be excluded from the BES; provided, however, to eliminate any reliability gaps, such generation-tie equipment should be classified as "Generator" equipment subject to GO/GOP standards, and the PRC and vegetation management standards should be made applicable to GO/GOPs and this equipment. This is consistent with the NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for non-critical generation-tie transmission elements that are not required for the reliable operation of the BES.
Florida Municipal Power Agency Transmission Access Policy Study Group	FMPA proposes that the BES be defined as:In general, the Bulk Electric System includes all Transmission Elements operated at voltages of 100 kV or higher, and all generation resources registered pursuant to the Statement of Compliance Registry Criteria. Radial Transmission Elements serving only load with one Transmission source are generally not included in this definition. A radial Transmission Element may be considered as "serving only load" for purposes of the foregoing general exclusion even if it connects generation, so long as that generation is not registered pursuant to the Statement of Compliance Registry Criteria. An Element that nominally meets the general BES criteria, but which an entity demonstrates, on a case-by-case basis, is not necessary for operating the interconnected electric transmission network, shall be exempted from the BES pursuant to the NERC exemption process. An Element that does not nominally meet the general BES criteria, but which NERC demonstrates, on a case-by-case basis, is necessary for operating the interconnected electric transmission network, shall be included in the BES pursuant to the NERC inclusion process. There should be an exemption process with clear criteria pursuant to which an entity can attempt to demonstrate that although a particular Element is nominally part of the BES, it is not necessary for operating the interconnected electric transmission network. Elements for which an exemption is granted would be considered non-BES. FMPA's proposed criteria and exemption process are discussed in FMPA' comments on BES exemption process submitted today. There should be an inclusion process with clear criteria pursuant to which NERC may show, on a case-by-case basis, that although a particular non-BES Element is nominally not part of the BES, it is necessary for operating the interconnected electric transmission network and should therefore be considered part of the BES. FMPA' proposed criteria and inclusion process are discussed in FMPA' comments on BES exemption process submitted today.
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. This new definition addresses radial Loads.	
PacifiCorp	See respons #11.

Organization	Question 12 Comment
Response: See response to Q11.	
PPL Energy Plus	The determination of whether or not a facility is part of the BES should consider FERC's Order 743 paragraph 73 which clearly states the network nature of the BES. FERC states that the ability to overload parallel facilities (Order 743 paragraph 73) is a key feature of an element in the BES.
LG&E and KU Energy LLC	
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. Elements such as Transmission lines are included and excluded in the BES based on this bright-line definition. Furthermore, entities will need to continue to meet all the performance of Facilities per the applicable NERC standards.	
Competitive Suppliers	Initial EPSA suggestions for meeting the directives for Order 743 are included in the answer to question 11. Additionally, EPSA recommends that the drafting team can benefit from utilizing the Compliance Registry Criteria in the BES definition. By using the classifications found in the Compliance Registry Criteria - Section III (Rules of Procedure Appendix 5B), of which much is alluded to in the questions included on this comment form, can provide a useful basis to create a comprehensive, revised BES definition. Further, competitive suppliers recommend that the BES drafting team incorporate the criteria directly into the revised BES definition, replacing the term "bulk power system" in each criteria with "100 kV." Structuring the revised BES definition to clarifying that aligns with the Compliance Registration criteria will ensure against complex exemption process as well as eliminate the need for Section III of the Registry Criteria.
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. Furthermore, the SDT has utilized many resources during the development of this definition including the Compliance Registry Criteria.	
NERC Staff	Please see additional comments at the end of this document. .
Entergy Services	Please see our response to Q13 below.
Response: See response to Q13.	
NextEra Energy Inc.	Based on the information posted by the North American Electric Reliability Corporation (NERC) on its plans to address Order No. 743 of the Federal Energy Regulatory Commission (FERC), NextEra Energy, Inc. (NextEra) believes that NERC (and associated drafting teams) should slightly modify its direction to more closely align with FERC's proposed framework. In Order No. 743, at paragraph 30, FERC stated that:The Commission believes the best way to address these concerns is to

Organization	Question 12 Comment
	eliminate the regional discretion in the ERO's current definition, maintain the bright-line threshold that includes all facilities operated at or above 100 kV except defined radial facilities, and establish an exemption process and criteria for excluding facilities the ERO determines are not necessary for operating the interconnected transmission network. It is important to note that Commission is not proposing to change the threshold value already contained in the definition, but rather seeks to eliminate the ambiguity created by the current characterization of that threshold as a general guideline.FERC also provided NERC with the opportunity to propose an alternative approach. NextEra believes, however, that FERC's proposed framework is appropriately designed to enhance the definition of the Bulk Electric System (BES) in the NERC glossary, and to separately develop a process to apply for and receive, as appropriate, an exemption from the BES definition. Although it appears that NERC and the drafting teams may also be inclined to proceed as suggested by FERC, there are indications in the questionnaire and BES concept paper that there may be some thought to deviating from FERC's proposal. A review of the information posted by NERC seems to indicate NERC's intention to have a drafting team develop a revised BES definition via the standards development process (i.e., Appendix 3A of the NERC Rules of Procedure). It also seems that NERC is interested in assigning a "working group" to separately develop an exemption process that would be implemented as a new process in the NERC Rules of Procedure. NextEra agrees with this approach. NextEra's concerns stem from some of the words in the proposed BES definition, the BES concept paper and the questions asked, which seem to suggest an unnecessarily overlapping definition and exemption process, and a movement toward an exemption process based on categories rather than criteria. Thus, to address these concerns NextEra proposes the following enhancements to more clearly separate the BES definition and exemption process, and align each more closely with Order No. 743. As for the BES definition, NextEra encourages the drafting team to solely focus its efforts on the definition. The currently posed revised BES definition reads as follows:Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher necessary to support bulk power system reliability. Elements and Facilities operated at voltages of 100kV or higher, including Radial Transmission systems, may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process.NextEra maintains that this is not the correct starting point, nor consistent with Order No. 743 or the other material posted by NERC, that suggests a more definitive separation of the BES definition from the exemption process. Thus, NextEra proposes that the definition be revised to read as follows:Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher, unless a Transmission or Generation Element or Facility has been exempted pursuant to the exemption process set forth in the NERC Rules of Procedure. This proposed BES definition more clearly and cleanly separates the BES definition from the exemption process. It also does not add unnecessary qualifiers or verbiage that may result in confusion. NextEra is also concerned that the working group assigned to the exemption process may initially be more focused on developing categories, instead of an exemption process and associated criteria. Given the unique circumstances of the interconnected BES, including system topology, NextEra does not believe that it would be a productive exercise for the exemption working group to focus on types, groups or categories of equipment; instead, its efforts should focus on developing specific objective criteria to judge the reasonableness of a request or application for an exemption. This approach also seems more in line with FERC's statement in Order No. 743 at paragraph 115: NERC should develop an

Organization	Question 12 Comment
	exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid. The ERO also should determine any related changes to its Rules of Procedures that may be required to implement the exemption process, and file the proposed exemption process and rule changes with the Commission. The challenges of developing an exemption process also include ensuring than any applicant is afforded due process and balanced decision-making, as required by section 215 of the Federal Power Act. Thus, the exemption process must address legal, regulatory and technical issues. Accordingly, NextEra requests that NERC assemble a working group (perhaps via the Standards Committee) to develop the exemption process that is comprised of stakeholders with legal, regulatory and technical experience. Without this balance of disciplines, NextEra is concerned that a technical-heavy working group will attempt to develop a "fix," instead of a process whereby applicants may request an exemption, and have that exemption judged by specific criteria and pursuant to a process that affords due process and balanced decision-making. It is not clear whether an exemption working group has already been assembled. If it has, NextEra requests that NERC consider restructuring of the group consistent with NextEra's proposal.In summary, NextEra requests that the BES definition drafting team adopt NextEra's proposed definition of BES. NextEra also requests that NERC assemble a cross-functional working group to develop an exemption process based on specific criteria (rather than categories), and a process that affords applicants due process and balanced decision-making.
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. The new definition removes the term "general" and provides more specific wording. NERC will follow the due process established for changes to the Glossary of Terms.	
Pepco Holdings Inc.	The RFC BES Definition and Clarifications could be used as a model for definition. It specifically incorporates additional detail of what is included and what is excluded.
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. The SDT has utilized many resources during the development of this definition including the work done by RFC.	
Indeck Energy Services	The BES definition should be the same as the FPA Bulk Power System definition! It will not be a bright line, like >100 kV. It will focus NERC's efforts on the real reliability issues rather than chasing many small entities through paper exercises that make someone feel that they are punishing unreliable behavior. Such exercises over the last 3 years have not measurably improved reliability, in fact, NERC doesn't seem to know how to measure reliability in its purest form. It can monitor operating and planning parameters of the BPS, but none of them truly measure reliability. The July, 2010 FERC Technical Conference showed how far off NERC is when a FERC Commissioner had to state that preventing "loss of load" does not define reliability. As referred to in the FPA, preventing cascading outages defines reliability. How does having a Sabotage

Organization	Question 12 Comment
	and Bomb Threat procedure at a 100 MW wind farm prevent cascading outages?
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions.	
Snohomish County PUD	Snohomish has worked extensively with the WECC Bulk Electric System Task Force ("BESDTF") over the last two years and, while we disagree with certain details of the BESDTF approach (in particular, we believe a 200-kV threshold rather than a 100-kV threshold more appropriately reflects conditions in the Western Interconnection), we believe the approach developed by the BESDTF will achieve the reliability goals laid down by FERC in Order No. 743 while at the same time excluding facilities from the BES that have no meaningful impact on the reliable operation of the bulk transmission system, which thereby minimizes unnecessary compliance costs. Accordingly, we commend the work of the BESDTF to the standards drafting team. Given the relatively short deadline imposed by FERC for completion of work on the revised definition, we believe it will be necessary for the standards drafting team to rely on existing work of groups like the BESDTF rather than re-inventing the wheel.
Central Lincoln	The WECC Bulk Electric System Definition Task Force has made significant progress in defining the BES. We encourage the SAR to look at the work they've done.
PUD No.1 of Clallam County	
PNGC Power	
Blachly-Lane Electric Co-op	
Clearwater Power Co.	
Douglas Electric Cooperative	
Central Electric Cooperative, Inc. (Redmond Oregon)	
Raft River Rural Electric Cooperative	
Northern Lights Inc.	
Salmon River Electric	

Organization	Question 12 Comment
Cooperative	
Okanogan Country Electric Cooperative	
Lost River Electric	
Lane Electric Cooperative	
Coos-Curry Electric Cooperative	
Consumer's Power Inc.	
Umatilla Electric Co-op	
West Oregon Electric Cooperative	
Lincoln Electric Cooperative	
Fall River Electric Cooperative	
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. The SDT has utilized many resources during the development of this definition including the work done by the WECC BESDTF.	
The Dow Chemical Company	As discussed above, the proposed definition of BES is flawed because it fails to expressly exclude local distribution facilities. It is also confusing, particularly with respect to its use and application of the 100 kV standard. As the definition is written, the 100 kV standard would apply to both transmission and generation facilities - i.e., "All Transmission and Generation Elements and Facilities" - even though voltage is primarily a measure of transmission capability with little applicability to generation. Such a standard would, depending on how it is applied, be inconsistent with the generation criteria already set forth in the NERC Statement of Compliance Registry Criteria. In the case of Dow and Union Carbide Corporation, these criteria establish a generally-applicable 20 MVA threshold applicable to exports of electricity to the transmission grid from individual generating units and a 75 MVA threshold applicable to exports of electricity to the transmission grid from generating plants/facilities.

Organization	Question 12 Comment
	The BES definition should not change the currently applicable 20 MVA / 75 MVA generation size threshold applicable to generation facilities or the manner in which that threshold is currently applied, with behind-the-meter cogeneration facilities evaluated based on the net capacity actually provided to the grid. The best approach might be to define BES as simply consisting of three types of facilities: (1) BES Generation; (2) BES Transmission; and (3) BES Protection and Controls. Those terms would then be defined by reference to criteria set forth in NERC's Statement of Compliance Registry Criteria. For example, the term BES Generation would be defined as individual generating units or generating plants or facilities that meet the criteria set forth in the Statement of Compliance Registry Criteria. This approach would provide greater clarity. It would also generally preserve the status quo, which is particularly important in the context of generation. NERC and the Regional Entities have already made significant progress in deciding what generators should be subject to compliance with mandatory reliability standards and what generators should be exempted. Nothing in Order No. 743 requires that those determinations be revisited. The issues raised in Order No. 743 will, however, likely require revisions to the transmission-related criteria set forth in NERC's Statement of Compliance Registry Criteria. Dow is not in principle opposed to the retention of the 100 kV standard that is already set forth in the registry criteria, but it must be clarified to apply to facilities that perform a transmission function while excluding facilities that perform a local distribution function. The criteria should also preserve the "material to reliability" standard that is set forth in the proposed definition, i.e., that facilities must be "necessary to support bulk power system reliability" in order to be considered part of the BES. This standard is particularly important in the context of interconnection facilities that connect generation resources to the transmission grid. FERC has recognized that such facilities do not neatly qualify as either transmission facilities or distribution facilities, but that such facilities should nevertheless be considered part of the BES and subject to mandatory reliability standards only if they are determined to be "material to the reliability of the bulk power system." See New Harquahala Generating Company, LLC, 123 FERC Â¶ 61,173 at P 44 (2008), clarified, 123 FERC Â¶ 61,311 (2008).Based on these considerations, the criteria set forth in the NERC Statement of Compliance Registry Criteria should be structured so as to define "BES Transmission" as including: (1) facilities that perform a transmission function, that are operated at voltages of 100 kV or higher, and that are materially necessary to support bulk power system reliability; and (2) any other facility that performs a transmission function that is found to be materially necessary to support bulk power system reliability. To the extent an interconnection line from a BES Generation facility is materially necessary to support bulk power reliability, that interconnection line should be treated as part of the BES Generation facility, rather than a BES Transmission facility. Such a structure would preserve the bright-line 100 kV standard preferred by FERC, while defining and applying the standard in a manner that appropriately preserves the distinctions that are recognized for local distribution and interconnection facilities, and that ensures that all facilities that materially affect reliability are covered by the standards. Of course, once a definition for BES Transmission is adopted, the next step is to develop a process for applying that definition so as to identify specific facilities that qualify as BES Transmission facilities, and that are subject to mandatory reliability standards. Owners and operators should be afforded an opportunity in the process to demonstrate that their facilities should be excluded because they either: (1) perform a distribution function; (2) are not materially necessary to support bulk power system reliability; or (3) are included as part of BES Generation facilities. Such an opportunity must be

Organization	Question 12 Comment
	provided before facilities become subject to mandatory BES Transmission reliability standards.
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. This new definition addresses radial Loads and generation. Furthermore, the SDT has utilized many resources to provide this clarity including the Compliance Registry Criteria.	
Utility Services	We believe our answers to the questions above provide for sufficient means to meet the intent of Order 743.
Response: Please see responses to questions above.	
BGE	It is preferable that non-BES facilities be excluded by the definition language rather than to define BES broadly and require non-BES facilities go through an exception process. For those special case facilities that may exist, an "opt-in" evaluation could be conducted. We find that this approach to revising the BES definition would satisfy the FERC directives in Order 743 by encompassing all facilities necessary for operating an interconnected electric transmission network into a national level, bright-line definition. This approach will improve the clarity and consistency of the BES definition for application by Industry and NERC as well as avoiding creation of a potentially cumbersome exception process. The rules of procedure process may be used to develop the "opt-in" process that would replace the proposed exception concept; however, the drafting team, perhaps in collaboration with regional entities, should develop any opt-in criteria needed for the process. It is appropriate for NERC to develop aspects such as the administrative management, the role and interaction of the regions, an appeal process, etc. However, due to the technical aspects of BES operation, the drafting team members are best suited to devise criteria for non-BES facilities to warrant inclusion in the BES.
Constellation Power Source Generation, Inc. ("CPSG") filing on behalf of Constellation Energy Group, Inc. ("CEG"), Constellation Energy Commodities Group, Inc. ("CCG"), Constellation Energy Control and Dispatch, LLC ("CDD"), Constellation NewEnergy, Inc., ("CNE") and Constellation Energy Nuclear	Constellation recognizes the value in clarifying the Definition of Bulk Electric System into a bright line threshold consistently applied across the regions. However, we are concerned that the current approach of a simple, all inclusive definition coupled with an exception criteria and process will not draw on the fundamentals underpinning the existing definition and create a cumbersome and unnecessary exception process. As an alternative, we propose that the standard drafting team utilize the Compliance Registry Criteria-Section III (Rules of Procedure Appendix 5B) along with definition threshold language (such as 100 kV) to develop a more comprehensive definition. Further, we propose that the BES drafting team incorporate the criteria directly into the revised BES definition, replacing the term "bulk power system" in each criterion with "greater than 100 kV." This will make for a longer definition, but by aligning the facilities requiring registration as those defined as BES, the definition will more clearly determine the line between BES and non-BES. It is preferable that non-BES facilities be excluded by the definition language rather than to define BES broadly and require non-BES facilities go through an exception process. Ideally, this approach can eliminate the need for an onerous exemption process as well as eliminate the need for Section III of the Registry Criteria in the Rules of Procedure. For special case facilities deemed non-BES by the revised definition that

Organization	Question 12 Comment
Group, LLC, ("CENG")	may warrant consideration for inclusion, an "opt-in" evaluation could be conducted. The rules of procedure process may be used to develop the "opt-in" process that would replace the proposed exception concept; however, the drafting team, perhaps in collaboration with regional entities, should develop any opt-in criteria needed for the process. Again, it is appropriate for NERC to develop aspects such as the administrative management, the role and interaction of the regions, an appeal process, etc. However, due to the technical aspects of BES operation, the drafting team members are best suited to devise criteria for non-BES facilities to warrant inclusion in the BES.We find that this approach to revising the BES definition would satisfy the FERC directives in Order 743 by encompassing all facilities necessary for operating an interconnected electric transmission network into a national level, bright-line definition. This approach will improve the clarity and consistency of the BES definition for application by Industry and NERC as well as avoiding creation of a potentially cumbersome exception process.
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. Furthermore, the SDT has utilized many resources to provide this clarity including the Compliance Registry Criteria.	
Springfield Utility Board	See suggested language in the comment to Question 11. (This e-survey process is confusing as one does not know what will be asked to know the right context to provide a response. Can you please post all questions in advance of an entity walking through the survey. Also - seeing the responses at the conclusion of the survey is great, but it would be convenient to be able to edit responses at the conclusion as well)
Response: See response to Q11. The SDT has no control over the logistics of the system for providing comments. However, a Word version was posted on the project web page for review.	
APPA	The Concept Paper states at page 1 that in Order 743, FERC directed NERC to do the following: A. Utilize the NERC Standard Development Process to revise the definition of Bulk Electric System (BES) contained in the NERC Glossary of Terms. B. Develop a single Implementation Plan to address the application of the revised definition of the BES and the implementation of the exemption process. C. Utilize the NERC Rules of Procedure to develop and implement an 'exemption process' used to identify Elements and Facilities which will be included in or excluded from the BES. The Concept Paper continues to state that: This project will address items 'A' and 'B' and will coordinate efforts between the Standard Drafting Team (SDT) and the group working to develop the exemption process for inclusion in the NERC Rules of Procedure to ensure that the revised BES definition and exemption process result in an accurate, repeatable, and

Organization	Question 12 Comment
	transparent method for the identification of BES and non-BES Elements and Facilities. APPA agrees that the standards process must be used to develop the revised BES definition and that NERC has been directed to use its Rules of Procedure process to develop an ROP-based procedure to implement an exemption/exclusion/inclusion process. However, the FERC directives do not speak to how and by whom the technical methodology, study criteria and data requirements for requesting and receiving approval for an exemption should be developed. To the maximum extent possible, subject to time constraints imposed by FERC, this inherently technical methodology needs to be developed through the NERC standards development process, in conjunction with development of the revised definition of BES. Separate development will significantly hamper development of industry consensus in support of the revised BES definition and the yet to be developed ROP modifications for the exemption process. The most critical question is how do we arrive at a commonly agreed upon, widely accessible, transparent, and replicable continent-wide methodology to determine whether each specific facility is or is not “necessary to operate an interconnected electric transmission network” to quote from paragraph 16 of Order 743. While each region may have a separate model reflecting its topology and system performance characteristics, a continent-wide approach is required to address FERC concerns about inconsistency across regions that are not the result of physical differences. The statutory definition of the term bulk-power system defines the outer extent of facilities that can be included (at least within the United States) within the NERC definition of BES. FPA section 215(a)(1) states that the bulk-power system includes “(A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability.” Further, the term BPS “does not include facilities used in the local distribution of electric energy.” [emphasis added].Similarly, “reliable operation” is defined at 215(a)(4) to mean “operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure of system elements.” These definitions appear to point to two basic questions for the classification of each facility or element as BES or non-BES: 1. Is the facility or element necessary for reliable operation because it contributes significant capability to the interconnected transmission network? 2. Will the misoperation or unanticipated failure of the facility or element adversely affect the reliable operation of the interconnected transmission network? APPA suggests that the BES SDT or separate study teams should be directed to establish the outline for this study methodology. APPA further suggests that BES sub-teams be established to address the Proposed BES Criteria in the Concept Paper. Separate sub-teams should be established to address detailed system configuration and study methodology issues affecting:

Organization	Question 12 Comment
	1. Radials serving load (with and without distribution voltage generation not subject to registration) 2. Other transmission elements that entities seek to include in or exclude from the BES. 3. Generating plant equipment that entities seek to include in or exclude from the BES. 4. Technical issues raised by the FERC Seven Factor Test for Local Distribution Facilities. Separate sub-teams are appropriate because the study issues are likely to be quite distinct. For example, radials serving only load do not provide alternative pathways for reliable BES operations, as might some sub-100 kV facilities. Mixing the two teams together might slow progress on identification of various commonly used radial to load center configurations that with proper protection schemes do not have the potential to adversely affect the BES. A focused effort on permissible exclusions of radials serving load is essential to prevent distribution providers from adopting less reliable system configurations to serve their loads because they are concerned that the preferred configuration will make them subject to registration as TOs and/or TOPs. Note that the proposed sub-teams do not necessarily have to be populated by members of the SDT. The new standards process allows SDTs to gather informal input from a variety of sources. However, development and posting for industry comment of the minimum acceptable characteristics of the study methodology to be used in the Exceptions Process should be the responsibility of the BES SDT. The Comment Form on the Exclusion Process poses reasonable questions and it is my hope that registered entities and regional entities identify numerous candidate facilities and elements for inclusion or exclusion from the BES, accompanied by one-line diagrams that lay out each of the permutations for such facilities that are candidates for exclusion/inclusion. These facilities range from simple radial transmission lines and distribution step-down transformers to 100 kV class distribution networks that operate radially from the BES. I also hope that entities submit extensive technical documentation to explain why such facilities should be excluded from or included in the BES. Good luck!
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. NERC will follow the due process established for changes to the Glossary of Terms. This new definition addresses radial Loads, generation, and local distribution networks.	
Xcel Energy	Xcel Energy agrees that the FERC Order 743 directs NERC to modify the Rules of Procedure to include the process for how an entity or region may initiate an exclusion or inclusion. However, we do not agree that FERC also directed that the actual criteria and technical specifics for inclusion or exclusion be developed as part of the Rules of Procedure. Furthermore, since

Organization	Question 12 Comment
	the inclusion/exclusion criteria is a key component to the definition of BES, we feel the criteria should be treated as part of the definition development and developed in the same manner as the definition itself. (Preferably by the same drafting team.)
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. NERC will follow the due process established for changes to the Glossary of Terms.	
City of Redding	Please consider the WECC Bulk Electric Defination Task Force work to date. See Attachment 1 at the end of this document. See Attachment 2 at the end of this document.
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions that will address many, if not all, of the issues in the provided examples. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. Furthermore, the SDT has utilized many resources to provide this clarity including the Compliance Registry Criteria and the work in the WECC BESDTF recommendations.	

13. Please provide any other information that you feel would be helpful to the drafting team working on the definition of BES.

Summary Consideration: The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements. The exception criteria use the same bright-line criteria to provide further guidance as to whether an Element is considered BES or non-BES. The SDT believes that this is the best method to address the Commission's concerns of establishing a bright-line definition of the BES that is clear, unambiguous, and provides for consistent application across the continent.

The SDT acknowledges the comments and concerns related to the Exception Process and recognizes that the forum for providing these comments to the NERC Rules of Procedure Team was not established prior to this posting. The revision process for the NERC ROP to develop the Exception Process will be coordinated by NERC staff and governed by current practice for administering such revisions. All comments pertaining to the Exception Process, the NERC ROP Team, and the ROP revision process will be forwarded to the appropriate parties for consideration.

The SDT acknowledges the industry's concerns surrounding the separation of work to different teams in response to the directives in FERC Order No. 743. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743 the decision was made to establish two teams working in close coordination to address the issues related to the project. The SDT is committed to that close coordination between the development of the core definition of the BES and the exception criteria by the SDT and the development of the Exception Process by the NERC ROP Team. The goal is to have parallel postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition exception criteria with its associated lists of "inclusions" and "exclusions" and the Exception Process.

Organization	Yes or No	Question 13 Comment
Northeast Power Coordinating Council		a.) Proposed definitions to be added to the NERC Glossary of Terms: BES Exemption Process: The review processes for (a) excluding or exempting facilities and Elements from the BES that are determined not to be necessary to support bulk power system reliability (e.g., radial elements), and (b) including Elements operated at voltages below 100 kV that are determined to be necessary to support bulk power system reliability. By identifying all such BES and non-BES facilities and elements, the BES Exemption Process will establish the Points-of-Demarcation between Facilities and BES Elements and non-BES facilities and Elements. Point-of-Demarcation: A physical point and/or electrical connection between facilities and BES Elements and non-BES facilities and elements, e.g., the upstream terminals of a disconnect switch (or a buss connection) representing the boundary between a BES supply bus and a non-BES radial feeder. The BES exemption process has not yet been written. So, it is somewhat difficult to know a priori whether any element, elements or a group of elements or facilities should or should not be classified as part of the BES definition. b.) This document uses both "exemption process" and "exception process". Recommend that the phraseology be standardized on "exception process" as the exception (not the exemption) can be to include or exclude elements and

Organization	Yes or No	Question 13 Comment
		facilities. c.) It is envisioned that the BES Exception Process will contain 3 sub-processes; one for Exclusion, one for Exemption, and one for Inclusion. Each sub-process will establish provisions and guidelines for the three different tasks. In order to ensure consistency across the continent, it is our view that NERC should be the facilitator of these processes. NERC may choose to have some of these tasks performed at the regional levels through the existing delegation agreements. d.) The BES Exception Process must be an active and ongoing aspect of the ERO program. With the addition of new or deletion of existing Transmission and Generation Elements, Facilities, or systems. It needs to be recognized that Exclusions, Inclusions, and Exemptions might need alteration over time. By establishing appropriate guidelines and processes, the ERO will be able to monitor and maintain information on what is the Bulk Electric System, or BES. e.) The exception (exemption) process should clearly address the process and requirements for FERC non-jurisdictional entities (such as the Canadian entities) with the exception of the interconnections between them and those entities under FERC jurisdiction, and/or those entities having a direct impact on those interconnections. f.) Classification of all radial facilities operated at voltages of 100 kV and above as part of the BES by default would be unnecessary and administratively inefficient, because the operation of all radial facilities do not have a significant operational impact on the BES. Those radial facilities not having a significant impact should be excluded from the BES. If they aren't, it could lead to delays in the review and approval of other exemption requests. As such, the proposed BES definition should be revised to clearly define what radial Transmission Elements will not be included as part of the BES. This would be consistent with FERC's intention expressed in Paragraph 55 of Order 743 to not alter the part of the approved definition that deals with "radial transmission facilities serving only load". g.) Additionally, to ensure a common understanding of the meaning of "radial" and to promote consistency in its application, "radial" should be defined and added to the NERC Glossary.
Response: a.) With the proposed revisions to the definition of BES, at this time, the SDT does not contemplate adding any additional definitions beyond BES. In regards to the term "BES Exception Process'; it has been determined that the process will reside in the NERC Rules of Procedure (ROP) and therefore it seems logical that the purpose of the process would be defined within the boundaries of the NERC ROP. b.) The inconsistency of the use of 'exemption' vs. 'exception' in several documents has been identified by the SDT and the team has determined that 'exception' is the proper term to be used in reference to the Bulk Electric System definition and supporting processes. c.) The 'Exception Process' will be developed by the NERC Rules of Procedure Drafting Team while coordinating with the DBES SDT. The 'Exception Process' and the responsibilities associated with the implementation and oversight will be defined by the NERC Rules of Procedure Team. Based on the		

Organization	Yes or No	Question 13 Comment
		language contained in FERC Order No. 743, there are Commission expectations associated with the process oversight by the ERO and allowances for the delegation of responsibilities to Regional Entities as appropriate, while ensuring the process is clear and capable of being applied consistently, objectively, and uniformly across all regions. d.) The SDT agrees that the Bulk Electric System is dynamic and that the implementation and continued application of the BES Definition and supporting processes will require active oversight and management to ensure that changing conditions (i.e., operational & new construction) surrounding the Bulk Electric System will be addressed and result in proper evaluation and identification of BES & non-BES Elements. The current scope of the Standard Authorization Request (SAR) for Project 2010-17 Definition of Bulk Electric System does not include the development of the 'Exception Process'. The 'Exception Process', including the implementation and continued application of the process will be developed by the NERC ROP Team. e.) The SDT has established non-jurisdictional representation to address the concerns of the applicable entities (i.e., Canadian entities) in regards to the application of a continent-wide 'bright-line' definition of the Bulk Electric System and the exception criteria listed in the definition. NERC Staff has determined the needs of the NERC Rules of Procedure Team in regards to the diversity of the membership and the technical expertise required to appropriately modify the ROP in response to the directives identified in FERC Order No. 743. f.) The SDT has further developed the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements. The 'exception criteria' utilizes the same 'bright-line' approach to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line for identifying Generation Facilities, Radials, etc.). The exception criteria has been listed in the revised definition of BES. g.) With the proposed revisions to the definition of BES, at this time, the SDT does not contemplate adding any additional definitions beyond BES.
MRO's NERC Standards Review Subcommittee		A. What time frame is the SDT considering for the implementation of this definition and process once approved, allowing enough time for the entities to provide justification, and then make the necessary changes to their internal programs? B. Recommend the BES SDT be consistent with the generation registration criteria and the Protection System definition and other documents. For example, what is a "common bus" as stated in the generation registration criteria. C. Please review and update the concept paper. The concept paper does not specifically call out Transmission Lines above 100 kV as in the BES definition (the proposed definition does, however) and there is a circular exemption criteria in the concept paper. In criterion #2, it refers to the exemption process "consistent with the criteria". The criteria exempt generating plant controls and Transmission Elements or Systems that are radial to a load or generator not included in the BES List. However, the BES list is defined prior to the criteria in the concept paper. Exemption criterion #1 points to BES list elements #6 and #7, which in turn, refer to the exemption process. But, the exemption criteria never define how to exempt the elements referred to in #6 and #7. D. How often would a Registered Entity revisit this Exception Process? NSRS can envision a scenario where they are doing that every year or two because of the changes in load, generation, and transmission. The process should also allow for

Organization	Yes or No	Question 13 Comment
		multi-year distinctions for exceptions. In other words, if a Registered Entity gets a facility excluded, then that exclusion should be allowed for 3 or more years. Annual certifications and approval are too restrictive. E. NSRS believes the exception criteria needs to be developed by the SDT. NERC Staff should focus on the process (identification, notification, appeal and rights) but the SDT is in the better position to develop the technical piece of the exception criterion.

Response:

A. The SDT has established basic goals and assumptions that will be used to guide the development of the BES definition and supporting documents. The assumptions include: 'The revised definition will not significantly expand or contract what are currently considered BES Elements, nor will the revised definition drive entity registration or de-registration". Based on these goals and assumptions the overall impact of the revised definition is expected to be minimized for the majority of the Regions and Registered Entities. However, once the definition and supporting documents are nearing completion, the impact of the revised definition will be assessed and the Implementation Plan and Transition Plans will be developed to provide an appropriate time-period for entities to establish compliance with the applicable Reliability Standards.

B. The SDT has established basic goals and assumptions that will be used to guide the development of the BES definition and supporting documents. The assumptions include: 'The revised definition will not significantly expand or contract what is currently considered to be BES Elements, nor will the revised definition drive entity registration or de-registration". Based on these goals and assumptions and in the absence of technical justification, the current generator registration criteria appears to be the logical starting point for assessing BES Elements. The goal of the SDT is to establish a component-based 'bright-line' definition which enables the proper assessment of BES and non-BES Elements. The 'bright-line' associated with the identification of Protection Systems which are applicable to the PRC series of Reliability Standards is not necessarily at the same point. The SDT has discussed this issue and will be seeking guidance from FERC staff in regards to the directives in FERC Order No. 743 and how they potentially apply to Protection Systems. Protection Systems are not currently within the scope of the SAR for this project and any significant expansion could potentially jeopardize the ability of the SDT to complete this project and file in accordance with the Commission directed time requirements in FERC Order No. 743.

C. The SDT is not considering updating the concept paper as future work will be in crafting the actual definition and designations.

D. The SDT agrees that the Bulk Electric System is dynamic and that the implementation and continued application of the BES Definition and supporting processes will require active oversight and management to ensure that changing conditions (i.e., operational & new construction) surrounding the Bulk Electric System will be addressed and result in proper periodic evaluation and identification of BES & non-BES Elements. The current scope of the Standard Authorization Request (SAR) for Project 2010-17 Definition of Bulk Electric System does not include the development of the 'Exception Process'. The specific review/re-assessment 'time periods' associated with the identified exceptions (inclusions & exclusions) will be drafted by the NERC ROP Team and vetted through the ROP Revision Process.

E. The current scope of Project 2010-17 includes the development of the exception criteria. Additionally, the SDT will have representation on the NERC ROP Team to ensure that consistency is maintained throughout the development of the revised definition and the Exception Process.

Organization	Yes or No	Question 13 Comment
IRC Standards Review Committee		a. On the SAR, it indicates an SC approval date of December 8. It is misleading since the SC did not approve the SAR; it only approved posting of the SAR for industry comment. b. We have a concern with the concept paper on the exemption/inclusion criteria/process. Please see other comments on that paper submitted separately. c. We suggest use of consistent term between “exception” and “exemption”. d. We suggest the exception/inclusion criteria to be included in the definition and developed/approved by the balloting body. Determining these criteria via any other processes will not provide the industry the opportunity to fully vet the criteria. e. The SAR indicates that “...the definition drafting team will work closely with the team developing the BES definition exemption process to develop a single coordinated implementation plan. It is also envisioned, that the team working to develop the BES definition exemption process will solicit input from drafting teams, stakeholders....” We find this confusing and have a concern that having two teams working on this definition/criteria package leads to misalignment and confusion. Further, while the definition drafting team is formed by a nomination process and appointed by the NERC Standards Committee, there is no transparency and/or public announcement to solicit nominations for the team working to develop the exemption process. We urge the NERC Standards Committee to direct the definition drafting team to also be responsible for developing the exemption process, and include the exemption criteria as part of the definition hence subjecting them to industry comment and balloting.

Response:

a. The default language in the form is misleading and implies that the NERC Standards Committee’s approval is required. Per the NERC Standard Process Manual the Standards Committee authorizes posting of the SAR for industry comment. The DBES SDT will provide a recommendation to NERC Standards Staff to revise the SAR form to read, "Date SC Authorized Posting the SAR”.

b. Please see comment responses to other questions.

c. The inconsistency of the use of ‘exemption’ vs. ‘exception’ in several documents has been identified by the SDT and the SDT has determined that ‘exception’ is the proper term to be used in reference to the Bulk Electric System definition and supporting processes.

d. The current scope of Project 2010-17 includes the development of the exception criteria and the revised definition of BES includes a proposed list of criteria for “Inclusions” and a proposed list for “Exclusions”. Additionally, the SDT will have representation on the NERC ROP Team to ensure that consistency is maintained throughout the development of the revised definition and the Exception Process.

e. The passage from the SAR that is referenced in the comment is addressing the need for a single Implementation Plan that takes into consideration all

Organization	Yes or No	Question 13 Comment
aspects of this project. The Implementation Plan will need to address the impact of the revised BES definition and exception criteria, the Exception Process (ROP) and the Regional Transition Plans. The current scope of Project 2010-17 includes the development of the exception criteria. Additionally, the SDT will have representation on the NERC ROP Team to ensure that consistency is maintained throughout the development of the revised definition and the Exception Process. The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and include representation from the DBES SDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP Team will be determined and administered by NERC staff.		
Bonneville Power Administration		1. Define the definition of generation resources and plants, specifically wind. 2. Ensure that the exemption process incorporates all lines in service, outage conditions, etc. 3. Ensure that BA's have the ability to recommend inclusion in the BES, if the BA determines the facility has an impact on the BES.
Response: 1. The term is no longer used in the definition. 2. The SDT has developed the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements. The 'exception criteria' utilizes the same type of 'bright-line' criteria approach to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The idea of injecting the 'current operational conditions' (lines in service, outage conditions, etc.) of Elements poses difficulties with the universal application of the definition to achieve consistent results across the continent. Additionally, the idea of 'current operational conditions' (lines in service, outage conditions, etc.) suggests that these conditions are subject to change and therefore could result in different assessments when identifying BES and non-BES Elements. 3. The responsibilities associated with the Exception Process will be determined and established by the NERC ROP Team as part of the Exception Process.		
FirstEnergy Corp		a.) FirstEnergy supports a new BES definition that will provide a clear bright-line of electric facilities deemed inclusive to the BES. The exclusion process should be a simple, continent wide, rarely used with high-thresholds for removing any 100kV and above facility from the BES. The exclusion process and BES definition change should also include a practical means for transition for any affected companies. b.) The BES definition should explicitly contain language to exclude radial to load transmission operated at 100kV and above voltage levels. Presently, it seems that radial transmission to load "may" be excluded, subject to the exemption process. The excluded radial facilities described by the BES definition should be simply defined and avoid overly complicated scenarios for qualify a facility as radial transmission.

Organization	Yes or No	Question 13 Comment
		c.) BES definition clarity can be accomplished by incorporating aspects of the concept paper's proposed "BES Criteria" as being part and parcel of the overall BES definition. Doing so will establish the desired BES bright-line by further describing facilities as "in" or "out" by definition and avoid an overly complicated exclusion process. d.) The exclusion process should be rarely used, having a narrow expectation for removing facilities from the BES and thus avoid an overly burdensome administrative process. From an exclusion view, the BES definition should directly exclude radial 100kV and higher transmission, facilities operated below 100kV unless deemed critical to the BES by the Regional Entity and any 100kV and higher facility qualified by the BES exemption process. e.) Further, we support EEI's views that the BES Definition and the technical aspects of the exemption criteria (outside of the definition) should be treated as a single standards development project and performed by this drafting team. f.) We also support a parallel effort by NERC staff, subject to industry review/comment, of revising the Rules of Procedure to account for the process oriented information that would point to the technical exemption criteria/guidance developed by the standard drafting team. g.) Finally, the concept paper awkwardly describes an "exclusion process" that would identify any sub 100kV facilities that would be "included" in the BES. The criterion developed for potentially including sub 100kV facilities should be separately developed or at least not referenced within an "exclusion process". Additionally care should be taken to not cast the net too wide in this regard. While we propose a high threshold for excluding 100kV facilities from the BES, we similarly propose a high threshold for inclusion of sub 100kV facilities. The primary focus of this drafting team should be the drafting of the new BES definition and the technical BES exemption criteria. The development of continent-wide criteria for including other sub 100kV facilities in the BES should be treated as a secondary priority for meeting the milestone expectations of the FERC compliance filing.

Response:

a.) The SDT agrees with the comments. The Implementation Plan will need to address the impact of the revised BES definition and exception criteria, the Exception Process (ROP) and the Regional Transition Plans on affected entities and provide sufficient time to ensure a smooth transition into the realm of mandatory and enforceable Reliability Standards.

b.) The SDT has further developed the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements with a list of exceptions. The 'exception criteria' utilizes the same 'bright-line' criteria approach to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.).

c.) The SDT agrees with the comments and has established the tight linkage between the core definition of the BES with the component-based 'bright-line' exception criteria.

Organization	Yes or No	Question 13 Comment
d.) The Exception Process will be employed when the bright-line core definition and its associated exception criteria cannot be applied to a specific Element. It is anticipated by the SDT that the 'bright-line' will be the definitive approach to identifying BES and non-BES Elements for the vast majority of the system configurations across the continent and utilization of the Exception Process will be limited to the remaining Elements. e.) The current scope of Project 2010-17 includes the development of the exception criteria and these have been included in the revised definition of BES. Additionally, the SDT will have representation on the NERC ROP Team to ensure that consistency is maintained throughout the development of the revised definition and the Exception Process. f.) The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and will include representation from the DBESSDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP Team will be determined and administered by NERC staff. g.) It is the vision of the SDT that the process to include Elements within the BES and the ability to exclude Elements from the BES should parallel each other and require the same level of technical justification to achieve consistent results.		
Electric Market Policy		Dominion supports, in large part, EEI's response to the draft concept paper. Dominion provides the following comments on the proposed exemption process. NERC should use the FERC-approved standards development process to develop the Bulk Electric System (BES) definition and the exemption process in a single, integrated and stakeholder approved process. To this end, Dominion conceptually supports an exemption process whereby NERC or the RRO could apply to have an element included or excluded from the BES definition. Such process recognizes that it may be necessary to include elements that do not meet the bright line criteria but are necessary for operating an interconnected transmission network. Such process should be developed through the existing NERC standards development process and include a robust appeals process for the owner/operator of any element so included or excluded. Dominion supports bright line exclusions of all elements rated at less than 100 kV, any transformer that has a primary or secondary winding of less than 100 kV, and all radial lines regardless of their kV rating. Radial lines to/from solely generation facilities and radial lines to/from load are comparable in terms of their impact on an interconnected transmission network. There are situations where these radials make a meaningful and required contribution to the operation of an interconnected transmission network and there are other locations/situations where these radials do not. Therefore, radial lines should only be specifically included in the definition of BES after the RRO has demonstrated that inclusion of the radial is necessary to operate an interconnected transmission network and the owner/operator of the radial line has had the opportunity to exercise its aforementioned appeal rights. Adopting this paradigm would prevent a gap in the application of reliability standards. Specifically, all radial lines would either be included in the definition of BES or would be captured via the NERC registry under distribution or generation.

Organization	Yes or No	Question 13 Comment
		Dominion supports the criteria for registering owners, operators, and users of the bulk power system, as indicated in the current Statement of Compliance Registry Criteria . Adoption of the foregoing process would insure confidence in entities that the compliance registration process is equitable and fair.
Response: The NERC Standard Processes Manual is the governing document for the development of the revised BES definition and exception criteria. The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements. The 'exception criteria' use the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e. bright-line criteria for identifying Generation Facilities, Radials, etc.). The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and will include representation from the DBESSDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP Team will be determined and administered by NERC staff. The development of the core definition of the BES and the exception criteria by the SDT will be closely coordinated with the development of the Exception Process by the NERC ROP Team. The goal (identified key to the project's success) is to have parallel postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition, the exception criteria, and the Exception Process. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743, the decision was made to establish two teams working in close coordination to address the issues related to the project. See responses to EEI comments.		
SERC OC Standards Review Group		We agree that Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher that are necessary to support bulk power system reliability should be included. Elements and Facilities operated at voltages of 100kV or higher, including radial elements, may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process."The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."
Competitive Suppliers		EPSA recognizes the value in revising the BES definition so that a bright-line proxy can be consistently applied by the NERC Regional Entities. It is important that this definition be completed so that the drafting team work sequentially by determining the new BES definition and then move on to developing a exemption process that can work efficiently with that new definition
Response: The DBESSDT acknowledges your comments and thanks you for the support of the presented concepts.		
Hydro-Quebec		For Canadian entities, inclusion or exclusion of equipment and facilities in the BES must be also approved by Canadian regulators. Common interconnection between two jurisdictions must be included in BES when at

Organization	Yes or No	Question 13 Comment
		least one Facilities is necessary for the reliability of BES. The transmission lines dedicated to serve the native load in Quebec Interconnection should be excluded, considering that the Quebec Interconnection is one of the four recognized interconnection. Finally, we believe that it is very difficult to propose first a definition for the BES and only after an Exemption process. Both aspects influence each other and both should be conducted together.
Response: The SDT has established non-jurisdictional representation to address the concerns of the applicable entities (e.g., Canadian entities) in regards to the application of a continent-wide 'bright-line' definition of the Bulk Electric System and exception criteria. NERC Staff has determined the needs of the NERC Rules of Procedure Team in regards to the diversity of the membership and the technical expertise required to appropriately modify the ROP in response to the directives identified in FERC Order No. 743. Transmission Lines dedicated to serving native Load are an identified concern in several Regions and Interconnections. The issues surrounding this concern and the development of potential bright-line criteria are currently being considered by the SDT. The development of the core definition of the BES and the exception criteria by the SDT will be closely coordinated with the development of the Exception Process by the NERC ROP Team.		
PPL Energy Plus		Please consider that it is the magnitude of MVA flow on a facility and the subsequent impact on the remaining facilities that defines when a facility is in the BES rather than just the direction of the real power flowing on the facility.
LG&E and KU Energy LLC		
Response: The SDT has developed the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements. The 'exception criteria' (now proposed as part of the definition of BES) utilizes the same 'bright-line' criteria approach to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The idea of injecting the 'current operational conditions' (i.e., MVA flow) of Elements poses difficulties with the universal application of the definition to achieve consistent results across the continent. Additionally, the idea of 'current operational conditions' (i.e., MVA flow) suggests that these conditions are subject to change and therefore could result in different assessments when identifying BES and non-BES Elements.		
ExxonMobil Research and Engineering		Industrial facilities must retain the ability to control their electric facilities in order to ensure that the system is designed to provide for the safest and most reliable source of electric power for the control of their processes. The definition of the bulk electric system and the exemption process should address this fact and exclude or provide a process to exclude industrial facilities from all or a select number of NERC requirements when there is a conflict between the requirements designed to ensure the reliability of BES and the safe operation of chemical processes.
Response: The SDT has established basic goals and assumptions that will be used to guide the development of the BES definition and supporting documents.		

Organization	Yes or No	Question 13 Comment
The assumptions include: 'The revised definition will not significantly expand or contract what are currently considered BES Elements, nor will the revised definition drive entity registration or de-registration". Based on these goals and assumptions the overall impact of the revised definition is expected to be minimized for the majority of the Regions and Registered Entities. The SDT is currently working toward an equitable solution concerning industrial customers based on language currently contained in the Registry Criteria which establishes guidance for addressing 'behind the meter generation'.		
NERC Staff		See Attached.
Response: The SDT will consider your comments in the further development of the core definition and the exception criteria.		
Edison Electric Institute		Order 743 / NERC BES Project Edison Electric Institute Responses to Draft Concept Paper General Issues: On behalf of its member companies, Edison Electric Institute (EEI) appreciates the opportunity to offer the following brief comments on NERC Project 2010-17 for developing response to FERC Order No. 743, definition of Bulk Electric System and an exemptions process for certain facilities. EEI is the association of the nation's shareholder-owned electric companies, international affiliates, and industry associates worldwide. EEI's U.S. members serve approximately 95 percent of the ultimate consumers served by the shareholder-owned segment of the electric utility industry and approximately 70 percent of all electric utility ultimate consumers in the nation. Virtually all EEI members are required to comply with the mandatory electric reliability standards established by the ERO and approved by the Commission, pursuant to section 215 of the Federal Power Act. As a process matter, EEI develops comments such as these through a disciplined and well-practiced process that includes broad distribution of draft documents to member companies, conference calls, and email exchanges, all conducted to ensure that EEI speaks with broad member company support and with as much specificity as possible. For additional information about the roster of membership, NERC staff should contact EEI directly. The concept paper envisions two parts of the project - (1) development of the technical criteria for the BES definition through the NERC Standards Development Process and (2) development of the Rules of Procedure for the exemption process. a.) NERC should use the FERC-approved standards development process for developing the technical criteria for both the BES definition and exemptions. EEI views this as a single exercise, that is, the BES definition and technical aspects relating to exemptions as a single project. b.) EEI members believe that this is a critical project and understands various concerns about timeliness and process efficiency, and therefore recommends that stakeholders make strong commitments now to a project plan that will ensure a timely compliance filing at FERC. The drafting team should also expedite development of a project plan that shows tasks, deliverables, and milestone dates for the entire one-year timeline.

Organization	Yes or No	Question 13 Comment
		c.) EEI reads Order No. 743 as suggesting that NERC should develop appropriate changes to the Rules of Procedure (ROP) to accommodate the process and due process features of the BES exemptions process, including matters such as administrative procedure, decision authority, appeals and other due process matters, and requests for changes. EEI strongly believes that the technical matters are best resolved in the FERC-approved standards development process, which for this project includes the BES definition and the various technical criteria to be used to define exemptions. NERC should manage the development of ROP changes through an open process that considers stakeholder comments and recommendations. d.) Alternatively, if NERC decides to develop various technical criteria for the granting of exemptions through the Rules of Procedure, EEI strongly encourages NERC to plainly describe the process plan, which will help communicate to companies how the process will be open, inclusive, transparent, and ensure due process. e.) Issues recommended for drafting team consideration: Order No. 743 provides that the best way to address its concerns about the definition of BES is to eliminate the regional discretion in the current definition, maintain the bright-line threshold that includes all facilities operated at or above 100 kV except defined radial facilities and establish an exemption process and criteria for excluding facilities that the ERO determines are not necessary for operating the interconnected transmission network. (P 30) Because transmission lines below 100 kV and radial lines are not included in the definition of BES, the standards drafting project should ensure that the definition expressly incorporates these exclusions. Entities should not have to seek an exemption for facilities below 100 kV or for radial lines. They should be clearly excluded in the BES definition itself. f.) Removing regional discretion does not imply that regions have no role. EEI also encourages NERC in the ROP to delegate the authority to grant exemptions in the first instance to the Regional Entities. NERC should maintain oversight authority, including review of decisions for consistent application of the criteria. g.) Applicants for exemptions should be able to appeal adverse Regional Entity decisions to NERC. The NERC Compliance Registry process should serve as a general model. h.) The BES definition must also address the statutory exclusion for facilities used in “local distribution.” Section 215 plainly excludes facilities used in local distribution from jurisdiction and EEI notes that the definition is applied under other provisions of the Federal Power Act. The exemptions process should provide that previous or future regulatory decisions regarding local distribution facilities can serve as an

Organization	Yes or No	Question 13 Comment
		exemption criterion. While Order 743 does not provide explicit guidance on this issue, EEI urges the drafting team to expand the concept paper to include how this issue will be addressed. If the concept paper is not expanded to include this issue, NERC needs to plainly say where the issue will be addressed. i.) Order 743 made references to facilities below 100 kv that might be defined as necessary for operating an interconnected transmission network, and asked that whatever processes are used to make jurisdictional decisions are rolled into the NERC process. In addition, the order referred to several "technical concerns" that might inform jurisdictional decisions on specific facilities greater than 100 kv, which are scattered references throughout the order. For example: operate in parallel with other high voltage and extra-high voltage facilities (P. 73), interconnect significant amounts of generation and (possibly) operate as a defined flowgate (P. 73), will experience similar loadings as high voltage or extra-high voltage facilities at any given time (P. 73), can cause or contribute to significant bulk power system disturbances and cascading outages (P. 73), will be relied upon during contingency operations (P. 73), are not primarily radial in character (P. 39), multiple interconnections of facilities (to other higher voltage facilities) do not constrain an otherwise limited geographical area (P. 39), overall, (implementation of) the proposed definition may not result in a reduction in reliability (P. 74), facilities that, when they fail, cause or influence significant loss of load (PP. 87, 89). Order No. 743 does not explicitly connect these criteria to the process to be developed; however, the drafting team in its plan should explain how it will address them, as required by the order (P 74). EEI encourages the drafting team to seek informal agreement with FERC staff on these various "technical concerns" prior to significantly advancing the project. j.) As a design matter, EEI encourages the drafting team to endorse a principle to seek to maximize the "brightness" of bright line criteria. While this may produce a longer or more detailed definition, EEI believes that greater demarcation at the outset will help reduce companies' uncertainty, and help avoid the need to maintain a costly and bureaucratic exemptions process. EEI has previously offered comments on many occasions to both FERC and NERC in support of a 'simple and clean' TFE process. k.) EEI urges the drafting team to resist the temptation to create a complicated 'Rube Goldberg' device for BES exemptions. Order No. 743 (PP 77-78, 84-85) criticizes the NPCC impact-based study as failing to identify many facilities that are necessary for operating an interconnected transmission network. However, the order does not reject such studies generically, and plainly states that the Commission is not dictating the substance or content of the exemptions process. (P 114) The concept paper needs to clarify whether requests for exemptions may use impact-based studies to support their requests. l.) The concept paper reflects an awkwardly-worded reference (Item #6, proposed BES criteria) to the effect that certain facilities will be deemed included in the BES "...where the exemptions process

Organization	Yes or No	Question 13 Comment
		deems..." In the paragraph at the top of p. 2, the concept paper refers to the exemption process as seeking to determine "...whether a facility should be included or excluded...." EEI requests clarification that an exemptions process will be used to determine facilities for exclusions and not inclusions, and based on a 100 kv bright-line criterion for inclusion. Alternatively, the concept paper should clarify the general intention of this particular criterion. m.) As previously stated, the proposed ROP to be developed should codify the process - and due process - aspects of the exemptions process. The exemptions process should strike the right balance in establishing the criteria for exemptions to ensure that the process does not become mired in attenuated processes such as those developed for the TFE process.

Response:

a.) The NERC Standard Processes Manual is the governing document for the development of the revised BES definition and exception criteria. The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements. The 'exception criteria' (now proposed as part of the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.).

b.) The SDT agrees with the critical nature of the project and the need to provide deliverables within the Commission directed time frame. The SDT has developed and posted a project schedule which identifies the tasks, deliverables, and milestone dates for the entire project. The schedule is publically posted and available on the project page (Project 2010-17 Definition of the Bulk Electric System) of the NERC website.

c.) The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and will include representation from the DBESSDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP Team will be determined and administered by NERC staff.

d.) The SDT has determined that one of the keys to success for this team and the NERC ROP Team is effective communication that provides the industry with an understanding of the project plan and concepts, which will emphasize the development process attributes of openness, inclusiveness, transparency, and due process.

e.) The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying Generation Facilities, Radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as

Organization	Yes or No	Question 13 Comment
		BES (inclusions) or non-BES (exclusions). f.) The 'Exception Process' and the responsibilities associated with the implementation and oversight will be defined by the NERC Rules of Procedure Team. Based on the language contained in FERC Order No. 743, there are Commission expectations associated with the process oversight by the ERO and allowances for the delegation of responsibilities to Regional Entities as appropriate, while ensuring the process is clear and capable of being applied consistently, objectively and uniformly across all regions. g.) The SDT agrees that within the NERC ROP Exception Process, entities should have the opportunity to appeal decisions made by the Regional Entities and the ERO concerning the inclusion or exclusion of Elements in relation to the BES. h.) The SDT agrees that the issues surrounding 'local distribution networks' deserve consideration when developing the BES Designations. See the revised definition as it proposes exclusions for local distribution networks that meet certain criteria. i.) The SDT will consider your comments in the further development of the core definition and the exception criteria and will seek clarity on the issues identified in future discussions with FERC staff. j.) The SDT has developed the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements. The 'exception criteria' utilizes the same 'bright-line' criteria approach to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). k.) The specific methodology associated with establishing the technical justification of inclusions to or exclusions from the BES will be determined and vetted by the NERC ROP Team utilizing the revision process for the NERC ROP and will be coordinated by NERC staff and governed by current practice for administering such revisions. l.) The SDT disagrees with the commenter in that any Exception Process should establish a process for exceptions from and inclusions to the BES. As stated in FERC Order No. 743, P83 "The Commission's proposed approach to addressing these concerns will enable affected entities to pursue exemptions for facilities they believe should not be included in the bulk electric system, and also will allow Regional Entities to add facilities below 100 kV they believe should be included". The Regional Entities currently have the authority to include Elements operated at voltages below 100 kV that are deemed necessary for the reliable operation of the BES. The Order does not eliminate this authority, but rather emphasizes the need to maintain the Regional Entity's ability of establishing inclusions to the BES through the Exception Process. m.) The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. With that in mind, the SDT agrees with the commenter in that the Exception Process should carry the same characteristics as the core definition and exception criteria: clear, unambiguous, repeatable, and establish consistency on a continent-wide basis.
Pepco Holdings Inc.		1. The definition should be expanded to contain what is excluded to minimize the need for exemptions. For example radial facilities should by definition be excluded and not have to go through a formal exemption

Organization	Yes or No	Question 13 Comment
		process. Other "generic" criteria identified should also be excluded. 2. The exemption process needs to be well designed to minimize the effort. The exemption process development should incorporate lessons learned and experience from the TFE process, so that this new process is more manageable. 3. Instead of two separate groups, one working on the definition and one on the exemption process, one group should handle both activities to assure continuity and consistency. 4. Any data required for the exemption process needs to be kept secure and not posted on an open source. 5. PHI is supportive the EEI comments offered on the BES Project.

Response:

1. The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed as part of the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying Generation Facilities, Radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as BES (inclusions) or non-BES (exclusions).

2. The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and will include representation from the DBESSDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP team will be determined and administered by NERC staff. With that in mind, the SDT agrees with the commenter in that the Exception Process should be a manageable process that is clear, unambiguous, repeatable, and establishes consistency on a continent-wide basis.

3. The development of the core definition of the BES and the exception criteria by the SDT will be closely coordinated with the development of the Exception Process by the NERC ROP Team. The goal (identified key to the project's success) is to have postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition, the exception criteria and the Exception Process. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743, the decision was made to establish two teams working in close coordination to address the issues related to the project.

4. The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The current process includes public postings of proposed changes which will allow the industry provide comments. We will forward your comment to the team working on the ROP modifications.

Organization	Yes or No	Question 13 Comment
5. See responses to EEI comments.		
PUD No.1 of Clallam County		Due to the lack of clarity around the current definition of the Bulk Electric System ("BES") the NERC Statement of Compliance Registry Criteria is often used/misused to define elements of the BES. The registration criterion uses many undefined terms as well as “bright line” thresholds that that in many cases have little to no technical basis. One example is using “gross nameplate rating” when the machine size may be significantly limited by boiler capacity on a cogeneration steam plant or water on a hydro plant. In addition there is no technical or reliability bases used to identify the low MVA/MW thresholds used in the load and generation thresholds for the DP, GO, GOp registrations. The Standards Authorization Requests (SARs) should also address how, or if the registration criteria is used in identifying BES elements. We believe the Registration Criteria should not be used to identify BES elements; it should be used as indented, to address functional registration.
Response: The SDT is continuing the development of the concept of a component-based ‘bright-line’ definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The ‘exception criteria’ (now proposed as part of the definition of BES) utilizes the same ‘bright-line’ criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying Generation Facilities, Radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as BES (inclusions) or non-BES (exclusions). Any impact of the revised core definition, the exception criteria, or Exception Process on the current Registry Criteria will be addressed in the Implementation Plan.		
Manitoba Hydro		a.) A NERC definition of ‘radial’ is required to prevent misapplication of the BES definition and exemption process. b.) There should be no regional differences in the BES definition or in the BES definition exemption process. c.) There should be equal representation from the regions to draft this standard and exemption process
Response: a.) With the proposed revisions to the definition of BES, at this time, the SDT does not contemplate adding any additional definitions beyond BES. b.) FERC Order No. 743 provides specific direction on the elimination of the regional discretion which is allowed under the current definition of the Bulk Electric System. The SDT fully intends to be responsive to the Commission directives. c.) In forming the SDT, NERC staff has utilized the criteria established in the NERC Standard Drafting Team Scope Document, which states: ‘Representation		

Organization	Yes or No	Question 13 Comment
from as many NERC Regions as possible'.		
North Carolina EMC		The BES definition for radial facilities serving only load with one source should be clarified to include radial facilities with the potential ability to be served from more than one source, but always operated with an "opening point" that makes it radial. If the entity can demonstrate that it always operates in this fashion, either by producing switching orders indicating such operation or other evidence such as documentation of open and tagged switches, etc., then it should be considered to be in full compliance with the radial BES definition exemption.
Response: The DBES SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed as part of the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The SDT has revised the definition but is retaining the single source designation.		
ReliabilityFirst		• ReliabilityFirst would like to see this as a simple easy-to-follow definition. The exclusion process needs to be clear without room for discussion or interpretation. • There must be a common framework developed to apply the entire process that begins with a single NERC-wide BES definition. • The definition should serve as a common approach for the identification of BES Elements and Facilities that are subject to compliance that is married to the Registration Criteria. • The definition and approach for the determination must be repeatable • The method must clearly identify the BES elements for use by the industry. • In order to obtain consistency, the definition, application and criteria must be used across Regional Entity boundaries. • The revised BES definition should be consistent with the Statement of Compliance Registry Criteria so as not to create a conflict between the two, and could possibly simply reference the Criteria for issues such as size of generating units (e.g., 20 MVA units and 75 MVA plants) included in the BES. • As stated in the FERC Order No. 743, the criteria for exemption should be included within the BES definition, and the exemption process should contain only the procedure for submitting and determination

Organization	Yes or No	Question 13 Comment
		of such. The exemption process should not contain a third set of criteria (in addition to the BES definition and the Statement of Compliance Registry Criteria) in which to make a determination of facilities to be monitored for compliance to standards. • With the revised BES definition containing specific requirements for inclusion in the BES, will the separate Statement of Compliance Registry Criteria be needed?
Response: The SDT agrees and has considered your comments in the further development of the core definition and the exception criteria. The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed as part of the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as BES (inclusions) or non-BES (exclusions). A revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and will include representation from the DBES SDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP Team will be determined and administered by NERC staff. With that in mind, the SDT agrees with the commenter in that the Exception Process should be a manageable process that is clear, unambiguous, repeatable, and establishes consistency on a continent-wide basis. The development of the core definition of the BES and the exception criteria by the SDT will be closely coordinated with the development of the Exception Process by the NERC ROP Team. The goal (identified key to the project's success) is to have postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition, the exception criteria, and the Exception Process. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743 the decision was made to establish two teams working in close coordination to address the issues related to the project. Any impact of the revised core definition, the exception criteria, or Exception Process on the current Registry Criteria will be addressed in the Implementation Plan.		
on behalf of Teck Metals Ltd.		Parallel transmission lines from a single source (substation) to a single load should be excluded from the BES, with the consent/request of the owner of the connected load (and/or all customers that constitute the connected load).
on behalf of Catalyst Paper Corporation		
Response: The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes		

Organization	Yes or No	Question 13 Comment
the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation facilities, radials, etc.). In the development of the exception criteria, the SDT has considered your comments.		
City of Grand Island		a.) The NERC defined Adequate Level of Reliability is the governing factor on whether or not a facility really has an impact on the BES. Currently the standards are applied far too broadly and numerous small entities are needlessly involved. This project should pull the standards/compliance environment back to entities that have a real impact. b.) Exemption process should be termed "exception" process. Exception means not conforming to general rule, whereas exemption primarily means exclusion. This process will be difficult to develop and administer and is counterproductive to "bright line" philosophy. Thus the bright lines should be at a high level resulting in fewer exceptions. The exception process must consider the impact of a fault or outage of that facility on the Adequate Level of Reliability of the BES. c.) The exception process development should be simultaneous to the BES definition project. It's all one, not two pieces. In addition if this is a direct impact on registration criteria, then that should be part of the project as well.
Response: a.) The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The SDT believes that this method of identification will provide the desired clarity requested by the industry and directed by the Commission while ensuring that consistent results will be produced universally across the continent. In the development of the core definition and the exception criteria, the SDT has considered your comments. b.) The inconsistency of the use of 'exemption' vs. 'exception' in several documents has been identified by the SDT and the team has determined that 'exception' is the proper term to be used in reference to the Bulk Electric System definition and supporting processes. The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e. bright-line criteria for identifying generation Facilities, radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as		

Organization	Yes or No	Question 13 Comment
BES (inclusions) or non-BES (exclusions). c.) The development of the core definition of the BES and the exception criteria by the DBES SDT will be closely coordinated with the development of the Exception Process by the NERC ROP Team. The goal (identified key to the project's success) is to have postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition, the exception criteria and the Exception Process. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743, the decision was made to establish two teams working in close coordination to address the issues related to the project. Any impact of the revised core definition, the exception criteria or Exception Process on the current Registry Criteria will be addressed in the Implementation Plan.		
Occidental Energy Ventures Corp		Demand Side Management. One commenter has apparently suggested that "Demand Side Management" relied on to provide Contingency Reserves be included in the BES definition. On the surface, this seems reasonable. However, this would possibly subject aggregators of DSM resources to registration as a yet unknown resource type. The DSM resources could be located on lower voltage distribution systems that should not be part of the BES. Once again, the issue of DSM registration is being pursued under a separate NERC initiative and should be resolved by that process rather than a broadening of the definition of BES which forces registration of entities not currently registered. This also could provide a disincentive for potential DSM development, which the Federal Energy Regulatory Commission (FERC) is on record as trying to foster as a peak shaving resource. When the issues surrounding DSM as a resource are resolved by due process, any recommendations could include a change to the definition of BES, if actually required. Finally, this issue is not part of the FERC directives for changing the BES definition. Self-Generation and Cogeneration. One commenter has apparently suggested that self-generation as currently defined and excluded in the Statement of Compliance Registry should not be excluded from the definition of BES based on the "immediate-term impact on reliability." This same commenter notes that, in order to be excluded under the current BES definition, the self-generation is required to purchase back-up (stand-by) power for the generation in case of an outage. Paying for this standby power (which is essentially "extra" reserve power) is one reason for allowing the self-generation to be excluded from the BES. Once again, subjecting self-generation/cogeneration to NERC regulatory requirements is not one of the directives from the FERC concerning the BES definition and could provide a disincentive for cogeneration, which has been historically supported by FERC and the federal government. Hence, suggestions such as this are out of the scope of this process.
Response: The SDT has established basic goals and assumptions that will be used to guide the development of the BES definition and supporting documents. The assumptions include: 'The revised definition will not significantly expand or contract what are currently considered BES Elements, nor will the revised		

Organization	Yes or No	Question 13 Comment
definition drive entity registration or de-registration. Based on these goals and assumptions the overall impact of the revised definition is expected to be minimized for the majority of the Regions and Registered Entities. The SDT will consider your comments in the further development of the core definition, the exception criteria and the Exception Process.		
Glacier Electric Cooperative		I highly encourage the development of a method that utilizes engineering analyses to more accurately define which elements are truly significant to the BES and which are not. Thanks for taking on the challenge to improve the BES definition.
Response: The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The SDT believes that this method of identification will provide the desired clarity requested by the industry and directed by the Commission while ensuring that consistent results will be produced universally across the continent. exception criteria		
Entergy Services		a.) The following are Entergy's comments concerning the scope and implementation of the requested work, the draft SAR, draft standard, draft criteria, draft exemption criteria, exemption process, and implementation process. We suggest the SAR ad the standard development be revised to reflect the comments below. In particular, we believe there are several parts to the scope of this project. First, the development of the revised definition of the BES including all inclusion / exemption criteria and the development of the implementation plan for that revised definition should be developed through the Standards Development Process. All future inclusion / exemption criteria would also be developed through the Standards Development Process. The process for changing the Rules of Procedure should be used for the development, approval and application of the process for obtaining an exemption of specific facilities. It would be helpful, but not required, that the development of the standard and the changes to the ROP proceed together. b.) We suggest there be one continent-wide definition of BES with no exemption criteria specific to a particular region... DEFINITION OF BES, INCLUSION CRITERIA and EXEMPTION CRITERIA We suggest the definition of BES be the following: Bulk Electric System: All Transmission and Generation Elements and Facilities conforming to the Inclusion Criteria and Exemption Criteria identified below. Elements and Facilities operated at voltages of 100kV or higher may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process included in the NERC Rules of Procedure. INCLUSION CRITERIA1. All transmission and generation elements and facilities operated at voltages of

Organization	Yes or No	Question 13 Comment
		100 kV or higher, 2... Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, with both primary and secondary windings of 100 kV or higher; 3. Individual generation resources (including GSU transformers and the associated generator interconnecting line lead(s)) greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above; 4. Generation plants (including GSU transformers and the associated generator interconnecting line lead(s)) with aggregate capacity greater than 75 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above; 5. Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's (TOP's) restoration plan; 6. Transmission Elements or Facilities operated at voltages below 100kV where the exemption process deems the Element or Facility to be included in the BES; 7. Individual generation resources greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where the exemption process deems the generation resources to be included in the BES; and 8. Generation plants with aggregate capacity greater than 75 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where the exemption process deems the generation plants to be included in the BES. EXEMPTION CRITERIA1. Any radial Transmission Element or System, connected from one Transmission source to a Load-serving Element and/or generation resources not included in items 2, 3, 4, 6, and 7 above are excluded from the BES; 2. Elements and Facilities identified through application of the exemption process, consistent with the criteria, where the exemption process deems that the Element or Facility should be excluded from the BES (with concurrence from the ERO); and 3. Generating plant control and operation functions which include relays and systems that control and protect the unit for boiler, turbine, environmental, and/or other plant restrictions. IMPLEMENTATION PLAN FOR REVISED DEFINITION OF BES The Standard Drafting Team will develop for industry comment an Implementation Plan for the revised definition of BES.
Response:		

Organization	Yes or No	Question 13 Comment
a.) The NERC Standard Processes Manual is the governing document for the development of the revised BES definition and exception criteria. The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements. The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e. bright-line criteria for identifying generation Facilities, radials, etc.). The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and will include representation from the DBES SDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP Team will be determined and administered by NERC staff. The development of the core definition of the BES and the exception criteria by the SDT will be closely coordinated with the development of the Exception Process by the NERC ROP Team. The goal (identified key to the project's success) is to have postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition, the exception criteria and the Exception Process. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743, the decision was made to establish two teams working in close coordination to address the issues related to the project. b) FERC Order No. 743 provides specific direction on the elimination of the regional discretion which is allowed under the current definition of the Bulk Electric System. The SDT fully intends to be responsive to the Commission directives. The SDT has considered your comments in the further development of the core definition and the exception criteria. See the proposed revised definition of BES with its lists of "Inclusions" and "Exclusions."		
Snohomish County PUD		While we recognize that the Standards Drafting Team is a technical body and is not charged with interpreting legal doctrine, we nonetheless urge the Drafting Team to bear in mind the statutory limitations on the definition of the BES. If the BES definition is drafted with these limits in mind, the process will more easily meet with industry acceptance. If the BES definition adopted by the drafting team fails to meet these limits, by contrast, its efforts are likely to result in extended litigation that will be counterproductive to the goal of improving the reliability of the bulk delivery system. The definition of "bulk-power system" adopted by Congress in Section 215 of the Federal Power Act is the ultimate source of the Standards Drafting Team's authority and the Team should therefore pay particular attention to that statutory definition:The term 'bulk-power system' means-(A) Facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and(B) Electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy. This definition, and in particular the language italicized above, imposes clear restrictions on the definition to be developed by the Drafting Team.

Organization	Yes or No	Question 13 Comment
		These restrictions are: a. Only facilities "necessary for" the operation of the interconnected bulk transmission network can be included in the BES. Snohomish believes the most logical way to determine whether facilities are "necessary for" operation of the bulk system is through engineering-based studies demonstrating that particular Facilities or Elements play a material role in the operation of the bulk grid. b. Generation facilities can be included in the BES only if they are "needed to maintain" the reliability of the bulk system. Accordingly, as noted above, the thresholds used in the NERC Statement of Registry Compliance are not determinative of whether a generator is necessary to maintain bulk system reliability. That determination is an engineering-based assessment and the fact that a generator may exceed the 20 MW capacity threshold in the Registry Statement does not mean that the generator is "needed to maintain" bulk system reliability. It may well not be. c. "Reliability" was also given a specific meaning by Congress when it drafted Section 215. Specifically, the statute defines "reliable operation" to mean "operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of sudden disturbances, including . . . unanticipated failure of system elements." Accordingly, the BES definition should focus on facilities that are necessary to ensure that the bulk transmission system does not suffer instability, uncontrolled separation, or cascading failures. Facilities that do not threaten these kinds of severe consequences should not be included in the BES. d. The definition explicitly excludes "facilities used in the local distribution of electric energy." The definition adopted by the Standards Drafting Team must therefore unequivocally exclude all local distribution facilities. In light of these statutory constraints, Snohomish supports as part of the Standards Drafting Team's process the creation of a categorical exclusion from the BES for systems that meet NERC's historical definition of Local Network. As explained in more detail below, Local Networks are operated to provide service to specific, geographically-limited service areas and do not affect the reliable operation of the bulk transmission system. Accordingly, there is no good reason to include Local Networks in the BES and to do so would be contrary to the language in the statute discussed above. Historically, NERC employed a definition of "Local Networks" and NERC's "Bulk Electric System" definition distinguished between the "Bulk Transmission System" and "Sub-transmission." More recently, those distinctions have been lost, diverting attention away from critical elements of the transmission system that, if they fail, threaten cascading outages or other large-scale events, and increasing attention to facilities that, if they fail, threaten only to disrupt service in a localized areas. The Standards Drafting Team can remedy this over breadth problem by categorically excluding facilities meeting the definition of "Local Networks" from the BES definition. Until a few years ago, NERC used the following definition of "Local Network": Local Network- a non-radial portion of a bulk electric system whose customers may be interrupted for the loss of a single transmission element (100 kV or more). This loss of load is only

Organization	Yes or No	Question 13 Comment
		allowed in those rare circumstances when it is impractical (e.g., long transmission distances, extremely high costs with low benefits) to avoid interruption of service to a portion or all of the customers in the network due to the network being directly connected to or supplied by the faulted transmission system element (e.g., generator, transmission circuit, transformer). The resulting customer interruption should be of relatively low probability of occurrence and limited in magnitude (less than 100 MW). The interruption of such local network customers shall not impact the overall security of the interconnected transmission systems. The term Local Network is currently used in the NERC TPL Reliability Standard. However the definition is no longer defined in the NERC Standard Glossary of Terms. The important distinctions between Local Networks and the Bulk Electric System have been further obscured by changes in NERC's BES definition. The "Bulk Electric System" definition that appeared in the Glossary of Terms reference document approved by both the NERC EC and OC at a joint meeting of those committees on July 16, 1996, distinguished between "Transmission" and "Sub-transmission": Bulk Electric System - A term commonly applied to the portion of an electric utility system that encompasses the electrical generation resources and bulk transmission system. Where Transmission - An interconnected group of lines and associated equipment for the movement or transfer of electric energy between points of supply and points at which it is transformed for delivery to customers or is delivered to other electric systems. Bulk Transmission - A functional or voltage classification relating to the higher voltage portion of the transmission system. Sub-transmission - A functional or voltage classification relating to the lower voltage portion of the transmission system. The current version of the BES definition does not, by contrast, make such a distinction: Bulk Electric System - As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition. The definitional changes have diverted attention away from the systems that pose the greatest risks of cascading outages and toward systems that do not threaten such widespread reliability impacts. Protecting the electric system from wide-spread cascading outages and focusing on protecting equipment and isolating cascading outages has historically been the primary goal of NERC reliability efforts and, as FPA Section 215 requires, should remain so now and in the future. It is clear, however, that there are real distinctions between "Bulk Transmission," "Sub-transmission," and "Local Networks" in terms of their impacts on bulk system reliability. We propose that, in order to restore these important distinctions, WECC categorically exclude systems meeting the definition of Local Network from its BES definition. Doing so will refocus the NERC-WECC reliability mission on those systems that most effect bulk system reliability, while excluding from the BES ambit those systems whose impacts are purely local. As noted above, Snohomish has participated in and supports the work of the WECC BESDTF. The BESDTF's current proposal contains a categorical exclusion for Local Networks along the lines of the one we advocate here and the BESDTF has developed an extensive factual and technical record supporting its approach. We urge the Standards Drafting Team to follow that approach.

Organization	Yes or No	Question 13 Comment
Response: The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The SDT believes that this method of identification will provide the desired clarity requested by the industry and directed by the Commission while ensuring that consistent results will be produced universally across the continent. In the development of the core definition and the exception criteria, the SDT has considered your comments.		
United Illuminating Company		Any technical definition should provide the means to differentiate facilities used in local distribution since these facilities are excluded from the statutory definition of bulk-power system. The definition of BES should be very broad or bright.
Response: The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The SDT believes that this method of identification will provide the desired clarity requested by the industry and directed by the Commission while ensuring that consistent results will be produced universally across the continent. In the development of the core definition and the exception criteria, the SDT has considered your comments.		
Orange and Rockland Utilities, Inc.		**a.)** Proposed definitions to be added to the NERC Glossary of Terms: BES Exemption Process: The review processes for (a) excluding facilities and elements from the BES that are determined not to be necessary to support bulk power system reliability (e.g., radial elements), and (b) including Elements operated at voltages below 100 kV that are determined to be necessary to support bulk power system reliability. By identifying all such BES and non-BES facilities and elements, the BES Exemption Process will establish the Points-of-Demarcation between Facilities and BES Elements and non-BES facilities and elements. Point-of-Demarcation: A physical point and/or electrical connection between facilities and BES Elements and non-BES facilities and elements, e.g., the upstream terminals of a disconnect switch (or a buss connection) representing the boundary between a BES supply bus and a non-BES radial feeder. **b.)** The BES exemption process has not yet been finalized or approved. So, it is somewhat difficult to know a priori whether any element, elements or a group of elements or facilities should or should not be classified as part of the BES definition. **c.)** This document uses both "exemption process" and "exception process". Recommend that the phraseology be standardized on "exception process" as the exception (not the exemption) can be to include or exclude elements and facilities.

Organization	Yes or No	Question 13 Comment
		d.) It is envisioned that the BES Exemption Process will contain 3 sub-processes; one for Exclusion, one for Exemption, and one for Inclusion. Each sub-process will establish provisions and guidelines for the three different tasks. In order to ensure consistency across the continent, it is our view that NERC should be the facilitator of these processes. NERC may choose to have some of these tasks performed at the regional levels through the existing delegation agreements. **e.)** The BES Exemption Process must be an active and ongoing aspect of the ERO program. With the addition of new or deletion of existing Transmission and Generation Elements, facilities, or systems. It needs to be recognized that Exclusions, Inclusions, and Exemptions might need alteration over time. By establishing appropriate guidelines and processes, the ERO will be able to monitor and maintain information of what is the Bulk Electric System, or BES.
Response: a.) The SDT is not currently contemplating any additional definitions beyond BES. In regards to the term "BES Exemption Process'; it has been determined that the process will reside in the NERC Rules of Procedure (ROP) and therefore it seems logical that the purpose of the process would be defined within the boundaries of the NERC ROP. b.) Exception criteria Agree. The Exemption Process is being developed by a separate team and will be posted for stakeholder comment. c.) The inconsistency of the use of 'exemption' vs. 'exception' in several documents has been identified by the SDT and the team has determined that 'exception' is the proper term to be used in reference to the Bulk Electric System definition and supporting processes. d.) The 'Exception Process' will be developed by the NERC Rules of Procedure Team while coordinating with the DBESSDT. The 'Exception Process' and the responsibilities associated with the implementation and oversight will be defined by the NERC Rules of Procedure Team. Based on the language contained in FERC Order No. 743, there are Commission expectations associated with the process oversight by the ERO and allowances for the delegation of responsibilities to Regional Entities as appropriate, while ensuring the process is clear and capable of being applied consistently, objectively, and uniformly across all regions. Note, however, that the drafting team has revised the definition of BES so that it now includes the exceptions (both inclusions and exclusions) stakeholders have already proposed be applied to the 100 kV bright line threshold. e.) The SDT agrees that the Bulk Electric System is dynamic and that the implementation and continued application of the BES Definition and supporting processes will require active oversight and management to ensure that changing conditions (i.e., operational & new construction) surrounding the Bulk Electric System will be addressed and result in proper evaluation and identification of BES & non-BES Elements.		
American Transmission company		1. ATC suggests that once the term "exemption" is replaced with the term "exception", then consider modifying the BES definition wording to, "All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher, necessary to support bulk power system reliability. Elements and Facilities

Organization	Yes or No	Question 13 Comment
		operated at voltages of 100kV or higher, including Radial Transmission systems, may be excluded through the BES definition exception process and Elements and Facilities operated at voltages less than 100kV may be included through the BES definition exception process". 2. The "Concept Paper" does not specifically call out Transmission Lines above 100 kV as in the BES definition (the proposed definition does, however) and there is a circular exemption criteria in the concept paper. In criterion #2, it refers to the exemption process "consistent with the criteria". The criteria exempt generating plant controls and Transmission Elements or Systems that are radial to a load or generator not included in the BES List. However, the BES list is defined prior to the criteria in the concept paper. Exception criterion #1 points to BES list elements #6 and #7, which in turn, refer to the exception process. But, the exemption criteria never define how to exempt the elements referred to in #6 and #7. 3. The revised definition of the BES and exception process does not address a timeframe for the implementation of this standard once approved, allowing enough time for the entities to provide justification, and then make the necessary changes to their internal programs? 4. How often would a Registered Entity revisit this Exception Process? ATC can envision a scenario where they are doing that every year or two because the loads, generation and transmission changes. The process should also allow for multi-year distinctions for exceptions. In other words, if a Registered Entity gets a facility excluded, then that exclusion should be allowed for 3 or more years. Annual certifications and approval are two restrictive. 5. ATC believes the exception criteria needs to be developed by the SDT. NERC Staff should focus on the process (identification, notification, appeal and rights) but the SDT is in the better position to develop the technical piece of the exception criterion. 6. ATC also supports the comments as submitted by EEI REAC on the Draft Concept Paper on the Definition of BES Project 2010-17.

Response:

1. The SDT has considered your comments in the further development of the core definition and the exception criteria. The drafting team has revised the definition of BES so that it now includes the exceptions stakeholders have already proposed be applied to the 100 kV bright line threshold. The word, "exemption" is not used in the proposed definition of BES.

2. The SDT has considered your comments in the further development of the core definition and the exception criteria. Please see the revised definition of BES.

3. The Implementation Plan will need to address the impact of the revised BES definition and exception criteria, the Exception Process (ROP), and the

Organization	Yes or No	Question 13 Comment
regional Transition Plans on affected entities and provide sufficient time to ensure a smooth transition into the realm of mandatory and enforceable Reliability Standards. **4.** The 'Exception Process' will be developed by the NERC Rules of Procedure Team while coordinating with the DBESSDT. The DBESSDT recognizes that the Bulk Electric System is dynamic and that the implementation and continued application of the BES Definition and supporting processes will require active oversight and management to ensure that changing conditions (i.e., operational & new construction) surrounding the Bulk Electric System will be addressed and result in proper evaluation and identification of BES & non-BES Elements. The time frames associated with the 'review' processes will be determined by the NERC ROP Team. The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. **5.** The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as BES (inclusions) or non-BES (exclusions). The 'Exception Process' will be developed by the NERC Rules of Procedure Team while coordinating with the DBES SDT. **6.** See responses to EEI comments.		
The Dow Chemical Company		Dow has reviewed and generally supports the comments prepared by The Electricity Consumers Resource Council (ELCON).
Response: See response to ELCON comments.		
National Rural Electric Cooperative Association (NRECA)		**a.)** BES definition exemption criteria must be developed by the same SDT that is modifying the BES definition and through the standards development procedure. The BES exemption criteria must not be developed by a separate group outside of the standard development procedure, e.g., through a NERC Rules of Procedure (ROP) modification process as is currently proposed in the SAR. The BES exemption process, not criteria, can be included in the ROP by utilizing the process for making such modifications to the ROP. The BES definition exemption process should refer to the procedure for applying for such an exemption, not the criteria that such an exemption application would be based upon. It is critical for the final SAR to provide clarity as it relates to what is considered exemption criteria and exemption process.

Organization	Yes or No	Question 13 Comment
		b.) We appreciate the work of the Regional BES Definition Coordination Group, however, this group must conclude its work now that a SAR has been proposed and is posted for comment. This group can provide comment on this SAR and future products from the SDT in same way as any other stakeholder can provide comment. Having a parallel effort led by Regional Entity staff, outside the formal Project 2010-17 SDT process, will create confusion and potentially cause inefficient use of industry resources. All efforts should be focused on the formal standard development activities including related future comment and ballot periods. Compliance registry criteria should only be reviewed and potentially modified if specifically needed to implement a modified BES definition and associated exemption criteria. **c.)** The SDT is tasked with addressing definition modifications to ensure consistent and uniform application of the BES definition across the Regional Entities. The focus of the SDT's work should first be on the BES definition and exemption criteria. Any Compliance Registry Criteria modifications would have to be approached very carefully as it was developed through a lengthy stakeholder consensus process.

Response:

a.) The NERC Standard Processes Manual is the governing document for the development of the revised BES definition and exception criteria. The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements. The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.).

The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and will include representation from the DBESSDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP Team will be determined and administered by NERC staff.

The development of the core definition of the BES and the exception criteria by the SDT will be closely coordinated with the development of the Exception Process by the NERC ROP team. The goal (identified key to the project's success) is to have postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition, the exception criteria, and the Exception Process. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743 the decision was made to establish two teams working in close coordination to address the issues related to the project.

b.) When the NERC Standards Committee accepted the SAR and established the SDT, the RBESDCG acknowledged that the primary development of definition and supporting documents had shifted from the RBESDCG to the SDT. The RBESDCG agrees that parallel efforts will result in inconsistencies and disruption of the SDTs efforts. Therefore, the RBESDCG forwarded all applicable work products to the SDT and to the NERC ROP Team for consideration. Going forward, the RBESDCG will support the development of the definition, supporting documents, and the revisions to the ROP by collectively participating in the respective development processes (i.e., providing consensus comments to posting and participating in the associated

Organization	Yes or No	Question 13 Comment
balloting process). **c.)** Any impact of the revised core definition, the exception criteria, or Exception Process on the current Registry Criteria will be addressed in the Implementation Plan.		
City of Austin dba Austin Energy		The word "exemption" in the last line is confusing. Lines above 100kV would be "exempted" from inclusion as part of the BES. Lines below 100kV would be "added" to the BES (under certain circumstances) which, technically, is not an "exemption." (In fact, the Word document on the NERC web page refers to the process as an "Exception Process") AE recommends the following language: Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher necessary to support bulk power system reliability. Elements and Facilities operated at voltages of 100kV or higher, including Radial Transmission systems, and Elements and Facilities operated at voltages less than 100kV may be included if approved through the process described in the BES Definition Exception Process.
Response: The inconsistency of the use of 'exemption' vs. 'exception' in several documents has been identified by the SDT and the team has determined that 'exception' is the proper term to be used in reference to the Bulk Electric System definition and supporting processes. In the development of the core definition and the exception criteria, the SDT has considered your comments. Please see the revised definition of BES – it now includes a list of both "Inclusions" and "Exclusions" as part of the definition and no longer references an exemption (or exception) process).		
Duke Energy		There should be a provision for the Planning Coordinator or Transmission Planner to include individual generators and generation plants that are not included in these criteria through a technical evaluation, either in the definition or in the inclusion of facilities below 100 kV portion of the exemption process. For example, generating facilities connected to generator step up transformers below 100 kV that have a demonstrated ability to have a significantly adverse affect on the reliability on the bulk power grid or a major urban load center should be included.
Response: The SDT agrees with the commenter, in that any Exception Process should establish a process for exceptions from and inclusions to the BES. As stated in FERC Order No. 743, P83 "The Commission's proposed approach to addressing these concerns will enable affected entities to pursue exemptions for facilities they believe should not be included in the bulk electric system, and also will allow Regional Entities to add facilities below 100 kV they believe should be included". The Regional Entities currently have the authority to include Elements operated at voltages below 100 kV that are deemed necessary for the reliable operation of the BES. The Order does not eliminate this authority, but rather emphasizes the need to maintain the Regional Entity's ability of establishing inclusions to the BES through the Exception Process. Under these circumstances, the SDT feels that a Planning Coordinator or Transmission Planner could pursue inclusion of selected Elements into the BES by lobbying with their Regional Entity. exception criteria		
BGE		**a.)** NERC should use the FERC-approved standards development process for developing the technical criteria for both the BES definition and exemptions process. We view this as a single exercise. BGE

Organization	Yes or No	Question 13 Comment
		feels joint development of the BES Definition & Exception Process under a single SDT would be preferable. The standards drafting project should ensure that the definition expressly incorporates these exclusions for facilities below 100 kV. Entities should not have to seek an exemption for facilities below 100 kV or for radial lines. They should be clearly excluded in the BES definition itself. **b.)** We encourage the drafting team to embrace a design concept that seeks to maximize the "brightness" of bright line criteria. The BES exemptions process should contemplate very few exemptions. The TFE process is an example of a process not to be repeated here.
Response: **a.)** The development of the core definition of the BES and the exception criteria by the SDT will be closely coordinated with the development of the Exception Process by the NERC ROP Team. The goal (identified key to the project's success) is to have postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition, the exception criteria and the Exception Process. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743 the decision was made to establish two teams working in close coordination to address the issues related to the project. **b.)** The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as BES (inclusions) or non-BES (exclusions).		
City Water Light and Power (CWLP) - Springfield, IL		Relative to the BES Definition Exclusion Process, CWLP has chosen to comment on the inclusion/exclusion process as a whole. The current lack of detailed, firm administrative guidelines as well as an unambiguous process for resolving disputes between parties involved in the process of adjudicating inclusions/exclusions is problematic. It is CWLP's belief that developing the proposed administrative framework for the process is needed first. Focusing on the data to be submitted as shown in (1) and (2) above does not address the scope, nature, and criteria applicable to the review of requests for inclusions/exclusions. Regardless, CWLP feels strongly that the sole basis for approval or rejection of a request should be technical justification. Speaking to the process in general, any inclusion or exclusion should be a specific request for a specific facility; continent-wide, interconnect-wide, and region-wide applicability for inclusions/exclusions departs from the intent of FERC Order 743 to establish a definition without regional variances.
Response: The SDT has considered your comments in the further development of the core definition and the exception criteria .		

Organization	Yes or No	Question 13 Comment
The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as BES (inclusions) or non-BES (exclusions). A revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and will include representation from the DBESSDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP Team will be determined and administered by NERC staff. With that in mind, the SDT agrees with the commenter in that the Exception Process should be a manageable process that is clear, unambiguous, and repeatable and establishes consistency on a continent-wide basis. The development of the core definition of the BES and the exception criteria by the SDT will be closely coordinated with the development of the Exception Process by the NERC ROP Team. The goal (identified key to the project's success) is to have postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition, the exception criteria, and the Exception Process. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743 the decision was made to establish two teams working in close coordination to address the issues related to the project.		
Lewis County PUD		The ever increasing regulatory environment does little to improve electric reliability. Suggest that the BES definition only include the most critical elements of the electric system and leave the smaller elements out of the definition, e.g. less than 100kV and less than 150MVA.
Response: The SDT has established basic goals and assumptions that will be used to guide the development of the BES definition and supporting documents. The assumptions include: 'The revised definition will not significantly expand or contract what are currently considered BES Elements, nor will the revised definition drive entity registration or de-registration. Based on these goals and assumptions the overall impact of the revised definition is expected to be minimized for the majority of the Regions and Registered Entities. exception criteria		
American Electric Power (AEP)		There needs to be more comprehensive BES nomenclature established that distinguishes among the applicable primary-voltage equipment, the associated auxiliary equipment having an impact to the BES, and the associated ancillary equipment having no electrical impact to the BES. The draft versions of PRC-005-2, Protection System Maintenance, look to bring into scope "system-connected station service transformers for generators that that are part of the BES". These transformers are not clearly included within the proposed BES criteria, and consistency must be obtained between the two

Organization	Yes or No	Question 13 Comment
		documents.
Response: The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as BES (inclusions) or non-BES (exclusions). The SDT will be reviewing all NERC and Regional Reliability Standards to ensure that no conflicts have been established between the core definition, the supporting documents and procedures, and the applicability or requirements in the standards.		
Southern Company		**a.** The proposed definition includes the phrase "... necessary to support bulk power system reliability". The exemption process should resolve the question related to precisely which transmission and generation elements and facilities are necessary to support reliability of the bulk power system. **b.** A clear definition of what is included in "Generation Elements and Facilities" is needed. Does it include components other than the GSU transformer? As written, does the BES extend beyond the low voltage side of a GSU transformer?
Response: The SDT has considered your comments in the further development of the core definition and the exception criteria. **a.** The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as BES (inclusions) or non-BES (exclusions). A revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and will include representation from the DBESSDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP Team will be determined and administered by NERC staff. With that in mind, the SDT agrees with the commenter in that the Exception Process should be a manageable process that is clear, unambiguous, repeatable, and establishes consistency on a continent-wide basis. We will forward your comment to the NERC ROP Team. The development of the core definition of the BES and the exception criteria by the SDT will be closely coordinated with the development of the Exception		

Organization	Yes or No	Question 13 Comment
Process by the NERC ROP Team. The goal (identified key to the project's success) is to have postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition, the exception criteria, and the Exception Process. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743 the decision was made to establish two teams working in close coordination to address the issues related to the project. **b.** The SDT is not contemplating any further definitions beyond BES based on the latest revision to the definition. Please see the revised definition of BES as this incorporates more details about including specific generation elements.		
Independent Electricity System Operator		a. On the SAR, it indicates an SC approval date of December 8. It is misleading since the SC did not approve the SAR; it only approved posting of the SAR for industry comment. b. We have a concern with the concept paper on the exemption/inclusion criteria/process. Please see other comments on that paper submitted separately. c. We suggest use of consistent term between "exception" and "exemption". d. We suggest the exception/inclusion criteria to be included in the definition and developed/approved by the balloting body. Determining these criteria via any other processes will not provide the industry the opportunity to fully vet the criteria. e. The SAR indicates that "...the definition drafting team will work closely with the team developing the BES definition exemption process to develop a single coordinated implementation plan. It is also envisioned, that the team working to develop the BES definition exemption process will solicit input from drafting teams, stakeholders...." We find this confusing and have a concern that having two teams working on this definition/criteria package leads to misalignment and confusion. Further, while the definition drafting team is formed by a nomination process and appointed by the NERC Standards Committee, there is no transparency and/or public announcement to solicit nominations for the team working to develop the exemption process. We urge the NERC Standards Committee to direct the definition drafting team to also be responsible for developing the exemption process, and include the exemption criteria as part of the definition hence subjecting them to industry comment and balloting.
Response: a. The default language in the form is misleading and implies that the NERC Standards Committee's approval is required. Per the NERC Standard Process Manual the Standards Committee authorizes posting of the SAR for industry comment. The DBES SDT will provide a recommendation to NERC Standards Staff to revise the SAR form to read, "Date SC Authorized Posting the SAR". **b.** The SDT has considered your comments in the further development of the core definition and the exception criteria. Note that the revised definition of BES now includes lists of criteria for both "inclusion" and "exclusion".		

Organization	Yes or No	Question 13 Comment
c. The inconsistency of the use of 'exemption' vs. 'exception' in several documents has been identified by the SDT and the team has determined that 'exception' is the proper term to be used in reference to the Bulk Electric System definition and supporting processes. **d.** The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as BES (inclusions) or non-BES (exclusions). **e.** The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as BES (inclusions) or non-BES (exclusions). The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and will include representation from the DBESSDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP Team will be determined and administered by NERC staff. The development of the core definition of the BES and the exception criteria by the SDT will be closely coordinated with the development of the Exception Process by the NERC ROP Team. The goal (identified key to the project's success) is to have postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition, the exception criteria and the Exception Process. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743, the decision was made to establish two teams working in close coordination to address the issues related to the project.		
APPA		See text submitted under Question 12.
Response: See response to Q12.		
Xcel Energy		It is not clear as to why the Reliability Assurer is included as an applicable entity in the SAR.

Organization	Yes or No	Question 13 Comment
Response: The NERC Functional Model Version 5 defines the role of the Reliability Assurer as: “The functional entity that monitors and evaluates the activities related to planning and operations, and coordinates activities of functional entities to secure the reliability of the Bulk Electric System within a Reliability Assurer area and adjacent areas”. Any revision to the definition of the Bulk Electric System could potentially expand or contract the ‘Reliability Assurer area’ which would have a direct effect on the responsibilities indentified in the Functional Model.		

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Consideration of Comments on the Revisions Made to the Definition of Bulk Electric System — Project 2010-17

The Definition of Bulk Electric System Drafting Team thanks all commenters who submitted comments on the revisions made to the definition of BES. The definition and supporting documents were posted for a 30-day public comment period from April 28, 2010 through May 27, 2010. The stakeholders were asked to provide feedback on the standards through a special Electronic Comment Form. There were 154 sets of comments, including comments from more than 279 different people from approximately 213 companies representing 10 of the 10 Industry Segments as shown in the table on the following pages.

http://www.nerc.com/filez/standards/Project2010-17_BES.html

The SDT has made numerous clarifying changes to the definition due to comments received:

- The bright-line core definition has been revised to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists.
- An additional inclusion (I5) was developed for Reactive Resources and an additional exclusion (E4) was developed to clarify that Reactive Resources that are owned by retail customers for their own use are not to be included.
- In Inclusion I1, deleted the Generator Step-Up and Phase Angle Regulating transformer language, changed the wording from "windings" to "terminals", and added the terms "primary" and "secondary".
- Inclusion I2 has been eliminated and Inclusion I3 (now numbered as Inclusion I2) has been revised to include generating resourceswith gross aggregate nameplate rating per the ERO Statement of Compliance Registry Criteria for consistency between the two documents.
- The SDT agreed that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system elements and has removed the inclusion for Cranking Paths.
- Inclusion I4 has been revised to eliminate the term 'collector system.'
- Within Exclusion E1, the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system.
- Within Exclusion E2, the SDT clarified the generation allowed within the system
- Within Exclusion E3, the SDT eliminated the term "Distribution" in the label, eliminated the provision which referred to automatic fault interrupting devices, clarified the connection point of the local network, inserted a provision in the local network exclusion to limit the operating voltage of the local network to 300 kV, and effectively removed the comparison test between generation and minimum demand of the local network.
- Included in the core definition a statement that excludes facilities used in local distribution of electric energy.

Several commenters objected to simply carrying through the generation thresholds from the ERO Statement of Compliance Registry Criteria as part of the revised definition. However, no respondents provided technical justifications for changing these values. Furthermore, the scope of this project deals mainly with responding to FERC Orders 743 and 743a which clearly stated that the intent of the order was to maintain the status quo and to only address those urgent issues identified in the Orders. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Issues such as what is necessary for the reliable operation of the BES, whether the BES needs to be contiguous, possible interconnection differences, who are users of the BES, and correlation of the definition of BES and the ERO Statement of Compliance Registry Criteria will be addressed with this new SAR. The proposed SAR has been posted for information purposes only concurrent with the second posting of this project. A formal comment period will follow.

The following minority opinions did not result in changes to the definition:

- The SDT retained the inclusion for Blackstart Resources although some commenters thought it should be deleted. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which include situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES Elements.
- The SDT considered commenters' suggestions regarding allowance of some power flow out of the local network, and concluded that strict limits precluding out-flow are appropriate, particularly given that the local network comprises facilities that are electrically parallel to the BES.

In addition, in response to comments received, the SDT has clarified the effective date in the Implementation Plan.

The SDT proposes to move this project to the 45-day parallel comment and initial ballot stage.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 609-452-8060 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

[1] The appeals process is in the Reliability Standards Development Procedures: http://www.nerc.com/standards/newstandardsprocess.html.

Index to Questions, Comments, and Responses

1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 22

2. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 69

3. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 90

4. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 135

5. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 160

6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 183

7. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 206

8. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 242

9. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 268

10. The SDT is discussing an exclusion from the Bulk Electric System (BES) for small utilities based on statements in Order No. 743 that FERC does not believe its suggested approach to the BES definition and exemption process will have a significant economic impact on a substantial number of small entities and that small entities will not adversely impact the reliability of the Bulk Electric System. The SDT has been made aware that organizations that are not presently required to be registered by the NERC Statement of Compliance Registry Criteria would meet the requirements to be registered as Transmission Owners given the current proposed BES definition. These small utilities could use the Rules of Procedure (ROP) exception process but this may be an issue that could be handled more appropriately through the BES definition. This would alleviate the paperwork burden for these small utilities and also avoid a possibly unnecessary and significant impact on the administration of the ROP exception process during the transition period to the revised BES definition. The proposed exclusion language is: Exclusion E4: Transmission Elements, from a single Transmission source connected at a voltage of 100 kV or greater, owned by a small utility whose connection to the BES is solely through this single Transmission source, and without interconnected generation as recognized in the BES Designation Inclusion Items I2, I3, I4, or I5. A small utility is recognized as an entity that performs a Distribution Provider or Load Serving Entity function but is not required to register as a Distribution Provider or Load Serving Entity by the ERO. Do you agree with this approach and the proposed language? If not, please be specific in your response with a technical reason for your disagreement and, if appropriate, suggested language for such an exclusion if you agree in general but feel that alternative language would be more appropriate. 340

11. In Order No. 743, the Commission addressed the need to differentiate between Transmission and distribution in the revised definition of the Bulk Electric System (BES). Specifically, the Commission stated that local distribution facilities are to be excluded from the BES. The SDT believes that it has excluded local distribution facilities through the revised bright-line core definition and specific inclusions and exclusions. Do you agree with this position? If not, please provide specific comments and suggestions on what else needs to be addressed or added. 357

12. Are you aware of any conflicts between the proposed definition and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? If so, please identify them here and provide suggested language changes that may clarify the issue. 390

13. Are there any other concerns with this definition that haven't been covered in previous questions and comments? 410

The Industry Segments are:

1 — Transmission Owners
2 — RTOs, ISOs
3 — Load-serving Entities
4 — Transmission-dependent Utilities
5 — Electric Generators
6 — Electricity Brokers, Aggregators, and Marketers
7 — Large Electricity End Users
8 — Small Electricity End Users
9 — Federal, State, Provincial Regulatory or other Government Entities
10 — Regional Reliability Organizations, Regional Entities

	Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Mikhail Falkovich	Public Service Enterprise Group LLC	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Clint Bogan		NPCC	5, 6
2.	Ken Brown		RFC	1
3.	Jeffrey Mueller		RFC	3
4.	Peter Dolan		RFC	6

2.	Group	Guy Zito	Northeast Power Coordinating Council	X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC	3
2.	Gregory Campoli	New York Independent System Operator	NPCC	2
3.	Kurtis Chong	Independent Electricity System Operator	NPCC	2
4.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1
5.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC	1
6.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10
7.	Mike Garton	Dominion Resources Services, Inc.	NPCC	5

Group/Individual	Commenter	Organization		Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
8.	Brian L. Gooder	Ontario Power Generation Incorporated	NPCC	5									
9.	Kathleen Goodman	ISO - New England	NPCC	2									
10.	Chantel Haswell	FPL Group, Inc.	NPCC	5									
11.	David Kiguel	Hydro One Networks Inc.	NPCC	1									
12.	Michael Lombardi	Northeast Utilities	NPCC	1									
13.	Randy MacDonald	New Brunswick Power Transmission	NPCC	1									
14.	Bruce Metruck	New York Power Authority	NPCC	6									
15.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10									
16.	Robert Pellegrini	The United Illuminating Company	NPCC	1									
17.	Si Truc Phan	Hydro-Quebec TransEnergie	NPCC	1									
18.	Saurabh Saksena	National Grid	NPCC	1									
19.	Michael Schiavone	National Grid	NPCC	1									
20.	Wayne Sipperly	New York Power Authority	NPCC	5									
21.	Donald Weaver	New Brunswick System Operator	NPCC	1									
22.	Ben Wu	Orange and Rockland Utilities	NPCC	1									
3.	Group	Bill Middaugh	Tri-State Generation and Transmission Association, Inc.	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Michael Houglum	Tri-State Generation and Transmission Association, Inc.	WECC	6, 1, 3, 5
2.	Rick Ashton	Tri-State Generation and Transmission Association, Inc.	WECC	6, 1, 3, 5
3.	Mark Graham	Tri-State Generation and Transmission Association, Inc.	WECC	6, 1, 3, 5
4.	Chris Pink	Tri-State Generation and Transmission Association, Inc.	WECC	6, 1, 3, 5
5.	Marlene Marquez	Tri-State Generation and Transmission Association, Inc.	WECC	6, 1, 3, 5
6.	Mark Conner	Tri-State Generation and Transmission Association, Inc.	WECC	6, 1, 3, 5
7.	Keith Carman	Tri-State Generation and Transmission Association, Inc.	WECC	6, 1, 3, 5
4.	Group	Kevin Koloini	American Municipal Power and Members			X	X	X					

Additional Member	Additional Organization	Region	Segment Selection

	Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Steve Harmath	City of Orrville	RFC 4										
5.	Group	Scott Berry	Small Entity Working Group (SEWG)	X			X	X					

	Additional Member	Additional Organization	Region	Segment Selection
1.	Kevin Koloini	American Municipal Power, Inc.	RFC	4
2.	Mark Ringhausen	Old Dominion Electric Cooperative	RFC	4
3.	Gary Wright	Allegheny Electric Cooperative	RFC	4
4.	Mike Tracy	Hoosier Energy REC, Inc	RFC	1
5.	Bob Thomas	Illinois Municipal Power Agency	RFC	4
6.	Tom Connell	Indiana Municipal Power Agency	RFC	4

6.	Group	Sammy Alcaraz	Imperial Irrigation District	X		X	X		X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Jose Landeros	IID BES Working Gp	WECC	
2.	Epifano Martinez	IID BES Working Gp	WECC	
3.	David Barajas	IID BES Working Gp	WECC	
4.	Chris Reyes	IID BES Working Gp	WECC	
5.	Fernando Gutierrez	IID BES Working Gp	WECC	
6.	Chris Riven	IID BES Working Gp	WECC	
7.	Joel Fugett	IID BES Working Gp	WECC	
8.	Al Minor	IID BES Working Gp	WECC	
9.	Juan Carlos Sandoval	IID BES Working Gp	WECC	

7.	Group	Frank Gaffney	Florida Municipal Power Agency	X		X	X	X	X	X			

	Additional Member	Additional Organization	Region	Segment Selection
1.	Timothy Beyrle	City of New Smyrna Beach	FRCC	4
2.	Greg Woessner	Kissimmee Utility Authority	FRCC	3
3.	Jim Howard	Lakeland Electric	FRCC	3
4.	Lynne Mila	City of Clewiston	FRCC	3
5.	Joe Stonecipher	Beaches Energy Services	FRCC	1

	Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
6.	Cairo Vanegas	Fort Pierce Utility Authority	FRCC 4										
7.	Randy Hahn	Ocala Electric Utility	FRCC 3										
8.	Group	Terry L. Blackwell	Santee Cooper	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	S. T. Abrams	Santee Cooper	SERC	1
2.	Rene Free	Santee Cooper	SERC	1
3.	Vicky Budreau	Santee Cooper	SERC	1
4.	Jim Peterson	Santee Cooper	SERC	1

9.	Group	David Taylor	NERC Staff Technical Review										
10.	Group	Mark Byrd	NERC Transmission Issues Subcommittee (TIS)	X	X							X	X

	Additional Member	Additional Organization	Region	Segment Selection
1.	See TIS Roster			

11.	Group	Louis Slade	Dominion	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Michael Gildea	Electric Market Policy	SERC	1, 3, 5, 6
2.	Connie Lowe	Electric Market Policy	RFC	5, 6
3.	Mike Garton	Electric Market Policy	MRO	5, 6
4.	Matt Woodzell	F&H	SERC	5
5.	Chip Humphrey	F&H	RFC	5
6.	Jeff Bailey	Nuclear	NPCC	5
7.	Mike Crowley	Electric Transmission	SERC	1, 3

12.	Group	Robert Rhodes	SPP Standards Review Group		X								

	Additional Member	Additional Organization	Region	Segment Selection

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
1. John Allen	City Utilities of Springfiled	SPP	1, 4									
2. Matt Bordelon	CLECO	SPP	1, 3, 5, 6									
3. Michelle Corley	CLECO	SPP	1, 3, 5, 6									
4. Louis Guidry	CLECO	SPP	1, 3, 5, 6									
5. Jonathan Hayes	SPP	SPP	2									
6. Tom Hestermann	Sunflower Electric	SPP	1, 5									
7. Valerie Pinamonti	AEP	SPP	1, 3, 5									
8. Mike Richardson	AEP	SPP	1, 3, 5									
13. Group	Carol Gerou	MRO's NERC Standards Review Forum										X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Mahmood Safi	Omaha Public Utility District	MRO	1, 3, 5, 6
2.	Chuck Lawrence	American Transmission Company	MRO	1
3.	Tom Webb	Wisconsin Public Service Corporation	MRO	3, 4, 5, 6
4.	Jodi Jenson	Western Area Power Administration	MRO	1, 6
5.	Ken Goldsmith	Alliant Energy	MRO	4
6.	Alice Ireland	Xcel Energy	MRO	1, 3, 5, 6
7.	Dave Rudolph	Basin Electric Power Cooperative	MRO	1, 3, 5, 6
8.	Eric Ruskamp	Lincoln Electric System	MRO	1, 3, 5, 6
9.	Joe DePoorter	Madison Gas & Electric	MRO	3, 4, 5, 6
10.	Scott Nickels	Rochester Public Utilties	MRO	4
11.	Terry Harbour	MidAmerican Energy Company	MRO	1, 3, 5, 6
12.	Marie Knox	Midwest ISO Inc.	MRO	2
13.	Lee Kittelson	Otter Tail Power Company	MRO	1, 3, 4, 5
14.	Scott Bos	Muscatine Power and Water	MRO	1, 3, 5, 6
15.	Tony Eddleman	Nebraska Public Power District	MRO	1, 3, 5
16.	Mike Brytowski	Great River Energy	MRO	1, 3, 5, 6
17.	Richard Burt	Minnkota Power Cooperative, Inc.	MRO	1, 3, 5, 6

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
14. Group	Charles W. Long	SERC Planning Standards Subcommittee	X									X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Pat Huntley	SERC Reliability Corporation	SERC	10
2.	John Sullivan	Ameren Services Co.	SERC	1
3.	Charles Long	Entergy Services, Inc.	SERC	1
4.	Philip Kleckley	South Carolina Electric & Gas Co	SERC	1
5.	Bob Jones	Southern Company Services	SERC	1
6.	Darrin Church	Tennessee Valley Authority	SERC	1

15. Group	Don Mazuchowski	Michigan Public Service Commission(MPSC)									X	

	Additional Member	Additional Organization	Region	Segment Selection
1.	Angie Butcher	MPSC	RFC	9

16. Group	Jason Marshall	ACES Power Participating Members	X		X	X	X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Chris Lang	Golden Spread Electric Cooperative	ERCOT	3, 4, 6
2.	Chris Bradley	Big Rivers Electric Cooperative	SERC	1, 3, 5, 6
3.	James Jones	Southwest Transmission Company	WECC	1
4.	Liz Hayden	Arizona Electric Power Cooperative	WECC	3, 5, 6

17. Group	Jim Case	SERC OC Standards Review Group	X		X							

	Additional Member	Additional Organization	Region	Segment Selection
1.	Gerald Beckerle	Ameren		1, 3
2.	Scott Brame	Ameren		1, 3
3.	Mike Hirst	Cogentrix		5, 6
4.	Dan Roethemeyer	Dynegy		5, 6
5.	Tim Hattaway	PowerSouth		1, 3, 5, 9
6.	Randy Castello	Alabama Power		1, 3, 5
7.	Danny Dees	MEAG		1, 3, 5, 9

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
8. Robert Thomasson	BREC	1, 3, 5, 9										
9. Bob Dalrymple	TVA	1, 3, 5, 9										
10. Andy Burch	EEI	1, 5										
11. David Trego	Fayetteville PWC	1, 3, 4, 9										
12. Reggie Wallace	Fayetteville PWC	1, 3, 4, 9										
13. Patrick Woods	EKPC	1, 3, 5, 9										
14. Darrin Adams	EKPC	1, 3, 5, 9										
15. George Carruba	EKPC	1, 3, 5, 9										
16. Alvis Lanton	SIPC	1, 3, 5										
17. Brad Young	LGE/KU	1, 3, 5										
18. Melinda Montgomery	Entergy	1, 3										
19. Steve McElhaney	SMEPA	1, 3, 5, 9										
20. Marc Butts	Southern	1, 3, 5										
21. John Troha	SERC	10										
18. Group	David Curtis	Hydro One Networks Inc	X		X						X	

	Additional Member	Additional Organization	Region	Segment Selection
1.	Bing Young	Transmission Development	NPCC	1
2.	David Kiguel	Hydro One Distribution	NPCC	3
3.	Oded hubert	Regulatory Affairs	NPCC	9

19. Group	Barry Lawson	National Rural Electric Cooperative Association (NRECA)	X		X	X	X					
1. Patti Metro												
20. Group	Barbara Hindin	Edison Electric Institute	X									
1. See EEI member list at www.eei.org												
21. Individual	Richard Malloy	Idaho Falls Power										

	Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
22.	Individual	Jim Lauth	City of Santa Clara, California, dba Silicon Valley Power			X						X	
23.	Individual	Randall Ozaki	Overton Power District No. 5	X		X							
24.	Individual	Richard Dearman	Tennessee Valley Authority	X		X		X	X				
25.	Individual	Janet Smith	Arizona Public Service Company	X		X		X	X				
26.	Individual	Brent Ingebrigtson	LG&E and KU Energy LLC	X		X		X	X				
27.	Individual	John Free	Alabama Public Service Commission									X	
28.	Individual	Michelle MIzumori	Western Electricity Coordinating Council										X
29.	Individual	William Drummond	Western Montana Electric Generating and Transmission Cooperative	X		X	X						
30.	Individual	Jim Uhrin	ReliabilityFirst										X
31.	Individual	Don Brookhyser	Cogeneration Association of California and Energy Producers & Users Coalition					X		X			
32.	Individual	Eddy Reece	Rayburn Country Electric Cooperative, Inc.	X		X							
33.	Individual	Roger Clayton	New York State Reliability Council										X
34.	Individual	Cynthia S. Bogorad	Transmission Access Policy Study Group	X		X	X	X					
35.	Individual	Randy D. Crissman	New York Power Authority	X		X		X	X				

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
36. Individual	Antonio Grayson	Southern Company	X		X						X	
37. Individual	Dennis Hogan	Luminant Energy					X					
38. Individual	Darren D. GIll	Pennsylvania Public Utility Commission									X	
39. Individual	Katie Coleman	Texas Industrial Energy Consumers (TIEC)							X			
40. Individual	John P. Hughes	Electricity Consumers Resource Council (ELCON)			X		X	X	X			
41. Individual	Brian Conroy	Central Maine Power Company	X									
42. Individual	John Allen	New York State Electric & Gas and Rochester Gas & Electric	X									
43. Individual	Brandy A. Dunn	Western Area Power Administration	X									
44. Individual	Robin Lunt	National Association of Regulatory Utility Commissioners									X	
45. Individual	Scott Tomashefsky	Northern California Power Agency				X	X					
46. Individual	Sandra Shaffer	PacifiCorp	X		X		X	X				
47. Individual	Kevin Conway	Intellibind								X		
48. Individual	Si Truc PHAN	Hydro-Quebec TransEnergie	X									
49. Individual	Martin Bauer	US Bureau of Reclamation					X					

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
50. Individual	Jerome Murray	Oregon Public Utility Commission Staff									X	
51. Individual	Eric Lee Christensen	Public Utility District No. 1 of Snohomish County, Washington	X		X	X	X					
52. Individual	Nicholas Winsemius	Grand Haven Board of Light and Power			X							
53. Individual	Josh Dellinger	Glacier Electric Cooperative										
54. Individual	Russ Schneider	FHEC			X							
55. Individual	Kim Moulton	Vermont Transco	X									
56. Individual	Richard McLeon	South Texas Electric Cooperative, Inc.	X									
57. Individual	Angela Gaines	Portland General Electric Company	X		X		X	X				
58. Individual	Richard McLeon	South Texas Electric Cooperative, Inc.	X									
59. Individual	Michael Albosta	Sweeny Cogeneration LP					X					
60. Individual	Michael Jones	National Grid	X		X							
61. Individual	Bud Tracy	Blachly Lane Electric Cooperative			X							
62. Individual	Paul Titus	Northern Wasco County PUD	X		X							
63. Individual	Bill Dearing	PUD No. 2 of Grant County, Washington	X		X	X	X					
64. Individual	Dave Markham	Central Electric Cooperative			X							
65. Individual	Dave Hagen	Clearwater Power Company			X							

	Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
66.	Individual	Roman Gillen	Consumers Power Inc.	X		X							
67.	Individual	Roger Meader	Coos-Curry Electric Cooperative			X							
68.	Individual	Dave Sabala	Douglas Electric Cooperative			X							
69.	Individual	Bryan Case	Fall River Electric Cooperative			X							
70.	Individual	Rick Crinklaw	Lane Electric Cooperative			X							
71.	Individual	Ray Ellis	Lincoln Electric Cooperative			X							
72.	Individual	Richard Reynolds	Lost River Electric Cooperative			X							
73.	Individual	Annie Terracciano	Northern Lights Inc.			X							
74.	Individual	Doug Adams	Okanogan Electric Cooperative			X							
75.	Individual	Rick Paschall	PNGC Power			X	X				X		
76.	Individual	Heber Carpenter	Raft River Rural Electric Cooperative			X							
77.	Individual	Ken Dizes	Salmon River Electric Cooperative	X		X							
78.	Individual	Steve Eldrige	Umatilla Electric Cooperative	X		X							
79.	Individual	Marc Farmer	West Oregon Electric Cooperative			X							
80.	Individual	Kerry Robinson	Wells Rural Electric Company			X							
81.	Individual	Hertzel Shamash	Dayton Power and Light Company	X		X		X					

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
82. Individual	David Proebstel	Clallam County PUD No.1			X							
83. Individual	Matt Morais	Electric Reliability Council of Texas, Inc.		X								
84. Individual	Martin Kaufman	ExxonMobil Research and Engineering	X				X					
85. Individual	Laura Lee	Duke Energy	X		X		X	X				
86. Individual	Curtis Klashinsky	FortisBC										
87. Individual	Mark Thompson	Alberta Electric System Operator		X								
88. Individual	RoLynda Shumpert	South Carolina Electric and Gas	X		X		X	X				
89. Individual	Reggie Wallace	Fayetteville Public Works Commission	X		X							
90. Individual	Gary Kruempel	MidAmerican Energy Company	X		X		X	X				
91. Individual	Dennis Minton	Florida Keys Electric Cooperative	X									
92. Individual	Thad Ness	American Electric Power	X		X		X	X				
93. Individual	Rick Drury	East Kentucky Power Cooperative, Inc.	X		X		X					
94. Individual	Andrew Z. Pusztai	American Transmission Company, LLC	X									
95. Individual	Linda Jacobson	Farmington Electric Utility System			X							
96. Individual	Rich Salgo	Sierra Pacific Power Co d/b/a NV Energy	X		X		X	X				
97. Individual	Jennifer Eckels	Colorado Springs Utilities	X		X		X	X				

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
98. Individual	Jianmei Chai	Consumers Energy Company			X	X	X					
99. Individual	Chad Bowman	Chelan PUD - CHPD	X		X		X	X				
100. Individual	Michelle R D'Antuono	Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)			X		X		X	X		
101. Individual	Kenneth A. Goldsmith	Alliant Energy				X						
102. Individual	Deborah J Chance	Chevron Global Power, a division of Chevron U.S.A. Inc.					X		X	X		
103. Individual	Scott Bos	Muscatine Power and Water	X		X		X	X				
104. Individual	Bill Keagle	BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	X									
105. Individual	John Bee	Exelon	X		X		X					
106. Individual	David C. Kahly	Kootenai Electric Cooperative			X	X						
107. Individual	Tracy Richardson	Springfield Utility Board			X							
108. Individual	Joe Tarantino	Sacramento Municipal Utility District (SMUD)	X		X	X	X	X				
109. Individual	Rick Hansen	City of St. George			X		X				X	
110. Individual	John Brockhan	CenterPoint Energy	X									

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
111. Individual	Sunitha Kothapalli	Puget Sound Energy	X		X		X					
112. Individual	Linda Esparza	Public Utility District No. 1 of Franklin County			X							
113. Individual	Patrick Farrell	Southern California Edison Company	X		X		X	X				
114. Individual	Thomas Weller	Midstate Electric Cooperative			X							
115. Individual	Jason Snodgrass	GTC	X									
116. Individual	Diane Barney	New York State Dept of Public Service									X	
117. Individual	Bob Thomas	Illinois Municipal Electric Agency				X						
118. Individual	Kim Wissman	Public Utilities Commission of Ohio									X	
119. Individual	Jeff Nelson	Springfield Utility Board			X							
120. Individual	David Angell	Idaho Power	X				X					
121. Individual	Robert Ganley	Long Island Power Authority	X									
122. Individual	Mike Hirst	Cogentrix Energy, LLC					X					
123. Individual	Jack Stamper	Clark Public Utilities	X									
124. Individual	John A. Gray	The Dow Chemical Company					X		X			
125. Individual	David Thorne	Pepco Holdings Inc	X		X							
126. Individual	Gary Ferris	Vigilante Electric Cooperative			X							

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
127. Individual	Steve Alexanderson	Central Lincoln			X	X					X	
128. Individual	Neil Phinney	Georgia System Operations			X	X						
129. Individual	Bill Harm	PJM		X								
130. Individual	Heather Hunt	New England States Committee on Electricity									X	
131. Individual	Darryl Curtis	Oncor Electric Delivery Company LLC	X									
132. Individual	Charles Yeung	Southwest Power Pool		X								
133. Individual	Geoff Carr	Northwest Requirements Utilities										
134. Individual	Jonathan Appelbaum	United Illuminating	X									
135. Individual	John Cummings	PPL Energy Plus and PPL Generation					X	X				
136. Individual	Joe Petaski	Manitoba Hydro	X		X		X	X				
137. Individual	Kathleen Goodman	ISO New England, Inc.		X								
138. Individual	Manny Robledo	City of Anaheim			X							
139. Individual	Chris de Graffenried	Consolidated Edison Co. of NY, Inc.	X		X		X	X				
140. Individual	Scott Miller	MEAG Power	X		X		X					
141. Individual	Alice Ireland	Xcel Energy	X		X		X	X				

	Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
142.	Individual	Michael Falvo	Independent Electricity System Operator		X								
143.	Individual	Randy MacDonald	NB Power Transmission	X									
144.	Individual	Glen Sutton	ATCO Electric	X									
145.	Individual	David Burke	Orange and Rockland Utilities, Inc.	X		X							
146.	Individual	Shane McMinn	Golden Spread Electric Cooperative, Inc.			X	X	X					
147.	Individual	Rick Spyker	AltaLink	X									
148.	Individual	Benjamin A Friederichs	Big Bend Electric Cooperative, Inc.			X							
149.	Individual	J. McFeely, PE	Modern Electric Water Company										
150.	Individual	Gary Carlson	Michgan Public Power Agency					X					
151.	Individual	Peter Mackin	Utility System Efficiencies, Inc.										
152.	Individual	Keith Morisette	Tacoma Power	X		X	X	X	X				
153.	Individual	Russell A. Noble	Cowlitz County PUD			X	X	X					
154.	Individual	Mihai Cosman	California Public Utilities Commission									X	

1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: Based on stakeholder comments, the SDT has made additional clarifying revisions to the draft BES definition. The BES Draft Definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. In response to comments, the SDT added an additional inclusion to clarify the inclusion of Reactive Resources and an additional exclusion to clarify that Reactive Resources that are owned by retail customers for their own use are not to be included. Finally, the SDT elected to retain the 100 kV bright-line criteria. This is the bright-line voltage level that is included in the existing approved definition of the Bulk Electric System in the NERC Glossary of Terms. While a number of stakeholders suggested alternate voltage levels, no technical justification was provided that would lead the SDT to make a change. One goal of this project is to add clarity to the definition without significantly changing the population of BES Elements.

Changes made to the definition as a result of comments on this question are:

Bulk Electric System (BES): Unless modified by the lists shown below, ~~A~~a~~ll~~ Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources~~ as described below, and Reactive Power resources~~ connected at 100 kV or higher~~ unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.

I1 - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.

I5 –Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): **A** ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system.

E4 – Reactive Power devices owned and operated by the retail customer solely for its own use.

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

Organization	Yes or No	Question 1 Comment
Public Service Enterprise Group LLC	No	There is still room for misinterpretation of the BES boundaries. The BES definition has ramifications affecting many standards. NERC should provide examples of what specifically is in and what is out of BES boundaries.

Organization	Yes or No	Question 1 Comment
		Example one line diagrams showing "Generation Resources" included or excluded and types of radial feeds exempted should be shown. Identify what element is in BES / what is out. Suggest showing typical interconnection facilities. Addressing typical interconnection facility configurations will assist in developing a clear and concise definition that provides a precise line of demarcation between elements of the BES.
Response: Based on the stakeholder comments, the SDT has made additional revisions to the three parts of the BES Definition (Core Definition, Inclusion List, and Exclusion List) in order to improve clarity.		
Northeast Power Coordinating Council	No	The core definition should be revised to read: Bulk Electric System (BES): All Transmission Elements operated at 100 KV or higher, unless such designation is modified by the list shown below. The resulting modified BES shall comprise all Elements deemed necessary for operating an interconnected electric energy transmission network, but shall exclude any Elements used in the local distribution of electric energy. The inclusion and exclusion requirements are restrictive. For example, radial characteristics should not be limited by the amount of installed generation or single transmission source and/or require an interrupting device. Instead, one or more transmission sources could feed the radial load to provide redundancy as long as there is adequate protection and isolation for improved customer-supply continuity and reliability. This would be considered radial as long as the loss of any transmission source would not affect, and is not necessary for the operation of the interconnected transmission network. This retains the incentive to build transmission. The revised definition will have a direct impact on entities across North America and may conflict with regulatory requirements, Codes, and Licenses. FERC in its Order 743 and 743A has directed NERC to address these concerns. Include provisions in both the NERC exception criteria and exception process for federal, state and provincial jurisdictions. These provisions should provide clear guidance so that, if and when there are deviations from the exception criteria, they are properly identified with technical and regulatory justifications ensuring there is no adverse impact on the interconnected transmission network. This burden of proof should be left to the entity seeking exception because it may be difficult to define the exception criteria. Further, if such an explicit criteria could be defined, it could become another bright-line BES.
Hydro-Quebec TransEnergie	No	The bright line revised definition could expand significantly what is considered to be BES in the case of HQT, with no discernible impact on the reliable operation of the interconnected system, because of the nature of the Quebec interconnection. Furthermore, it should be stated that there appears to be a conflict between the proposed definition and the regulatory framework applicable in Quebec or at least there are some important differences between both. The non-FERC juridiction was acknowledged by FERC Order 743 in paragraph 95. As an example, the

Organization	Yes or No	Question 1 Comment
		Quebec regulatory framework considers that there are several levels of application for standards, not only one. A single BES definition cannot apply to all standards.The definition must include more latitude for non-FERC jurisdictions, as long as the reliability objective is achieved.
Hydro One Networks Inc	Yes	We agree with the concept of a bright-line definition and commend the SDT for developing a concept of explicit inclusions and exclusions as part of the definition. This will reduce the number of exception applications for some of the BES elements. However, the inclusion and exclusion requirements are extremely restrictive. For example, radial characteristics should not be limited by the amount of installed generation or single transmission source and/or require an interrupting device. Instead we believe that one or more transmission sources could feed the radial load to provide redundancy as long as there is adequate protection and isolation for improved customer-supply continuity and reliability. This should be considered radial as long as the loss of any transmission source does not affect, and is not necessary for, the operation of the interconnected transmission network. Further, it is imperative to understand that the NERC's revised definition will have a direct impact on entities across North America and will conflict with regulatory requirements, Codes, and Licenses. FERC in its Order 743 and 743A has directed NERC to address these concerns.We suggest the SDT and RoP teams should: o Carefully craft the exception criteria and procedure to be flexible and technically sound, to allow entities to adequately present their case to the ERO for inclusions or exclusions outside of the definition. This burden of proof should be left to the entity seeking exception because it may be difficult if not impossible to define the exception criteria. If such a criteria could be defined, it will in fact become another bright-line BES. o Include provisions in both the NERC exception criteria and exception procedure for federal, state and provincial jurisdictions. These provisions should provide clear guidance so that, if and when there are deviations from the exception criteria, they are properly identified with technical and regulatory justifications ensuring there is no adverse impact on the interconnected transmission network.
Response: Based on the stakeholder comments, the SDT has made additional revisions to the three parts of the BES Definition (Core Definition, Inclusion List, and Exclusion List) in order to improve clarity. See the responses to comments as well as a discussion of the latest revisions regarding the Radial Exclusion in Question 7 and the responses to comments regarding the Regulatory Requirements in Question 12 below.		
Tri-State Generation and Transmission Association, Inc.	No	The Northeast Power Coordinating Council stated that "Step-down transformers with the low-side terminals serving non-BES facilities, which are serving a distribution function, should not be part of the definition of BES." The drafting team stated that it agrees with the comment, but the implementation uses the term local distribution network, which is different than a step-down transformer. Transformers are addressed in the

Organization	Yes or No	Question 1 Comment
		answer to the NPCC comment 2, but uses the ambiguous “single Transmission source” phrase as a requirement to determine BES status.Other specific comments are below.
Response: The SDT has made revisions to the draft definition to clarify that only transformers with primary and secondary terminals operated at 100 kV or higher unless excluded under Exclusions E1 or E3 would be included in the BES under Inclusion I1. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
NERC Staff Technical Review	No	The core definition lacks a clear bright-line designation for generating resources. For such resources, the core definition only references “Real Power resources as described below” which in and of itself is not a bright-line designation. A bright-line designation for generating resources needs to be included in the core definition. A bright-line can be established in the core definition by including generating units based on the MVA ratings as found in current Inclusions I2, I3, and I5. Additional generating unit specifications could be included in the core definition or as Inclusions such as the existing Inclusion I4 for black start generating units. >>>>>>>>>>> The core definition also lacks clarity with respect to the facilities included under “Reactive Power resources” and may unintentionally omit Reactive Power resources necessary for reliable operation of the BES. The definition as proposed excludes devices such as shunt reactors connected to the tertiary terminals of a BES transformer and synchronous condensers connected through a transformer, and is unclear whether a static var compensator (SVC) with thyristor switched capacitors and thyristor switched or controlled reactors operated below 100 kV, but connected to the BES through a transformer (similar to a generator connected to the BES through a generator step-up transformer) is included in the BES definition. The qualifications on Reactive Power resources recommended below will include the necessary transmission resources noted above, without unintentionally including distribution capacitors connected on the low voltage side of a distribution transformer. >>>>>>>>>>> These concerns can be addressed by revising the core definition as follows:>>>>>>>>>>> “Bulk Electric System (BES): All Transmission Elements operated at 100 kV or higher;Real Power resources including, * Individual Generating Units greater than 20 MVA (gross nameplate rating), * Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross nameplate rating) connected through a common point of interconnection, * Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection, and * Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator’s restoration plan regardless of voltage; andReactive Power devices (capacitive or inductive, static

Organization	Yes or No	Question 1 Comment
		or actively controlled) greater than 20 Mvar that are directly connected at 100 kV or higher, or connected through a transformer at 100 kV or higher at the site of transformation;unless such designations are modified by the list of Inclusions and Exclusions shown below." >>>>>>>>>>> (Note that the rationale for excluding the 100 kV interconnection threshold on the first three bullets is provided in our responses to Questions 3, 4, and 6.) >>>>>>>>>>> In conjunction with the alternative language for the core definition proposed above, NERC staff proposes the following definition of Generating Unit be added to the NERC Glossary of Terms used in Reliability Standards: >>>>>>>>>>> Generating Unit - A device, whether spinning or static and whether connected synchronously, asynchronously, or electronically coupled, that produces electrical energy from another source of energy, either directly from the other energy source (such as a combustion turbine from natural gas or light distillate oil, a wind turbine from wind, or a solar array from the sun) or through a storage medium (such as pumped storage hydro, a flywheel, compressed air, or battery).
NERC Transmission Issues Subcommittee (TIS)	No	Although the wording can work as it is, the TIS believes clearer wording would be: "All Transmission Elements operated at 100 kV or higher, Real Power and Reactive Power resources as described below, connected at 100 kV or higher unless such designation is modified by the list shown below."
Response: The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. In response to comments, the SDT added an additional item to clarify the inclusion of Reactive Resources and an additional exclusion to clarify that Reactive Resources that are owned by retail customers for their own use are not to be included. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy. **I5** –Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1. **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.		
Dominion	No	Dominion believes the core BES definition should include any non-radial Element or Facility operated at 100 Kv or higher and should exclude any radial Element or Facility (regardless of operating voltage) as well as non-radial Element or Facility operated below 100 kV. The core definition should also include defined criteria that are applied to an Element or Facility to determine

Organization	Yes or No	Question 1 Comment
		whether or not it meets the intent of the Section 215 of Federal Power which defines the bulk power system as (1) facilities and control systems necessary for operating an interconnected electric energy transmission network; and (2) electric energy from generation facilities needed to maintain transmission system reliability. (3) However, Section 215 excludes facilities used in the local distribution of electric energy From the definition of the bulk power system . An Element or Facility should be included where the Element or Facility is necessary for operating an interconnected electric energy transmission network or is needed to maintain transmission system reliability. Likewise an Element or Facility should be excluded where the Element or Facility is not necessary for operating an interconnected electric energy transmission network or is needed to maintain transmission system reliability. Dominion agrees that the BES definition should exclude local distribution facilities under state jurisdiction. In specific instances (including UFLS programs and transmission protection systems that are implemented on distribution elements or radial transmission) local distribution facilities can be included in approved NERC reliability standards following under explicit standards dedicated to their explicit mission without their automatic inclusion in a definition of BES that could infringe on state jurisdiction. Dominion is also concerned at how complicated these lists of inclusions and exclusions has become! Dominion had implemented the 100 kV threshold, as displayed in prior drafts of this bright line test (without all these distractions provided in this BES definition version). With the complexity of inclusion and exclusion criteria now provided in this draft, Dominion is not sure it can replicate the list of facilities that are now qualified for inclusion in the BES as seen through the eyes of different auditors and this will expose Dominion to undesirable disputes down the road on what should have been included or excluded.
National Grid	No	The core definition should be revised to read: Bulk Electric System (BES): All Transmission Elements operated at 100 KV or higher, unless such designation is modified by the list shown below. The resulting modified BES shall comprise all Elements deemed necessary for operating an interconnected electric energy transmission network, but shall exclude any Elements used in the local distribution of electric energy.

Response: The SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists.

See the responses to comments regarding Local Distribution Facilities in Question 11 below.

Bulk Electric System (BES): Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list~~

Organization	Yes or No	Question 1 Comment
~~shown below~~. This does not include facilities used in the local distribution of electric energy. **I5** –Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1. **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.		
SPP Standards Review Group	No	A reference needs to be made to the ROP changes which also provide a mechanism whereby Elements may be excluded/included in the BES. Without that reference the proposed definition does not completely include all means for exceptions/inclusions. We would suggest the definition be expanded to say '...modified by the list shown below or as provided by Appendix 5C of the NERC Rules of Procedure.'
ISO New England, Inc.	Yes	This definition does not indicate that there may be other "inclusions" and "exclusions" for which an entity has to seek ERO/RRO approval. Therefore our recommendation is that this definition be modified to resolve this concern.This questionnaire contains information as part of the definition description that is different from the draft Implementation Plan and definition of Bulk Electric System document, specifically the entirety of E4 is included in the questionnaire but in neither of the other two documents; this may lead to confusion by commenters.
Response: In the first posting, a reference to the Rules of Procedure exception process was inadvertently omitted from the posting. It has been added back in to this posting. Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.		
Michigan Public Service Commission(MPSC)	No	MPSC Staff Comments: The BES definition proposed by the SDT should not use the term "transmission", if that term is defined as facilities that are at 100 kV or above. Not all facilities at 100 kV or above are properly considered transmission facilities. Use of "transmission" is causing unnecessary uncertainty and much debate among NERC stakeholders in the standards development and outreach processes over potential effects on jurisdiction, ownership, and possible new NERC registration requirements. This is especially true in states such as Michigan where Michigan Public Service Commission-regulated utilities sold their transmission facilities to independent transmission companies. Using FERC's Order 888 seven-factor technical-functional test as the basis for technical studies presented and evaluated in individual state dockets, the Michigan Public Service Commission approved, and subsequently FERC deferred to, those transmission and distribution classifications. Using "transmission" in the BES definition could cause unintended consequences. Entities already registered with NERC as Distribution Providers, Load Serving Entities, or Generation Owners, etc. which own facilities previously classified as distribution by state regulatory agencies, may also now be required to register with NERC as Transmission Planners, Owners, or Operators. A system element defined as BES should not determine jurisdiction, ownership, or require duplicative or additional

Organization	Yes or No	Question 1 Comment
		NERC registration. Much compliance with reliability standards is already being done by RTOs and entities already registered with NERC. Unnecessary and costly duplication of standards work should be avoided. We support that "All Transmission Elements ..." be replaced with "All network System Elements ..." in the BES definition.
Consumers Energy Company	No	The generic inclusion within the definition of BES, of the NERC-defined term, "Transmission", has the potential to cause confusion and controversy. Small entities that own facilities that have been approved by FERC as being classified as "distribution" according to the FERC Order 888 seven-factor test, could be viewed as owning "Transmission." Therefore, Regional Entities might require these small entities to register as Transmission Owners, Transmission Operators, and/or Transmission Planners. However, these facilities may not form a contiguous system, as expressed in the defined term, "Transmission" and being "An interconnected group of lines and associated equipment". Alternatively, such facilities, because they do not form such a contiguous system (and thus are not, and should not be, classified as Transmission) may inappropriately be excluded from the BES. Therefore, even though "Transmission Facilities" represent a subset of the BES, we urge that NERC avoid the use of the term, "Transmission" within the definition of BES. NERC should more explicitly describe, in a functional manner independent of the term, "Transmission", what is intended to be included within the core definition. For NERC to fail to do so is to invite challenges to the final definition as well as establish inappropriate reliability gaps. We agree with GO/TO Interface Project 2010-07 method of resolving reliability gaps by expanding requirements to the Distribution Provider function as necessary.We propose that "All Transmission Elements ..." be replaced with "All network System Elements ..."
Response: The SDT elected to retain the use of the word "Transmission" as it is an approved term in the NERC Glossary of Terms. As defined, Transmission is "An interconnected group of lines and associated equipment for the movement or transfer of electric energy between points of supply and points at which it is transformed for delivery to customers or is delivered to other electric systems." The SDT considers this an appropriate use of the term. No change made.		
Idaho Falls Power	No	We believe that inclusions or exclusions tied to brightline registration criteria (such as the 20MVA single generation source or 75 MVA facility) does not fulfill the effort the NERC BES definition project was tasked to undertake. The current draft's language will draw in many small municipal and other like entities with small generation assets, which have no material impact upon the BES. Further, should these generation assets not be excluded, this draft implies that all assets downstream to the point of interconnection are BES as well regardless of point of connection. We believe it was the original intent of this definition project to remove such immaterial assets and the undue burden placed upon such entities and subsequently their rate payers, who have no impact to the BES.

Organization	Yes or No	Question 1 Comment
Southern Company	No	Inclusion of individual units less than 75MVA was established when these smaller units were significant to the reliability of the BES and is outdated.
Intellibind	No	I agree in principle with the changes; however the definition and direct effect on certain small entities has not been improved. Primarily there are many entities that will be included that are marginal at best. Such entities will include intermittent generation such as wind, which may, or may not fit into the designation of aggregation of up to 75 MVA. It is becoming a practice to size a farm, or phase of a farm, to under 75MVA to get around the rules. A site is not defined and could be defined very narrowly. I do not agree with the 20MVA threshold for single generators when the generators net output cannot reach the 20MVA output. Trash burning facilities have heavy station service loads and by nameplate are included when in reality they operate below the arbitrary cut off. FERC has asked for technically justified standards, and the proposed BES definition still applies an arbitrary threshold not supported by technical argument. This issue is further aggravated by location of these resources. Many of these resources are remotely located specifically so that they have no, or minimize impact on the BES. Many times they are on long lines that are over 100KV simply because of efficiency in electrical transmission.
Fayetteville Public Works Commission	No	The changes made by the SDT with respect to Real Power resources in Inclusion I2 do not ensure a consistent determination by independent entities of whether a generator should be included within the BES. The ambiguity in Inclusion I2 has implications on other Inclusions and Exclusions. See the comments on Question 3 for additional detail.
Response: See the responses to comments as well as a discussion of the latest revisions regarding Generation Inclusions in Questions 3 and 4 below.		
Overton Power District No. 5	No	The term does not include facilities used in the local distribution of electric energy.
Response: The SDT has made additional clarifying revisions to the draft BES definition to address your concern. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Western Montana Electric Generating and Transmission Cooperative	No	As a general matter, Western Montana Electric Generating and Transmission Cooperative (WMG&T) supports the approach the Standards Development Team (“SDT”) has taken to defining the Bulk Electric System (“BES”). The changes made in the revised core definition are helpful and represent significant

Organization	Yes or No	Question 1 Comment
Northern Wasco County PUD Chelan PUD – CHPD Kootenai Electric Cooperative Public Utility District No. 1 of Franklin County Midstate Electric Cooperative Big Bend Electric Cooperative, Inc Northwest Requirements Utilities Cowlitz County PUD		progress toward an acceptable definition. With an effective and efficient exclusion process, the draft will better define the BES as a whole.We urge the SDT to bear in mind the restrictions contained in Section 215 of the Federal Power Act ("FPA") The "bulk-power system" (As per FERC, we treat the statutory term "bulk-power system" as equivalent to the term ordinarily used in the industry, "Bulk Electric System") definition imposes a clear limit on the reach of the mandatory reliability regime. The BES is made up of only those "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" and "electric energy from generation facilities needed to maintain transmission system reliability." Congress reinforced that limit in Section 215(i), where it emphasized that the FPA authorizes the imposition of reliability standards "for only the bulk-power system." WMG&T is concerned that the SDT's proposed definition is overly-broad, and that it will sweep in many Elements that have little or no material impact on the reliable operation of the interconnected bulk transmission grid. For example, the definition uses the arbitrary 20 MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators. Accordingly, for the BES definition to conform to the requirements of the statute, the SDT must adopt an effective mechanism to exempt facilities like these that are improperly swept in by the SDT's brightline approach to inclusions and exclusions. For this reason, the Exception process to accompany the SDT's definition is of critical concern. If the SDT incorporates this statutory language as its core definition, it will have addressed FERC's primary concern with a minimum of disruption to the current NERC system of definitions. The definition could then be further elaborated to show specific points of demarcation for each inclusion and exclusion similar to that Proposal 6 from the WECC Bulk Electric System Definition Task Force ("BESDTF") team to further delineate BES and non-BES facilities.
Response: See the responses to comments regarding the Regulatory Requirements in Question 12 below. See the responses to comments as well as a discussion of the latest revisions regarding Generation Inclusions in Questions 3 and 4 below. The SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
ReliabilityFirst	No	We feel the intent of the FERC Order was to simplify and not complicate the definition and the inclusion/exclusion process. This definition is now even more complex. we also feel that as a result of several defined terms such as the LDN teh proposed definition will in most

Organization	Yes or No	Question 1 Comment
		cases exclude portions of networks in locations such as Washington DC, New York and other Metro Areas, many Munis and citiies that are currently registered. If the intent is to remove entities from the registry this will in most likely do it.
Response: The SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. See the responses to comments as well as a discussion of the latest revisions regarding local networks in Question 9 below. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
New York State Reliability Council	No	HVDC and VFT technologies are not addressed specifically. Consideration should be given to expanding the core BES definition to clarify that it includes all AC and DC system Element(s).
Response: The SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. The SDT discussed your comment and feels that HVDC and VFT technologies are already included in the draft core definition since they are Transmission Elements. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Grand Haven Board of Light and Power	No	The Grand Haven Board of Light and Power (GHBLP) does not agree that the core definition for the BES use a “bright line” definition of 100kV and above. Currently, we have a 138kV/69kV transformer that connects to the BES and serves a radial, load serving system. This transformer is presently protected by a “ground switch” relay scheme. We have a project in process that is replacing this “ground switch” relay scheme with a circuit switcher. The circuit switcher, unlike the ground switch, would not affect the BES if it were to operate. By this “bright line” definition this single asset would be defined as a part of the BES. The cost that our organization would incur from being forced to register as a Transmission Owner and Transmission Operator (TO/TOP) would be extreme, and would significantly impact our budget and our customer’s rates. We should

Organization	Yes or No	Question 1 Comment
		not have to depend on an "exclusion" process to remove this asset from being defines as a part of the BES, and this should be addressed in the core definition.
Response: The SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. The SDT has made revisions to the draft definition to further clarify that radial systems at 100 kV or higher serving only Load would be excluded under Exclusion E1. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Glacier Electric Cooperative	No	I still feel that a bright-line of 200 kV would be more appropriate, with language stating that certian significant elements operated below 200 kV would be included. However, I believe the exlusion process is definitely a step in the right direction.
Response: The SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. The SDT elected to retain the 100 kV bright line criteria. This is the bright-line voltage level that is included in the existing approved definition of the Bulk Electric System in the NERC Glossary of Terms. While a number of stakeholders suggested alternate voltage levels, no technical justification was provided that would lead the SDT to make a change. One goal of this project is to add clarity to the definition without significantly changing the population of BES elements. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Company Consumers Power Inc.	No	First, thank you for the opportunity to comment on the draft Proposed Continent-wide Definition of the Bulk Electric System (BES). We appreciate the work that the Standards Development Team (SDT) has put into a new definition so far and believe the draft is a step in the right direction. We also understand the relatively short timeframe that NERC is working under in order to create a new BES definition to submit to FERC for approval before the imposed deadline. That said, we believe that the draft definition needs significant revision before NERC files it with FERC for approval. In response to question #1, we recommend that NERC revise the draft BES definition so that the first paragraph reads as follows:"Bulk Electric System (BES): Includes

Organization	Yes or No	Question 1 Comment
Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Inc Okanogan Electric Cooperative PNGC Power Raft River Rural Electric Salmon River Electric Cooperative Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative		anything that meets each of the following three (3) criteria:(1) (a) Is a facility or control system necessary for operating an interconnected electric energy transmission network (or any portion thereof), or(b) Is electric energy from generation facilities needed to maintain transmission system reliability; AND(2) Is not a facility used in the local distribution of electric energy as determined by the Seven Factor Test set out in FERC Order 888; AND(3) (a) Unless included or excluded in subpart (b), isi. A Transmission Element operated at 100kV or higher; orii. A Real Power Resource identified in subpart (b); oriii. A Reactive Power resource connected at 100kV or higher;(b) [the list of inclusions of exclusions in the draft, as modified by our comments below]" Criteria (1) and (2) of these revisions would capture the limitations on what may be included in the BES due to the jurisdictional limits that Congress placed on FERC, NERC, and the Regional Entities in developing and enforcing mandatory reliability standards. Specifically, Section 215(i) of the Federal Power Act provides that the Electric Reliability Organization (ERO) "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." Section 215(b)(1) of the FPA, 16 U.S.C. Â§ 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. With this language, Congress expressly limited FERC, NERC, and the Regional Entities' jurisdiction with regard to local distribution facilities as well as those facilities not necessary for operating a transmission network. Given that these facilities are statutorily excluded from the definition of the BPS, reliability standards may not be developed or enforced for facilities used in local distribution, and therefore the definition of the BES may not include such facilities. In Order No. 672, FERC adopted the statutory definition of the BPS. See Order No. 672, FERC Stats. & Regs. Â¶ 31,204 (2006). In Order No. 743-A, issued earlier this year, the Commission acknowledged that "Congress has specifically exempted 'facilities used in the local distribution of electric energy'" from the BPS definition. See Order 743-A, 134 FERC Â¶ 61,210 at P. 25 (2011). FERC also held that to the extent any facility is a facility used in the local distribution of electric energy, it is exempted from the requirements of Section 215. Id. at P.54. In Order No. 743-A, FERC delegated to NERC the task of proposing for FERC approval criteria and a process to identify the facilities used in local distribution that will be excluded from NERC and FERC regulation. Id. at P 76. The critical first step in this process is for NERC to propose criteria for approval by FERC to determine which facilities are not BPS facilities and therefore not BES facilities. Accordingly, it is critical that NERC create a definition of the BES that first excludes facilities used in local distribution. In Order No. 743-A, the Commission confirmed this, stating: "once a facility is classified as local distribution, the facility will be excluded from the [BES] unless changes to the system warrant a review of the determination." Order No. 743-A, at P 71 (emphasis added).We believe that the Seven Factor is the appropriate means to determine whether a facility is used in the local distribution of electricity and therefore should be referenced in the definition of the BES. This is the test that applies elsewhere to determine whether facilities qualify as local distribution, and therefore there is strong and clear precedent for using it in the BES definition. See 334 F.3d 48. In fact, the statutory language in Section 201 of

Organization	Yes or No	Question 1 Comment
		the FPA that led to the Seven Factor Test for other purposes is identical to the statutory language in Section 215 of the FPA at issue here. Well established rules of statutory construction call for interpreting identical language to produce similar meanings, therefore applying the Seven Factor Test under both sections of the statute is appropriate. And, without the Seven Factor Test as a means of determining what qualifies as local distribution facilities, there could be significant uncertainty and confusion as to whether certain facilities are part of the BES. Further, the Commission stated in Order 743-A that, "the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes, while also allowing NERC flexibility in applying the test or developing an alternative approach as it deems necessary." Id. at P 69. The Seven Factor Test includes the following factors: 1) Local distribution facilities are normally in close proximity to retail customers; 2) local distribution facilities are primarily radial in character; 3) power flows into local distribution systems, it rarely, if ever, flows out; 4) when power enters a local distribution system, it is not re-consigned or transported on to some other market; 5) power entering a local distribution system is consumed in a comparatively restricted geographical area; 6) meters are based at the transmission/local distribution interface to measure flows into the local distribution system; and 7) local distribution systems will be of reduced voltage. Order No. 888 at 31,771. FERC precedent indicates that a utility does not have to meet every factor of the seven-factor test in order for their facilities to qualify as local distribution. California Pacific Edison Co., Order Granting in Part and Denying in Part Petition for Declaratory Order, 133 FERC Â¶ 61,018, 61,075 (Oct. 7, 2010). NERC must also limit the BES to facilities or control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) or electric energy from generation facilities needed to maintain transmission system reliability, as directed by the FPA. Similar to the local distribution exclusion, facilities not falling into either of these categories are not part of the BPS and therefore must be expressly excluded from the BES.In order to establish a process that is consistent with the FPA and NERC's delegated authority from FERC, the proper sequence of steps must be applied in the correct order to determine which facilities are subject to NERC and FERC jurisdiction in the first instance, and only then, from among the jurisdictional facilities, to determine which facilities and control systems must comply with the electric reliability standards. Our revisions to the BES definition would create such a process within the definition of the BES. It would ensure that entities would begin any analysis of whether a particular item qualifies as BES by asking, first, whether that facility is "necessary for operating an interconnected electric energy transmission network (or any portion thereof)" or is "electric energy from generation facilities needed to maintain transmission system reliability," and second, whether that facility is "used in the local distribution of electric energy." Only after addressing these questions might further analysis be appropriate. We understand, but disagree with, the argument that, because the FPA clearly excludes local distribution facilities and facilities necessary for operating an interconnected electric transmission network from FERC, NERC, and Regional Entity jurisdiction, it is not necessary to expressly exclude these facilities again in the definition of the BES. This approach might be legally accurate, but could lead to significant confusion for entities attempting to implement the new BES definition. There are numerous examples of Regional Entities,

Organization	Yes or No	Question 1 Comment
		particularly WECC, attempting to include such facilities in the BES under the current BES definition, and regulated entities are not certain as to which facilities they should consider part of the BES. Clarifying FERC, NERC, and Regional Entity in the BES definition, even if such clarification is already provided in the FPA, would avoid such problems under the new definition. Criterion (3) of these revisions is necessary to resolve the ambiguity in the proposed definition as to whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition.Rearranging the definition in this way should make clear that the list of inclusions and exclusionsthat would be inserted as Subpart (b) modifies each provision ofSubpart (a). Thus, for example, even if a Transmission Element is otherwiseincluded by virtue of operating at 100 kV or higher, it is nonetheless excluded ifspecifically addressed in the list of exclusions that would be incorporated assubpart (b) of the definition (if, for example, the Element qualifies as a LocalDistribution Network). The rearrangement of the language eliminates anyargument that the phrase "unless such designation is modified by the list shownbelow" does not modify "all Transmission Elements operated at 100 kV or higher"because of its placement at the end of the independent clause "Reactive Powerresources connected at 100 kV or higher."Further, we support the use of the phrase "Transmission Elements" as the startingpoint for the base definition because both "Transmission" and "Elements" arealready defined in the NERC Glossary of Terms Used, and the use of the term"Transmission" makes clear that the Bulk Electric System includes only Elementsused in Transmission and therefore excludes Elements used in local distribution ofelectric power. As discussed above, the definition must exclude facilities used inlocal distribution in order to comply with the limits placed on NERC authority byCongress in Section 215 of the FPA. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."
Response: The SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. See the responses to comments regarding Local Distribution Facilities in Question 11 and the responses to comments regarding the Regulatory Requirements in		

Organization	Yes or No	Question 1 Comment
Question 12 below. The SDT has made revisions to the draft definition to clarify that the BES does not include Facilities used in the local distribution of electric energy. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Electric Reliability Council of Texas, Inc.	No	ERCOT ISO suggests a different approach. In order 743, to remedy its concerns, FERC suggested eliminating RE discretion in defining the BES, and instead basing it upon a bright-line 100kV threshold, provided that elements above and below 100kV could be excluded and included, respectively, based on specific procedures. Consistent with that approach, ERCOT ISO suggests that the BES definition itself establish a bright line standard, with inclusions and exclusions managed through the exception process (the exception process allows for both exclusions and inclusions of relevant facilities/equipment).With respect to exclusions (and inclusions), FERC contemplated a process involving stages that established "exclusion" criteria in the first instance. If equipment met such criteria, the process ended there and it was excluded or included, as appropriate. If the equipment did not meet the bright-line criteria, then it moved to the "exception" analysis, which contemplated additional critical analysis to determine if exemption was warranted.ERCOT ISO believes that structuring the revised definition in accordance with this approach is more consistent with FERC's intent of having an inclusive definition in the first instance, with modifications occurring subsequently pursuant to critical analysis in a well defined exception process.Revising the BES definition consistent with the above principles would counsel in favor of revisions to the current definition that removed RE discretion and provided for inclusion or exclusion on a case by case basis. ERCOT ISO also believes that the BES definition should provide for a general exclusion of distribution facilities. In Orders 743 and 743-A, FERC made clear that, consistent with the terms of EPAct 2005, distribution systems were excluded from the BES. However, FERC also made clear that it reserved the right to judge whether something was distribution or transmission, and, therefore, subject to its jurisdiction. Consistent with FERC's findings in this regard, ERCOT ISO believes that the definition should provide the general exclusion, with specific exclusions being performed as part of the exception process. This will meet the goal of respecting Congress' exclusion of distribution facilities, while ensuring the distribution/transmission distinction is subject to clear, objective standards the application of which can be critically reviewed by FERC to provide the appropriate procedural and substantive checks FERC envisions to ensure its jurisdiction is applied in all relevant cases to facilitate enhanced system reliability. In addition, ERCOT ISO supports memorializing the generation registration criteria in the BES definition. However, consistent with the approach described above, the BES definition should not be characterized in terms of inclusions or exclusions, but rather as general thresholds, with modifications occurring solely

Organization	Yes or No	Question 1 Comment
		pursuant to the exemption process. Finally, with respect to generation, ERCOT ISO questions the 75 MVA threshold applied to collector system type generation. As indicated by the SDT, this was intended to capture renewable resources (e.g. wind), and ERCOT ISO agrees with this clarification, but questions whether the 20 MVA threshold should apply. These systems can include multiple wind turbines on the collector system, but when they are interconnected at a single point, they are viewed as a single resource and, as such, should be subject to the same 20 MVA threshold as other single units.Applying the approach described above, the BES definition would reflect general thresholds. Specific circumstances warranting exception would occur via a separate process - ERCOT ISO is not disagreeing with any of the SDT's inclusions or exclusions, it is merely suggesting that they be addressed in that separate process. Consistent with this approach, ERCOT ISO offers the following language:The Bulk Electric System shall include: A) all Transmission Elements operated at voltages100 kV or higher; B) all generation resources that: 1) are individual units greater than 20 MVA; 2) multiple units at a single facility that are equal to or greater than 75 MVA in the aggregate, provided that all units have a common point of interconnection; and 3) multiple units connected to a collector system that are equal to or greater than 20 MVA in the aggregate; 4) all Blackstart Resources; and C) Reactive Power resources connected at 100 kV or higher. The BES shall not include distribution facilities, and radial transmission facilities serving only load with one transmission source are generally not included in this definition. The foregoing notwithstanding, any relevant element (e.g. transmission, generation, etc.) may be included or excluded in the BES pursuant to the relevant exception processes criteria and analyses as provided for in the NERC Rules of Procedure.

Response: The SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists.

In the first posting, a reference to the Rules of Procedure exception process was inadvertently omitted from the posting. It has been added back in to this posting.

The SDT has also made revisions to the draft definition to clarify that the BES does not include Facilities used in the local distribution of electric energy.

The SDT feels this threshold is consistent with the existing limits in the ERO Statement of Compliance Registry Criteria. No stakeholder provided sufficient technical analysis to support a change.

Also, see the responses to comments as well as a discussion of the latest revisions regarding Generation Inclusions in Questions 3 and 4 below.

> **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list~~

Organization	Yes or No	Question 1 Comment
~~shown below~~. This does not include facilities used in the local distribution of electric energy. Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.		
ExxonMobil Research and Engineering	No	The SDT's attempt to create a structure that clarifies what types of facilities should be included / excluded from the bulk electric system is a positive step; however, the utilization of an automatic fault interrupting device as the end point criteria for bulk electric and start point for local distribution is inappropriate. The Federal Power Act specifically excludes all "facilities used in the local distribution of electric energy" from the bulk power system without mention of how these facilities are isolated from the transmission system.
Response: See the responses to comments as well as a discussion of the latest revisions regarding the Radial Exclusion in Question 7 and the responses to comments regarding Local Distribution Facilities in Question 11 below. No change made.		
American Electric Power	No	Rather than a 75 MVA threshold as designated in I3, we suggest a threshold of 100 MVA which we believe to be more appropriate. It is difficult to provide comments regarding the BES definition, given the parallel nature of the other related deliverables currently out for review. For example, there needs to be a defined relationship between an approved definition of BES, the technical principles for demonstrating BES exception, and the exception process itself. When closely related projects such as these are done simultaneously, no individual deliverable can rely on the completed work of another. As a result, we risk having conflicting decision making across these projects.
Response: The SDT discussed and has retained the 75 MVA threshold for generating resource(s) located at a single site. The SDT feels this threshold is consistent with the existing limits in the Registry Criteria. No stakeholder provided sufficient technical analysis to support a change. Also, see the responses to comments as well as a discussion of the latest revisions regarding Generation Inclusions in Questions 3 and 4 below. No change made. The teams working on the various documents needed to address the revision to the definition of BES are coordinating their work and did provide some overlap in the posting periods to provide stakeholders with an opportunity to see the various draft products at one time. Unfortunately, the schedule for delivery doesn't allow the products to be developed serially.		
Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)	No	Please see discussion in response to Questions 2, 7, 9, 10, 11, 12 and 13.
Response: Please see response to Questions 2, 7, 9, 10, 11, 12, and 13.		

Organization	Yes or No	Question 1 Comment
Springfield Utility Board	No	SUB appreciates the effort put forward in this process and is indicating “no” primarily because Springfield Utility Board (SUB) has observed that the statutory term “Bulk Power System” is being applied in some cases as being equivalent and interchangeable with “Bulk Electric System”. SUB is concerned that the SDT’s proposed BES definition is broad and that it will sweep in many elements that have little or no material impact on the reliable operation of the interconnected bulk transmission grid. Springfield Utility Board requests that NERC create a distinction between the terms BPS and BES. Are the two to be used interchangeably, or will BPS no longer be used? SUB suggests NERC consider adopting the statutory definition of the Bulk Power System as the core definition of the Bulk Electric System.
Springfield Utility Board	No	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
Response: See the responses to comments as well as a discussion of the latest revisions regarding Generation Exclusions for units serving retail customer load in Question 8 below. See the responses to comments regarding the Regulatory Requirements in Question 12 below. Note that in Reliability Standards, the term “Bulk Electric System” (a formally defined term) is used; however in other NERC corporate documents the term, “bulk power system” (not capitalized) is used.		
Southern California Edison Company	No	The current approach seems to be based on the assumption that the presence of particular equipment is more important than the manner in which the equipment is used. Before SCE can support the BES Definition, the definition should be revised to include “All Transmission and Generation Elements and Facilities operated at voltages 100 kV or higher, Real Power resources as described below, and Reactive Power resources

Organization	Yes or No	Question 1 Comment
		connected at 100 kV or higher that operate in parallel with the integrated networked transmission system and are necessary for operating the interconnected transmission network, unless such designation is modified by the list shown below." This modification will provide the clarification needed to better ascertain what facilities should be identified as part of the BES and lessen the need to trigger the Rules Of Procedure exceptions process. If "Inclusions" and "Exclusions" continue to be a part of the BES definition, they will need additional clarification to ensure the exclusion of radial and distribution facilities which (1) do not have interconnected operations risk and (2) are not used for inter-utility transfers on the BES and, therefore, are not necessary for operating the interconnected transmission network. They also need to be modified to work in tandem with the "Technical Principles for Demonstrating BES Exceptions", so that these types of facilities don't continually have to be validated by the ROP exceptions process. Example: The exclusion of facilities which are radial or distribution in nature and that have connecting generation of 20MVA or higher for the purpose of serving local load and that are not used to transfer power between "systems" to the BES should be automatic under the BES Definition.
Response: Based on the stakeholder comments as shown below, the SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. The Rules of Procedure exception process will only be used for those facilities that entities feel should also be excluded or that regions feel should also be included. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
New York State Dept of Public Service	No	1) We do not agree with the core definition. The core definition starts with the premise that the definition must be drafted based on a 100 kV brightline designation. FERC's Order 743 and 743-A clearly state that is just one approach and would entertain other approaches that demonstrate the same level of reliable operation and is responsive to FERC's reliable operation concerns. As the EPAct 2005 recognizes, the industry technical expertise is preserved in the NERC and does not reside at FERC. Therefore, FERC's jurisdiction is expressly limited by Section 215 of the Federal Power Act. Moreover, FERC cannot, under the guise of "policy" concerns, exceed the limits of its statutory authority. FERC's orders recognize this, and repeatedly acknowledge that FERC must exclude facilities used in local distribution from the definition of BES. FERC's orders, at most, assert that "some" 115/138 kV facilities are needed to reliably operate the bulk system.

Organization	Yes or No	Question 1 Comment
		FERC has made no showing that all facilities of 100kV or greater are necessary for reliable operation of the grid. Without a record based finding that all such facilities are necessary for reliable operation of the grid, FERC cannot include all such facilities within its definition of BES. FERC has even explicitly acknowledged within a New York transmission tariff rate case that a 115 kV loop around a significant size city should not be included in the transmission account as it existed solely to serve load in that city. Given the technical expertise to devise a definition more refined lies with the industry, FERC wisely deferred to NERC processes the ability to employ a different approach other than a brightline. Therefore, NERC should apply its expertise to fashion a definition of "bulk electric system" that comports with the statutory jurisdictional limitations Congress imposed upon FERC in FPA Section 215. NERC's efforts should be checked at every step that they are not exceeding the originating authority contained in FPA Section 215. Overall, the definition must be guided by, and limited to, the FPA definition of reliable operation which is explicitly defined as limited to protection of the bulk system by "operating the elements of the bulk-power system ... so that instability limits, uncontrolled separation, or cascading failures of such systems will not occur....", and expressly excludes facilities used in local distribution. 2) NERC fails to make any technical demonstration that using the existing definition as a starting point is valid. Moreover, NERC has resisted pursuing alternative avenues. The NPCC study submitted to FERC in the combined NERC-NPCC compliance filing in September 2009, clearly demonstrated the movement from the NPCC regional criteria to a 100 kV brightline provided little, if any, increased levels of reliable operation. Through extrapolation, a study of other areas is likely to indicate that reliable operation levels throughout the rest of the country could be assured by a more refined selection of which facilities under 200 kV should be included as part of the bulk system. Note that FERC did not reject use of material impact assessmensts; they only objected to the fact that the NPCC test did not include some regional interconnection facilities, some nuclear interconnections and a particular load area.NERC's failure to evaluate other approaches than a brightline 100 kV standard is a failure to ensure adequate levels of reliable operation at a sustainable level consistent with provisions of the FPA.All remaining comments on the definition, as presented by NERC, are based on our belief that the proposed definition is overreaching in its basic premise of starting with a brightline 100 kV as its core definition of the bulk system. 3) It is not clear why the core definition has dropped "generation" interconnected at the specified voltage level. The following inclusions/exclusions included generation facilities and it appears inconsistent to not include generation in the core definition.
Public Utilities Commission of Ohio	No	FERC jurisdiction is limited by the Federal Power Act, Section 215. To make a bright line designation as the starting point, without a demonstration that ALL facilities at 100 kV and greater affect the reliability of the bulk power system is a step beyond FERC jurisdictional boundaries. The Federal Power Act explicitly excludes facilities used in local distribution from the bulk power system. NERC should give serious consideration to

Organization	Yes or No	Question 1 Comment
		other (non bright-line) approaches to ensure bulk system reliability.
City of Redding	Yes	In general Redding supports the work of the SDT team in revising the core definition of the Bulk Power System as ordered by FERC. The core definition, as written, is a good step at removing the ambiguities of the current definition and is acceptable as long as it is coupled with a fair and objective Exception Process that, as FERC directed in Order 743, "*excludes facilities the ERO determines are not necessary for operating the interconnected transmission network*". (P 30). It is Redding's opinion that using a voltage threshold is a convenient method to make an initial dividing line however it does not provide adequate proof that elements, over or under this voltage threshold, are "necessary" for the operation of the Bulk Electric System (BES). It is also noted that while the 100 kV threshold is intended to capture the majority of the power system elements that are potentially BES, on a continent wide basis, a 200 kV threshold would serve the Western Interconnect better as a starting brightline. In the Western Interconnect the majority of 100 kV elements are used as Distribution facilities. Therefore, this will burden NERC and the Regional Entity in the West with a larger number of Exception Process applications. Redding supports the use of exclusion and inclusion lists in the Definition; however Redding believes the SDT needs to take a more literal approach to FERC's Orders and define the term "*necessary for operating the interconnected transmission network"* and clearly *"establish whether a particular facility is local distribution or transmission".* Without a clear distinction of these two foundational principles it is difficult to have a significant discussion about the validity of the proposed inclusions and exclusions and the thresholds involved. As an alternative to the proposed definition, Redding would support using a simple approach to meet FERC's orders (as long as is coupled with an "exception process that includes clear, objective, transparent, and uniformly applicable criteria of facilities that are not necessary for operating the grid"). (Order 743A P73). If the above criteria is developed to accomplish the above then the existing definition could be modified to read: *"Electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, operated at voltages of 100 kV or higher."*
Response: The SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. The SDT elected to retain the 100 kV bright line criteria. This is the bright-line voltage level that is included in the existing approved definition of the Bulk Electric System in the NERC Glossary of Terms. While a number of stakeholders suggested alternate voltage levels, no technical justification was provided that would		

Organization	Yes or No	Question 1 Comment
lead the SDT to make a change. One goal of this project is to add clarity to the definition without significantly changing the population of BES elements. Finally, the SDT has made revisions to the draft definition to clarify that the BES does not include Facilities used in the local distribution of electric energy as established by applicable regulatory authorities. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Cogentrix Energy, LLC	No	I would like to see a definition for clarity of an "Individual Generating Unit"Example:Solar farm with 300 photovoltaic units. Each is a stand-alone unit with its own inverter, but all come together at a common tie breaker to connect to the BES. Questions:1. Would each one be considered directly tied to the BES through one common tie breaker? 2. Would each photovoltaic unit be considered an individual generating unit? 3. Would the combined total of 300 units be considered an individual generating unit or would they be considered a facility?
Response: The SDT is not in position to provide an answer without first making sure that all relevant data is in hand.		
The Dow Chemical Company	No	See Dow's specific comments on some of the following questions.
Response: See specific responses in following questions.		
Clark Public Utilities	No	Clark is concerned that the core definition is overly-broad and sweeps facilities into the BES that are required by the statute to be excluded, even considering the list of inclusions and exclusions. Clark urges the SDT to bear in mind the specific restrictions on the definition of “bulk-power system” contained in Section 215 of the Federal Power Act (“FPA”). In Section 215(a)(1), Congress defined “bulk-power system” to mean “facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)” and “electric energy from generation facilities needed to maintain transmission system reliability.” 16 U.S.C. Â§ 824 o(a)(1). Congress unequivocally excluded from this definition “facilities used in the local distribution of electric energy.” The “bulk-power system” definition thus imposes a clear limit on the reach of the mandatory reliability regime. Congress reinforced that limit in Section 215(i), where it emphasized that the FPA authorizes the imposition of reliability standards “for only the bulk-power system.” 16 U.S.C. Â§ 824 o(i)(1). Clark believes it is clear that Congress intended the “bulk-power system” to be defined narrowly so

Organization	Yes or No	Question 1 Comment
		that it would incorporate only high-voltage, interstate facilities used to transmit power over long distances, whose failure threatens drastic reliability events such as system instability, uncontrolled separation, or cascading outages.In addition, the Federal Energy Regulatory Commission clearly stated that Order No. 743 did not mandate or direct NERC to adopt a 100 kV bright-line threshold (Order No. 743-A, 134 FERC Â¶ 61,210 at P 20. The Commission goes on to state that the 100 kV bright-line threshold is only one way to address the Commission's concerns. The Commission only requires that NERC use the Commission's recommendation or propose a different solution that is as effective as, or superior to, the Commission's proposed approach. The Commission also acknowledges that Congress has specifically exempted facilities used in the local distribution of electric energy.The definition developed by the SDT should therefore focus on that portion of the interconnected bulk transmission grid for which thermal, voltage, and stability limits must be observed in order to prevent instability, uncontrolled separation, or cascading outages. Further, in order to honor the specific limits placed on the definition by Congress, the SDT's definition must exclude facilities used in the local distribution of electric power and it must exclude facilities whose operation or mis-operation affects only the level of service and does not threaten cascading outages or other widespread events on the bulk interconnected system. Clark asserts that the adoption of a bright-line threshold of 100 kV is arbitrary and not based on any investigation of the potential for facilities at this voltage level to cause instability, uncontrolled separation, or cascading outages or for the general need of these facilities for the operation of an interconnected electric energy transmission network. The threshold excludes transmission facilities below 100 kV without any determination on a general basis of whether these facilities affect interconnected system operation. It goes without saying that these low voltage transmission facilities should be subject to an inclusion process in the event that regional reliability entities believe they do have an impact on reliability but on a case-by-case basis. Clark agrees with this concept and does not believe bringing low voltage transmission facilities into the BES through an inclusion process causes any BES reliability issues. Similarly, Clark believes that the majority of facilities between 100 kV and 200 kV can be shown to have no impacts on interconnected system operation and do not threaten instability, uncontrolled separation, or cascading outages. Clark also points out that the vegetation outage standard (FAC-003) uses this approach. The standard applies to facilities operated at 200 kV or above and "lower voltage lines designated by the RRO as critical to the reliability of the electric system in the region." Clark believes the use of 100 kV as the bright-line threshold will result in a large number of facilities being brought into the definition of the BES that are either 1) part of a Local Distribution Network, 2) are radial serving only load from one transmission source, or 3) that can be shown to have no affect on interconnected system operation or cannot cause instability, uncontrolled separation, or cascading outages. This unnecessary inclusion will cause a large amount of effort on the part of the owners of these facilities and on the part of the Regional Reliability Organizations that will have to review the many exclusion filings that will result. Utilizing a 200 kV threshold with a low voltage inclusion process will eliminate much of the

Organization	Yes or No	Question 1 Comment
		unnecessary paperwork since very few owners of 200 kV or above facilities will seek exclusions. This will free up regional reliability entities to focus on low voltage transmission facilities that truly have an impact on interconnected system operations.Clark believes that the SDT and the NERC should consider adopting a bright-line threshold higher than 100 kV with low voltage inclusion and develop the arguments necessary to demonstrate to the Commission that this solution is as effective as, or superior to, the Commission's proposed approach. These arguments should include the following: o Eventually, a 200 kV bright-line threshold with a low voltage inclusion process will incorporate into the BES the same facilities that a 100 kV bright-line threshold with an exclusion process. This means that these two concepts both have the same effect on the reliability and the operability of the BES. o Utilizing a 200 kV bright-line will reduce the amount of initial effort by transmission owners and Regional Reliability Organizations and allow these entities to concentrate on low voltage facilities that truly have an impact on the BES. Clark is similarly concerned that the SDT's proposed definition is overly-broad in including all generating units greater than 20 MVA capacity connected to transmission at 100 kV or above. Clark believes that there are many small to medium sized generators that individually have no affect on interconnected system operations and do not threaten the BES with instability, uncontrolled separation, or cascading outages. Many of these generators are connected to Local Distribution Networks with minimum loads that exceed maximum generation. While the generators do support system reliability collectively, it is questionable whether many of these generators individually represent a facility necessary for interconnected system operations. The adoption by the SDT of a 200 kV bright-line threshold would eliminate many of these smaller generating units. Again, the RROs must have an inclusion process for smaller generating units it believes support interconnected system operations. Clark believes that eventually both thresholds (with appropriate inclusion and exclusion processes) will result in the same 100 kV to 200 kV connected generators being included in the BES so there will be no difference in the reliability of the BES. Adopting the higher of the two thresholds and adopting a generating capacity threshold higher than 20 MVA will allow generator owners and Regional Reliability Organizations to devote resources to small generating units that truly have an impact on interconnected system operations.
Response: The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. The SDT elected to retain the 100 kV bright-line criteria. This is the bright-line voltage level that is included in the existing approved definition of the Bulk Electric System in the NERC Glossary of Terms. While a number of stakeholders suggested alternate voltage levels, no technical justification was provided that would lead the SDT to make a change. One goal of this project is to add clarity to the definition without significantly changing the population of BES elements. See the responses to comments as well as a discussion of the latest revisions regarding Generation Inclusions in Questions 3 and 4 below.		

Organization	Yes or No	Question 1 Comment
Bulk Electric System (BES): Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Central Lincoln	No	We support the PNGC comments suggesting beginning with the statutory definition of BPS that excludes local distribution. The definition should also be further elaborated to show specific points of demarcation for each inclusion and exclusion by the use of diagrams similar to those included with Proposal 6 from the WECC Bulk Electric System Definition Task Force. We also note that per the flowchart at http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf, any >100 kV element that does not meet an inclusion or an exclusion ends up being included. We don't think that was the SDT's intent. For example a 5 kW solar project connected at 115 kV does not meet any inclusions so proceed to the exclusion box. It is not radial load, behind a retail meter, or part of an LDN so it is BES by application of the definition. We realize this flowchart was drafted by another team. It therefore becomes imperative that the definition team clearly specifies exactly what becomes of an element that does not meet an inclusion.
Response: See the responses to comments regarding Local Distribution Facilities in Question 11 below. The SDT has revised the wording of the generation inclusions to reference the ERO Statement of Compliance Registry Criteria for consistency. Therefore, there should be no change in registration due to the revised definition.		
Southwest Power Pool	No	SPP generally agrees with the substance of the SDT's changes, but suggests a different approach. In order 743, to remedy its concerns, FERC suggested eliminating RE discretion in defining the BES, and instead basing it upon a bright-line 100kV threshold, provided that elements above and below 100kV could be excluded and included, respectively, based on specific procedures. Consistent with that approach, SPP suggests that the BES definition itself establish a bright line standard, with inclusions and exclusions managed through the exemption process.With respect to exclusions (and inclusions), FERC contemplated a process involving stages that established "exclusion" criteria in the first instance. If equipment met such criteria, the process ended there and it was exempt. If the equipment did not meet the bright-line criteria, then it moved to the "exemption" analysis, which contemplated additional critical analysis to determine if exemption was warranted.SPP believes that structuring the revised definition in accordance with this approach is more consistent with FERC's intent of having an inclusive definition in the first instance, with modifications occurring subsequently pursuant to critical analysis in a well defined exemption process.Revising the BES definition consistent with the above principles would counsel in favor of revisions to the current definition that removed

Organization	Yes or No	Question 1 Comment
		RE discretion and provided for inclusion or exclusion on a case by case basis. SPP also believes that the BES definition should provide for a general exclusion of distribution facilities. In Orders 743 and 743-A, FERC made clear that, consistent with the terms of EPAct 2005, distribution systems were excluded from the BES. However, FERC also made clear that it reserved the right to judge whether something was distribution or transmission, and, therefore, subject to its jurisdiction. Consistent with FERC's findings in this regard, the SRC believes that the definition should provide the general exclusion, with specific exclusions being performed as part of the exception process. This will meet the goal of respecting Congress' exclusion of distribution facilities, while ensuring the distribution/transmission distinction is subject to clear, objective standards the application of which can be critically reviewed by FERC to provide the appropriate procedural and substantive checks FERC envisions to ensure its jurisdiction is applied in all relevant cases to facilitate enhanced system reliability. However, consistent with the approach described above, the BES definition should not be characterized in terms of inclusions or exclusions, but rather as general thresholds, with modifications occurring solely pursuant to the exemption process. Applying the approach described above, the BES definition would reflect general thresholds. Specific circumstances warranting exclusion/exception/inclusion would occur via a separate process -SPP is not disagreeing with any of the SDT's inclusions or exclusions, it is merely suggesting that they be addressed in that separate process. Consistent with this approach, SPP offers the following language:The Bulk Electric System shall include: A) all Transmission Elements operated at voltages 100 kV or higher; B) all generation resources that: 1) are individual units greater than 20 MVA; 2) multiple units at a single facility that are equal to or greater than 75 MVA in the aggregate, provided that all units have a common point of interconnection; and 3) multiple units connected to a collector system that are equal to or greater than 75 MVA in the aggregate; 4) all Blackstart Resources regardless of size; and C) Reactive Power resources connected at 100 kV or higher. The BES shall not include distribution facilities, and Radial transmission facilities serving only load with one transmission source are generally not included in this definition. The foregoing notwithstanding, any relevant element (e.g. transmission, generation, etc.) may be identified as an exception and excluded or included in the BES pursuant to the process delineated in the NERC Rules of Procedure and subject to the exclusion or inclusion criteria.All equipment specific issues that affect exclusions/exceptions/inclusions would then be addressed via the Rules of Procedure processes and the exclusion and inclusion criteria.
Response: The SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. In the first posting, a reference to the Rules of Procedure exception process was inadvertently omitted from the posting. It has been added back in to this		

Organization	Yes or No	Question 1 Comment
posting. The SDT has also made revisions to the draft definition to clarify that the BES does not include facilities used in the local distribution of electric energy. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy. Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.		
PPL Energy Plus and PPL Generation	No	See the response to Question 13
Response: See response to Question 13.		
Independent Electricity System Operator	No	We agree with the BES definition principles in general, the concept of Inclusions and Exclusions, as well as the proposal for an Exception Process. However, since the Exception Process and the Technical Principles and Criteria (TPC) for justifying BES Exceptions are being developed and will be approved independently, albeit concurrently with the BES definition, there is a risk that the revised definition may be approved while the TPC and Exception Process may not come to fruition in the form anticipated during development of the BES definition. In short, our support for any revised BES definition would be conditional to the establishment of the associated TPC. As such we advocate developing the revised BES definition and TPC as a "single package".Thus, we do not agree with the blanket inclusion of generation units and Facilities meeting the thresholds of 20 MVA and 75 MVA respectively. We also do not agree with using these same thresholds in determining when Exclusions are applicable. Instead, we believe the impact on BES reliability of all generation units and Facilities meeting these capacity thresholds, should be assessed against the TPC and if found to be impactive, these units and Facilities should be included as part of the BES after going through the Exception Process.We believe this change in the approach to defining the BES will take into account the evolving reality of distributed generation, particularly in the context of radial systems and local distribution networks (LDNs), where generation units are installed in lieu of transmission reinforcements. We offer our further comments on the Definition and its Inclusions and Exclusions against the backdrop of this general philosophy. The BES definition refers to Reactive Power resources "connected at" 100 kV or higher as opposed to "operated at" 100 kV or higher. Is the intent of this wording to include in the BES a reactive resource (capacitor, reactor, etc.) operating at a voltage below 100 kV and connected to the BES via a step-up transformer?

Organization	Yes or No	Question 1 Comment
		If yes, would the transformer be excluded from the BES to be consistent with Inclusion I1?
Response: The SDT is tasked with creating a bright-line continent-wide definition for the BES. One of the goals of this effort is to ensure that similarly situated elements in different regions are included or excluded on a consistent basis. The Rules of Procedure Exception process will only be used for those facilities that entities feel should also be excluded or that regions feel should also be included. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. In response to comments, the SDT added an additional item to clarify the inclusion of Reactive Resources and an additional exclusion to clarify that Reactive Resources that are owned by retail customers for their own use are not to be included. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Dayton Power and Light Company	No	
Response: Without any specific comments, the SDT is unable to respond.		
BPA	No	BES Definition First Paragraph - Change first sentence to "Unless otherwise excluded below, all Transmission Elements operated at 100 kV or higher and those facilities included in the list below, Real Power resources included below, and Reactive Power resources connected at 100 kV or higher."
Tacoma Power		Tacoma Power generally supports clarifying changes to the BES definition by the SDT and the goal of including only those facilities that materially impact the reliable operation of the interconnected bulk transmission system. We propose one change to help guide the industry as the definition is applied. Currently, the definition includes the clause 'unless such designation is modified by the list shown below,' positioned after the reactive resources clause. Due to the position of the clause, it can be misinterpreted to apply only to reactive resources. To eliminate this ambiguity, we suggest that the proposed definition be reordered to read as follows:"Bulk Electric System (BES) definition: (A) Unless included or excluded in Section B below, the BES consists of: (1) All Transmission Elements operated at 100 kV or higher; (2) Real Power resources identified in Section B below; and (3) Reactive Power resources connected at 100 kV or higher.(B) [BES designation criteria, list of inclusions and exclusions]." Additionally, the BES definition should not require the inclusion of contiguous elements as the definition is further developed.Lastly, the proposed BES definition for comments is not clear on the state of the system

Organization	Yes or No	Question 1 Comment
		conditions (normal or emergency) that should be assumed when applying the definition. The definition should apply to only normal operating conditions.
Orange and Rockland Utilities, Inc.		In the core definition, "the list shown below" is still not clearly defined and causes some confusion.
American Transmission Company, LLC	Yes	However, to clarify the core definition, ATC proposes to change the text for Real and Reactive Power resources from "connected" to "operated or connected".
Response: The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Consolidated Edison Co. of NY, Inc.		Guidance Document - The SDT should develop a BES Definition Guidance Document which includes a fairly comprehensive list of Elements considered to be potentially necessary for operating an interconnected electric energy transmission network. This list would include references to Real Power and Reactive Power resources.
PUD No. 2 of Grant County, Washington	Yes	Grant supports the approach the Standards Development Team ("SDT") has taken to defining the Bulk Electric System ("BES"). The changes made in the revised core definition are helpful and represent significant progress toward an acceptable definition. With an effective and efficient exclusion process, the draft will better define the BES as a whole. The definition could then be further elaborated to show specific points of demarcation for each inclusion and exclusion similar to that Proposal 6 from the WECC Bulk Electric System Definition Task Force ("BESDTF") team to further delineate BES and non-BES facilities.
Response: The SDT will consider drafting a Guidance Document as a part of this project in order to provide the specific guidance you suggest.		
United Illuminating		The definition should incorporate the language in Energy Policy Act of 2005 that defines bulk power system. UI agrees in general that facilities operated at 100 kV and above are part of bulk power system. Without the clarification in the definition the possibility of facilities that are not necessary for the operation of the interconnected transmission will be pulled into scope.
Response: This suggestion would be outside of the scope of the approved BES Definition project. The SDT is tasked with creating a bright-line continent-wide		

Organization	Yes or No	Question 1 Comment
definition for the BES. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Portland General Electric Company		The bright-line definition of 100kV should specify that this is a three-phaseline-to-line voltage.
Response: The currently approved definition of the BES in the Glossary of Terms does not include this clarification. The SDT discussed your comment and decided that this clarification was not necessary. Furthermore, all ac and dc facilities with a line-ground or line-line voltage greater than 100 kV would be included in the BES except as modified by the lists of exclusions or inclusions. No change made.		
Sweeny Cogeneration LP		The specific identification of global inclusions and exclusions is a very good way to approach this complex issue. We believe there are further items to be added to the list related to generator interconnections, a task that was passed to this project from Project 2010-07. Just as is the case with complex distribution systems, there are a variety of generator-transmission interconnection architectures which are driving the Regions to inappropriately register Generator Owner/Operators as Transmission Owners.
Response: See the responses to comments as well as a discussion of the latest revisions regarding generation inclusions in Questions 3, 4, and 6 below. For clarification, no tasks were passed from Project 2010-07 to the Project 2010-17. The BES Definition and the associated Exception Process are separate and distinct from the ERO Statement of Compliance Registry Criteria.		
American Municipal Power and Members Florida Municipal Power Agency Transmission Access Policy Study Group	Yes	AMP and its members appreciate the opportunity to comment on the draft BES definition. We generally support the direction taken by the SDT, with some minor changes.We agree with some other entities' comments and suggest a few clarifying edits to the core definition. First, the definition should refer to "non-generator Reactive Power resources," to make clear that although all generators provide some reactive power, those that do not meet the criteria of I2-I5 are not included in the BES. There is ambiguity concerning whether a transformer stepping down from >100 kV to <100 kV is included or not, though we believe that the SDT intends to exclude such transformers. It is clear that transformers with

Organization	Yes or No	Question 1 Comment
		two windings >100 kV are included and GSUs for registered generators are included, but it is somewhat unclear in the current draft whether a 138 kV to 69 kV transformer is included or excluded. We suggests making it clear that the intent of the SDT is to include (a) GSUs associated with BES generators and (b) transformers with 2 or more windingwindings >100 kV, and that other transformers are excluded. We also believe the drafting team intended to exclude all elements that are not included either under the BES definition and designations or through the exception process. For the sake of clarity, we suggest that a sentence to that effect be added to the core definition. Finally, we note that the definition does not currently refer to the existence of the exception process. We suggest that such a reference be added either to the core definition or to the lists of Inclusions and Exclusions. The following is the core definition incorporating the changes:All Transmission Elements (except transformers) operated at 100 kV or higher, transformers as described below, Real Power resources as described below, and non-generator Reactive Power resources connected at 100 kV or higher unless such designation is modified by the list shown below. The NERC Rules of Procedure provide an Exception Process through which Elements not included in the BES under this definition and designations may be included in the BES, and Elements included in the BES under this definition and designations may be excluded from the BES. Elements not included in the BES either by application of this definition and designations, or through the BES exception process, are not BES Elements.
Northern California Power Agency	Yes	NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.

Response: The SDT added an additional item to clarify the inclusion of Reactive Resources and an additional exclusion to clarify that Reactive Resources that are owned by retail customers for their own use are not to be included.

See the responses to comments as well as a discussion of the latest revisions regarding the Transformer Inclusion in Question 2.

In the first posting, a reference to the Rules of Procedure exception process was inadvertently omitted from the posting. It has been added back in to this posting.

> **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.
>
> Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

Organization	Yes or No	Question 1 Comment
Small Entity Working Group (SEWG)	Yes	The Small Entity Working Group (SEWG) appreciates the opportunity to comment on the draft BES definition. The group generally supports the direction taken by the SDT, with some minor changes.The BES definition should refer to "non-generator Reactive Power resources," to clarify that although all generators provide some reactive power, the generators that do not meet the criteria of I2 through I5 are not included in the BES. The BES definition should include a reference to the existence of the exception process.
MRO's NERC Standards Review Forum	Yes	Please quantify that Reactive Resources within the BES definition are meant to be generator resources and not static resources.
Muscatine Power and Water	Yes	Would like to ask the SDT to please affirm that Reactive Resources within the BES definition are intended to be generator resources and not static resources.
Illinois Municipal Electric Agency	Yes	With the following clarifying edits. The BES definition should refer to "non-generator Reactive Power resources," to clarify that although all generators provide some reactive power, the generators that do not meet the criteria of I2 through I5 are not included in the BES.
Pepco Holdings Inc	Yes	Do reactive power resources include reactors?
Response: In response to comments, the SDT added an additional item to clarify the inclusion of Reactive Resources and an additional exclusion to clarify that Reactive Resources that are owned by retail customers for their own use are not to be included. **I5** –Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1. **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.		
Santee Cooper	Yes	We agree with the changes of adding the inclusions and exclusions. We recommend that I3 be 100 MVA or higher. Was there a rationale for using 75 MVA?
Response: See the responses to comments as well as a discussion of the latest revisions regarding Generation Inclusions in Questions 3 and 4 below.		
SERC OC Standards Review Group	Yes	The SERC Standards Review Group (SRG) still believes that 200KV is the correct bright line for the BES definition
Response: The SDT elected to retain the 100 kV bright-line criteria. This is the bright-line voltage level that is included in the existing approved definition of the Bulk Electric System in the NERC Glossary of Terms. While a number of stakeholders suggested alternate voltage levels, no technical justification was provided		

Organization	Yes or No	Question 1 Comment
that would lead the SDT to make a change. One goal of this project is to add clarity to the definition without significantly changing the population of BES elements.		
National Rural Electric Cooperative Association (NRECA)	Yes	NRECA believes the definition should explicitly state that facilities used in local distribution are excluded from the BES.
Response: See the responses to comments regarding Local Distribution Facilities in Question 11 below.		
New York Power Authority MEAG Power	Yes	The New York Power Authority (NYPA) supports the Standards Drafting Team's development of a revised Bulk Electric System (BES) definition in response to FERC Order 743 that is directly linked to an exception process for inclusions and exclusions. The definition must be closely coupled to the exception process and the two must be integrated in the standard that is ultimately adopted. This will ensure that the regulatory requirements apply to only those facilities that materially affect the reliability of the BES.In general, NYPA agrees with the proposed definition and the objectives the Standards Drafting Team has established. NYPA recommends that the team make additional clarifications to provide industry with a better understanding of the inclusions and exclusions, as well as the impact of the inclusions/exclusions on the BES. The definition should exclude generator leads for generating units that do not materially affect the reliability of the BES regardless of the BES designation of the generating unit. In addition, the definition should not require the inclusion of contiguous elements. Generating units that are designated BES are currently required to comply with a subset of NERC Reliability Standards, but may not be material to the reliable operation of the interconnected BES. This portion of the definition should not require that both BES and non-BES generating units have their generator leads defined as BES transmission elements. A length-based criterion for generator leads ought to be considered. For example, the definition should exclude generator leads that are one mile or less between BES elements. The Standards Drafting Team should engage and coordinate with the Standards Drafting Team for Project 2010-07 (the GO/TO task force). This coordination is needed to determine the impacts of the new BES definition on Transmission Owner (TO) and Transmission Operator (TOP) registration. In addition, NYPA recommends that the Standards Drafting Team and the GO/TO Task Force consider, if they have not already done so, the impacts of ownership and operating agreements on registration. For example, clarification of registration impacts for BES elements that are jointly owned by two utilities (e. g. where one utility owns 5 of 20 towers and the other utility owns the remaining towers and the conductor of a transmission line) is required.

Organization	Yes or No	Question 1 Comment
		The definition does not provide clarity on the state of the system conditions (normal or emergency) that should be applied. The definition should apply to only normal operating conditions.
Response: See the responses to comments as well as a discussion of the latest revisions regarding Generation Inclusions in Questions 3, 4, and 6 below. One goal of this project is to add clarity to the definition without significantly changing the population of BES elements. The Registry Criteria is not being revised by this project. The leadership of the two SDTs, Project 2010-17 Definition of BES and Project 2010-07 GO/TO TF, have met and coordinated as necessary.		
Electricity Consumers Resource Council (ELCON)	Yes	We support the expanded structure of the core definition that provides for inclusions and exclusions. This clarification establishes a rebuttable presumption that excluded elements are not BES and appropriately shifts the burden of proof for any subsequent inclusion to Regional Entities or the ERO, thereby minimizing the regulatory burden on the industry, an outcome consistent with the Commission's stated assumption that revising the BES definition should have relatively minor impacts on registrations in non-NPCC regions.
Response: Thank you for your comments.		
Western Area Power Administration	Yes	As a Transmission Operator (TO) it helps us define and write O & M, and operating agreements for our Load Serving Entities (LSE/customers) that prefer to contract the responsibilities to the TO. The definition 'Bright Line Threshold' is a general statement, that needs more definition for the special circumstances in the southwestern U.S. where pump loads provide necessary irrigation. Based upon NERC's compliance registry criteria, small entities prefer to contract responsibilities to the TO in order to forego NERC registration, or the exception process for special circumstances.
Response: The ERO Statement of Compliance Registry Criteria is not being revised by this project.		
PacifiCorp	Yes	In general PacifiCorp agrees with the direction of the proposed BES definition. Specific exceptions are discussed in questions 2 - 13
Response: Thank you for your support. See specific responses to Questions 2 – 13.		
Public Utility District No. 1 of Snohomish County, Washington Clallam County PUD No.1	Yes	As a general matter, Snohomish County PUD supports the approach the Standards Development Team ("SDT") has taken to defining the Bulk Electric System ("BES"). In the comments we submit today, we identify several refinements we believe would improve the definition. We also discuss the legal framework the SDT must operate under as we understand it. But we support the SDT's conceptual approach and, if refined as we suggest, we will support the SDT's proposal so long as an acceptable process for defining exceptions

Organization	Yes or No	Question 1 Comment
		accompanies the definition. As to the core definition addressed in Question 1, Snohomish believes the changes made in the revised definition are helpful and represent significant progress toward an acceptable definition. Nonetheless, we are concerned that the core definition is overly-broad and sweeps facilities into the BES that are required by the statute to be excluded, even considering the list of inclusions and exclusions. We therefore suggest two different approaches below that may achieve the SDT's aims more effectively than the proposed core definition. At a minimum, as we explain below, additional clarifications to the core definition are necessary and an acceptable exemption process is required to ensure that facilities that by statute must be excluded are excluded from the BES as defined by the SDT.At the outset, we urge the SDT to bear in mind the specific restrictions on the definition of "bulk-power system" contained in Section 215 of the Federal Power Act ("FPA") (Following FERC's guidance on the question, we treat the statutory term "bulk-power system" as equivalent to the term ordinarily used in the industry, "Bulk Electric System"). In Section 215(a)(1), Congress defined "bulk-power system" to mean "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" and "electric energy from generation facilities needed to maintain transmission system reliability." 16 U.S.C. Â§ 824o(a)(1). Congress unequivocally excluded from this definition "facilities used in the local distribution of electric energy." Id. The "bulk-power system" definition thus imposes a clear limit on the reach of the mandatory reliability regime. Congress reinforced that limit in Section 215(i), where it emphasized that the FPA authorizes the imposition of reliability standards "for only the bulk-power system." 16 U.S.C. Â§ 824o(i)(1) (emph. added).Further, the SDT must bear in mind "the cardinal rule that a statute is to be read as a whole since the meaning of statutory language, plain or not, depends on context." City of Mesa v. FERC, 993 F.2d 888, 893 (D.C. Cir. 1993) (citation omitted). In considering how Congress used the term "bulk-power system" in the statute, as well as the limits on the reliability regime imposed in the surrounding statutory language, it is clear that Congress intended the "bulk-power system" to be defined narrowly so that it would incorporate only high-voltage, interstate facilities used to transmit power over long distances, whose failure threatens drastic reliability events such as cascading outages. These limitations are plain from, for example, the statutory definition of "reliability standard," which provides that reliability standards are to encompass only requirements to "provide for reliable operation of the bulk-power system." 16 U.S.C. Â§ 824o(a)(3) (emph. added). Congress further refined the scope of reliability authority by specifically defining "reliable operation" to mean "operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance. . . or unanticipated failure of system elements." 16 U.S.C. Â§ 824o(a)(4). Congress's intent to focus the national reliability regime on broad-scale threats to the interconnected, interstate high-voltage system like cascading outages is made clear, as well, by Congress's specific direction that the mandatory reliability system is prohibited from enforcing standards for adequacy of service, which were left to state and local authorities. 16 U.S.C. Â§ 824o(i)(2).When read in the context of the statute as a whole, the definition developed by the SDT should therefore focus on that portion of the interconnected bulk

Organization	Yes or No	Question 1 Comment
		transmission grid for which thermal, voltage, and stability limits must be observed in order to prevent instability, separation events, and cascading outages. Further, in order to honor the specific limits placed on the definition by Congress, the SDT's definition must exclude facilities used in the local distribution of electric power and it must exclude facilities whose operation or mis-operation affects only the level of service and does not threaten cascading outages or other widespread events on the bulk interconnected system. Snohomish is concerned that the SDT's proposed definition is overly-broad, and that it will sweep in many Elements that have little or no material impact on the reliable operation of the interconnected bulk transmission grid. For example, the definition would sweep in all generators with 20 MVA capacity even though generators this small rarely create impacts on the interconnected bulk transmission system that would threaten to violate the thermal, voltage or stability limits of the bulk transmission system and therefore do not threaten instability, separation, or cascading outages on the interconnected transmission system. Accordingly, for the BES definition to conform to the requirements of the statute, the SDT must adopt an effective mechanism to exempt facilities like these that are improperly swept in by the SDT's brightline approach to inclusions and exclusions. For this reason, the Exception process to accompany the SDT's definition is of critical concern. It constitutes the last line of defense against a SDT definition that sweeps in facilities excluded by the statutory definition.Snohomish believes the SDT can achieve the goals of FERC's Orders No. 743 and 743-A while honoring these statutory limits by taking one of two alternative approaches to the core definition. First, perhaps the simplest way the SDT could achieve the goals of FERC Order No. 743 while avoiding overbreadth that violates statutory limits is to simply adopt the statutory definition of "bulk-power system" as the core definition. This approach is commonly used by regulatory agencies in defining key jurisdictional terms to ensure that the agency does not cross statutory boundaries when carrying out the duties assigned to it by Congress. Under this approach, the core definition would simply echo the statutory definition, substituting "Bulk Electric System" for its statutory equivalent, "bulk-power system":The term 'Bulk Electric System' means: (A) Facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and,(B) Electric energy from generation facilities needed to maintain transmission system reliability.The term does not include facilities used in the local distribution of electric energy.See 16 U.S.C. Â§ 824o(a)(1). The inclusions and exclusions developed by the SDT, with the refinements we discuss below, would then be added to provide guidance in the application of this definition to specific classes of electric system facilities and Elements. A second alternative approach is to make the smallest possible adjustment to the current BES definition that suffices to address the central concern expressed by FERC in Orders No. 743 and 743-A. Those orders emphasized that FERC's concerns are with the initial phrase in the current NERC BES definition, which provides that the "Bulk Electric System" is: As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher.In Order No. 743, FERC made clear that it views the initial phrase ("As defined by the Regional Reliability Organization") as creating unreviewable discretion for Regional Entities to define the BES in their region, and that this unreviewable discretion, rather

Organization	Yes or No	Question 1 Comment
		than lack of uniformity per se, is the problem Order No. 743 is designed to remedy. See, e.g., Order No. 743, 133 FERC Â¶ 61,150 at P 16 (2010) (FERC believes the "best way to address these concerns is to eliminate the Regional Entities' discretion to define 'bulk electric system' without ERO or Commission review"; id. at 30 (same). In Order No. 743-A, FERC clarified that the primary aim of its rulemaking was to eliminate this unreviewed regional discretion, and it was not, as FERC had originally proposed, to create a uniform national definition that does not allow for any regional variation. Order No. 743-A, 134 FERC Â¶ 61,210 at P 11 ("We clarify that the specific issue the Commission directed the ERO to rectify is the discretion the Regional Entities have under the current bulk electric system definition to define the parameters of the bulk electric system in their regions without any oversight from the Commission or NERC."); id. at P 39 ("The Commission's suggested solution simply would eliminate regional discretion that is not subject to review by [NERC] or the Commission").Accordingly, the SDT could achieve the primary aim of Order No. 743 by simply rewriting the current definition to read:Unless a different definition has been developed by the Regional Reliability Organization and approved by NERC and FERC, the Bulk Electric System is defined as the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher.If the SDT uses this suggested language as its core definition, it will have addressed FERC's primary concern with a minimum of disruption to the current NERC system of definitions. The definition could then be further elaborated with the list of specific inclusions and exclusions of Elements and systems (modified as discussed below), to provide more specific guidance to the industry. In this connection, we note that a 200 kV threshold would be more appropriate for WECC than a 100-kV threshold. This is because generation in the West is generally located far from load, and power is generally transmitted from these generation sources to distant load centers on extremely high-voltage lines, usually operating in the range of 230-kV to 500-kV. Further, because loads are often dispersed across relatively broad geographic areas, especially in the rural West, 115-kV lines are frequently used in local distribution systems. See WECC Bulk Electric System Definition Task Force, Initial Proposal and Discussion, at pp. 11-16 (posted May 15, 2009) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx) (technical discussion showing that most transmission in the Western Interconnection operates at voltages greater than 200 kV). Accordingly, a 200-kV threshold with an "inclusion" mechanism to sweep in the relatively limited number of 115-kV lines in the West that perform a transmission function would be better suited to the typical topology of systems in the West than a 100-kV threshold with exceptions for facilities that operate as local distribution. That being said, we recognize that 200-kV may not be an appropriate threshold for other parts of the country and we are willing to support the SDT's approach as long as discretion is preserved for the WECC to develop a definition better suited to the conditions in the Western Interconnection. If the STD elects not to adopt one of the above suggestions, the core definition proposed on April 28 requires clarification. Specifically, as drafted, the proposed definition is ambiguous in that it is not clear whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause

Organization	Yes or No	Question 1 Comment
		("Reactive Power resources connected at 100 kV or higher") or the entire definition. To eliminate this ambiguity, we suggest that the proposed definition be reordered to read as follows:Bulk Electric System (BES): (A) Unless included or excluded in subpart B, the Bulk Electric System consists of: (1) all Transmission Elements operated at 100 kV or higher; (2) Real Power resources identified in subpart B; and, (3) Reactive Power resources connected at 100 kV or higher.(B) [the list of inclusions and exclusions, modified as discussed in our responses to questions 2 through 9]. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that would be inserted as Subpart B modifies each provision of Subpart A. Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart B of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Snohomish supports the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the Federal Power Act ("FPA"), 16 U.S.C. Â§ 824o. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."
Response: The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. The SDT elected to retain the 100 kV bright-line criteria. This is the bright line voltage level that is included in the existing approved definition of the Bulk Electric System in the NERC Glossary of Terms. While a number of stakeholders suggested alternate voltage levels, no technical justification was provided that would lead the SDT to make a change. One goal of this project is to add clarity to the definition without significantly changing the population of BES elements.		

Organization	Yes or No	Question 1 Comment
See the responses to comments regarding the Regulatory Requirements in Question 12 below. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
FHEC	Yes	Generally agree, but think E1 should be changed slightly to:From: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: To:E1 - Any radial system which is described as connected from a Transmission source originating with a single automatic interruption device and:
Response: See the responses to comments as well as a discussion of the latest revisions regarding the Radial Exclusion in Question 7 below.		
Vermont Transco	Yes	It appears that the SDT has made progress in addressing comments made to date. Concerned that facilities below 100 kV will fall into the current definition of BES. If changes in the wording better identified key areas the new definition would be easier to interpret, apply, and it would better align with the concerns of the members
Response: The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. The SDT elected to retain the 100 kV bright-line criteria. One goal of this project is to add clarity to the definition without significantly changing the population of BES elements. See the responses to comments regarding Local Distribution Facilities in Question 11 below. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
South Texas Electric Cooperative, Inc.	Yes	There is general confusion as to whether or not the “BES” is synonymous with the “BPS”. If this is so, then it should be expressly stated as such. If not, clarification should be provided to industry.
Response: The BES and BPS are not synonymous. The BES is a subset of the BPS. This has been stated in numerous documents, including Orders No. 693 (P76) and 743 (P36). No change made.		
FortisBC	Yes	We agree with the concept of a bright-line definition and commend the SDT for developing a concept of explicit inclusions and exclusions as part of the definition. This will reduce the number of exception

Organization	Yes or No	Question 1 Comment
		applications for some of the BES elements. However, the inclusion and exclusion requirements are extremely restrictive. For example, radial characteristics should not be limited by the amount of installed generation or single transmission source and/or require an interrupting device. Instead we believe that one or more transmission sources could feed the radial load to provide redundancy as long as there is adequate protection and isolation for improved customer-supply continuity and reliability. This should be considered radial as long as the loss of any transmission source does not affect, and is not necessary for, the operation of the interconnected transmission network. Further, it is imperative to understand that the NERC's revised definition will have a direct impact on entities across North America and will conflict with regulatory requirements, Codes, and Licenses. FERC in its Order 743 and 743A has directed NERC to address these concerns.We suggest the SDT and RoP teams should: o Carefully craft the exception criteria and procedure to be flexible and technically sound, to allow entities to adequately present their case to the ERO for inclusions or exclusions outside of the definition. o Include provisions in both the NERC exception criteria and exception process for federal, state and provincial jurisdictions. These provisions should provide clear guidance so that, if and when there are deviations from the exception criteria, they are properly identified with technical and regulatory justifications ensuring there is no adverse impact on the interconnected transmission network. This burden of proof should be left to the entity seeking exception because it may be difficult if not impossible to define the exception criteria. Further, if such an explicit criteria could be defined, it will in fact become another bright-line BES.
Response: See the responses to comments as well as a discussion of the latest revisions regarding the Radial Exclusion in Question 7 and the responses to comments regarding Regulatory Requirements in Question 12 below.		
Puget Sound Energy	Yes	E3. Local distribution networks (LDNs): In this exclsion criteria, it was unclear about the size of the LDN that could be excluded from BES. There was a limit on connected generation but not connected load. If there is any mention of total aggregate load served by this LDN then that would clarify the definition better. We would like to suggest using a limit say lesser than or equal to 300 MW of total aggregate load served by LDN could be excluded from BES definition in addition to all the 5 (a-e) characteristics mentioned.
Response: After extensive communication, the SDT has made changes to the draft Local Network definition to provide additional clarity. The draft definition now includes an upper voltage limit of 300 kV. The draft definition does not contain a limit on connected Load as no technical basis has yet been provided regarding this issue that would lead the SDT to make this change. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): **A** ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to		

Organization	Yes or No	Question 1 Comment
accommodate bulk power transfer across the interconnected system.		
Manitoba Hydro	Yes	We recommend that the definition be prefaced with the statement 'except where provided otherwise by applicable law...'
Response: The SDT has made revisions to the draft definition to clarify that the BES does not include facilities used in the local distribution of electric energy. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
City of Anaheim	Yes	I1: Change the "and" to an "or" at the end of the sentence, i.e. Exclusions E1 or E3. E3 (b): Use the same language in E1 (b), i.e. Only including generation resources not identified in Inclusions I2, I3, I4, and I5.
Response: The SDT has accepted your proposed change for Inclusion I1. The SDT has adopted the suggestion. Note that former Inclusions I2 and I3 have been combined into a new Inclusion I2. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
AltaLink	Yes	We agree with the concept of a bright-line definition and commend the SDT for developing a concept of explicit inclusions and exclusions as part of the definition. This will reduce the number of exception applications for some of the BES elements. However, the inclusion and exclusion requirements are extremely restrictive. For example, radial characteristics should not be limited by the amount of installed generation or single transmission source and/or require an interrupting device. Instead we believe that one or more transmission sources could feed the radial load to provide redundancy as long as there is adequate protection and isolation for improved customer-supply continuity and reliability. This should be considered radial as long as the loss of any transmission source does not affect, and is not necessary for, the operation of the interconnected transmission network. We suggest the SDT and RoP teams should: o Carefully craft the exception criteria and procedure to be flexible and technically sound, to allow entities to adequately present their case to the ERO for inclusions or exclusions outside of the definition. o Include provisions in both the NERC exception criteria and exception process for federal, state and

Organization	Yes or No	Question 1 Comment
		provincial jurisdictions. These provisions should provide clear guidance so that, if and when there are deviations from the exception criteria, they are properly identified with technical and regulatory justifications ensuring there is no adverse impact on the interconnected transmission network. This burden of proof should be left to the entity seeking exception because it may be difficult if not impossible to define the exception criteria. Further, if such an explicit criteria could be defined, it will in fact become another bright-line BES.
Response: See the responses to comments as well as a discussion of the latest revisions regarding the Radial Exclusion in Question 7. The SDT appreciates your comments and suggestions for the Rules of Procedure exception process and will consider them in its deliberations.		
Modern Electric Water Company	Yes	Taken by itself, the proposed core definition directly accomplishes the following: i) it re-affirms the 100kV bright-line and ii) it removes Regional discretion to define the BES. However, the language continues to inject ambiguity in that it introduces the use of the separately-defined capitalized term "Transmission". In NERC's Glossary of Terms (May 24, 2011), "Transmission" is defined in terms of function rather than voltage. Strictly interpreted, the core definition implies that only Elements used for the transfer of energy to points where it transformed for delivery to customers as well as certain resources are considered to be included in the BES. Under this viewpoint, there exists a two-stage qualifier for non-resource Elements - namely that it must first be used for Transmission and not for "Distribution", and secondly, that it be operated above 100kV. Rather, the BES cannot contain Elements used for "Distribution" (a term not explicitly defined, but extrapolated from other NERC glossary terms to mean the "wires" between the transmission system and the end-use customer, and NOT defined by voltage). If this is the case, the SDT has established that an Element's function is equally important to its voltage, and has simultaneously excluded all Transmission Elements under 100kV - even if used for bulk transfers. While the Exclusions detail characteristics of specific distribution-like Elements, we suggest that the core BES definition contain language explicitly excluding Distribution (there are Elements that are neither qualifying radials as defined in E1 nor local distribution networks as defined in E3).
Michgan Public Power Agency	Yes	My concern centers on the intent of FERC Order 743 language "we certify that this Final Rule will not have a significant economic impact on a substantial number of small entities" still falls short from being met by this definition change. This is a good start but additional work remains to be done. As pointed out in FERC Order 743A the 100 KV bright-line was not required but NERC can provide an alternative which can be supported technically. Also I have concerns for the FERC Order 743A language "facilities used in the local distribution of energy should be excluded from the revised bulk electric system definition" also needs additional work remains to be done.
Response: The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists.		

Organization	Yes or No	Question 1 Comment
The SDT elected to retain the 100 kV bright-line criteria. One goal of this project is to add clarity to the definition without significantly changing the population of BES elements. See the responses to comments regarding Local Distribution Facilities in Question 11 below. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
California Public Utilities Commission	Yes	The CPUC supports the changes, especially the exclusions and the flexibility given to facilities to prove that they are not part of the BES. However, the CPUC is concerned about the automatic imposition of deterministic standards that are arbitrary rather than technically-based: (1) the 100kV "bright line" test for transmission facilities, and the (2) 20 MVA threshold for generating units.In general, the current BES definition is largely deterministic rather than based on economics or probabilities. An arbitrary number such as a "bright line" test should not be the singular gauge for inclusion in the BES. A robust BES definition should consider the actual impact on the system and the cost. The courts have spoken on the issue, Illinois Commerce Commission v. Federal Energy Regulatory Commission, 576 F.3d 476, and instructed FERC to approve projects, "pricing scheme", only if the benefits outweigh the cost. Further, the 20 MVA threshold for generating facilities is coincident with the NERC threshold for registered entities. While a logical threshold to require generators to register with NERC, the required reliability assessments, and subsequent reliability upgrades may be prohibitively expensive for small generating units.
Response: The SDT elected to retain the 100 kV bright-line criteria. One goal of this project is to add clarity to the definition without significantly changing the population of BES elements. This is the bright-line voltage level that is included in the existing approved definition of the Bulk Electric System in the NERC Glossary of Terms. While a number of stakeholders suggested alternate voltage levels, no technical justification was provided that would lead the SDT to make a change. See the responses to comments as well as a discussion of the latest revisions regarding Generation Inclusions in Questions 3 and 4 below. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Sierra Pacific Power Co d/b/a	Yes	The revised core definition serves to address the directives of the Commission Order in 743 and 743A,

Organization	Yes or No	Question 1 Comment
NV Energy		particularly the elimination of regional discretion, and it also eliminates the ambiguity of the word “generally”.
City of St. George	Yes	The definition is okay as long as proper inclusions and exclusions are included in the definition.
Imperial Irrigation District	Yes	
SERC Planning Standards Subcommittee	Yes	
ACES Power Participating Members	Yes	
Utility System Efficiencies, Inc.	Yes	
Tennessee Valley Authority	Yes	
Arizona Public Service Company	Yes	
Western Electricity Coordinating Council	Yes	
Rayburn Country Electric Cooperative, Inc.	Yes	
Luminant Energy	Yes	
Central Maine Power Company	Yes	
New York State Electric & Gas and Rochester Gas & Electric	Yes	No comments
US Bureau of Reclamation	Yes	
Duke Energy	Yes	

Organization	Yes or No	Question 1 Comment
Alberta Electric System Operator	Yes	
South Carolina Electric and Gas	Yes	
MidAmerican Energy Company	Yes	
Florida Keys Electric Cooperative	Yes	
East Kentucky Power Cooperative, Inc.	Yes	
Farmington Electric Utility System	Yes	
Colorado Springs Utilities	Yes	
Sacramento Municipal Utility District (SMUD)	Yes	
GTC	Yes	
Idaho Power	Yes	
Long Island Power Authority	Yes	
PJM	Yes	
Oncor Electric Delivery Company LLC	Yes	
Xcel Energy	Yes	
Golden Spread Electric	Yes	

Organization	Yes or No	Question 1 Comment
Cooperative, Inc.		
Exelon	Yes	
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	Yes	No comment.
Response: Thank you for your support. Many stakeholders suggested revisions to the definition – and the drafting team made modifications that were responsive to theses suggestions. Please see the revised definition.		

2. Q2. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: The SDT has made changes to Inclusion I1 of the BES definition based upon comments received from the industry. These changes in the revised definition include removing the Generator Step-Up and Phase Angle Regulating transformer language, changing the wording from "windings" to "terminals", and adding the terms "primary" and "secondary".

I1 - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.

Organization	Yes or No	Question 2 Comment
Tri-State Generation and Transmission Association, Inc.	No	We recommend changing I1 to the following: "Only transformers, including phase angle regulators, with two or more windings of 100 kV or higher that are connected through automatic fault-interrupting devices, unless excluded under Exclusions E1 and E3." "Only" is required to prevent a regional interpretation that includes distribution transformers since they are never specifically excluded. The phrase regarding GSUs is removed since they are covered in I2 and I3.
Response: The SDT has addressed the issue of transformers serving local networks in the revised Exclusion E3 for the Local Network portion of the revised version of the definition. A transformer serving a local network could be considered an "Element" that is part of the local network and would be excluded if so justified by the characteristics of the exclusion. No change made. The SDT agrees with your comment regarding GSUs and has made the appropriate revision in the revised version of the definition. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
NERC Staff Technical Review	No	Inclusion I1 is acceptable in general; however, there are two items that should be modified.>>>>>>>>>> The reference to "two windings" is technically incorrect because it would exclude autotransformers with two terminals at 100 kV or higher since the primary and secondary terminals are connected to the same winding. It would be better to replace the phrase "with two windings of 100 kV or higher" with the phrase "with two or more terminals connected at 100 kV or higher.">>>>>>>>>> The phrase "other than Generator Step-up (GSU) transformer" is unnecessary. The qualifier "with two or more terminals connected at 100 kV or higher" already will exclude GSU transformers. In unusual cases in which a generator is connected to the system through a transformer that does have two terminals connected at 100 kV or higher the transformer should be included by Inclusion I1.

Organization	Yes or No	Question 2 Comment
Response: The SDT has made appropriate changes in the revised version of the definition regarding both comments. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
NERC Transmission Issues Subcommittee (TIS)	No	It is not necessary to exclude generator step-up transformers because a GSU should be considered to be part of the generating Unit. >>>>>>>>>>> The reference to two windings is technically incorrect because it would exclude autotransformers which technically only have one winding. It would be better to say that both the high-side and the low side of the transformer connected at 100 kV or higher. >>>>>>>>>>> "I1 - Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings both the high-side and the low side of the transformer connected at 100 kV or higher unless excluded under Exclusions E1 and E3."
Response: The SDT has deleted the GSU language in the revised Inclusion I1. The SDT has changed the wording from "windings" to "terminals" in the revised version of the definition. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
Dominion	No	While Dominion appreciates the SDT's attempt to respond to initial comments, unfortunately the response does not squarely address Dominion's concerns. Rather, the SDT proposes that all transformers, whether for transmission or generation should be included. The SDT's response to SERC also seems to indicate that the facility associated with generators should be included in the BES. In order to provide clarity Dominion restates its comment. Dominion's position is that all transformers with two windings at 100 kV or higher should be included in the BES. Dominion does not agree that a transformer with two windings at 100 kV or higher should be excluded merely because it is a generator step up (GSU). And, while Dominion does not agree that a generation resource, Element or Facility should automatically be classified as part of the BES, if the SDT decides to do so, then it is Dominion's position that the GSU should also be included in the BES. It doesn't seem to make sense to include the generator itself, but exclude an associated element that is operated at 100 kV or above. If the SDT's intent was to 'carve out' GSUs in Inclusion -I1, but to include GSUs in Inclusion I2 and 3, then Dominion suggests revising the phrase "....including the generator terminals through the GSU...." to read "....including the generator terminals and the GSU."
Response: The SDT agrees with the inclusion of all generation and transmission transformers and has attempted to provide clarity in the revised version of the		

Organization	Yes or No	Question 2 Comment
definition. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
Overton Power District No. 5	No	clarification is needed to identify which transformers to include in the BES
Tennessee Valley Authority	No	We suggest I1 to read, “Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, having two windings of 100 kV or higher, unless excluded under Exclusions E1 or E3. Transformers having only one winding of 100 kV or higher are excluded.”
Central Maine Power Company New York State Electric & Gas and Rochester Gas & Electric	No	By definition above, a transformer with a 100 kV winding is already an “element operated at 100 kV or above.” This inclusion is actually intended to exclude transformers with only one winding operated at 100 kV or higher voltage. Therefore, Inclusion I1 should be deleted and a new Exclusion should be made: “Transformers with only one winding of 100 kV or higher, including phase angle regulators, unless included under Inclusions I2, I3, or I5.”
Hydro-Quebec TransEnergie	No	Since transformers are already part of "all transmission Elements operated at 100 kV and above" in the definition, and since inclusions I2 to I5 are commonly related to only generation, I1 should be removed and replace instead by the following Exclusion: Ex "Transformers not used as Generator Step-Up (GSU) transformers that have primary or secondary winding at less than 100 kV."
Consumers Energy Company	No	The facilities currently listed in Inclusion I1 are already arguably included in the core definition. Inclusion I1 should be reclassified as an Exclusion to cover transformers that do not meet the criteria in Inclusion I1 such as those transformers with a single winding of 100kV or higher. Following is our proposed language for the exclusion we are proposing. Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, that have less than two windings of 100 kV or higher.
Southern California Edison Company	No	Identifying specific equipment within the “Inclusions” or “Exclusions” component is too prescriptive, and itemizing them in this fashion misses the intent of this endeavor which should be to ultimately ensure the risks to region wide reliability are captured.Therefore, it is SCE’s position that the proposed BES Definition should not single out specific pieces of equipment, and that they should be included or excluded based on the criteria of the definition. To do otherwise could: (i) generate confusion due the many types and variations of equipment, and what should/should not be included In the BES; and(ii) include radial or distribution systems into scope that might not otherwise have been considered, and which pose no regional reliability risk. If the BES Definition continues to reference transformer types, it should clarify what specific attributes qualify for inclusion. This might best reside in companion documentation that would accompany the definition to ensure

Organization	Yes or No	Question 2 Comment
		consistency in application.
Clark Public Utilities	No	Transformers should only be part of the Bulk Electric System if they are transforming voltage from one BES element to another BES element. The current inclusion language would apply to all transformers with two windings operated at greater the 100 kV subject to the E1 and E3 exclusions. There is no indicated exclusion referring to the exception process. If a facility is excluded from the BES by the exception process, connected transformers should also be excluded. Clark believes if the inclusion language was changed slightly, the exclusion references to E1 and E3 would not be necessary. Without this change, it appears that a transformer with two winding connected to greater than 100 kV would be a BES asset even if both of the facilities these windings were connected to had been excluded (E1 or E3) or excepted (BES Exception Process). I1 should be rewritten to state: Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings of 100 kV or higher connected to Transmission Elements determined to be part of the Bulk Electric System.
Independent Electricity System Operator	No	We agree with the concept of Inclusion I1. We suggest that since transformers with at least two windings greater than 100 kV are already part of "all transmission Elements operated at 100 kV and above" in the definition, and since inclusions I2 to I5 are commonly related to only generation, Inclusion 1 should be removed and replace by the following Exclusion: E(x)"Transformers that have a primary or secondary winding at less than 100 kV except for those included by I2 and I3"
BPA	No	Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings of 100 kV or higher unless excluded under Exclusions E1 and E3.
American Municipal Power and Members Florida Municipal Power Agency	Yes	We support I2, but propose clarifying edits. To minimize possible confusion as to the category of transformers being addressed in I1, and the sufficiency of a single applicable Exclusion, we suggest the following rewording: "Transformers, including phase angle regulators, and not including generator step-up (GSU) transformers, with two windings of 100 kV or higher unless excluded under Exclusion E1 or E3."
Transmission Access Policy Study Group	Yes	To minimize possible confusion as to the category of transformers being addressed in I1, and the sufficiency of a single applicable Exclusion, TAPS suggests the following rewording: "Transformers, including phase angle regulators, and not including generator step-up (GSU) transformers, with two windings of 100 kV or higher unless excluded under Exclusion E1 or E3."
Northern California Power Agency	Yes	NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.

Organization	Yes or No	Question 2 Comment
Illinois Municipal Electric Agency	Yes	With the following clarifying edits. "Transformers, including phase angle regulators, and not including generator step-up (GSU) transformers, with two windings of 100 kV or higher unless excluded under Exclusion E1 or E3."
Idaho Power	Yes	I generally agree but the definition accidently excludes autotransformers. It should be restated as transformers with two terminal at or above 100 kV. Also, there should be clarification about any tertiary windings that a transformer might have. I would assume that the tertiary winding and any real or reactive load or generation connected to it to be excluded as the tertiary winding are typically of distribution class voltage. Finally, there is no need to exclude GSUs in this definition because they will be excluded unless the two terminals are at 100 kV or above. Additionally, the GSUs will be covered by other inclusion statements related to generators.
Xcel Energy	Yes	The drafting team should consider how components such as autotransformers would be considered under this aspect, and if additional language needs to be added to clearly include certain autotransformers.
Response: The SDT has revised Inclusion I1 to provide more clarity on specifically which transformers are included in the BES. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
Western Montana Electric Generating and Transmission Cooperative	No	In concept, we support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams noting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort. Also, the reference to "two windings of 100 kV or higher" may create some confusion because many three-phase transformer banks have 6 or 9 windings, depending on whether the transformer has a tertiary. We suggest clarifying this provision by changing the clause reference two windings to read: "the two highest voltage transformer windings of 100 kV per phase that are connected to the Bulk Electric System." We again urge the SDT to consider further delineation of points of demarcation similar to WECC BESDTF

Organization	Yes or No	Question 2 Comment
		Proposal 6.
Sierra Pacific Power Co d/b/a NV Energy	No	We agree with the concept; however there are two issues that must be resolved. First, the "two windings" language should be changed to "two terminals", as in the case of an auto-transformer, there is technically only one winding, and it would fail to be included in this inclusion designation as written. Second, a literal read could have an unintended interpretation that transformers with fewer than 2 windings at 100kV might still be included through the core definition. The SDT should consider whether this I1 inclusion item would be better applied in the converse as an exclusion designation.
Chelan PUD – CHPD Northwest Requirements Utilities Big Bend Electric Cooperative, Inc. Cowlitz County PUD	No	In concept, we support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams noting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort. Also, the reference to "two windings of 100 kV or higher" may create some confusion because many three-phase transformer banks have 6 or 9 windings, depending on whether the transformer has a tertiary. We suggest clarifying this provision by changing the clause reference two windings to read: "the two highest voltage transformer windings of 100 kV per phase that are connected to the Bulk Electric System."We again urge the SDT to consider further delineation of points of demarcation similar to WECC BESDTF Proposal 6.
Public Utility District No. 1 of Snohomish County, Washington Clallam County PUD No.1	Yes	In concept, we support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT

Organization	Yes or No	Question 2 Comment
		should be able to provide much useful guidance to the industry with relatively little additional effort. Also, the reference to "two windings of 100 kV or higher" may create some confusion because many three-phase transformer banks have 6 or 9 windings, depending on whether the transformer has a tertiary. We suggest clarifying this provision by changing the clause referencing two windings to read: "the two highest voltage transformer windings of 100 kV per phase that are connected to the Bulk Electric System."
Response: The SDT has changed the wording from "windings" to "terminals" in the revised version of the definition. The SDT has revised Inclusion I1 to provide more clarity on specifically which transformers are included in the BES. The SDT will consider the suggestions to incorporate the WECC work into its effort. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
PacifiCorp	No	Transformers with two or more windings greater than 100 kV exclusively serving local distribution networks should be excluded from the BES.
Response: The SDT has addressed the issue of transformers serving local networks in the revised Exclusion E3 for the local network portion of the revised version of the definition. A transformer serving a Local Network could be considered an "Element" that is part of the local network and would be excluded if so justified by the characteristics of the exclusion. No change made.		
Electric Reliability Council of Texas, Inc.	No	ERCOT ISO agrees that such equipment should be considered for inclusion, but suggests that these issues be addressed relative to the criteria for evaluation in the exception process. In other words, this inclusion doesn't need to be explicitly identified. It would simply be included under the general 100 kV threshold, and to the extent an owner believed the characteristics of its equipment don't warrant inclusion, it would seek an exception.
Response: The SDT believes the BES definition should be "bright-line" criteria and be able to include a very high percentage of the facilities by inspection. The exception criteria and process is meant to handle very few facilities. The BES definition and exemption process have been developed under this guiding concept. No change made.		
Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)	No	Inclusion I1 would be unlawful to the extent that it would include the transformers of retail customers that have self-provided "hard-tapped" facilities behind the retail delivery point. (For the purposes of these Comments, "hard-tapped" means connected without an automatic fault-interrupting device).
Response: The SDT believes that retail customer transformers could be excluded based upon Exclusions E1 or E3. No change made.		

Organization	Yes or No	Question 2 Comment
Kootenai Electric Cooperative Public Utility District No. 1 of Franklin County Midstate Electric Cooperative	No	In concept, Kootenai supports the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams noting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort. We again urge the SDT to consider further delineation of points of demarcation similar to WECC BESDTF Proposal 6.
Blachly Lane Electric Cooperative PUD No. 2 of Grant County, Washington Central Electric Cooperative Clearwater Power Company Consumers Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Inc. Okanogan Electric Cooperative PNGC Power Raft River Rural Electric Cooperative Salmon River Electric	Yes	We support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. We note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort.

Organization	Yes or No	Question 2 Comment
Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative		
Northern Wasco County PUD	No	In concept, we support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams noting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort. Also, the reference to "two windings of 100 kV or higher" may create some confusion because many three-phase transformer banks have 6 or 9 windings, depending on whether the transformer has a tertiary. We suggest clarifying this provision by changing the clause reference two windings to read: "the two highest voltage transformer windings of 100 kV per phase that are connected to the Bulk Electric System."We again urge the SDT to consider further delineation of points of demarcation similar to WECC BESDTF Proposal 6.
Response: The SDT will consider the suggestions to incorporate the WECC work and FRCC work into its effort.		
Public Utilities Commission of Ohio	No	FERC jurisdiction is limited by the Federal Power Act, Section 215. To make a bright line designation as the starting point, without a demonstration that ALL facilities at 100 kV and greater affect the reliability of the bulk power system is a step beyond FERC jurisdictional boundaries. The Federal Power Act explicitly excludes facilities used in local distribution from the bulk power system. NERC should give serious consideration to other (non bright-line) approaches to ensure bulk system reliability.
Response: The task of the SDT is to put forward a 100 kV bright-line for the BES definition. The SDT has modified the definition and distribution facilities are now specifically excluded from the BES. However, the SDT acknowledges that there may still be regulatory conflicts as many of the commenters have voiced. The definition is neither intended to nor can it supersede any regulatory orders and/or rulings by relevant Federal, State, or Provincial Authorities. Although the SDT can not resolve all regulatory conflicts, it believes that a) proposed revisions to the definition should address many of these concerns; and b) remaining issues may be effectively addressed by the Rules of Procedure exception procedure currently under development. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and		

Organization	Yes or No	Question 2 Comment
		Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.
The Dow Chemical Company	No	An additional exclusion for industrial distribution facilities needs to be added for the reasons expressed in Dow's comments on Exclusion E3. Dow's manufacturing sites have transformers, other than generator step up transformers, that have two windings of 100 kV or higher and that are between on-site generation and individual manufacturing plants at such sites. Such transformers should be excluded, because they are part of electricity distribution facilities. However, such transformers do not fall within proposed Exclusion E1 or E3.
Response: If a manufacturing site's facilities cannot meet the exclusion criteria, then those facilities must be part of the BES. There may be instances where customer facilities are part of the BES. See response to Question 9. No change made.		
Central Lincoln	No	We support the SDT's intent, but it is unclear from the language how single winding transformers (autotransformers) are handled. We suggest replacing "two windings..." with "two sets of terminals...." Please also indicate how transformers with only one set of terminals above 100 kV are treated, since we don't believe the flowchart at http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf properly expresses the SDT's intent to classify these transformers as non-BES.
United Illuminating	No	Inclusion I1 is an attempt to limit the scope of the core definition to only those transformers with a high and low side connection at or above 100 kV. However it is not clear that a transformer connected solely on the high side at 100 kV, that is a distribution transformer, is not included in the BES by the definition. This is because the core definition includes all transmission elements connected at 100 kV, this would include the distribution transformer. Then Inclusion I1 does not eliminate the distribution transformer explicitly. It is only implied that the core definition applies only to those transformers with a high and low side connection at or above 100 kV. UI would prefer a more explicit description. Such as: I1- Only those Transformers, including phase angle regulators, with two windings of 100 kV or higher unless excluded under Exclusions E1 and E3 are included in the definition of BES. Generator Step Up Transformers are included based on the generator. A similar comment can be made for the other inclusions. An alternative solution is to change word Inclusions to a sentence that explicitly states: for the category of element below only include the type of equipment specified. Also The use of the descriptor two windings implies auto transformers with one winding is excluded. UI understands that is not the intent of the team.
Response: The SDT has changed the wording from "windings" to "terminals" in the revised version of the definition. The SDT has revised Inclusion I1 to provide more clarity on specifically which transformers are included in the BES.		

Organization	Yes or No	Question 2 Comment
Transformers with only one set of terminals operated above 100 kV would not be included in the BES. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
Oncor Electric Delivery Company LLC	No	The reference to two windings is technically incorrect because it would exclude autotransformers which technically only have one winding. Recommend rephrasing this to say that both the high-side and the low side of the transformer connected at 100 kV or higher.I1 Suggested Language:"I1 - Transformers, including phase angle regulators, with both the high-side and the low side of the transformer connected at 100 kV or higher unless excluded under Exclusions E1 and E3."
Manitoba Hydro	No	Inclusion I1 requires clarification. The intention of I1 is to include transformers that have both their primary and secondary windings operated at 100kV and the wording in I1 should reflect this. Requiring that only 'two windings' must be connected at 100kV or greater for inclusion is not sufficient in the case of 3 separate single phase banks connected to form a delta-wye connection for example. As currently written, even if only the primary windings of this bank were connected at greater than 100kV, this transformer would be included in the BES regardless of the secondary voltage. -Suggested wording: "Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, that are connected at 100kV or above on their primary and secondary windings unless excluded under Exclusions E1 and E3.OR"Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings of 100 kV or higher in the same phase unless excluded under Exclusions E1 and E3."
Tacoma Power		Tacoma Power agrees with Inclusion I1. However, we believe the reference to 'two windings' is ambiguous and propose changing it to read,"Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, with two or more connections to Elements at 100 kV or higher, unless excluded under Exclusions E1 and E3."
Western Electricity Coordinating Council	Yes	WECC agrees in concept and understands that the intent of the phrase "other than GSU transformers" was used to prevent duplication or conflict with I2. However, it has the unintended consequence of creating the appearance that GSU transformers are not included in the definition, which is more of a conflict. By removing this phrase, such transformers would be clearly included because, if both terminals are connected at greater than 100 kV, it will also be true that the high side is connected at greater than 100 kV, per I2. WECC suggests removing this phrase. Also, the final statement more appropriately should be "...unless excluded under Exclusions E1 or E3."

Organization	Yes or No	Question 2 Comment
		Finally, the term "two windings" may be technically incorrect because some transformers may only have one winding. This wording would exclude single-winding transformers at or above 100 kV. One option may be to change the language to "two terminals" instead of "two windings." It may also be useful to clarify that transformers with one terminal above and one terminal below 100 kV should be excluded.
Portland General Electric Company	Yes	The reference to "two windings" will cause confusion. Presumably theStandard Drafting Team means two three-phase windings, which would mean that boththe high sides and the low sides of a typical transformer bank would have to beoperating at 100kV and above in order to be part of the BES. In other words, a230kV/57kV transformer would not be included, despite the fact that all three windingsthat make up the high side are individually rated at over 100kV. The inclusion needs tomake clear that it's talking about two or more sets of windings, each set consisting ofthree phases.
Sacramento Municipal Utility District (SMUD)	Yes	Sacramento Municipal Utility District (SMUD) agrees with the concept of Inclusion 1. However, to ensure a clarity of the "Bright-Line" criteria, two items for the Drafting Team (DT) to consider are: 1) removal of the phrase other than GSU as it may lead to confusion. The GSUs typically have one winding below 100 kV that disqualify their inclusion. 2) Reference to the transformer terminals each above 100 kV would reduce confusion for single winding transformers and multiple winding transformers.
Long Island Power Authority	Yes	For clarification it is recommended that "windings" be replaced with "connection points".
Modern Electric Water Company	Yes	The use of "terminals" rather than "windings" might be more clear.
Response: The SDT has changed the wording from "windings" to "terminals" in the revised version of the definition. The SDT has revised Inclusion I1 to provide more clarity on specifically which transformers are included in the BES. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
Consolidated Edison Co. of NY, Inc.	No	Recommended changes to the wording used in Inclusion I#1, et al:Formatting - When referring to an Inclusion (or Exclusion), the SDT should use a number/pound sign ("#") between the "I" and number to avoid confusing "I" with the numerical value "1."
Response: The comment isn't related to the question and will be considered by the technical writers when the final draft is written. No change made.		

Organization	Yes or No	Question 2 Comment
ATCO Electric		While we agree generally with the inclusion, we have some questions based on specific examples: 1. A load substation has two 144/25kV transformers that connects to two separate 144kV transmission lines (i.e. two separate 144kV buses). However, the two transformers joins on one 25kV bus. Should these two 144/25kV transformers be part of BES? 2. A protection relay is on 72kV side of a 144/72 tie transformer and its purpose is to remove 72kV weak source (i.e. trip 72kV breakers) during 144kV bus fault. Should this protective relay be included in BES? 3. According to Inclusion I1, a 144/25kV transformer is not a BES element. The transformer's 144kV side has a Motor Operated Disconnecting Switch (MOD), and this MOD connects to one or two 144kV line breakers. The transformer's protections trip the 144kV line breakers. Should the transformer protection systems be part of BES?
Response: 1. The two transformers cited in the comment would not be part of the BES based upon Inclusion I1 of the definition. 2. This relay cited in the comment would not be part of the BES because it trips a less than 100 kV interrupting device. 3. The substation configuration would need to be reviewed before a determination could be made on whether the protection system cited in the comment is part of the BES. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
MRO's NERC Standards Review Forum	Yes	Please clarify that an exclusion would be a tertiary winding for example an auto transformer.
Response: The SDT has revised Inclusion I1 to provide more clarity on specifically which transformers are included in the BES. As an example, a 345/138 kV transformer with a 23 kV tertiary winding would be included in the BES. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
ACES Power Participating Members	Yes	We agree with limiting transformers to bulk power transformers and not including step-down or distribution transformers. Some regions have been enforcing standards on protection equipment that is on the low-side of these step-down or distribution transformers. Additional language further clarifying that this low-side protection equipment is not part of the BES should be added to for consistency across regions.Additionally, the drafting team might consider using the terms primary and secondary rather than windings. Otherwise,

Organization	Yes or No	Question 2 Comment
		autotransformers which have a sing
Response: The SDT has changed the wording from "windings" to "terminals" in the revised version of the definition. The SDT has revised I1 to provide more clarity on specifically which transformers are included in the BES. Associated protection system equipment will be handled separately via the PRC standards. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
Hydro One Networks Inc	Yes	We agree with the concept of Inclusion I1. However, we suggest that since transformers are already covered by the definition, "all transmission Elements operated at 100 kV and above", and since Inclusions I2 to I5 are commonly related to generation only, Inclusion I1 should be removed and replaced by the following Exclusion: E(x) "Transformers not used as Generator Step-Up (GSU) transformers that have primary or secondary winding at less than 100 kV." We also suggest the SDT to put forward a high-level exception criteria with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) mentioned in Inclusion I1, or any other inclusion(s). These inclusion(s) that are intended for exemption would be based on the entity's technical assessment, evidence and justification for its unique characteristics, configuration, and utilization.
Response: The SDT has revised Inclusion I1 to provide more clarity on specifically which transformers are included in the BES. The SDT believes the BES definition should be "bright line" criteria and be able to include a very high percentage of the facilities by inspection. The exemption criteria and process is meant to handle very few facilities. The BES definition and exemption process have been developed under this guiding concept. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
FHEC	Yes	Believe that the NERC Statement of Compliance Registry Criteria should be revised to reflect only thsese inclusions and exclusions. An entity with no assets that meet this definition should be allowed to de-register.
Response: Revision of registry criteria is not part of this project. No change made.		
Vermont Transco	Yes	This inclusion's wording allows an entity to easily identify which of its transformers will be included as BES and also adheres directly to the FERC identified 100kV or higher equipment. Question: if a transformer does not have two windings of 100 kV or higher but does have protection devices that could open the BES system, e.g. due to a low-voltage failed breaker scenario, would the protective devices be part of the BES even

Organization	Yes or No	Question 2 Comment
		though the transformer itself is not?
Response: Associated protection system equipment will be handled separately via the PRC standards. No change made.		
National Grid	Yes	We would like some clarification regarding three-winding transformers, for example a 345/115/23 kV transformer. Was the intention to include the 23kV in the new definition of BES? If so, it seems likely that other 23 kV components on the buswork could be pulled into the definition of BES if it is in the zone of protection of the transformer.
Response: The cited 345/115/23 kV transformer in the comment would be included in the BES since it has both primary and secondary terminals operated above 100 kV. The SDT has changed the wording from "windings" to "terminals" in the revised version of the definition. The SDT has revised Inclusion I1 to provide more clarity on specifically which transformers are included in the BES. The 23 kV facilities would not be included in the BES. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
City of Redding	Yes	Redding supports the concept of additional inclusions to the brightline if the objective is to further hone the generalness of the proposed definition. As we stated in question #1, we support the definition as long as an entity has the ability to seek an exception via a fair and objective Exception Process. If the SDT keeps inclusion 1, we believe it is overly broad and should have additional clarification added to address the various types of transformers such as auto transformers, three phase "Y" transformers, transformers with tertiary windings, etc. Additionally, the exclusion "other than generator step-up (GSU) transformers" could easily be interpreted to mean "all" GSU transformers regardless of voltage. Redding suggests that I1 be changed to read: "*Transformers, including phase angle regulators, with both high side and low side windings connected at 100 kV or higher unless excluded under E1 or E3 and generator step-up (GSU) transformers, serving generators in I2 and I3, with the high-side winding connected at 100 kV or higher.*"
FortisBC	Yes	We agree with the concept of Inclusion I1. However, we suggest that since transformers are already covered by the definition, "all transmission Elements operated at 100 kV and above", and since Inclusions I2 to I5 are commonly related to generation only, Inclusion I1 should be removed and replaced by the following Exclusion: E(x) "Transformers not used as Generator Step-Up (GSU) transformers that have primary or secondary winding at less than 100 kV." We also suggest the SDT to put forward a high-level exception criteria with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) mentioned in Inclusion I1, or any other inclusion(s). These inclusion(s) that are intended for exemption would be based on the entity's technical assessment, evidence and justification for its unique characteristics, configuration, and

Organization	Yes or No	Question 2 Comment
		utilization.
AltaLink	Yes	We agree with the concept of Inclusion I1. However, we suggest that since transformers are already covered by the definition, "all transmission Elements operated at 100 kV and above", and since Inclusions I2 to I5 are commonly related to generation only, Inclusion I1 should be removed and replaced by the following Exclusion: E(x) "Transformers not used as Generator Step-Up (GSU) transformers that have primary or secondary winding at less than 100 kV."We also suggest the SDT to put forward a high-level exception criteria with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) mentioned in Inclusion I1, or any other inclusion(s). These inclusion(s) that are intended for exemption would be based on the entity's technical assessment, evidence and justification for its unique characteristics, configuration, and utilization.
Response: The SDT believes the BES definition should be "bright-line" criteria and be able to include a very high percentage of the facilities by inspection. The exemption criteria and process is meant to handle very few facilities. The BES definition and exception process have been developed under this guiding concept. The SDT has revised Inclusion I1 to provide more clarity on specifically which transformers are included in the BES. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
Springfield Utility Board	Yes	In concept, SUB supports an attempt to provide a clear demarcation between BES and non-BES elements. The WECC Bulk Electric System Definition Task Force (BESDTF) has devoted considerable effort to this question and has developed one-line diagrams which note the BES demarcation point for a number of different kinds of elements that are common in the Western Interconnection.
Springfield Utility Board	Yes	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of

Organization	Yes or No	Question 2 Comment
		inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
Response: The SDT will consider the suggestions to incorporate the WECC work into its effort. See the answers to Questions 7, 8, and 9 related to generation.		
New England States Committee on Electricity	Yes	Inclusion I1 now appears to exclude transformers that connect the BES to the sub transmission networks (the sub transmission elements connected to one of the windings is less than 100 kV). This suggests that the intent of this language is to exclude such transformers and all sub transmission elements (unless included by the other Inclusion criteria) from the BES. With that understanding, NESCOE supports Inclusion I1.
Southwest Power Pool	Yes	SPP agrees that such equipment should be included, but suggests that these issues be addressed in the exception process. In other words, this inclusion doesn't need to be explicitly identified. It would simply be included under the general 100 kV threshold, and to the extent an owner believed the characteristics of its equipment don't warrant inclusion, it would seek an exception, which can be for either an exclusion or an inclusion.
City of Anaheim	Yes	Change the "and" to an "or" at the end of the sentence, i.e. Exclusions E1 or E3.This appears to be the intent.
Response: The SDT has revised Inclusion I1 to provide more clarity on specifically which transformers are included in the BES. Your understanding is correct. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
Michgan Public Power Agency	Yes	
Sweeny Cogeneration LP	Yes	Transmission system transformers are not part of our existing or anticipated base of facilities.
Western Area Power Administration	Yes	Appreciate the bullet comments that help explain the reasoning for the inclusion.
Public Service Enterprise Group LLC	Yes	
Northeast Power Coordinating	Yes	

Organization	Yes or No	Question 2 Comment
Council		
Imperial Irrigation District	Yes	
Santee Cooper	Yes	
SPP Standards Review Group	Yes	
SERC Planning Standards Subcommittee	Yes	
SERC OC Standards Review Group	Yes	
National Rural Electric Cooperative Association (NRECA)	Yes	
Arizona Public Service Company	Yes	
ReliabilityFirst	Yes	
Rayburn Country Electric Cooperative, Inc.	Yes	
New York State Reliability Council	Yes	
New York Power Authority	Yes	
Southern Company	Yes	
Luminant Energy	Yes	
Intellibind	Yes	

Organization	Yes or No	Question 2 Comment
US Bureau of Reclamation	Yes	
Grand Haven Board of Light and Power	Yes	
Glacier Electric Cooperative	Yes	
South Texas Electric Cooperative, Inc.	Yes	
South Texas Electric Cooperative, Inc.	Yes	
Dayton Power and Light Company	Yes	
ExxonMobil Research and Engineering	Yes	
Duke Energy	Yes	
Alberta Electric System Operator	Yes	
South Carolina Electric and Gas	Yes	
Fayetteville Public Works Commission	Yes	
MidAmerican Energy Company	Yes	
Florida Keys Electric Cooperative	Yes	
American Electric Power	Yes	

Organization	Yes or No	Question 2 Comment
East Kentucky Power Cooperative, Inc.	Yes	
American Transmission Company, LLC	Yes	
Farmington Electric Utility System	Yes	
Colorado Springs Utilities	Yes	
Muscatine Power and Water	Yes	
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	Yes	No comment.
Exelon	Yes	
City of St. George	Yes	
Puget Sound Energy	Yes	
GTC	Yes	
Cogentrix Energy, LLC	Yes	
Pepco Holdings Inc	Yes	
PJM	Yes	
ISO New England, Inc.	Yes	

Organization	Yes or No	Question 2 Comment
MEAG Power	Yes	
Orange and Rockland Utilities, Inc.	Yes	
Golden Spread Electric Cooperative, Inc.	Yes	
Idaho Falls Power	Yes	It seems reasonable to conclude that such transformers would belong in a classification that comprises the BES.
Response: Thank you for your support. The SDT has made changes to Inclusion I1 of the BES definition based upon other stakeholder comments. These changes in the revised definition include removing the Generator Step-Up and Phase Angle Regulating transformer language, changing the wording from "windings" to "terminals", and adding the terms "primary" and "secondary". Please see the revised definition.		

3. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration:

After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.

Changes have been made to Inclusion I2 for clarity.

I~~3~~2 - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.

Organization	Yes or No	Question 3 Comment
Public Service Enterprise Group LLC	No	See comment 1 above.
Response: See response to Q1 above.		
Northeast Power Coordinating Council	No	I2 should pertain to individual generating units, but the entire path should not be labeled as BES. Oftentimes there are cases when neither the path nor a 20 MVA unit itself will have any impact on the reliability of the interconnected transmission network, nor is it necessary for its operation. The path to generating facilities does not need to be BES contiguous. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require a contiguous path unless the unit is identified essential for the operation of transmission network.

Organization	Yes or No	Question 3 Comment
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The definition for this inclusion only addresses BES contiguity from the generator leads through the generator step up transformer which is connected on the high side at a voltage of 100 kV or above. This establishes contiguity of the generation facility and provides for the highest level of reliable service (generation) to the BES. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
NERC Staff Technical Review	No	The interconnection voltage threshold should be removed. The contribution of a generator to system reliability is a function of its MVA rating rather than its interconnection voltage. All generating units greater than 20 MVA should be included in the BES definition because all such units provide similar contributions to system reliability. >>>>>>>>>> Also, the specific inclusion of the GSU transformer implies that all other components of a generating unit, such as its unit auxiliary transformer, start-up transformer, governor, exciter, power system stabilizer, etc., are excluded. The SDT should define "generating unit" or otherwise clarify which components of a generating unit are included in the BES definition.
Response: The SDT has changed the terminology in the definition to include "generating resources" for clarity. Balance of Plant equipment is not included in the contiguous path of the generator and therefore does not fall under the definition. The SDT carefully debated the generating threshold for inclusion in the definition. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
NERC Transmission	No	It is commonly understood that a generating unit includes the generator itself, and all of the

Organization	Yes or No	Question 3 Comment
Issues Subcommittee (TIS)		components that connect it to the grid, including the GSU. The specific inclusion of the GSU implies that other components of a generating unit, such as its auxiliary transformers and loads, the governors, exciters, etc., are not included. >>>>>>>>>>> The TIS suggests the following wording: >>>>>>>>>>>"I2 - Individual generating units greater than 20 MVA (gross nameplate rating) generator terminals through the GSU which has a high side connected at a voltage of 100 kV or above."
Response: The SDT has changed the terminology in the definition to include "generating resources" for clarity. Balance of Plant equipment is not included in the contiguous path of the generator and therefore does not fall under the definition. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Dominion	No	As stated in its response to Question 2 above, Dominion disagrees that a generation resource, Element or Facility should automatically be included in the BES. Dominion agrees that the Generator Owner and Generator Operator, as users of the bulk power system, should have to abide by applicable reliability standards, but do not agree that this should automatically require the inclusion of a generation resource, Element or Facility in the BES. Further, Dominion prefers that the SDT use the term "generation resources" as stated in the current BES definition contained in the Glossary of Terms instead of the proposed term "generating unit".
Response: The SDT has changed the terminology in the definition to include "generating resources" for clarity. The SDT carefully debated the generating threshold for inclusion in the definition. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		

Organization	Yes or No	Question 3 Comment
SPP Standards Review Group	No	With the inclusion of a voltage criteria in the definition an inconsistency is created between Elements that are not a part of the BES but are still required to be part of the NERC Compliance Registry. Does this create an issue? Did the SDT intend to create this inconsistency? A large generating unit or group of units that are connected to the interconnection via 69kV does not qualify as a part of the BES. Although the generation level could be substantial, it is still not a part of the BES. If said generation is 20 MVA or 75 MVA, respectively, it would have to be registered in the Compliance Registry. While an entity may be able to petition to include such a facility in the BES, what is the incentive to do so? This seems to detract from the 'bright line' definition.
Response: The SDT is drafting a definition for the Bulk Electric System and does not have involvement with the registration criteria. If reliability is a concern regarding specific generation that has been excluded from the definition, the Reliability Coordinator can always go through the NERC Rules of Procedure exception process to petition to bring generation into the BES. No change made.		
Michigan Public Service Commission(MPSC)	No	MPSC Staff Comments: This inclusion should be eliminated entirely for the reasons provided in E1 above. If the BES is required to be contiguous, this I2 threshold will result in many radial subtransmission lines losing their non-BES status and having to comply with NERC security and reliability requirements. Two different generation thresholds, one for I2 and one for I3, should not be used. The I3 inclusion (75MVA) threshold should be sufficient.
Tennessee Valley Authority	No	Other than the NERC Registry Criteria definition, what is the technical justification for the 20 MVA thresholds? The threshold level for inclusion should be technically based on the BES capacity and configuration at the location of the generating source's connection to the BES.
New York State Reliability Council	No	The use of a 20 MVA threshold based on NERC's Registry Criteria may be administratively convenient but is arbitrary when based upon BES reliability considerations. Suggest use of a 300 MW or other regionally and technically acceptable threshold such as NPCC's A-10 criterion.
Michgan Public Power Agency	Yes	Generally I would agree with I2 but question the technical justification for 20 MVA without also considering its capacity factor.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new		

Organization	Yes or No	Question 3 Comment
Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
SERC OC Standards Review Group	No	SERC proposes the following as an alternative to the Inclusion I2 wording in the draft BES definition: "Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through its GSU which has a high side voltage of 100 kV or above." The only difference in proposed text is that the word "the" preceding "GSU" has been changed to "its". The text in the draft clearly defines that the inclusion begins with the generator, continues through the terminals, and ends at a GSU. The wording in the draft text does not, however, explicitly limit the scope of equipment that should be evaluated for inclusion to the GSU which is directly connected to the generator terminals. Since GSU is not a defined term there is a strong potential for inconsistent interpretation of this boundary to include multiple transformers in series until ultimately a transformer which does operate at a voltage of greater than 100 kV is included in the flow path. To eliminate this potential for compliance re-interpretation, we also strongly suggest the term GSU be defined in the NERC Glossary of Terms. A suggested definition is: "Generator Step-up Transformer (GSU) should be defined as a transformer directly connected to a generator on the low side and to a bus on the high side."
Response: The SDT generally agrees with your clarification statement. Inclusion I2 has been eliminated and Inclusion I3 has been clarified to use the term step-up transformer rather than GSU. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Hydro One Networks Inc	No	We agree with the concept of Inclusion I2 with respect to individual generating units, but do not support having the entire path labeled as BES. In most cases, neither the path nor a 20 MVA unit itself will have any impact on the reliability of the interconnected transmission network nor is it necessary for the operation. Hence, we do not support the fact that there should be a blanket application of the BES definition to all individual generating units greater than 20 MVA and its connection to the system. It is also important to mention that moving into the future, with the Green Energy and Smart Grid plans advocated by both Canadian and US policy makers, the gross nameplate rating of 20 MVA acquired from NERC registration restricts the penetration of dispersed

Organization	Yes or No	Question 3 Comment
		generation in many parts of North America. We suggest the following: o Generation restriction (20 MVA or 75 MVA) should either be revised or the exception procedure should allow entities, with the support of technical evidence, to exclude element(s) from being labeled as part of the BES. o Entities should be able to use the exception process, with the help of technical evidence, to exclude generating units that do not impact the interconnected grid and the bulk transfer of power. o The path to generating facilities does not need to be BES contiguous. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require a contiguous path unless the unit is identified essential for the operation of transmission network.
Ida ho Falls Power	No	We feel the bright line criteria 20 MVA for generation is equally as arbitrary as the 100KV threshold for transmission, which was the impetus for the NERC BES definition effort. There should be more defining criteria to establish what generation resources should be included in the BES. Possible criteria to consider would be generation serving load other than local load connected to an LDN or generation that is dispatchable. Surely, just as not all 100 kV is is material to the BES, niether is all 20MVA or greater generation. If this draft's language is allowed to stand at the brightline of 20MVA, without additional defining criteria, will have the likely result of an inordinate number of entities having to resolve the issue of material impact through the Rules of Procedure exemption process. We urge NERC to take this opportunity now to more clearly define material generation assets beyond a simple brightline criteria. In addition to our concern of this draft following bright line registry criteria for generation assets, it is our concern that there is no distinction made as to where the generation is connected. Our belief is that generation on an LDN wherein the net flow of power is into the LDN should be exempt as the liklihood of that generation being material to the larger BES is exceedingly small.

Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.

Entities seeking exception from the core definition can utilize the NERC RoP exception process to present relevant evidence.

I~~3~~2 - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross

Organization	Yes or No	Question 3 Comment
aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Western Montana Electric Generating and Transmission Cooperative	No	WMG&T is concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Unfortunately, the SDT appears to have concluded that any interconnection facility operating above 100-kV should be classified as BES. The result will be to require Generation Owners to register as Transmission Owners/Operators, as well, producing substantial additional compliance costs for those Generation Owners but resulting in little or no improvement in the reliability of the BES. We recommend that the SDT, like the Project 2010-07 SDT (commonly referred to as the GO/TO Team), give careful consideration to the practical results of its recommendations rather than relying on abstract conclusions about whether a "contiguous" or "non-contiguous" BES is more desirable. We are concerned that the SDT's pursuit of a "contiguous" BES will result in a substantially over-inclusive BES definition. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. NERC's Standards Drafting Team for Project 2010-07, has already considered this question and, based on an in-depth review of potentially applicable reliability standards, has concluded that generation interconnection facilities, even if operated above 100-kV, need to comply only with a limited set of reliability standards in order to achieve the reliability goals. Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only

Organization	Yes or No	Question 3 Comment
		plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability.

Response: There has been no significant technical justification by which to base a departure from the 75 MVA threshold where connected at 100 kV and above. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.

The definition for this inclusion only addresses BES contiguity from the generator leads through the generator step up transformer which is connected on the high side at a voltage of 100 kV or above. This establishes contiguity of the generation facility and provides for the highest level of reliable service (generation) to the BES.

> **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.

Southern Company	No	The inclusion criterion I3 and I5 establish the level of generation that has been deemed to be the important threshold for the amount of generation at a facility. The individual generating unit size criteria should match that same aggregate size given in I3 and I5. It doesn't make sense to specify a 20 MVA level for a single unit compared to multiple smaller unit plants whose aggregate totals 75 MVA. To provide equivalent weight to each configuration of plant structure, the individual generating unit size should be 75 MVA rather than 20 MVA. The NERC Registry Criteria should also be changed from 20 MVA to 75 MVA for a single generator size. Further, a significant number of respondents to the first BES definition posting stated that the 20 MVA generator threshold is too low. Many Generator Owners and Operators do not understand the technical basis for including individual generators rated 75 MVA or less. The NERC Registry Criteria alone does not clearly define the technical basis for the 20 MVA threshold, and appears to use this as a conservative generator rating to cover some areas where units this size may have a material impact on the local area reliability. We do not believe this translates to material impact on BES reliability in terms of wide area blackouts and cascading outages. We believe that the technical basis for including any single generator of 75 MVA or less needs to be more clearly concisely established and documented to support Inclusion Criterion I2.
Electricity	No	Although the BES Standards Drafting Team has stated that it will not propose changing the 20-

Organization	Yes or No	Question 3 Comment
Consumers Resource Council (ELCON)		MVA/75-MVA thresholds, we think the thresholds should be set based on the BA/RC needs in each area and that a suggested range (perhaps by taking a survey of the operational entities) should be in the new BES Definition. Having an arbitrary and capricious number in the new BES Definition just because it is in the current Statement of Compliance Registry Criteria, and requiring significant technical justification for change, does not seem appropriate when so many expert industry commenters have indicated the existing thresholds are too low to be operationally significant.
Response: There has been no significant technical justification by which to base a departure from the 75 MVA threshold where connected at 100 kV and above. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The goal of this project is to clarify the BES definition and not to address issues related to registration criteria. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
National Association of Regulatory Utility Commissioners	No	The inclusion of individual generating units between 20 MVA and 75 MVA nameplate capacity is inconsistent with I3 that sets the aggregate threshold at 75 MVA. There is no technical justification for including a facility as low as 20 MVA and no rational basis for thinking that these generators could be the cause of instability, uncontrolled separation, or cascading events. We recommend removing this inclusion or raising the threshold to 75 MVA.
American Electric Power	No	The use of the word "including" within I2 seems to imply the inclusion of 20MVA (or greater) generating units beyond those which have a high side voltage of 100 kV or above. Was this intentional? If not, the following wording is preferable: "Individual generating units greater than 20 MVA (gross nameplate rating) having a GSU with a high side voltage of 100 kV or above. This includes equipment installed from the generator terminals through the high side of the GSU."
Springfield Utility Board	No	SUB raises the questions "Are multiple individual units considered one unit if they have a shared bus?" SUB is concerned that in the instance where individual units have a shared bus that some interpretations would be that these are individual and therefore not part of the BES while other interpretations would result in the units being considered part of the BES because of a shared bus. Given I3, SUB suggests that units connected to a shared bus be considered as if they were not

Organization	Yes or No	Question 3 Comment
		connected to a shared bus if they are individually separable by automatic fault-interrupting devices (e.g. two 15aMW units that have a shared bus would not be included as part of I2 if they each have automatic fault-interrupting devices). Continuing the example of the two 15aMW units, if a shared bus somehow combined the two individual units into one unit for purposes of I2, where does this distinction end? What if they share the same transmission line? Is this transmission line considered being a “bus” for purposes of combining the two units into one individual unit? Because this discussion could go on with multiple examples, SUB suggests that the distinction be the automatic fault-interrupting device. If the devices can be separated from each other and the local network then they should be considered individual. While Springfield Utility Board does not own any generating units, we do recognize the importance of the stability and restoration of the Grid, and the generation necessary for the Grid.
Springfield Utility Board	No	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
New York State Dept of Public Service	No	The inclusion of 20 MVA generation seems inconsistent with I3 that sets the aggregate threshold at 75 MVA. It is not rational that a 20 MVA facility could be the cause of instability, uncontrolled separation of the system or cascading events. This inclusion should be dropped.
Idaho Power	No	Generators at 20 MVA are not material to the BES. I would recommend combining I2, I3, and I5 with the limit at 75 MVA for plant nameplate capability regardless of the number of generators and

Organization	Yes or No	Question 3 Comment
		type of generators.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
PacifiCorp	No	Although certain areas of the country may have a need for generating units of this magnitude to be included in the BES for reliability, the 20 MVA minimum rating essentially discriminates against the owners of these generators. In I3 and I5 a 75 MVA limit has been established for different combinations of generation. This limit should also be used for a single generating unit. Those areas that require generator units less than 75 MVA for reliability should add them back to the BES via the inclusion/exclusion process to be proposed in NERC's Rules of Procedure ("ROP"). o The 20 MVA threshold was intended to mirror the existing NERC Compliance Registry Criteria. This registry value was adopted without the benefit of having been scrutinized through a NERC Reliability Standards Development Process, so the technical record justifying the 20 MVA threshold is non-existent. The BES Drafting Team will need to have technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different framework (i.e., for entity registration). Absent any technical justification, Inclusion I2 should be eliminated. This would leave the 75 MVA threshold in Inclusion I3 and Inclusion I5 as the minimum BES thresholds for generation. Also, please refer to additional comments in question 13 regarding a contiguous BES.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Comments regarding contiguous BES submitted under Q13 will be answered under Q13.		

Organization	Yes or No	Question 3 Comment
I~~3~~2 - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Intellibind	No	In the discussion the Drafting team stated they found no technical rational to change the 20 MVA rule, however there is no technical rational to support 20 MVA either. There are arguably cases where it will be appropriate to include these generators; however there are may instances where these generators should not be included. This should be driven by the interconnected transmission operators, not by an arbitrary threshold. In the WECC there are multiple examples of small/medium hydro, waste-to-energy, and other non-dispatchable generation that not only are located where they cannot add to the reliability of the BES, are not manned, and are bound by contractual relationships by a BA. These facilities have a tendency to have multiple forced outages, are affected by weather events, and are not considered reliable by the interconnected transmission operator for BES reliability purposes. Many of these facilities generate power as a secondary business, not primary. Wood burning, trash burning is waste disposal, irrigation projects are primarily focused on water delivery. Failure of power generation is not addressed as a primary importance during a failure, and none of these facilities were constructed to benefit the BES. In many cases the contract to construct these facilities was predicated on proving they do not impact the interconnected transmission operator or the BES.
Portland General Electric Company	No	The 20 MVA gross nameplate rating threshold for an individual unit is toolow and will result in the inclusion in the BES of generating units that have no potentialto impact the reliability of the BES. The 20 MVA threshold was taken from theregistration criteria, and no technical justification has been provided for its use. PGErecommends that this inclusion be removed entirely.
City of St. George	No	It is understood that this mirrors the Registry Criteria and this is a simple way to address the issue. The justification states there is no technical rationale to change the 20 MVA threshold, however the technical rationale for the 20 MVA criteria has not been provided to the industry either. Having a 20 MVA unit treated the same and subject to all of the same standard requirements as a unit with several hundred MVA of capacity doesn't make sense either. The requirements for an entity or facility should match the impact of that facility to the system.
City of Redding	Yes	In concept Redding is in agreement that the Brightline should specify generators at a certain level, however we believe the SDT has no technical basis to choose the 20 MVA threshold. If the SDT elects to retain I2 in its current form then Redding suggests changing the generation level from 20 MVA to 100 MVA. If the goal of the Brightline Definition is to create a starting point to identify power system elements that are "necessary" then the SDT should choose a larger generation threshold as

Organization	Yes or No	Question 3 Comment
		a starting point. The 100 MVA would serve a better purpose by casting the burden of proof (via the Exception Process) from the smaller units under 100 MVA to the Regional Entity. This would help the SDT to achieve an objective of reducing the burden on the "small entity" and "distribution" facilities due to the fact that most smaller generators of this size are installed to serve local loads. Additionally, The SDT has not provided justification that the "generator terminals through GSU" on smaller units are "needed to maintain transmission system reliability." The inclusion of the low voltage equipment from the GSU to the Generator on small generators is going beyond what is necessary to operate an interconnected transmission network. This portion of the inclusion should be removed or modified because the SDT has not demonstrated why the connection facilities are "necessary". The biggest argument for smaller units to be included as BES elements is that their operation/maintenance schedules and output visiablity are "necessary to operate an interconnected transmission network". If that is the case the Compliance Registry captures units above 20 MVA as users of the BES system; Standards can be written to address the support aspects of these types of units. As recommended, selecting a higher generator MVA threshold in the brightline definition does not exempt the lower MVA generation units from being classified as Users of the BES in the Compliance Registry. In fact Redding, suggests that the Registry be revised to have a more tiered approach allowing the Standards to be equably applied to Entities. Redding suggests that SDT recommend that the Generator Owner and Operator definitions be modified to have Large and Small generator owners and operators. In summary, Redding supports the concept that the brightline is an initial dividing line of elements that are necessary to operate the BES. Therefore, Redding suggests that the SDT change the language in I2: From: "Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above". To: "Individual generating units greater than 100 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above". OR To: "Individual generating units which have a contractual obligation to provide operational support necessary to operate the interconnected transmission system."
California Public Utilities Commission	Yes	The CPUC would like a technical justification/rational for the 20 MVA threshold. We understand and agree with the ability to show no impact through a technical impact assessment, but such an

Organization	Yes or No	Question 3 Comment
		assessment may be costly for a small 20-50 MW peaker plant that may operate for few hours during any given month. The cost imposed to small generating plants that operate a few hours a month may be too excessive given the probability of the generator causing an event and the cost associated with the event. The BES definition should be more than a deterministic standard and should properly assess every asset it proposes to include, especially given what the courts have ruled. We believe it would be preferable to include individual elements at power plants that can impact the BES (governors, system stabilizers, breakers,...) rather than to extend the definition of the BES to include all small power plants.
Response: There has been no significant technical justification by which to base a departure from the 75 MVA threshold where connected at 100 kV and above. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Hydro-Quebec TransEnergie	No	We believe that it is not necessary to include small generator of 20 MVA into the BES, neither the transmission path that connect them. However, a provision should be made so that some reliability standards related to generator shall apply (voltage regulation, etc.).
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Oregon Public Utility Commission Staff	No	The inclusion of individual generation units with a nameplate capacity between 20 MVA and 75 MVA is over-inclusive and unnecessary. Generation in this range generally has no impact to the reliability of the bulk transmission system. The 20 MVA threshold was pulled from the existing

Organization	Yes or No	Question 3 Comment
		NERC Statement of Compliance Registry. This Registry value was adopted without the benefit of having been scrutinized through a NERC Standards Development Process, so the technical record justifying the 20 MVA threshold is unavailable. The BES Drafting Team will need to have technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different framework. Absent any technical justification, Inclusion I2 should be eliminated. This would leave the 75 MVA threshold in Inclusion I3 and Inclusion I5 as the minimum BES thresholds for generation.The proposed BES Definition does not address the BES "demarcation points" and whether the BES must be "contiguous." NERC Staff has submitted written comments to this project stating that the BES "must be contiguous." Instituting a contiguous BES with Inclusion I2 would result in a over-inclusive BES definition. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of distribution elements that have nothing to do with improving or protecting the reliability of bulk transmission system.There is no compelling reason to adopt a "contiguous" BES down into local distribution systems. Section 215 of the FPA of 2005 gives FERC jurisdictional authority over "users" as well as "owners" and "operators" of the bulk power system. Consequently, FERC has the jurisdictional authority to require generation entities in the Compliance Registry to comply with applicable NERC requirements. Hence, even where an entity does not own or operate BES assets, it could still be required, for example, to provide necessary information to the applicable Reliability Coordinator or Planning Coordinator and to participate in programs to prevent instability, uncontrolled separation or cascading outages to the bulk transmission system. This approach would fully achieve the goals of bulk transmission system reliability without imposing the full BES regulatory compliance burden on local distribution elements.
Response: There has been no significant technical justification by which to base a departure from the 75 MVA threshold where connected at 100 kV and above. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The SDT proposal does not address BES contiguity beyond the connection to 100 kV or greater (the high side of the GSU). **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Public Utility District	No	Snohomish is concerned that the inclusion of individual generation units with a nameplate capacity

Organization	Yes or No	Question 3 Comment
No. 1 of Snohomish County, Washington		as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the “bulk-power system” unless they produce “electric energy” that is “needed to maintain transmission system reliability.” 16 U.S.C. Â§ 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is “needed to maintain transmission system reliability.” Hence, the inclusion as drafted improperly expands the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because “there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria.” Consideration of Comments on Definition of Bulk Electric System - Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are “needed to maintain transmission system reliability,” the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. Â§ 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry.In the same comments, the SDT also states that it has considered “the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable.” Id. The SDT’s reasons for reaching this conclusion are not well-explained, but apparently the concern is that a “non-contiguous” BES could create “reliability gaps.” But this conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. In fact, we believe that if the SDT insists on a “contiguous” BES, an over-inclusive definition will result.We base these conclusions on the findings of NERC’s Standards Drafting Team for Project 2010-07 and its predecessor, the “GO-TO Task Force.” The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as “Transmission” and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management,

Organization	Yes or No	Question 3 Comment
		reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Developoment Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity - the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those

Organization	Yes or No	Question 3 Comment
		devices as a precondition for their use of transmission on the bulk system. The other alternative is to draft standards that apply to a specific type of equipment - again UFLS relays is a good example - rather than to BES facilities categorically. Either approach will fully achieve the goals of bulk system reliability without imposing an undue regulatory compliance burden on local distribution systems.For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application of particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a “contiguous” or “non-contiguous” BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Company Consumers Power Inc Clallam County PUD No.1	No	The inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the “bulk-power system” unless they produce “electric energy” that is “needed to maintain transmission system reliability.” 16 U.S.C. Â§ 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is “needed to maintain transmission system reliability.” Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because “there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria.” Consideration of Comments on Definition of Bulk Electric System - Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are “needed to maintain transmission system reliability,” the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. Â§

Organization	Yes or No	Question 3 Comment
		8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result.We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity - the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies

Organization	Yes or No	Question 3 Comment
		that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application fo particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.
Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric	No	Specific language change: Change 20 MVA to 100 MVAThe inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." 16 U.S.C. Â§ 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20

Organization	Yes or No	Question 3 Comment
Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Inc Okanogan Electric Cooperative PNGC Power Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative		MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System - Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. Â§ 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry.In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result.We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is

Organization	Yes or No	Question 3 Comment
		applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity - the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application for particular reliability standards and whether the results are beneficial to reliability or

Organization	Yes or No	Question 3 Comment
		simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.
Northern Wasco County PUD Chelan PUD – CHPD Kootenai Electric Cooperative Public Utility District No. 1 of Franklin County Midstate Electric Cooperative Northwest Requirements Utilities Big Bend Electric Cooperative, Inc. Cowlitz County PUD	No	Northern Wasco County PUD is concerned that I2 inclusion criteria that includes the arbitrary 20 MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted improperly expands the BES definition to include generators that the statute requires to be excluded. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Unfortunately, the SDT appears to have concluded that any interconnection facility operating above 100-kV should be classified as BES. The result will be to require Generation Owners to register as Transmission Owners/Operators, as well, producing substantial additional compliance costs for those Generation Owners but resulting in little or no improvement in the reliability of the BES. We recommend that the SDT, like the Project 2010-07 SDT (commonly referred to as the GO/TO Team), give careful consideration to the practical results of its recommendations rather than relying on abstract conclusions about whether a "contiguous" or "non-contiguous" BES is more desirable. We are concerned that the SDT's pursuit of a "contiguous" BES will result in a substantially over-inclusive BES definition. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. NERC's Standards Drafting Team for Project 2010-07, has already considered this question and, based on an in-depth review of potentially applicable reliability standards, has concluded that generation interconnection facilities, even if operated above 100-kV, need to comply only with a limited set of reliability standards in order to achieve the reliability goals. Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays,

Organization	Yes or No	Question 3 Comment
		must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability.
Response: The SDT has carefully debated your comments. The SDT does not base its conclusions on "metaphysical debates" as you imply, but rather the practical nature of inclusions and exclusions in the definition and the reliability impacts associated with them based on technical debate and justification. There has been no significant technical justification by which to base a departure from the 75 MVA threshold where connected at 100 kV and above. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The definition for this inclusion only addresses BES contiguity from the generator leads through the generator step up transformer which is connected on the high side at a voltage of 100 kV or above. This establishes contiguity of the generation facility and provides for the highest level of reliable service (generation) to the BES. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Sweeny Cogeneration LP	No	The threshold for individual generation units is consistent with the NERC functional registry criterion. We believe that it is important to maintain this uniformity. However, we believe there are further items to be added to the list related to generator interconnections, a task that was passed to this project from Project 2010-07. Just as is the case with complex distribution systems, there are a variety of generator-transmission interconnection architectures which are driving the Regions to inappropriately register Generator Owner/Operators as Transmission Owners.
Response: The SDT cannot respond to this general comment as it lacks specific action.		
PUD No. 2 of Grant County, Washington	No	In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Unfortunately, the SDT appears to have concluded that any interconnection facility operating above 100-kV should be classified as BES. The result will be to require Generation Owners to register as Transmission Owners/Operators, as well, producing substantial additional compliance costs for those Generation Owners but resulting in

Organization	Yes or No	Question 3 Comment
		little or no improvement in the reliability of the BES. We recommend that the SDT, like the Project 2010-07 SDT (commonly referred to as the GO/TO Team), give careful consideration to the practical results of its recommendations rather than relying on abstract conclusions about whether a "contiguous" or "non-contiguous" BES is more desirable. We are concerned that the SDT's pursuit of a "contiguous" BES will result in a substantially over-inclusive BES definition. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. A "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." The improper classification of local distribution lines as BES "Transmission" facilities results in huge regulatory compliance burdens with little or no improvement in bulk system reliability.
FortisBC	No	We agree with the concept of Inclusion I2 with respect to individual generating units, but do not support having the entire path labeled as BES. In most cases, neither the path or a 20 MVA unit itself will have any impact on the reliability of the interconnected transmission network nor is it necessary for the operation. We also do not support the fact that there should be a blanket application of the BES definition to all individual generating units greater than 20 MVA. It is also important to mention that moving into the future, with the Green Energy and Smart Grid plans advocated by both Canadian and US policy makers, the gross nameplate rating of 20 MVA acquired from NERC registration restricts the penetration of dispersed generation in many parts of North America. We suggest the following: o Generation restriction (20 MVA or 75 MVA) should either be revised or the exception procedure should allow entities, with the support of technical evidence, to exclude element(s) from being labeled as part of the BES. o Entities should be able to use the exception process, with the help of technical evidence, to exclude generating units that do not impact the interconnected grid and the bulk transfer of power. o The path to generating facilities does not need to be BES contiguous. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require a contiguous path unless the unit is identified essential for the operation of transmission network. o Definition and/or exception process should provide clear acknowledgement and flexibility to

Organization	Yes or No	Question 3 Comment
		avoid any regulatory conflicts. - For example: NERC and SDT should consider introducing a concept of a new category of registration or BES Support (BESS) elements. These elements are NOT BES but support the reliable operation of the interconnected transmission network. A sub-set of relevant NERC Standards should still apply to BESS elements such as planning, design, and maintenance. However, they may not be subject to mandatory compliance.
Public Utilities Commission of Ohio	No	The inclusion of individual generating units between 20 MVA and 75 MVA nameplate capacity is inappropriate and over-reaching. Inclusion I3 sets the aggregate threshold at 75 MVA for multiple generating units. Technical justification for assuming a 20 MVA generating facility could cause instability, uncontrolled separation, or cascading events on the bulk system appears to be lacking. This appears to simply be based on that fact the NERC used it in a separate framework, which has no basis. Inclusion I2 should be removed.Regarding the contiguous standard - simply because an element is connected to the BES does not make it a part of the BES. By the very nature, a radial or distribution element should pose limited or no impact on the BES. They are easily isolated from the rest of the system. This contiguous measurement could impose standards unnecessarily on systems with no ultimate impact on the bulk system, thereby enabling far-reaching authority into the distribution system.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The SDT proposal does not address BES contiguity beyond the connection to 100 kV or greater (the high side of the GSU). The SDT believes that the definition must be contiguous at this level in order to ensure reliability of the BES. Aside from registration burdens, stakeholders have not provided technical justification or recommendations by which to base a departure from the contiguous nature of the definition. The goal of the SDT is to provide clarity to the definition of the BES and not to address registration criteria. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Electric Reliability Council of Texas, Inc.	No	See response to question 1. ERCOT ISO supports redefining generation covered under the BES to reflect the registration threshold, but, consistent with the comments to question 1, believes it should be included within the bright line criteria unless otherwise indicated by application of the inclusion and exclusion criteria of the exception process or analyses.

Organization	Yes or No	Question 3 Comment
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Fayetteville Public Works Commission	No	Inclusion I2 contains wording that is ambiguous and does not support a consistent determination by independent parties of whether or not a specific generator should be included in the BES. This definition will be a critical part of the guidance used by registered entities to validate their current registration status and by new entities to properly determine their initial registration status. It will also be used by regional reliability entities during compliance activities to verify proper registration. The ambiguous wording of Inclusion I2 could easily lead to re-interpretation issues between the owner/operator of the generator and regional entities in a compliance audit or other compliance setting. To be specific, the phrase "including the generator terminals through the GSU which has a high side voltage of 100 kV or above" is particularly troublesome. The phrase as written is intended to establish the boundary of the Real Power resource that will be included in the BES if the conditions of Inclusion I2 are met. The intent appears to be to include within the BES the generator, the cables connecting the generator terminals to the GSU, and the GSU, if the GSU has a high side voltage of 100 kV or above. If the GSU, however, does not have a high side voltage of 100 kV or above, then neither the generator, nor the connecting cables, nor the GSU would included within the BES.The crux of the problem lies in the interpretation of the term "GSU" and the phrase "through the GSU which". The term "GSU" or "generator step-up transformer" is commonly applied to a transformer with a generator directly connected to the low side and a bus directly connected to the high side. This is not, however, a defined term within the NERC Glossary and no standard for that interpretation is provided. The very structure of the phrase "through the GSU which" implies that there may be more than one GSU to be considered, some of which do not but at least one of which does have a high side voltage of 100 kV or above. This could be interpreted to include multiple transformers (GSUs) stepping up the generator voltage in series, the first stepping up the generator voltage to a bus, the second stepping up that bus voltge to another bus, and the third, and so on, and so on, until finally 'THE" transformer (GSU?) is encountered "WHICH" does have a high side voltage of 100 kV or higher.Thus, if the registering entity were to apply the commonly accepted definition of "GSU" to a generator, and the GSU directly connected to that generator has a high side of less than 100 kV, that entity would properly conclude that

Organization	Yes or No	Question 3 Comment
		neither the generator nor the leads nor the GSU should be included in the BES. If a regional compliance entity applies the interpretation that transformers in series must be considered until a generator is encountered which does have a high side of 100 kV or higher, then that compliance entity would properly conclude that the generator, all the transformers in series, and the buses connecting those transformers should be included in the BES. Clearly this potential for contradictory conclusions would be better cleared up during this comment period than repeatedly coming up during compliance processes.I offer two suggestions for eliminating this ambiguity. The first and preferred method would be to change the wording of Inclusion I2 to read s follows: "Individual generating units greater than 20 MVA (gross nameplate rating) directly connected to the low side of a GSU which has a high side voltage of 100 kV or higher. The generator, the leads directly connecting the generator terminals to the GSU, and the GSU are all included in the BES." The second method would be to define within the NERC Glossary the term GSU as follows: "A generator step-up transformer (GSU) is a transformer directly connected to the terminals of a generator on the low side and to a bus at a higher voltage on the high side."
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The SDT does not feel that the wording is confusing but is understood to mean that any generating resources, their generator terminals, connecting cabling up to and including their generator step up transformers that are connected at 100 kV or greater will be included in the definition of the BES. The SDT believes that the definition must be contiguous at this level in order to ensure reliability of the BES. Aside from registration burdens, stakeholders have not provided technical justification or recommendations by which to base a departure from the contiguous nature of the definition. Elements connected at below 100 kV that meet registration criteria will still be required to meet NERC Reliability Standards that apply to their registration. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Southern California Edison Company	No	Inclusions I2, I3, and I5 should either be modified or removed, because as currently written, these three Inclusion criteria force the definition to be arbitrarily demarcated by the size of generators connecting to the system, or the aggregate thereof, rather than focusing on the risk characteristics that should define the BES, as SCE identified in its response to Question No. 1. In the WECC, it can safely be said that the vast majority of 20MVA generators are located in local distribution systems and are used to off-set local load, rather than transfer power to the BES. In SCE's case,

Organization	Yes or No	Question 3 Comment
		our distribution system has a number of components which are marginally above the 100kV BES threshold, are radial in nature, and were previously exempted from the BES by the WECC. These radial systems have interconnecting generation units larger than 20 MVA and/ or aggregate generation exceeding 75 MVA. In many cases, the generation levels on those radial systems exceed the limits proposed in I2, I3, and I5, but the loading on those same systems is such that generation will rarely exceed the local load. Therefore, there is little to no power flow back to the BES from these radial systems.If the BES definition continues to heavily focus its inclusion criteria on generator/ generation size, SCE feels that the SDT also consider incorporating the concept of "potential exports to the BES" from these generating sources. An example being:"I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above and have no more than 5% net flows into the BES based on the past XXX calendar years."This "Net Flow" concept would negate the need for Section 1C of the "Technical Principles for Demonstrating BES Exceptions", or conversely, provide the framework for a more quantifiable criteria in Section 1C.
Response: The SDT has debated your comments and similar comments from stakeholders. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Individual situations can be evaluated on a case by case basis and utilities can use the NERC RoP exception process. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Cogentrix Energy, LLC	No	We also strongly suggest the term GSU be defined in the NERC Glossary of Terms to prevent potential compliance re-interpretation of this requirement. A suggested definition is: "Generator Stepup Transformer (GSU) should be defined as a transformer directly connected to a generator on the low side and to a bus on the high side."
Response: The SDT has made clarifying changes to the inclusion to address your concern. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		

Organization	Yes or No	Question 3 Comment
Clark Public Utilities	No	Generators should only be part of the Bulk Electric System if they are connected through a GSU to a Transmission Element determined to be part of the BES. The current inclusion language would apply to all generators connected to facilities greater the 100 kV with no exclusion or exception process. Without a change, it appears that a generator connected to a facility greater than 100 kV would be a BES asset even if the transmission assets could be excluded or excepted. I2 should be rewritten to state: Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side winding connected to a Transmission Element determined to be part of the Bulk Electric System. Additionally, as indicated by Clark in its comments on the core definition of the BES, Clark believes the 20 MVA threshold lacks an adequate technical justification and is a purely arbitrary quantity. The use of a capacity threshold in the definition of the BES should have technical reasons.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The SDT feels that the revised definition provides adequate clarifying measures. Individual situations can be addressed through the NERC RoP exception process. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
The Dow Chemical Company	No	It should be clarified that if something falls within an Inclusion and an Exclusion, then it is excluded. See ELCON comments.
Response: The SDT has made clarifying changes to the definition to address your concern.		
New England States Committee on Electricity	No	Inclusion Criteria I2 through I4 relate to generation connected with GSU High side voltages greater than 100 kV and refer to generators with MVA limits exceeding either 20 or 75 MVA aggregate depending on their configuration. It should be made clear that all generation connected to sub transmission are not BES as these units are adequately covered under other applicable NERC and/or regional reliability organization criteria. These units have no direct impact on the reliability of the BES. This includes black start units because they do not directly impact normal or contingency operation of the BES. These units

Organization	Yes or No	Question 3 Comment
		and their associated cranking paths are used only for restoration and not operation. Further, they are appropriately covered under regional restoration procedures and NERC standards (see for example, Emergency Operating Procedure EOP-005-2). Use of varying generator MVA thresholds as inclusion criteria under I2 and I3 could lead to inconsistent treatment of generation facilities. For example, a generation facility with a single 30 MVA generator would qualify as BES under I2. However, if an additional 30 MVA generator was added at the same site, the facility's status would change to non-BES under I3 even though the facility's capacity had doubled. NESCOE is also concerned that if the BES is required to be contiguous, the I2 threshold will result in many radial sub transmission lines becoming BES, resulting in substantial costs without significant justifying benefits. NESCOE suggests deleting Inclusion I2 or adopting a threshold that is consistent with I3, and which in no event should be lower than 75 MVA. Regarding facilities connected at 100 kV and above, some generation units in paper mills or other entities operating on the retail side of the meter may exceed the Inclusion Criteria. The Exception Process, which will be the subject of future comments, should provide some flexibility in this area. NESCOE further notes that in the case of radially connected generation, the contiguous connection paths should not be BES even if the operating voltage is greater than 100 kV. This is due to the fact that loss of a path has no greater impact than loss of the connected generator. This is simply a first contingency loss that has no significant impact on the BES. Inclusion I2 should be clarified to include only connections that impact the BES.

Response: The definition states that Real and Reactive Power resources connected at 100 kV or higher are considered BES. Sub-transmission referenced in your comments would generally be considered below 100 kV. Inclusions within the definition address resources connected at below 100 kV that are considered BES elements.

After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.

The definition for this inclusion only addresses BES contiguity from the generator leads through the generator step up transformer which is connected on the high side at a voltage of 100 kV or above. This establishes contiguity of the generation facility and provides for the highest level of reliable service (generation) to the BES.

Aside from registration burdens, stakeholders have not provided technical justification or recommendations by which to base a departure from the contiguous

Organization	Yes or No	Question 3 Comment
nature of the definition. Individual situations can be addressed through the NERC RoP exception process. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
PPL Energy Plus and PPL Generation	No	See comments in Question 13.
Illinois Municipal Electric Agency	Yes	Please see comments under Question 13.
Response: See response to Q13.		
Consolidated Edison Co. of NY, Inc.	No	The inclusion of generation to the BES should be subject to an impact test.â€¬
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Independent Electricity System Operator	No	We agree with the goal of inclusion of I2 but as stated earlier in our response to Q1, we do not support the blanket application of the BES definition to all individual generating units and Facilities meeting the respective capacity thresholds. Entities should be able to assess the impact of these units and Facilities against the TPC and use the Exception Process, with the help of technical evidence, to include generating units and Facilities that impact the interconnected grid and the bulk transfer of power.

Organization	Yes or No	Question 3 Comment
Orange and Rockland Utilities, Inc.	No	: XI2 should pertain to individual generating unit impact to the Bulk system, rather than the size unit only. Oftentimes there are cases when neither the path nor a 20 MVA unit itself will have any impact on the reliability of the interconnected transmission network, nor is it necessary for its operation.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Individual situations can be addressed through the NERC RoP exception process. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
AltaLink	No	We agree with the concept of Inclusion I2 with respect to individual generating units, but do not support having the entire path labeled as BES. In most cases, neither the path or a 20 MVA unit itself will have any impact on the reliability of the interconnected transmission network nor is it necessary for the operation. Generation restriction (20 MVA or 75 MVA) should either be revised or the exception procedure should allow entities, with the support of technical evidence, to exclude element(s) from being labeled as part of the BES. The path to generating facilities does not need to be BES contiguous. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require a contiguous path unless the unit is identified essential for the operation of transmission network.Definition and/or exception process should provide clear acknowledgement and flexibility to avoid any regulatory conflicts.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The definition for this inclusion only addresses BES contiguity from the generator leads through the generator step up transformer which is connected on the high side at a voltage of 100 kV or above. This establishes contiguity of the generation facility and provides for the highest level of reliable service (generation) to the BES. Aside from registration burdens, stakeholders have not provided technical justification or recommendations by which to base a departure from the		

Organization	Yes or No	Question 3 Comment
contiguous nature of the definition. Individual situations can be addressed through the NERC RoP exception process. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Utility System Efficiencies, Inc.	No	The 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System - Project 2010-17, March 30, 2011, at 30. But this response gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. Â§ 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The goal of the SDT is to provide clarity to the definition of the BES and not to address registration criteria. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		

Organization	Yes or No	Question 3 Comment
BPA	No	Change to "Individual generating units greater than 20 MVA (gross nameplate rating), including the generator terminals through the GSU, where the GSU has a high side voltage of 100 kV or above." The 100 kV high side voltage is important for determining whether the generation is included, not whether the terminals are included.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Clarifying language has been included in the definition which addresses your concern. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
ATCO Electric		If a generator connects to 2 back to back transformers (25kV/72kV and 72kV/144kV), which transformer is GSU? 25/72kV transformer only or both transformers.
Response: There is not enough information included in your comment to determine inclusions or exclusions.		
Tacoma Power		Tacoma Power generally supports Inclusion I2. However, the term 'gross nameplate rating' is not defined and should be replaced with a specific definition. Additionally, no justification for the 20 MVA level has been provided and therefore it appears arbitrary. Since this measurement will define Elements for absolute inclusion in the BES, the threshold for generation units should be based on a need to maintain transmission reliability. Generation units located within a Local Distribution Network (LDN), which do not exit the LDN, should not be included. We propose changing Inclusion I2 to read,"Individual generating units greater than 20 MVA (ratings based on the Code of Federal Regulation, CFR 18, Part 11.1 definition "Authorized Installed Capacity") including the generator terminals through the GSU which has a high side voltage of 100 kV or above, except generating units that are within a Local Distribution Network (LDN) and do not have a net export out of the LDN."
Response: The SDT feels that the term "gross nameplate rating" is a widely used term within industry and does not require additional definition. No change made.		

Organization	Yes or No	Question 3 Comment
After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Please refer to stakeholder comments and responses to Question 9 for the local distribution network. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Pepco Holdings Inc		Clarification needed: If a generator greater than 20mva connected to a bus less than 100kv, but the bus is connected through a transformer (high side greater then 100kv) to the BES, are the generator, GSU or transformer considered BES?
Response: The generator and its contiguous path including the bus or interconnecting cable through the GSU high side bushing would all fall under the BES definition.		
Georgia System Operations		It is unclear to us what the phrase "including the generator terminals through the GSU..." means. Is the GSU itself included (it apparently would not be under I-1)? We understand terminals to be in essence points, and therefore don't see how they go "through" a GSU. Is the intention perhaps to mean "including the generator terminals at the GSU" or even "including the generator terminals at the GSU and the GSU itself"?
Response: The SDT has included clarifying language to address your concern. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Central Lincoln	Yes	But please indicate how generators below 20 MVA are treated, since we don't believe the flowchart at http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf properly expresses the SDT's intent to classify these small units as non-BES.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus		

Organization	Yes or No	Question 3 Comment
of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The RoP flowchart that was originally posted was incorrect and a corrected version is now available. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
American Municipal Power and Members	Yes	We support I2 but propose clarifying edits. We understand that the intent is to define the BES component of qualifying generators as that equipment from the generator terminals through the GSU. To convey clearly this point, as well as that only generators that are both over 20 MVA and connected through a GSU with a high side voltage of at least 100 kV are included in the BES, I2 should be reworded as follows: "Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals, connected through a GSU that has a high-side voltage of 100 kV or above. A BES generator includes the equipment from the generator terminals through the GSU."
Small Entity Working Group (SEWG)	Yes	Yes, with a minor clarification. Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side connection voltage of 100 kV or above. This should help state that only generators that are both over 20 MVA and connected through a GSU with a high side voltage of at least 100kV are included in the BES.
Florida Municipal Power Agency	Yes	FMPA understands that the intent is to define the BES component of qualifying generators as that equipment from the generator terminals through the GSU. To convey clearly this point, as well as that only generators that are both over 20 MVA and connected through a GSU with a high side voltage of at least 100 kV are included in the BES, I2 should be reworded as follows: "Individual generating units greater than 20 MVA (gross nameplate rating), connected through a GSU with a high-side voltage of 100 kV or above. A BES generator includes the equipment from the generator terminals through the GSU."
Western Electricity Coordinating Council	Yes	WECC agrees in concept, but the language could be clarified on the GSU transformer. Suggested language "Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals up to and including the GSU transformer, which has a high-side voltage of 100 kV or above."

Organization	Yes or No	Question 3 Comment
Transmission Access Policy Study Group	Yes	TAPS understands that the intent is to define the BES component of qualifying generators as that equipment from the generator terminals through the GSU. To convey clearly this point, as well as that only generators that are both over 20 MVA and connected through a GSU with a high side voltage of at least 100 kV are included in the BES, I2 should be reworded as follows: "Individual generating units greater than 20 MVA (gross nameplate rating), connected through a GSU with a high-side voltage of 100 kV or above. A BES generator includes the equipment from the generator terminals through the GSU."
Northern California Power Agency	Yes	NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.
Sacramento Municipal Utility District (SMUD)	Yes	SMUD agrees with the concept of Inclusion 2. To ensure the clarity of the "Bright-Line" criteria the GSU when connected to a voltage 100 kV and above as indicated in the proposal should clearly state that the GSU is included as BES.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Clarifying edits have been made to the definition to address your comments. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Santee Cooper	Yes	The inclusion for generating units needs to be consistent with regional entities exclusion criteria for MODO24.
Response: The SDT has been asked to provide a definition that provides clarity and less ambiguity on a continent-wide basis. The SDT does not agree that there should be regional interpretation and criteria associated with this definition. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards		

Organization	Yes or No	Question 3 Comment
Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
New York Power Authority	Yes	The definition should exclude generator leads for generating units that do not materially affect the reliability of the BES regardless of the BES designation of the generating unit. In addition, the definition should not require the inclusion of contiguous elements. Generating units that are designated BES are currently required to comply with a subset of NERC Reliability Standards, but may not be material to the reliable operation of the interconnected BES. This portion of the definition should not require that both BES and non-BES generating units have their generator leads defined as BES transmission elements. A length-based criterion for generator leads ought to be considered. For example, the definition should exclude generator leads that are one mile or less between BES elements.This comment has been raised in Question number 1 as well.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The definition for this inclusion only addresses BES contiguity from the generator leads through the generator step up transformer which is connected on the high side at a voltage of 100 kV or above. This establishes contiguity of the generation facility and provides for the highest level of reliable service (generation) to the BES. Aside from registration burdens, stakeholders have not provided technical justification or recommendations by which to base a departure from the contiguous nature of the definition. Radial exclusions are discussed under Question 7. Please see responses to comments under question 1 for further discussion. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Central Maine	Yes	Please note that this departs from NERC's Registry Criteria in that the unit of measurement is

Organization	Yes or No	Question 3 Comment
Power Company		MVA instead of MW.
New York State Electric & Gas and Rochester Gas & Electric	Yes	Please note that this departs from NERC's Registry Criteria in that the unit of measurement is MVA instead of MW.
Response: ERO registration criteria utilize MVA as a measurement unit. No change made.		
Vermont Transco	Yes	How will generating owners currently registered as a GO/GOP and have units tied to the BES system through a radial transmission line, that they own, and connects them to the grid be affected by the new definition? Will they need to become TO and TOP registered also? Should a GO/GOP have to adhere to all TO/TOP standards and requirements or only a sub-set of requirements?
Response: The SDT cannot address individual registration questions. Discussion of radial connections can be found under Question 7.		
ExxonMobil Research and Engineering	Yes	Support is contingent on the continued exclusion of generation based on its net capacity provided to the BES.
Response: See response to question 4 in this regard.		
Alberta Electric System Operator	Yes	Consider adding the word "transformer" after "GSU".
Response: Clarifying edits have been made to the definition to address your comments. I~~3~~2 - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
MEAG Power	Yes	The definition should exclude generator leads for generating units that do not materially affect the reliability of the BES regardless of the BES designation of the generating unit. In addition, the definition should not require the inclusion of contiguous elements. Generating units that are designated BES are currently required to comply with a subset of NERC Reliability Standards, but

Organization	Yes or No	Question 3 Comment
		may not be material to the reliable operation of the interconnected BES.This portion of the definition should not require that both BES and non-BES generating units have their generator leads defined as BES transmission elements. A length-based criterion for generator leads ought to be considered. For example, the definition should exclude generator leads that are one mile or less between BES elements.This comment has been raised in Question number 1 as well.
Response: The SDT proposal does not address BES contiguity beyond the connection to 100 kV or greater (the high side of the GSU). **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Xcel Energy	Yes	Xcel Energy thanks the SDT for their work and appreciates the clarification that BES extends from the generator out and does not include the prime mover and balance of plant equipment.
Southwest Power Pool	Yes	Please refer to SPP's response to question 1. but, consistent with the comments to question 1, believes it should be reflected as part of the general definition, as opposed to inclusions/exclusions, which should all be addressed pursuant to the separate processes.
Consumers Energy Company	Yes	We are supportive of Inclusion I2. Generators 20MVA and greater with terminals through a GSU connected at 100kV and above are treated as Bulk Electric System at this time along with their radial connections to the Transmission system. We agree with the SDT that no technical rationale for changing this condition exists.
Sierra Pacific Power Co d/b/a NV Energy	Yes	While 20MVA has no technical basis for the threshold above which a generator should be considered to be necessary for the reliable operation of an interconnected transmission network, the industry has not provided any technical data to support a value other than this which has been established in the NERC Statement of Compliance Registry Criteria.
Western Area Power Administration	Yes	the bullet comments that define a specific point for demarcation.
Tri-State Generation and Transmission Association, Inc.	Yes	

Organization	Yes or No	Question 3 Comment
Imperial Irrigation District	Yes	
MRO's NERC Standards Review Forum	Yes	
SERC Planning Standards Subcommittee	Yes	
ACES Power Participating Members	Yes	
National Rural Electric Cooperative Association (NRECA)	Yes	
Overton Power District No. 5	Yes	
Arizona Public Service Company	Yes	
ReliabilityFirst	Yes	
Rayburn Country Electric Cooperative, Inc.	Yes	
Luminant Energy	Yes	
US Bureau of	Yes	

Organization	Yes or No	Question 3 Comment
Reclamation		
Grand Haven Board of Light and Power	Yes	
Glacier Electric Cooperative	Yes	
FHEC	Yes	
South Texas Electric Cooperative, Inc.	Yes	
National Grid	Yes	
Dayton Power and Light Company	Yes	
Duke Energy	Yes	
South Carolina Electric and Gas	Yes	
MidAmerican Energy Company	Yes	
Florida Keys Electric Cooperative	Yes	
East Kentucky Power Cooperative, Inc.	Yes	
American	Yes	

Organization	Yes or No	Question 3 Comment
Transmission Company, LLC		
Farmington Electric Utility System	Yes	
Colorado Springs Utilities	Yes	
Muscatine Power and Water	Yes	
Exelon	Yes	
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	Yes	No comment.
Puget Sound Energy	Yes	
GTC	Yes	
Long Island Power Authority	Yes	
PJM	Yes	
Oncor Electric Delivery Company	Yes	

Organization	Yes or No	Question 3 Comment
LLC		
Manitoba Hydro	Yes	
ISO New England, Inc.	Yes	
City of Anaheim	Yes	
Golden Spread Electric Cooperative, Inc.	Yes	
Response: Thank you for your support. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Please see the revised definition.		

4. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: While many commenters did agree with the proposal, about half of the commenters who responded to this question disagreed with some aspect of the proposal.

The SDT believes that generation plants larger than 75 MVA connected at 100 kV or higher need to be included within the Bulk Electric System (BES) definition. This threshold is based on the generation plant threshold values found in the NERC Statement of Compliance Registry Criteria. Also, two Regional Entities (FRCC and RFC) specifically use this criterion in each of their current BES definitions. The 75 MVA plant is a low enough level to capture most generating plants that would have an effect on the reliability of the interconnected Transmission network.

After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.

Commenters have suggested other thresholds (anywhere from 0 to 300 MVA) for generation plants to be included in the BES definition. However, as of this date, commenters have not submitted technical justification upon which to base a departure from the generation MVA thresholds included in the ERO Statement of Compliance Registry Criteria. The SDT recommends that entities use the NERC Rules of Procedure (RoP) exception process for obtaining exceptions to the BES Definition.

Some other issues raised include the following:

- Some commenters expressed that "single site" should be defined. "Single site" basically means "generating plant/facility" as used in the ERO Statement of Compliance Registry Criteria (SCRC). Because this SCRC criteria understanding has not been problematic to date, the SDT does not believe that "single site" needs to be further clarified.
- Concerns were raised about the interpretation of the term "through a common bus". The SDT eliminated this term, which should improve the clarity of the definition.
- Some commenters brought up concerns related to the "contiguous" nature of the BES. For purposes of this inclusion, the SDT is proposing BES contiguity from the generator leads through the step up transformer(s). The SDT proposal for this inclusion does not address BES contiguity beyond the connection to 100 kV or greater (the high side of the step-up transformer).
- Two commenters expressed concerns that Exclusion E2 (using net capacity) and the new Inclusion I2 (using gross aggregate nameplate capacity) are inconsistent. ~~The SDT agrees that Exclusion E2 should over-ride this Inclusion.~~ Exclusion E2 is dedicated to the situations faced by behind-the-meter (retail customer owned) generation that are PURPA qualifying facilities in the US and similarly situated

generators in Canada. While the criteria in Inclusions I2 and I3 were based on gross nameplate ratings in MVA, the first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. The "net capacity provided to the BES" is the behind-the-meter generation that exceeds the Load directly served by the generator. The revised language in Exclusion E2 should address these concerns.

Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows:

I~~3~~2 - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.

Organization	Yes or No	Question 4 Comment
Northeast Power Coordinating Council	No	I3 should pertain to multiple generating units located at a single site, but the entire contiguous path should not be labeled as BES. Oftentimes there are cases when neither the path of a 75 MVA plant or aggregated generation will have any impact on the reliability of the interconnected transmission network nor be necessary for its operation. As stated earlier, under various green energy, smart grid and dispersed renewable energy plans advocated by both Canadian and US policy makers, the gross nameplate rating of 75 MVA may undermine and deter the future potential of integrating Distributed Generations (DG's) that will be implemented to ensure the reliable operation of the interconnected transmission network BES, and, at the same time, providing the most effective and economical solutions for rate payers. Local generation can cost-effectively enhance the reliability of load pocket by avoiding transmission, but such restrictions would deter the adoption of good planning decisions.Path to generating facilities need not be BES contiguous. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require contiguous BES paths.

Response: The SDT carefully debated the generating threshold for this inclusion in the definition. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.

The definition for this inclusion only addresses BES contiguity from the generator leads through the step up transformer(s) connected on the high side at a voltage of 100 kV or above. This establishes contiguity of the generation facility and provides for the highest level of reliable service (generation) to the BES.

Organization	Yes or No	Question 4 Comment
Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Santee Cooper	No	We recommend that it say "Single generating units located at a single site with a capacity of greater than or equal to 100 MVA". The use of aggregate capacity greater than 75 MVA pulls in some very small units.
Idaho Falls Power	No	Again, following our statement in question 3, we feel an arbitrary brightline threshold requires additional defining criteria for inclusion.Adopting the registry's brightline criteria is to us skirting the purpose of the BES definition effort, and lends no more clarity to what is in fact the BES.
Tennessee Valley Authority	No	Other than the NERC Registry Criteria definition, what is the technical justification for the 75 MVA threshold? The threshold level for inclusion should be technically based on the BES capacity and configuration at the location of the generating sources' connection to the BES.
Western Montana Electric Generating and Transmission Cooperative	No	WMG&T is concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition.
New York State Reliability Council	No	The use of a 75 MVA threshold based on NERC's Registry Criteria may be administratively convenient but is arbitrary when based upon BES reliability considerations. Suggest use of a 300 MW or other regionally and technically acceptable threshold such as NPCC's A-10 criterion.
Intellibind	No	Though as previously stated I do not think that the 20 MVA threshold has technical merit, I do not believe that the 75MVA limit has technical merit either. Further the impact should be measured at the buss bar not at the nameplate. The aggregate rating should be the same as the individual unit rating on a single plant, unless the plant can prove that there is not a common failure mode to lose more than 20MVA.
Public Utility District No. 1 of	No	Snohomish is concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from

Organization	Yes or No	Question 4 Comment
Snohomish County, Washington		the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy “needed to maintain transmission system reliability” and are therefore properly included in the BES definition.
Blachly Lane Electric Cooperative Northern Wasco County PUD Central Electric Cooperative Clearwater Power Company Consumers Power Inc. Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Northern Lights Inc Okanogan Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Clallam County PUD No.1 Chelan PUD – CHPD Public Utility District No. 1 of Franklin County Midstate Electric Cooperative Northwest Requirements Utilities	No	We are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy “needed to maintain transmission system reliability” and are therefore properly included in the BES definition. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

Organization	Yes or No	Question 4 Comment
Big Bend Electric Cooperative, Inc. Cowlitz County PUD Utility System Efficiencies, Inc		
Coos-Curry Electric Cooperative Lost River Electric Cooperative PNGC Power Raft River Rural Electric Cooperative	No	Specific language change: Change 75 MVA to 100 MVAWe are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.
City of St. George	No	It is understood that this mirrors the Registry Criteria and this is a simple way to address the issue. The justification states there is no technical rationale to change the 75 MVA threshold, however the technical rationale for the 75 MVA criteria has not been provided either. Having a 75 MVA plant treated the same as a plant with a rating of several hundred or several thousand MVA doesn't make sense either. The requirements for an entity or facility should match the impact of that facility to the system.
Clark Public Utilities	No	Generators should only be part of the Bulk Electric System if they are connected through a GSU to a Transmission Element determined to be part of the BES. The current inclusion language would apply to all generators connected to facilities greater the 100 kV with no exclusion or exception process. Without a change, it appears that a generator connected to a facility greater than 100 kV would be a BES asset even if the transmission assets could be excluded or excepted. I3 should be rewritten to state: Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus to a Transmission Element determined to be part of the Bulk Electric System. Additionally, as indicated by Clark in its comments on the core definition of the BES, Clark believes the 75 MVA threshold lacks an adequate technical justification and is a purely arbitrary quantity. The use of a capacity threshold in the definition of the BES should have technical reasons.
New England States Committee on Electricity	No	Please refer to comments under 3 above. Additionally, regardless of the connection voltage, the 75 MVA limit may unintentionally impose unnecessary added costs to renewable generation, thus inhibiting the development of these resources. This is of particular concern to New England, which has aggressive

Organization	Yes or No	Question 4 Comment
		renewable energy objectives and is working to develop resources in and around the region to meet them in the most cost-effective way. Looking forward, the exception process should provide criteria allowing flexibility as to the aggregate MVA rating as related to the specific connection and impact on a region. This will be discussed further in comments on the Exception Process as appropriate.
Consolidated Edison Co. of NY, Inc.	No	The inclusion of generation to the BES should be subject to an impact test.â€¬
Orange and Rockland Utilities, Inc.	No	XI3 should pertain to multiple generating units impact to the Bulk system, rather than the size unit only. Oftentimes there are cases when neither the path nor a 75 MVA unit itself will have any impact on the reliability of the interconnected transmission network, nor is it necessary for its operation.
City of Redding	Yes	As stated in question #3 above, in concept Redding is in agreement that the Brightline should specify generation facilities at a certain level, however we believe the SDT has no technical basis to choose the 75 MVA threshold. If the SDT elects to retain I3 in its current form then Redding suggests changing the generation level from 75 MVA to 200 MVA. If the goal of the Brightline Definition is to create a starting point to identify power system elements that are "necessary" then the SDT should choose a larger generation threshold as a starting point. The 200 MVA would serve a better purpose by casting the burden of proof (via the Exception Process) from the smaller facilities under 200 MVA to the Regional Entity. This would help the SDT to achieve an objective of reducing the burden on the "small entity" and "distribution" facilities due that fact that most generator facilities of this size are installed to serve local loads. In summary, Redding supports the concept that the brightline as an initial dividing line of elements to be labeled as BES. Therefore, Redding suggests that the SDT change the language in I3: From: "Multiple generating units located at a single site with aggregated capacity greater than 75 MVA (gross nameplate rating) including the generator terminals through the GSUs, connected through a common buss operated at a voltage of 100 kV or above". To: Multiple generating units located at a single site with aggregated capacity greater than 200 MVA (gross nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above".

Response: The SDT has not received sufficient technical justification upon which to base a departure from the generation threshold included in the ERO's Statement of Compliance Registry Criteria.

> **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the

Organization	Yes or No	Question 4 Comment
high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above. The SDT recommends that entities use the NERC Rules of Procedure process for obtaining exceptions to the BES Definition as needed. No change made.		
NERC Staff Technical Review	No	>>>The interconnection voltage threshold should be removed. The contribution of a multiple generating units at a single site to system reliability is a function of the aggregate MVA rating rather than the interconnection voltage. All locations with multiple generating units with aggregate capacity greater than 75 MVA should be included in the BES definition because all such units provide similar contributions to system reliability. >>>>>>>>>> As noted in the comment on Question 3 of this comment request, the specific inclusion of the GSU transformer implies that all other components of a generating unit, such as its unit auxiliary transformer, start-up transformer, governor, exciter, power system stabilizer, etc., are excluded. The SDT should define "generating unit" or otherwise clarify which components of a generating unit are included in the BES definition. >>>>>>>>>> The use of the term "common bus" introduces ambiguity into the definition. It would be better to replace the phrase "connected through a common bus" with the phrase "connected through a common point of interconnection" which also provides consistency with the description of Inclusion I5.
Response: NERC Staff has not provided technical justification for requiring the inclusion of all generating resources greater than 75MVA no matter the interconnecting voltage. The SDT believes that "generating unit" (now expressed as "generating resources") does not need further clarification. The SDT believes that specific requirements for generation support equipment and functions should be addressed by specific NERC standards. The goal of the SDT is to provide clarity to the BES Definition and not to address reliability standards applicability. The SDT agrees that using the "common bus" term is problematic. The revised definition should resolve this concern. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
NERC Transmission Issues Subcommittee (TIS)	No	The use of the term "common bus" technically has a very specific meaning and would openly exclude most modes of connection. There is no "common bus" in a ring-bus or a breaker-and-one-half configuration. Also, it is not necessary to include the GSU (s), as commented in 3 above. >>>>>>>>>> The TIS suggests using wording similar to that contained in I5: >>>>>>>>>>"I3 - Multiple generating units

Organization	Yes or No	Question 4 Comment
		located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common bus operated at a common point of interconnection to a system Element at a voltage of 100 kV or above."
Response: The SDT has eliminated term "common bus". The SDT believes that the revised proposed definition is an improvement. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Dominion	No	As stated in its response to Question 2 above, Dominion disagrees that a generation resource, Element or Facility should automatically be included in the BES. Dominion agrees that the Generator Owner and Generator Operator, as users of the bulk power system, should have to abide by applicable reliability standards, but do not agree that this should automatically require the inclusion of a generation resource, Element or Facility in the BES. Further, Dominion prefers that the SDT use the term "generation resources" as stated in the current BES definition contained in the Glossary of Terms, instead of the proposed term "generation unit"
Response: The SDT agrees and has proposed the term "generating resources" for clarity. The SDT scope was determined by the language contained in Order Nos. 743 & 743a in which the Commission provided guidance to the ERO to clarify the definition for continent-wide application. The Commission did not propose significant changes to the current application of the existing definition over the majority of the continent. Therefore the SDT has developed a draft core definition, together with BES designations (Inclusions and Exclusions) that provide the specificity necessary to identify the vast majority of BES Elements by utilizing the existing definition and criteria previously approved for this purpose. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		

Organization	Yes or No	Question 4 Comment
MRO's NERC Standards Review Forum	No	The wording "connected through a common bus" is drawn from the NERC Compliance Registry Criteria. NSRF agrees with the language if the intent is to let entities classify the applicable multiple generating units as part of the BES only when it is connected to one (common) bus. However, if the intent is for entities to also classify multiple generation as part of the BES when it is connected through two or more GSUs to different bus sections of a set of (common) buses that are interconnected through bus-tie breakers [which may be done to provide improved reliability and maintenance flexibility], then wording like "connected through a common bus or set of interconnected buses" would be more appropriate. It is the NSRF's understanding that entities do not have to classify applicable multiple generating units as part of the BES when the aggregate MVA is connected to different buses at different voltage levels and no more than 75 MVA is connected to any one bus (or set of interconnected buses) at a single voltage level of 100 kV or more. Is this a correct interpretation?
American Transmission Company, LLC	No	ATC offers the following alternative language: o The wording "connected through a common bus" is drawn from the NERC Compliance Registry Criteria. ATC agrees with the language if the intent is to let entities classify the applicable multiple generating units as part of the BES only when it is connected to one (common) bus. However, if the intent is for entities to also classify multiple generation as part of the BES when it is connected through two or more GSUs to different bus sections of a set of (common) buses that are interconnected through bus-tie breakers [which may be done to provide improved reliability and maintenance flexibility], then wording like "connected through a common bus or set of interconnected buses" would be more appropriate. o It is also ATC's understanding that entities do not have to classify applicable multiple generating units as part of the BES when the aggregate MVA is connected to different buses at different voltage levels and no more than 75 MVA is connected to any one bus (or set of interconnected buses) at a single voltage level of 100 kV or more. Is this a correct interpretation?

Response: The SDT has eliminated the term "through a common bus". The SDT believes that the revised proposal should be an improvement. The SDT also believes that this inclusion is in conformance with the generation plant 75 MVA threshold in the NERC Statement of Compliance Registry Criteria, which has not needed clarification to date.

The SDT cannot address each and every unique situation related to the connection of generation resources. More information would be needed before this question could be answered. For individual situations, entities may seek exception by using the NERC Rules of Procedure (RoP) exception process to present relevant evidence.

Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows:

I~~3~~2 - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross

Organization	Yes or No	Question 4 Comment
aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
SERC OC Standards Review Group	No	"Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above." GSUs need to be defined - see response to question 3 above.
Response: This inclusion has been clarified using the term step up transformer(s) rather than GSU. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Hydro One Networks Inc FortisBC	No	We agree with the concept of Inclusion I3 with respect to multiple generating units located at a single site, but do not support that the entire contiguous path has to be BES. The path of a 75 MVA plant or aggregated generation will rarely have any impact on the reliability of the interconnected transmission network nor is it necessary for its operation. We also do not support the fact that there should be a blanket application of this inclusion.As stated earlier, under various green energy, smart grid and dispersed renewable energy plans advocated by both Canadian and US policy makers, the gross nameplate rating of 75 MVA may undermine and deter the future potential of integrating Distributed Generations (DG's) that will be implemented to ensure the reliable operation of the interconnected transmission network BES, and, at the same time, providing the most effective and economical solutions for the rate payers in North America. Local generation can cost-effectively enhance the reliability of load pocket by avoiding transmission, but such restrictions would deter the adoption of good planning decisions.Upcoming load displacement projects would result in the installation of new self-generation facilities at customer sites, with the electricity generated being used on-site by the customer, with a resultant decrease in the consumption of electricity purchased via large scale generation. These projects can be large, and displace a substantial portion of the customer's (or local distribution company's) existing load, even to the extent of total self-sufficiency and the availability of surplus generation. The aggregated surplus generation capacity may very well exceed 75 MVA and would consequently force the facility owners to register as both Generation Owners (GO) and Transmission Owners (TO), which may be in conflict with regulatory rules in many jurisdictions. We suggest the following: o Generation restriction (75 MVA) should either be revised or the exception procedure should allow entities,

Organization	Yes or No	Question 4 Comment
		with the support of technical evidence, to exclude element(s) being labeled as part of BES. o Path to generating facilities need not be BES contiguous unless the unit is identified essential for the operation of transmission network. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require contiguous paths. o Entities should be able to use the exception process, with the help of technical evidence, to exclude generating units that do not impact the interconnected grid and the bulk transfer of power. o From a regulatory perspective such an inclusion could also be in conflict with the current regulatory requirements. Definition and/or exception process should provide acknowledgement and flexibility to avoid any regulatory conflicts. For example, as stated earlier (Q3 response) NERC and SDT should consider introducing a concept of a new category of registration or BES Support elements. These elements are NOT necessarily BES but support the reliable operation of the interconnected transmission network.
Response: The definition for this inclusion only addresses BES contiguity from the generator leads through the step up transformer(s). The SDT has not received sufficient technical justification upon which to base a departure from the generation plant 75 MVA threshold included in the ERO's Statement of Compliance Registry Criteria. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The SDT recommends that entities use the NERC Rules of Procedure exception process for obtaining exceptions to the BES Definition. With respect to the regulatory issue raised, the revised definition should resolve this concern. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Electricity Consumers Resource Council (ELCON)	No	Same response as item 3 above.
Response: See response to Q3.		

Organization	Yes or No	Question 4 Comment
Electric Reliability Council of Texas, Inc.	No	See response to question 3 - ERCOT ISO agrees with substance, but not the approach.
Fayetteville Public Works Commission	No	The same comment made in Question 3 and applicable to Inclusion I2 is also applicable to Inclusion I3.
American Electric Power	No	Please see response to question 3.
Southern California Edison Company	No	Please refer to SCE's answer for Question No. 3 above.
SPP Standards Review Group	No	The comment provided for Question 3 above applies here also.
Pepco Holdings Inc		Clarification needed: Same situation as described in #3 above.
Southwest Power Pool	Yes	Please see SPP's response to question 3 - SPP agrees with substance, but not the approach.
Michgan Public Power Agency	Yes	See comments to question 3
Response: See response to Q3.		
Hydro-Quebec TransEnergie	No	We believe that automatic inclusion of 75 MVA generation and the path to connect them to the BES should not be automatically included in the BES. However, a provision should be made so that some reliability standards related to generator shall apply (voltage regulation, etc.).
Response: The definition for this inclusion only addresses BES contiguity from the generator leads through the step up transformer(s) which is connected on the high side at a voltage of 100 kV or above. This establishes contiguity of the generation facility and provides for the highest level of reliable service (generation) to the BES. The SDT believes that NERC Reliability Standards may be applied to specific generator support elements (e.g., voltage regulation) that are necessary to operate the interconnected transmission network. The goal of the SDT is to provide clarity to the BES Definition and not to address Reliability Standards applicability. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: I~~3~~2 - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross		

Organization	Yes or No	Question 4 Comment
aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Vermont Transco	No	What is the definition of "common bus"? Would this only apply to generating facilities with a direct GSU tie to the 100 kV, and up, system? Or would it apply to those units tied to the low side of a transformer at a voltage below 100 kV that has a step up high side voltage greater than 100 KV? Example: units are tied through to a single 46 kV substation (GSU high side connected to this substation) with a tie from this substation to the BES through a step up transformer.
Response: The SDT has eliminated the term "common bus". The SDT cannot address each and every unique situation related to the connection of generation resources. More information would be needed before this question could be answered. For individual situations, entities may seek exception by using the NERC Rules of Procedure (RoP) exception process to present relevant evidence. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Sweeny Cogeneration LP	No	The threshold for multiple generation units aggregated at a single location is consistent with the NERC functional registry criterion. We believes that it is important to maintain this uniformity. However, we believe there are further items to be added to the list related to generator interconnections, a task that was passed to this project from Project 2010-07. Just as is the case with complex distribution systems, there are a variety of generator-transmission interconnection architectures which are driving the Regions to inappropriately register Generator Owner/Operators as Transmission Owners.
Response: More information would be needed before the concern can be answered. No change made.		
Muscatine Power and Water	No	The phrase "connected through a common bus" is taken from the NERC Compliance Registry Criteria. MP&W would agree with this language if the intent is to let entities categorize the applicable multiple generating units as part of the BES only when it is connected to one (common) bus. However, if the intent is for entities to also classify multiple generation as part of the BES when it is connected through two or more GSUs to different bus sections of a set of (common) buses that are interconnected through bus-tie breakers

Organization	Yes or No	Question 4 Comment
		(which may be done to provide improved reliability and maintenance flexibility), then using language like "connected through a common bus or set of interconnected buses" would be more appropriate.
Response: The SDT believes the term "through a common bus" is problematic and the revised proposal should resolve this concern. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Springfield Utility Board	No	While Springfield Utility Board does not own any generating units, we do recognize the importance of the restoration of the Grid, and the generation necessary for the Grid. SUB would recommend that NERC clearly define "location" and "single site". Does single site mean interstate service area location (adding up generation over multiple geographically separate areas), same City?, same common bus?, etc... SUB suggests that for purposes of I3 (and other inclusions and exclusions that reference "same site", "same location", or similar language) that the term "collectively share a common bus" be used.
Springfield Utility Board	No	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
Response: The SDT believes that "single site" is in agreement with the ERO Statement of Compliance Registry Criteria (SCRC) threshold for including greater than 75 MVA generating plants/plants. Because this SCRC criterion has not been problematic to date, the SDT does not believe that "single site" needs to be further clarified.		

Organization	Yes or No	Question 4 Comment
The SDT has not received sufficient technical justification to exclude load modifying or backup generation plants as described from the BES Definition. No changes made.		
Public Utilities Commission of Ohio	No	This should be expanded to also refer to individual generation capacity, as well as aggregate, at 75 MVA and above.
New York State Dept of Public Service		I3 should be revised to read all generation - individually or aggregate - 75 MVA and above.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Cogentrix Energy, LLC	No	GSUs need to be defined - see response to question 3 above
Response: This inclusion has been clarified to use the term step up transformer(s) rather than GSU. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
The Dow Chemical Company	No	It should be clarified that Exclusion E2 over-rides this Inclusion. See ELCON comments.
ExxonMobil Research and Engineering	Yes	Support is contingent on the continued exclusion of generation based on its net capacity provided to the BES.
Response: The SDT agrees that Exclusion E2 should over-ride this inclusion. The revised language in Exclusion E2 should address these concerns.		

Organization	Yes or No	Question 4 Comment
PJM	No	As written I3 implies a contiguous system from the unit to a "common bus operated at a voltage above 100 kV" there is no technical justification for a contiguous system. The requirement should read "Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSU"
Response: The SDT's revised proposal should address this concern. The definition for this inclusion only addresses BES contiguity from the generator leads through the step up transformer(s). Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Oncor Electric Delivery Company LLC	No	The ERCOT Region already considers load in any combination equal to and over 20 MVA through a single Point of Interconnect as part of the BES
Response: The definition does not preclude more restrictive local requirements.		
PPL Energy Plus and PPL Generation	No	See comments in Question 13
Illinois Municipal Electric Agency	Yes	Please see comments under Question 13.
Response: See response to Q13.		
Manitoba Hydro	No	It is not clear if this inclusion only applies if the generators at a single site have an aggregate capacity greater than 75 MVA AND are connected through a common bus operated at 100kV or if the inclusion applies if the generators at a single site have an aggregate capacity of over 75MVA regardless of whether or not they are connected through a common bus operated at 100kV or above. For example, would this inclusion apply if a utility has over 75MVA at single generating site but only a small portion of the generating capacity is connected through the GSU to a common bus at 100kV or above and the rest is connected through a common bus operating at less than 100kV? Suggested wording: "Multiple generating units located at a single site connected to a common bus operated at a voltage of 100kV or above with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs.

Organization	Yes or No	Question 4 Comment
Response: The SDT's revised proposal should be understood to mean that all applicable generating resources at a single site, their generator terminals, connecting cabling up to and including their step up transformer(s) that are connected at 100kV or greater will be included in the definition of the BES. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Independent Electricity System Operator	No	See our responses to Q1 and Q3.
Response: See responses to Q1 & Q3.		
AltaLink	No	We agree with the concept of Inclusion I3 with respect to multiple generating units located at a single site, but do not support that the entire contiguous path has to be BES. The path of a 75 MVA plant or aggregated generation will rarely have any impact on the reliability of the interconnected transmission network nor is it necessary for its operation. Generation restriction (75 MVA) should either be revised or the exception procedure should allow entities, with the support of technical evidence, to exclude element(s) being labeled as part of BES. Path to generating facilities need not be BES contiguous. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require contiguous paths.
Response: The definition for this inclusion only addresses BES contiguity from the generator leads through the step up transformer(s) connected on the high side at a voltage of 100 kV or above. This establishes contiguity of the generation facility and provides for the highest level of reliable service (generation) to the BES. The SDT has not received sufficient technical justification upon which to base a departure from the generation plant threshold included in the ERO's Statement of Compliance Registry Criteria. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The SDT recommends that entities use the NERC Rules of Procedure exception process for obtaining exceptions to the BES Definition.		

Organization	Yes or No	Question 4 Comment
Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
BPA	No	BPA suggest defining "single site." BPA is assuming that a "single site is a single substation with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above. BPA would also like this to be consistent with Inclusion #2 and state: a high side voltage of 100 kV or above.
Response: The SDT believes that "single site" is in agreement with the ERO Statement of Compliance Registry Criteria (SCRC) threshold. Because this SCRC criterion has not been problematic to date, the SDT does not believe that "single site" needs to be defined. No change made.		
Portland General Electric Company		The 75 MVA aggregate capacity rating threshold could result in the inclusionin the BES of generating units that have no potential to impact the reliability of the BES.The 75 MVA threshold was taken from the registration criteria, and no technicaljustification has been provided for its use. In addition, the meaning of the phrase"located at a single site" is unclear and subject to multiple interpretations. The phrase"connected through a common bus" accomplishes the same goal, and therefore thephrase "located at a single site" hould be removed.
Response: The SDT has not received sufficient technical justification upon which to base a departure from the generation plant threshold included in the ERO's Statement of Compliance Registry Criteria. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The SDT believes that the term "single site" is agreement with the ERO Statement of Compliance Registry Criteria (SCRC) threshold. Because this SCRC criterion has not been problematic to date, the SDT does not believe that "single site" needs further clarification. No changes made.		
Tacoma Power		Tacoma Power generally supports Inclusion I3. However, the term 'gross aggregate nameplate rating' is not defined and should be replaced with a specific definition. Additionally, no justification for the 75 MVA level has been provided and therefore it appears arbitrary. Since this measurement will define Elements for absolute inclusion in the BES, the threshold for multiple generation

Organization	Yes or No	Question 4 Comment
		units located at a single site should be based on a need to maintain transmission reliability. Such single sites located within a Local Distribution Network (LDN), which do not exit the LDN, should not be included. We propose changing Inclusion I3 to read, "Multiple generating units located at a single site with an aggregate capacity greater than 75 MVA (aggregate capacity based on the Code of Federal Regulation, CFR 18, Part 287.1, "Determination of powerplant design capacity") including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above, except multiple generating units located at a single site that are within a Local Distribution Network (LDN) and do not have a net export out of the LDN."
Response: The SDT feels that the term "gross nameplate rating" is a widely used term within the industry and does not require additional defining. The SDT has not received sufficient technical justification upon which to base a departure from the generation plant threshold included in the ERO's Statement of Compliance Registry Criteria. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.		
American Municipal Power and Members Florida Municipal Power Agency	Yes	I3 contains language similar to I2, and should be similarly reworded, as follows: "Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating), connected through a common bus operated at a voltage of 100 kV or above. A BES generating plant includes the equipment from the generator terminals through the respective GSUs."
Transmission Access Policy Study Group	Yes	I3 contains language similar to I2, and should be similarly reworded, as follows: "Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating), connected through a common bus operated at a voltage of 100 kV or above. A BES generating plant includes the equipment from the generator terminals through the respective GSUs."
Northern California Power Agency	Yes	NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.
Response: The SDT agrees that BES contiguity for this inclusion is limited to the generator leads through the step up transformer(s). However, the SDT believes the last sentence in the comment is not needed for clarification.		

Organization	Yes or No	Question 4 Comment
Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Western Electricity Coordinating Council	Yes	WECC agrees in concept, but suggests that the phrase "connected through a common bus" may be unclear. For example, if there is also load connected through that common bus, does that net, does it negate the inclusion, or does it not matter? Perhaps a phrase such as "regardless of the amount of load also connected through that common bus" would help. The GSU comment from I2 also applies. Suggested language "...including the generator terminals up to and including the GSU transformer, which has a high-side voltage of 100 kV or above."
Response: The SDT eliminated the term "common bus". Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Central Maine Power Company New York State Electric & Gas and Rochester Gas & Electric	Yes	Please note that this departs from NERC's Registry Criteria in that the unit of measurement is MVA instead of MW.
Response: The ERO Statement of Compliance Registry Criteria uses MVA units (not MW units) for both generator unit and generation plant capacities. No change made.		
PacifiCorp	Yes	PacifiCorp understands the SDT is looking for technical reasons for something other than 75 MVA. PacifiCorp believes it is not feasible to determine a value that is consistent across the continent. Although PacifiCorp believes 75 MVA is too low, it is an acceptable number for any configuration of generation (see comment on question 3). Those above 75 MVA believed to be exempt from the BES definition can be processed through the proposed ROP inclusion/exclusion process.PacifiCorp submits the following suggested wording for I3: "Multiple generating units with an aggregate capacity greater than 75 MVA or a single generating unit with a generating capacity greater than 75 MVA....."
Response: Stakeholder comments have not provided technical justification by which to base a departure from the 75 MVA threshold where connected at 100		

Organization	Yes or No	Question 4 Comment
kV and above. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Alberta Electric System Operator	Yes	Consider adding the word "transformer" after "GSU".
Response: The SDT agrees and has replaced GSU with the term "step-up transformer(s)". Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Idaho Power	Yes	Generally agreed but please revise to inlcude I2, I3 and I5 at 75 MVA, see Question 3 and 6 comments.
Long Island Power Authority	Yes	We recommend clarifying that I3 only covers units under 20 MVA and that the aggregation similarly just applies to those units that are under 20MVA. Example: a 100 MVA generating unit and a 15 MVA generating unit at a single site only the 100 MVA generating unit would be BES per Inclusion I2 but Inclusion I3 would not apply.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross		

Organization	Yes or No	Question 4 Comment
aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Central Lincoln	Yes	Please indicate how aggregate generation below 75 MVA is to be treated, since we don't believe the flowchart at http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf properly expresses the SDT's intent to classify these small plants as non-BES.
Response: The BES Rule of Procedure team has been made aware of this.		
Sacramento Municipal Utility District (SMUD)	Yes	SMUD also agrees with the Inclusion 3 concept.
Sierra Pacific Power Co d/b/a NV Energy	Yes	While 75MVA has no technical basis for the threshold above which an aggregate generation plant should be considered to be necessary for the reliable operation of an interconnected transmission network, the industry has not provided any technical data to support a value other than this which has been established in the NERC Statement of Compliance Registry Criteria.
PUD No. 2 of Grant County, Washington	Yes	Grant supports this proposed inclusion.
Public Service Enterprise Group LLC	Yes	
Tri-State Generation and Transmission Association, Inc.	Yes	
Imperial Irrigation District	Yes	
SERC Planning Standards Subcommittee	Yes	
ACES Power Participating Members	Yes	
National Rural Electric Cooperative Association	Yes	

Organization	Yes or No	Question 4 Comment
(NRECA)		
Overton Power District No. 5	Yes	
Arizona Public Service Company	Yes	
ReliabilityFirst	Yes	
Rayburn Country Electric Cooperative, Inc.	Yes	
New York Power Authority	Yes	
Southern Company	Yes	
Luminant Energy	Yes	
Western Area Power Administration	Yes	
US Bureau of Reclamation	Yes	
Grand Haven Board of Light and Power	Yes	
Glacier Electric Cooperative	Yes	
FHEC	Yes	
South Texas Electric Cooperative, Inc.	Yes	
National Grid	Yes	
Dayton Power and Light	Yes	

Organization	Yes or No	Question 4 Comment
Company		
Duke Energy	Yes	
South Carolina Electric and Gas	Yes	
MidAmerican Energy Company	Yes	
Florida Keys Electric Cooperative	Yes	
East Kentucky Power Cooperative, Inc.	Yes	
Farmington Electric Utility System	Yes	
Colorado Springs Utilities	Yes	
Consumers Energy Company	Yes	
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	Yes	No comment.
Exelon	Yes	
Puget Sound Energy	Yes	
GTC	Yes	
ISO New England, Inc.	Yes	
City of Anaheim	Yes	

Organization	Yes or No	Question 4 Comment
MEAG Power	Yes	
Xcel Energy	Yes	
Golden Spread Electric Cooperative, Inc.	Yes	
Response: Thank you for your support. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Please see the revised definition.		

5. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: The SDT agrees that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system elements. In addition, the Transmission Operator's actual restoration may make use of paths that were not identified as Cranking Paths in the restoration plan due to the particular system configuration on the day in question. Therefore, the SDT has removed the inclusion for Cranking Paths.

However, the SDT disagrees that Blackstart Resources should not be included in the BES definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which include situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES Elements.

If a situation arises where an entity believes that a specific Cranking Path must be part of the BES, that entity can always make use of the Rules of Procedure exception process to request including it in the BES.

Inclusion I4 has been re-numbered as Inclusion I3 and revised as follows:

I~~4~~3 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.

Organization	Yes or No	Question 5 Comment
Public Service Enterprise Group LLC	No	Black start resources and the cranking path should not be included in the BES definition unless connected at 100kV and above. There are many other existing standards that impact black start units. Routine testing and redundancy is part of them. Adding in black start units < 100kV and the associated cranking path to the BES definition may discourage entities from providing black start capability due to cost associated with cumulative testing and record keeping criteria. This may result in withdrawing the offer to provide that service and/or potentially drive up the cost of that service significantly without any related increase in BES reliability.
ACES Power Participating	No	Blackstart resources are rarely used. For many reasons, restoration almost always starts with synchronizing

Organization	Yes or No	Question 5 Comment
Members		to other systems (the Interconnection) that are already intact. Because Blackstart Resources can actually be on the distribution system, the distribution system can then become subject to the enforceable standards. This results in significant increased costs in tracking compliance for these distribution systems without a commensurate increase in reliability. Because a Blackstart Resource must be included in the Transmission Operator's restoration plan, this creates a perverse incentive to un-designate the Blackstart Resource that is on a distribution system to avoid the distribution system becoming part of the Bulk Electric.
Western Montana Electric Generating and Transmission Cooperative Public Utility District No. 1 of Snohomish County, Washington Northern Wasco County PUD Clallam County PUD No.1 Chelan PUD – CHPD Public Utility District No. 1 of Franklin County Midstate Electric Cooperative Northwest Requirements Utilities Big Bend Electric Cooperative, Inc. Cowlitz County PUD	Yes	Including "all" blackstart and blackstart cranking paths in the BES may ultimately provide an incentive to the electric industry to reduce the number of resources with blackstart capability. We therefore suggest that essential blackstart resources identified by the Regional Entity should be included in the Bulk Electric System, but non-essential blackstart resources need not be.
Response: The SDT agrees that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system elements. In addition, the Transmission Operator's actual restoration may make use of paths that were not identified as Cranking Paths in the restoration plan due to the particular system configuration on the day in question. Therefore, the SDT has removed the inclusion for Cranking Paths. However, the SDT disagrees that Blackstart Resources should not be included in the BES definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which include situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system		

Organization	Yes or No	Question 5 Comment
that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES Elements. If a situation arises where an entity believes that a specific Cranking Path must be part of the BES, that entity can always make use of the Rules of Procedure exception process to request including it in the BES. Transmission Operators are responsible for maintaining a viable, reliable restoration plan, regardless of the BES definition; the SDT does not agree that adding Blackstart Resources to the BES definition alone would "discourage entities from providing Blackstart capability." I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
Northeast Power Coordinating Council	No	Blackstart resources and transmission facilities on the cranking path should not be classified as BES regardless of size and voltage level. From a regulatory perspective, such an inclusion would be in conflict with the current regulatory requirements in many jurisdictions. More importantly, designating these facilities as BES Elements or Facilities beyond the 100 kV bright line, the 20 MVA/unit or 75 MVA/plant criteria, without a regard to their impact on the BES (under conditions other than system restoration) will impose unnecessary requirements for these facilities, which do not contribute to reliability under interconnected operation conditions. For a restoration condition, this inclusion is extraneous. There is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability.The BES definition should cover those facilities that are needed for operation under both normal and emergency conditions, which includes situations related to blackstart and system restoration. The directives should not specifically ask for inclusion of blackstart resources and facilities on the cranking path in the BES definition. The requirements in EOP-005-2 suffice to address the SDT's interpretation and concern regarding recognition of the reliability impacts and requirements for blackstart resources and facilities used for system restoration.Generating units of any size and transmission facilities of any voltage level may be used for black start and restoration. Conceivably, a generator of 10 MW and transmission or distribution facilities of 44 kV or 69 kV may be a part of the cranking path. A BES inclusion will then subject these generators and facilities, which are essentially "local" facilities but called upon to begin restoring its bulk interconnected counterparts, to comply with the reliability standards intended for maintaining BES reliability. Included in the BES definition will thus discourage smaller generators from providing black start capability, and the transmission facilities from being a part of the cranking path. This may also discourage Transmission Owners and Operators from identifying multiple black start resources and cranking paths to provide restoration flexibility. Such an inclusion will ultimately undermine reliability.If indeed any of these facilities are deemed necessary to support bulk power system reliability at times other than system restoration, they would/should have been identified

Organization	Yes or No	Question 5 Comment
		through the basic BES definition and inclusion list or can be addressed through the exception procedure. I4 should be removed based upon: o The availability and performance expectations of blackstart resources and facilities on the cranking path are already specifically addressed in an existing standard; and o Unless they meet the BES definition and the other inclusion criteria, they do not have any perceived reliability impact on everyday operation of the BES. o I4 may include very small generators and distribution facilities as it is written. Is it necessary from a reliability point of view to include “cranking paths” below 100kV?
American Municipal Power and Members	No	We recommend that the SDT exclude Blackstart Units under 20MW and Blackstart Units that are connected via their GSU to Non-BES Facilities (under 100kV). We believe this would be a minimal impact on the existing Restoration Plans while increasing the reliability and viability of these Restoration Plans since the industry would be forced to use only BES facilities as defined by NERC BES definition. This would force all Blackstart Units to be compliance with all Reliability Standards if this change is implemented.
Hydro One Networks Inc	No	We do not agree with Inclusion I4. Blackstart resources and transmission facilities on the cranking path should not be classified as BES regardless of size and voltage level. From a regulatory perspective, such an inclusion would be in conflict with the current regulatory requirements in many of the jurisdictions. More importantly, designating these facilities as BES Elements or Facilities beyond the 100 kV bright line, the 20 MVA/unit or 75 MVA/plant criteria, without a regard to their impact on the BES (under conditions other than system restoration) will impose unnecessary requirements for these facilities, which do not contribute to reliability under interconnected operation conditions. For restoration condition, this inclusion is extraneous given there is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability.While we do not disagree with the SDT’s interpretation of the FERC directives, the BES definition should cover those facilities that are needed for operation under both normal and emergency conditions, which includes situations related to black-start and system restoration. We do not agree that the directives specifically ask for inclusion of blackstart resources and facilities on the crank path in the BES definition. We believe the requirements in EOP-005-2 suffice to address the SDT’s interpretation and concern regarding recognition of the reliability impacts and requirements for blackstart resources and facilities used for system restoration.Generating units of any size and transmission facilities of any voltage level may be used for blackstart and restoration. Conceivably, a generator of 10 MW and transmission facilities of 44 kV or 69 kV may be a part of the cranking path. A BES inclusion will then subject these generators and facilities, which are essentially “local” facilities but called upon to begin restoring its bulk interconnected counterpart, to comply with the reliability standards intended for maintaining BES reliability.

Organization	Yes or No	Question 5 Comment
		Included in the BES definition will thus discourage smaller generators from providing blackstart capability, and the transmission facilities from being a part of the cranking path. This may also discourage Transmission Owners and Operators from identifying multiple blackstart resources and cranking paths to provide restoration flexibility. Such an inclusion will ultimately undermine reliability.If indeed any of these facilities are deemed necessary to support bulk power system reliability at times other than system restoration, they would/should have been identified through the basic BES definition and inclusion list or can be addressed through the exception procedure. We suggest and urge the SDT to remove I4 on the basis that: o The availability and performance expectations of blackstart resources and facilities on the cranking path are already specifically addressed in an existing standard; and o Unless they meet the BES definition and the other inclusion criteria, they do not have any perceived reliability impact on everyday operation of the BES.
Southern Company	No	Inclusion I4 should be removed from this definition. There is an existing standard, EOP-005-2 (System Restoration from Blackstart Resources), which specifically addresses Blackstart Resources and the designated Blackstart Cranking Paths "regardless of voltage". Also, use of "regardless of voltage" in Inclusion I4 as part of the BES definition will expand the applicability of some NERC Reliability Standards, which pertains to the BES, to connected facilities at voltage levels below 100Kv.
Hydro-Quebec TransEnergie	No	When we have to use Blackstart Resources, there is no more system. Therefore, reliability is not a system planning issue, the need is no more for reliability since we lost the System or part of it. It becomes a need for restoration of the system as fast as possible. The restoration plan is necessary, but the Blackstart Resources and do not contribute to the reliability of the System, which just failed, but to limit the time of loss of service. There is no obligation to apply the same Reliability Standards on the paths and it should not be automatically included in the BES.
National Grid	No	We do not feel that blackstart resources and cranking paths should be classified as BES. In several instances, cranking paths direct the operator to pick up distribution load before moving on to the next step for stability purposes. These are non-jurisdictional distribution facilities and should not be considered BES, since they are not necessary to support the reliability of the bulk power system during normal conditions. The BES definition should cover those facilities that are within FERC's jurisdiction and that are needed for operation under both normal and emergency conditions, which may include some facilities related to black-start and system restoration, but not all. The directives should not broadly include blackstart resources and facilities on the cranking path in the BES definition. This is over inclusive. The requirements in NERC standard EOP-005-2 address the SDT's interpretation and concern regarding recognition of the reliability impacts and requirements for blackstart resources and facilities used for system restoration.For example, there could also be small generators (less than 20 MVA/unit or 75 MVA/plant) or transmission and distribution facilities of 69 kV or less, which are considered "local", that are used for system restoration in the cranking path. A BES inclusion will then subject these generators and facilities, which are "local", non-jurisdictional facilities that

Organization	Yes or No	Question 5 Comment
		may be called upon to begin restoring its bulk interconnected counterparts, to comply with the reliability standards intended for maintaining BES reliability. Including these facilities in the BES definition will thus discourage smaller generators from providing blackstart capability, and the transmission facilities from being a part of the cranking path. This may also discourage Transmission Owners and Operators from identifying multiple blackstart resources and cranking paths to provide restoration flexibility. This will ultimately undermine reliability. Also, including these types of facilities in the BES definitions could lead to jurisdictional challenges that could cause uncertainty and delay the implementation of the new BES definition and divert important industry and regulatory resources. Because of these reasons, I4 should be removed from the inclusions list.
Dayton Power and Light Company	No	Black start resources should not be included in this new proposal, which is being developed in response to FERC Orders 743 and 743A. These orders do not mention the inclusion of black start resources or cranking paths. These resources are undeniably important and we believe the existing CIP and other NERC standards applicable to them provide sufficient and appropriate safeguards. Their inclusion as BES elements would significantly increase the requirements for both distribution and 69kV cranking paths - which would be classed as BES elements and fall under all those requirements. Entities currently include multiple cranking paths for their restoration plans to improve the flexibility of their resources. However, if cranking paths are considered BES and must meet those requirements, they will default to a single cranking path which would potentially decrease their flexibility. The purpose of the bulk electric system is to accommodate the bulk movement of electricity through the interconnected system. In a black start situation, entities would NOT be interconnected and not moving bulk power. In light of the above, there is no sound basis for inclusion of these elements as part of the BES.
Cogentrix Energy, LLC	No	The SERC SRG is concerned that this provision may have the effect of incenting transmission operators to limit the available generator options to the minimum necessary for a reliable option as opposed to every possible option that might be utilized in a pinch. We recommend the following adjusted language: “Essential Blackstart Resources and the designated essential blackstart Cranking Paths identified in the Transmission Operator’s restoration plan regardless of voltage”
New England States Committee on Electricity	No	Please refer to comments under 3 above. Black start units should be excluded from BES. These units and their associated cranking paths are used only for restoration and not operation. Such units are appropriately covered under regional restoration procedures and applicable NERC standards (see for example, Emergency Operating Procedure EOP-005-2). NESCOE is still exploring the impact and necessity of this proposed inclusion.

Organization	Yes or No	Question 5 Comment
Manitoba Hydro	No	Inclusion I4 should be modified so that only the Blackstart Resources and designated Cranking Paths required for compliance with the NERC Emergency Preparedness and Operations Standards are included in the BES Definition.
ISO New England, Inc.	No	The SDT states that "One of the basic tenets that the SDT is following is to avoid changes to registration due to the revised definition if such changes are not technically required for the definition to be complete." However, adding every black start generator and the designated cranking path to the definition of the BES is at odds with the Statement of Compliance Registry Criteria which states: III.c.3 Any generator, regardless of size, that is a blackstart unit material to and designated as part of a transmission operator entity's restoration plan, or; The SDT should use the registry language in order to not expand the BES to every cranking path on the distribution system from a small generator entered into the black start program. Furthermore, the SDT cannot simply disregard voltage level, because: (a) FERC Order 743 expresses preference for a bright line definition, and (b) Section 215 of the Federal Power Act defines the "bulk-power system" as, in part, "electric energy from generation facilities needed to maintain transmission reliability". As the NERC Compliance Registry has long recognized, not every generator that is a blackstart unit is "material" - i.e., may not be necessary - to the restoration plan or, therefore, to bulk-power system reliability.
Independent Electricity System Operator	No	This inclusion is extraneous given there is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. We therefore suggest removing Inclusion I4.
AltaLink	No	We do not agree with Inclusion I4. Blackstart resources and transmission facilities on the cranking path should not be classified as BES regardless of size and voltage level. From a regulatory perspective, such an inclusion would be in conflict with the current regulatory requirements in many of the jurisdictions. More importantly, designating these facilities as BES Elements or Facilities beyond the 100 kV bright line, the 20 MVA/unit or 75 MVA/plant criteria, without a regard to their impact on the BES (under conditions other than system restoration) will impose unnecessary requirements for these facilities, which do not contribute to reliability under interconnected operation conditions. For restoration condition, this inclusion is extraneous given there is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability.While we do not disagree with the SDT's interpretation of the

Organization	Yes or No	Question 5 Comment
		FERC directives, the BES definition should cover those facilities that are needed for operation under both normal and emergency conditions, which includes situations related to black-start and system restoration. We do not agree that the directives specifically ask for inclusion of blackstart resources and facilities on the crank path in the BES definition. We believe the requirements in EOP-005-2 suffice to address the SDT's interpretation and concern regarding recognition of the reliability impacts and requirements for blackstart resources and facilities used for system restoration.Generating units of any size and transmission facilities of any voltage level may be used for blackstart and restoration. Conceivably, a generator of 10 MW and transmission facilities of 44 kV or 69 kV may be a part of the cranking path. A BES inclusion will then subject these generators and facilities, which are essentially "local" facilities but called upon to begin restoring its bulk interconnected counterpart, to comply with the reliability standards intended for maintaining BES reliability. Included in the BES definition will thus discourage smaller generators from providing blackstart capability, and the transmission facilities from being a part of the cranking path. This may also discourage Transmission Owners and Operators from identifying multiple blackstart resources and cranking paths to provide restoration flexibility. Such an inclusion will ultimately undermine reliability.If indeed any of these facilities are deemed necessary to support bulk power system reliability at times other than system restoration, they would/should have been identified through the basic BES definition and inclusion list or can be addressed through the exception procedure. We suggest and urge the SDT to drop I4 on the basis that: o The availability and performance expectations of blackstart resources and facilities on the cranking path are already specifically addressed in an existing standard; and o Unless they meet the BES definition and the other inclusion criteria, they do not have any perceived reliability impact on everyday operation of the BES.
Response: The SDT agrees that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system elements. In addition, the Transmission Operator's actual restoration may make use of paths that were not identified as Cranking Paths in the restoration plan due to the particular system configuration on the day in question. Therefore, the SDT has removed the inclusion for Cranking Paths. However, the SDT disagrees that Blackstart Resources should not be included in the BES definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which include situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES Elements.		

Organization	Yes or No	Question 5 Comment
If a situation arises where an entity believes that a specific Cranking Path must be part of the BES, that entity can always make use of the Rules of Procedure exception process to request including it in the BES. I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
Small Entity Working Group (SEWG)	No	The SEWG proposes a minor change to Inclusion I4. The SEWG recommends that the SDT exclude Blackstart Units under 20MW and Blackstart Units that are connected via their GSU to Non-BES Facilities (under 100kV). We believe this would be a minimal impact on the existing Restoration Plans while increasing the reliability and viability of these Restoration Plans since the industry would be forced to use only BES facilities as defined by NERC BES definition. In addition, a clarification is needed under the first bullet under I4 in the posted word comment form for this BES draft (posted in the first column under Implementation Plan for Definition). It should be changed to read "Blackstart units that have been included in the Transmission Operator's restoration plan and their respective cranking paths..." We do not believe it was the intent of the SDT to include all blackstart units in the BES definition regardless if they are not part of a Transmission Operator's restoration plan.
Dominion	No	Dominion continues to disagree that a generation resource, Element or Facility should automatically be included in the BES. Dominion agrees that the Generator Owner and Generator Operator, as users of the bulk power system, should have to abide by applicable reliability standards, but do not agree that this should automatically require the inclusion of a generation resource, Element or Facility in the BES.
SPP Standards Review Group	No	While we understand the necessity of including the Cranking Path in the BES, we are equally concerned about the broad usage of the term BES throughout the NERC Reliability Standards and the ramifications of extending the requirements associated with those standards to parts of the distribution system that do not have a logical association with the BES. For example, some of the TPL standards require studies of the BES. Does this then mean those studies would apply to those Cranking Paths on the distribution system? We think Cranking Paths that include portions of the distribution system should be excluded from the BES definition. Could the SDT please provide us with an explanation of why these Elements would be included in the BES and what would be gained if they were included? We'd also like to ask the SDT to identify the standards and requirements that would be applied to the distribution system Cranking Paths. Is there any way that the significance of the distribution Cranking Paths could be maintained without going as far as including them in the BES? Also, if a Distribution Provider has a portion of his distribution system designated an Element of the BES, as in the Cranking Path scenario, does that then require the DP to register as a TO or TOP?
Michgan Public Power Agency	No	I would agree to this for Blackstart Resources only designated Blackstart Cranking Paths in the Transmission

Organization	Yes or No	Question 5 Comment
		Operator's restoration plan regardless of voltage.
Tacoma Power		Tacoma Power generally supports Inclusion I4. We believe additional consideration should be given to identifying only the Blackstart Resource`s that support a regional recovery. Based on that criteria, we propose changing Inclusion I4 to read,"Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan, regardless of voltage, and included in a regional restoration plan."
Response: The SDT agrees that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system elements. In addition, the Transmission Operator's actual restoration may make use of paths that were not identified as Cranking Paths in the restoration plan due to the particular system configuration on the day in question. Therefore, the SDT has removed the inclusion for Cranking Paths. However, the SDT disagrees that Blackstart Resources should not be included in the BES definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which include situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES Elements. If a situation arises where an entity believes that a specific Cranking Path must be part of the BES, that entity can always make use of the Rules of Procedure exception process to request including it in the BES. I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
SERC OC Standards Review Group	No	"Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage." The SERC SRG is concerned that this provision may have the effect of incenting transmission operators to limit the available generator options to the minimum necessary for a reliable option as opposed to every possible option that might be utilized in a pinch. We recommend the following adjusted language: "Essential Blackstart Resources and the designated essential blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage"
Vermont Transco	No	: The phrase "regardless of voltage" is a concern. The goal of the FERC order is to provide a more reliable "bulk power system". Many blackstart resources are at voltages well below the 100 kV voltage and are not material to the restoration of the bulk electric system during a blackout. The wording of this inclusion would require many units that are used only for local area support to now be listed as a BES facility. The wording of

Organization	Yes or No	Question 5 Comment
		this inclusion should be something to the order of "Blackstart Resources and the designated blackstart cranking paths identified in the transmission operators restoration plan that are necessary to restore the BES system", this should not include cranking paths on distribution feeds that are used primarily for local area support. The purpose of this inclusion should be to make certain all units necessary to energize the BES grid after a blackout are maintained and operated appropriately
Consumers Energy Company	No	We recommend that the word, primary, be added, and that the phrase, "regardless of voltage" be removed: "Blackstart Resources and the designated primary blackstart Cranking Paths identified in the Transmission Operator's restoration plan." NERC's May 19, 2011 webinar described this as applying only to the path directly from the blackstart unit to the Transmission System. Is this correct? If so, please clarify within the definition.
Exelon	No	Exelon believes that the entire designated cranking path should not be included in the BES definition if there are facilities less than 100kV on the path. Doing so may inappropriately include a number of facilities that are local distribution facilities under jurisdiction of the states, i.e, the inclusion of the entire cranking path occurs without an inquiry as to whether or not the facilities are "facilities used in local distribution of electric energy" even though such facilities are by explicit language in the Federal Power Act not included in the definition of Bulk Power System. In Orders 743 and 743-A, FERC reiterated several times that "facilities that are determined to be local distribution will be excluded from the bulk electric system." (Order No. 743-A, P.22). Furthermore, by including these facilities the Drafting Team has gone beyond the boundaries of Section 215 of the Federal Power Act and Orders 743 and 743-A. It should be noted that there is no reference to black start Cranking Paths in either Order. Practically, it is unclear that including lower voltage facilities on a Cranking Path will have any positive impact on reliability without potential entity registration changes or NERC Reliability Standards changes. For example, NERC Reliability Standards FAC-008 and FAC-009 do not currently apply to Distribution Providers.
Response: The SDT agrees that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system Elements. In addition, the Transmission Operator's actual restoration may make use of paths that were not identified as Cranking paths in the restoration plan die to the particular system configuration on the day in question. Therefore, the SDT has removed the inclusion for Cranking Paths. Accordingly, as suggested, the phrase "regardless of voltage" has been also removed. If a situation arises where an entity believes that a specific Cranking Path must be part of the BES, that entity can always make use of the Rules of Procedure exception process to request including it in the BES. I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
National Rural Electric	No	This is the only part of the BES definition and inclusions/exclusions that specifically states "regardless of

Organization	Yes or No	Question 5 Comment
Cooperative Association (NRECA)		voltage." NRECA does not believe it is appropriate for the BES definition to include such a statement. This issue needs to be addressed in standard applicability language, not in the definition of BES.
Response: As suggested, the phrase "regardless of voltage" has been also removed. I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
Edison Electric Institute	No	EEI believes that the entire designated cranking path should not be included in the BES definition if it would include facilities that are less than 100 kV on the path. Including such facilities may inappropriately include some facilities that are local distribution facilities, which are under state jurisdiction. These facilities might be swept into the definition of BES without an inquiry as to whether or not the facilities are "facilities used in local distribution of electric energy," which is an explicit exclusion under the Federal Power Act definition of "Bulk-Power System." This issue is more fully discussed in EEI's response to Question 13.
Response: The SDT agrees that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system elements. In addition, the Transmission Operator's actual restoration may make use of paths that were not identified as Cranking Paths in the restoration plan due to the particular system configuration on the day in question. Therefore, the SDT has removed the inclusion for Cranking Paths. However, the SDT disagrees that Blackstart Resources should not be included in the BES definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which include situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES Elements. If a situation arises where an entity believes that a specific Cranking Path must be part of the BES, that entity can always make use of the Rules of Procedure exception process to request including it in the BES. See response to Q13. I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
New York Power Authority	No	The Standards Drafting Team needs to clarify whether this inclusion is intended to apply to local transmission operator restoration plans or only to the Balancing Authority's restoration plans. This inclusion should be stated as follows: Blackstart Resources and the designated cranking paths identified in the Balancing

Organization	Yes or No	Question 5 Comment
		Authority's Restoration Plan regardless of voltage."Local restoration plans may not be material to the restoration and operation of the BES, but black start resources for the Balancing Authority's restoration plan are material to the reliable restoration of the BES.
Response: The SDT reaffirms that the reference is to the Blackstart Resources identified in the Transmission Operator's restoration plan.		
Central Maine Power Company New York State Electric & Gas and Rochester Gas & Electric	No	Inclusion I4 should be stricken for several reasons: 1. The SDT states that "One of the basic tenets that the SDT is following is to avoid changes to registration due to the revised definition if such changes are not technically required for the definition to be complete." Adding every black start generator and the designated cranking path is not technically required. All significant black start generation is already included in I2 and I3 and I5. 2. The NERC Compliance Registry notes that not every generator that is a blackstart unit is "material" - it may not be necessary to the restoration plan or to bulk power system reliability. 3. There is already an existing standard to ensure reliability of blackstart performance. NERC Reliability Standard EOP-005-2 ensures that the facilities critical to system restoration are functional when needed. 4. In CMP's case, there are two generator locations which are part of the Black Start capability, and they are small hydroelectric stations connected to our 34.5 kV transmission system. Under this inclusion, these small hydroelectric stations and 34.5 kV paths would inappropriately be classified as BES. Other, critical blackstart facilities are already included in the BES definition without I4.
Response: The SDT agrees that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system elements. In addition, the Transmission Operator's actual restoration may make use of paths that were not identified as Cranking Paths in the restoration plan due to the particular system configuration on the day in question. Therefore, the SDT has removed the inclusion for Cranking Paths. However, the SDT disagrees that Blackstart Resources should not be included in the BES definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which include situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES Elements. If a situation arises where an entity believes that a specific Cranking Path must be part of the BES, that entity can always make use of the Rules of Procedure		

Organization	Yes or No	Question 5 Comment
exception process to request including it in the BES. Accordingly, as suggested, the phrase "regardless of voltage" has been also removed. I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
PacifiCorp	No	PacifiCorp supports the concept of unique or singular blackstart paths being included in the BES. However, once the uniqueness of the path disappears PacifiCorp believes the multiple non-unique blackstart paths should be excluded by definition from the BES. This approach could be equated to pending version 4 of the CIP Reliability Standards, in which the Critical Asset Criteria of CIP-002-4 set forth the facilities comprising the Cranking Paths that are considered Critical Assets, up to the point on the path where two or more path options exist.
Farmington Electric Utility System	No	The drafting team should consider adopting language similar to CIP-002-4 for Cranking Paths. Cranking Paths up to the the point on the Cranking Path where two or more path options exist.
New York State Dept of Public Service	No	This inclusion is problematic at a couple levels. First, blackstart resources can be facilities smaller than the previous thresholds located deep within the local distribution system. Second, given you do not know ahead of time how the system might come apart, often there are multiple cranking paths specified. To avoid incurring the costs of upgrading facilities all along multiple paths, there will be an inclination to designate only one path involving the fewest impacted facilities. The result could be reduced reliable operation - not more.
Pepco Holdings Inc	No	1)In many cases the cranking path or portions of it may consist of facilities less than 100kv. Many of these facilities are local distribution facilities and should not be included in the BES. 2) If there is an identified cranking path that is transmission designated, but the path is not contiguous with the BES, must the elements in-between be included as BES?
PJM	No	Black start units are used to start other units to when the BES is compromised. There is no technical justification to include all elements in the "cranking path" as BES facilities.
ReliabilityFirst	Yes	but needs to state if this is ALL paths or just a single path, there may be many.
American Electric Power	Yes	While AEP supports the concept of including designated Blackstart Cranking paths as part of the BES, there is concern that doing so without respect to voltage would unnecessarily include elements which should not be included as part of the BES. More clarity is needed to explicitly describe the scope of the inclusion. Is it limited to Transmission facilities or more broad to include Distribution facilities or even sub-Distribution auxiliary systems? If so, this would unnecessarily bring those sub-systems under the purview of PRC-005, for

Organization	Yes or No	Question 5 Comment
		example.
Response: The SDT agrees that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system Elements. In addition, the Transmission Operator's actual restoration may make use of paths that were not identified as Cranking paths in the restoration plan die to the particular system configuration on the day in question. Therefore, the SDT has removed the inclusion for Cranking Paths. If a situation arises where an entity believes that a specific Cranking Path must be part of the BES, that entity can always make use of the Rules of Procedure exception process to request including it in the BES. I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
Electric Reliability Council of Texas, Inc.	No	See response to question 3 - ERCOT ISO agrees with the substance, but not the approach.
Southwest Power Pool	No	Please see SPP's response to question 3 - SPP agrees with the substance, but not the approach.
Response: See response to Q3.		
FortisBC	No	We do not agree with Inclusion I4. Blackstart resources and transmission facilities on the cranking path should not be classified as BES regardless of size and voltage level. From a regulatory perspective, such an inclusion would be in conflict with the current regulatory requirements in many of the jurisdictions. More importantly, designating these facilities as BES Elements or Facilities beyond the 100 kV bright line, the 20 MVA/unit or 75 MVA/plant criteria, without a regard to their impact on the BES (under conditions other than system restoration) will impose unnecessary requirements for these facilities, which do not contribute to reliability under interconnected operation conditions. For restoration condition, this inclusion is extraneous given there is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability.While we do not disagree with the SDT's interpretation of the FERC directives, the BES definition should cover those facilities that are needed for operation under both normal and emergency conditions, which includes situations related to black-start and system restoration. We do not agree that the directives specifically ask for inclusion of blackstart resources and facilities on the crank path in the BES definition. We believe the requirements in EOP-005-2 suffice to address the SDT's interpretation and concern regarding recognition of the reliability impacts and requirements for blackstart resources and facilities used for system restoration.Generating units of any size and transmission facilities of any voltage level may be used for blackstart and restoration. Conceivably, a generator of 10 MW and

Organization	Yes or No	Question 5 Comment
		transmission facilities of 44 kV or 69 kV may be a part of the cranking path. A BES inclusion will then subject these generators and facilities, which are essentially "local" facilities but called upon to begin restoring its bulk interconnected counterpart, to comply with the reliability standards intended for maintaining BES reliability. Included in the BES definition will thus discourage smaller generators from providing blackstart capability, and the transmission facilities from being a part of the cranking path. This may also discourage Transmission Owners and Operators from identifying multiple blackstart resources and cranking paths to provide restoration flexibility. Such an inclusion will ultimately undermine reliability.If indeed any of these facilities are deemed necessary to support bulk power system reliability at times other than system restoration, they would/should have been identified through the basic BES definition and inclusion list or can be addressed through the exception procedure. We suggest and urge the SDT to drop I4 on the basis that: o The availability and performance expectations of blackstart resources and facilities on the cranking path are already specifically addressed in an existing standard; and o Unless they meet the BES definition and the other inclusion criteria, they do not have any perceived reliability impact on everyday operation of the BES.

Response: The SDT agrees that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system elements. In addition, the Transmission Operator's actual restoration may make use of paths that were not identified as Cranking Paths in the restoration plan due to the particular system configuration on the day in question. Therefore, the SDT has removed the inclusion for Cranking Paths.

However, the SDT disagrees that Blackstart Resources should not be included in the BES definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which include situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES Elements.

If a situation arises where an entity believes that a specific Cranking Path must be part of the BES, that entity can always make use of the Rules of Procedure exception process to request including it in the BES.

The SDT does not agree that adding Blackstart Resources to the BES definition alone would "discourage" entities from providing blackstart capability.

I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.

Organization	Yes or No	Question 5 Comment
Public Utilities Commission of Ohio	No	this should be determined by an impact analysis, not inclusive of all Blackstart Resources, regardless of location on the system.
Response: The SDT disagrees that Blackstart Resources should not be included in the BES definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which include situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the system or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES Elements. No change made.		
Intellibind	Yes	There continues to be confusion in the industry of blackstart by Generator Owners and Operators (especially small to medium generation), and the drafting team should clearly define what is meant by blackstart. Many small generators have the capability to blackstart their resource, but are not part of the Transmission Operator's blackstart plan on restoring the BES. In most cases they are asked to blackstart if possible and wait until lines are energized and close in as directed by Transmission Operator. This is significantly different than owning a blackstart resource designated to provide power during a blackout.
American Transmission Company, LLC	Yes	For clarification, ATC understands that only blackstart resources that are part of a Transmission Operator's Blackstart Restoration plan are included in I4 (Ref. EOP-005) and should be consistent with the upcoming CIP-002 version 4 standard. ATC also recommends that the SDT consider adding Blackstart Resources as a defined term in the NERC Glossary.
Response: Only Blackstart Resources indentified in the Transmission Operator's restoration plan are included in the BES. The term "Blackstart Resource" is a defined term in the NERC Glossary. No change made.		
PUD No. 2 of Grant County, Washington	Yes	Grant supports this proposed inclusion with the caveat that the BES should be allowed to be non-contiguous, especially in this case, if the unit is low voltage.
Response: The SDT proposed BES definition allows for non-contiguous elements.		
Illinois Municipal Electric Agency	Yes	Please see comments under Question 13.

Organization	Yes or No	Question 5 Comment
Response: See response to Q13.		
Springfield Utility Board	Yes	While Springfield Utility Board does not own any Blackstart Resources, we do recognize the importance of the restoration of the Grid, and the generation necessary for the Grid should have identified paths that are critical, regardless of voltage level.
Springfield Utility Board	Yes	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
Central Lincoln	Yes	But please indicate how blackstart resources (regardless of voltage) not in the TO's restoration plan are treated, since we don't believe the flowchart at http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf properly expresses the SDT's intent to classify these resources (when also below the 20 or 75 MVA thresholds) as non-BES.
City of Redding	Yes	Redding suggests that only the primary black start resource in the TO or BA's black start plan fall under this inclusion otherwise the secondary and or backup black start units may not be identified in the main plans to avoid excessive regulation of the equipment.
Response: Only Blackstart Resources indentified in the Transmission Operator's restoration plan are included as BES Elements. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated		

Organization	Yes or No	Question 5 Comment
resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. No change made.		
Long Island Power Authority	Yes	Need to define Cranking Paths.
Response: "Cranking Path" is a defined NERC Glossary term but is no longer used in the revised inclusion. I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
MEAG Power	Yes	The Standards Drafting Team needs to clarify whether this inclusion is intended to apply to local transmission operator restoration plans or only to the Balancing Authority's restoration plans. This inclusion should be stated as follows: Blackstart Resources and the designated cranking paths identified in the Balancing Authority's Restoration Plan regardless of voltage."Local restoration plans may not be material to the restoration and operation of the BES, but black start resources for the Balancing Authority's restoration plan are material to the reliable restoration of the BES.
Response: Only Blackstart Resources indentified in the Transmission Operator's restoration plan are included as BES Elements. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. The SDT agrees that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system Elements. In addition, the Transmission Operator's actual restoration may make use of paths that were not identified as Cranking paths in the restoration plan die to the particular system configuration on the day in question. Therefore, the SDT has removed the inclusion for Cranking Paths. If a situation arises where an entity believes that a specific Cranking Path must be part of the BES, that entity can always make use of the Rules of Procedure exception process to request including it in the BES. I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
Muscatine Power and Water	Yes	This Inclusion I4 provides a defense in depth with CIP-002-4.
New York State Reliability Council	Yes	BS facilities and their cranking paths are critical to the maintenance of system reliability under system restoration conditions. However, they are a special case and should not be construed as a precedent for inclusion of all BES contiguous elements.

Organization	Yes or No	Question 5 Comment
Idaho Falls Power	Yes	It is reasonable to conclude that Blackstart generation resources are material to the BES.
MRO's NERC Standards Review Forum	Yes	It does provide a defense in depth with CIP-002-4.
BPA	Yes	
Duke Energy	Yes	
ExxonMobil Research and Engineering	Yes	
Alberta Electric System Operator	Yes	
South Carolina Electric and Gas	Yes	
Fayetteville Public Works Commission	Yes	
MidAmerican Energy Company	Yes	
Florida Keys Electric Cooperative	Yes	
Sierra Pacific Power Co d/b/a NV Energy	Yes	
Colorado Springs Utilities	Yes	
East Kentucky Power Cooperative, Inc.	Yes	
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and	Yes	No comment.

Organization	Yes or No	Question 5 Comment
Dispatch		
Sacramento Municipal Utility District (SMUD)	Yes	SMUD agrees with the inclusion of blackstart resources and their cranking paths.
City of St. George	Yes	
Puget Sound Energy	Yes	
Southern California Edison Company	Yes	
GTC	Yes	
Idaho Power	Yes	
Clark Public Utilities	Yes	
The Dow Chemical Company	Yes	
Oncor Electric Delivery Company LLC	Yes	
City of Anaheim	Yes	
Xcel Energy	Yes	
Golden Spread Electric Cooperative, Inc.	Yes	
Utility System Efficiencies, Inc.	Yes	
Tri-State Generation and Transmission Association, Inc.	Yes	

Organization	Yes or No	Question 5 Comment
Imperial Irrigation District	Yes	
Florida Municipal Power Agency	Yes	
Santee Cooper	Yes	
NERC Staff Technical Review	Yes	
SERC Planning Standards Subcommittee	Yes	
Overton Power District No. 5	No	
Tennessee Valley Authority	Yes	
Arizona Public Service Company	Yes	
Western Electricity Coordinating Council	Yes	
Rayburn Country Electric Cooperative, Inc.	Yes	
Luminant Energy	Yes	
Electricity Consumers Resource Council (ELCON)	Yes	
Western Area Power Administration	Yes	
US Bureau of Reclamation	Yes	
Grand Haven Board of Light and	Yes	

Organization	Yes or No	Question 5 Comment
Power		
Glacier Electric Cooperative	Yes	
FHEC	Yes	
South Texas Electric Cooperative, Inc.	Yes	
Portland General Electric Company	Yes	
South Texas Electric Cooperative, Inc.	Yes	
Response: Thank you for your response. Several stakeholders identified that Cranking Paths usually involve distribution elements, and the SDT has removed the inclusion for Cranking Paths. Please see the revised definition.		

6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: Industry comments included the following issues:

- Concern over the assumed contiguous nature of the BES definition. The SDT did not mandate a contiguous BES and has clarified the language of the inclusions to make this clear.
- Confusion over the term 'collector system.' The SDT has deleted this terminology.
- Concern that the definition could ensnare distributed generation or small generators in a distribution system. The SDT has clarified the wording of the inclusion to emphasize that the inclusion is 'designed primarily for aggregating capacity.'
- While several commenters asked about the technical justification of the generation thresholds, the SDT was not presented with any technical rationale for moving away from this existing limit. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.

Inclusion I5 has been re-numbered as Inclusion I4.

I~~5~~4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system -~~, connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.

Organization	Yes or No	Question 6 Comment
Northeast Power Coordinating Council	No	The entire contiguous path does not have to be BES. The path or aggregate generation will rarely have any impact on the reliability on the interconnected transmission network, nor is it necessary for its operation. These are generally referred to as connection facilities.
MRO's NERC Standards Review Forum	No	We propose the following questions for your consideration:Which components of the dispersed power resources would be classified as BES? Are the individual small wind generator units and terminals through the GSUs to a higher voltage (e.g. 34.5 kV) collector bus classified as BES Elements? Are the higher voltage bus, the associated elements (e.g. protection system, cap bank, SVC, etc.), and step up transformer to a system Element of 100 kV or above to be classified as BES Elements?With these questions, the NSRF is

Organization	Yes or No	Question 6 Comment
		confused on what the SDT is trying to formulate as an Inclusion. If a dispersed power systems meets the threshold of 75MVA and connected at 100kV or higher, does this make the entire dispersed system considered to be part of the BES? We recommended that one solution is that I5 to be revised as follows "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system from the point where the aggregated rating exceeds 75 MVA through a common point of interconnection to a system Element at a voltage of 100 kV or above. "
Hydro One Networks Inc	No	We agree with the concept of Inclusion I5 but do not support that the entire contiguous path has to be BES. The path or aggregate generation will rarely have any impact on the reliability on the interconnected transmission network nor is it necessary for its operation. These are generally referred to as connection facilities. In addition, renewable generation units are intermittent and the planning and operational standards and practices make sure that their unavailability or unexpected (sudden) loss of generation won't jeopardize reliability of the network; therefore, they should not be BES. As stated earlier, with the Green Energy and Smart Grid plans and dispersed renewable energy advocated by both Canadian and US policy makers, the gross nameplate rating of 75 MVA may undermine and deter the future potential of integrating DG's that will be implemented to ensure the reliable operation of the interconnected transmission network BES, and, at the same time, provides the most effective and economical solutions for the rate payers in North America. Local generation can cost-effectively enhance the reliability of load pocket, by avoiding transmission, but such restrictions would deter the adoption of good planning decisions.(Refer to Q4 comments).
Hydro-Quebec TransEnergie	No	We believe that automatic inclusion of dispersed generation greater than 75 MVA and the path to connect them to the BES should not be automatically included in the BES. However, a provision should be made so that some reliability standards related to generator shall apply (voltage regulation, etc.).
New York State Reliability Council	No	Distributed resources are comprised of multiple small units that cycle on and off depending upon local ambient conditions. They have multiple feeders collecting at the point of interconnection. It is not credible that simultaneous loss of multiple units and/or collector system feeders could occur and they should be excluded from the BES based upon reliability considerations. It is noted that system Element(s) beyond the point of interconnection are subject to BES inclusion per the core definition.
FortisBC	No	We agree with the concept of Inclusion I5 but do not support that the entire contiguous path has to be BES. The path or aggregate generation will rarely have any impact on the reliability on the interconnected transmission network nor is it necessary for its operation. These are generally referred to as connection facilities.As stated earlier, with the Green Energy and Smart Grid plans and dispersed renewable energy advocated by both Canadian and US policy makers, the gross nameplate rating of 75 MVA may undermine and deter the future potential of integrating DG's that will be implemented to ensure the reliable operation of the interconnected transmission network BES, and, at the same time, provides the most effective and

Organization	Yes or No	Question 6 Comment
		economical solutions for the rate payers in North America. Local generation can cost-effectively enhance the reliability of load pocket, by avoiding transmission, but such restrictions would deter the adoption of good planning decisions.(Refer to Q4 comments).
PJM	No	As written I5 implies a contiguous system from the unit to a “point a system element at a voltage above 100 kV” there is no technical justification for a contiguous system. The requirement should read “- Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection."
Xcel Energy	No	For dispersed power producing resources, such as wind farms, we do not see the value in making each individual 1-2 MW wind turbine a BES element. The BES applicability should be focused on the point when the collective becomes large enough to impact the grid. So, we recommend that I5 apply from the point of aggregation of 75 MW or more to a system element operated at 100 kV or more. Specifically, we feel it should be limited to the feeder bus and aggregating transformer.
Independent Electricity System Operator	No	We agree with the goal of Inclusion I5 but have the same concerns expressed in our responses to Q1 and Q3. For the dispersed power resources referred to in Inclusion I5, we do not see the benefit of including the collector system, switchgear, associated medium voltage equipment and step-up transformer(s) in the BES. As before, these Facilities should be subject to assessment and included if found to impact BES reliability after going through the Exception Process. To reinforcing what was stated during the NERC BES webinar, we do not believe that the entire contiguous path has to be BES.
AltaLink	No	We agree with the concept of Inclusion I5 but do not support that the entire contiguous path has to be BES. The path or aggregate generation will rarely have any impact on the reliability on the interconnected transmission network nor is it necessary for its operation. These are generally referred to as connection facilities.
American Transmission Company, LLC	Yes	ATC poses the following questions to the SDT for consideration:Which components of the dispersed power resources would be classified as BES? Are the small wind generator units and terminals through the GSUs to a higher voltage (e.g. 34.5 kV) collector bus classified as BES Elements? Are the higher voltage bus, the associated elements (e.g. protection system, cap bank, SVC, etc.), and step up transformer to a system Element of 100 kV or above to be classified as BES Elements?
Exelon	Yes	Exelon agrees with this inclusion as long as it’s clear that distribution voltage collector systems are not to be included in the BES. Exelon suggests that a clarifying statement be added to the inclusion item, such as “Collector system facilities that are <100kV are excluded from the BES.”

Organization	Yes or No	Question 6 Comment
Central Lincoln	Yes	But please indicate how dispersed aggregate generation below 75 MVA is to be treated, since we don't believe the flowchart at http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf properly expresses the SDT's intent to classify these resources as non-BES.
Response: There is no contiguous path requirement and the SDT has revised the wording for clarity. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system~~ , connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
American Municipal Power and Members	No	There is concern over inadvertently including small distribution that has behind-the-meter generation on a 69 kV loop. We somewhat agree with the concept of Inclusion I5 but suggest a language change to clarify what we understand to be the drafting team's intent, that the inclusion is intended to apply to dispersed wind and solar generating plants, and not, for example, to a radially-connected city with an aggregate of 75 MW of small generators behind-the-meter. This distinction is appropriate because such a city cannot have the same impact on the grid as a 75 MW wind farm; loss of the radial connecting the city to the grid would result in loss of its load as well as its generation, so that the supply-demand mismatch would be far less significant. We suggest that I5 be revised.
Response: The SDT clarified the language to address this point. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system~~ , connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
Imperial Irrigation District	No	In reference to I5 If the collector system is in the distribution system and after a series of elements and (sub transmission system) is connected to a common point of interconnection to a system element at a voltage of 100 kV and above, is there a criteria of after how many elements before it connects to a system element at a voltage of 100 kV and above is I5 still applicable?IID prefers the following language: Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) after the collector system to the first system Element at a voltage of 100 kV or above.
Response: The SDT clarified the language to address this point.		

Organization	Yes or No	Question 6 Comment
Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system~~ , connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
NERC Staff Technical Review	No	We agree that Inclusion I5 is an effective method for including dispersed resources; however, the interconnection voltage threshold should be removed. The contribution of dispersed power producing resources to system reliability is a function of the aggregate MVA rating rather than the interconnection voltage. All dispersed resources with aggregate capacity greater than 75 MVA should be included in the BES definition because all such units provide similar contributions to system reliability.
Response: The SDT appreciates the concern regarding the 100 kV threshold and the 75 MVA limit on connected generation; however, the SDT has been presented with no technical basis upon which to suggest a change from these values. No change made.		
Dominion	No	Dominion disagrees that an Element or Facility operated below 100 kV should be included automatically in the BES. Dominion agrees that users of the bulk power system should be required to abide by applicable reliability standards. Dominion questions why the SDT chose to use the phrase 'Dispersed power producing resources' As opposed to the phrase 'Dispersed generating resources'. Dominion asks that the SDT provide an explanation for its choice of phrases.
Response: The SDT used this term intentionally. Generation resources suggest a "generator". Using the term power producing resources includes devices now and in the future that could produce energy (like wind and solar). No change made.		
SPP Standards Review Group	No	Limiting this to 75 MVA does allow the opportunity for a significant amount of generation to 'slip under the fence' regarding inclusion in the BES. Was this the intent of the SDT? For example, in order to circumvent the BES issue a developer may decide to build 2-74 MVA sites rather than a single 148 MVA site. Regarding the similarity of the I3 and I5, what is the difference between a 'single site' and a 'common point of interconnection'? Shouldn't they be the same in the two inclusions?
Response: If a developer wants to build 2- 74 MVA sites solely to not be deemed part of the BES, they can do so, but the Regional Entity could still require them to register. No change made.		
Idaho Falls Power	No	This inclusion seems redundant to the registry criteria for GO/GOP of a facility generation of 75MVA or greater. We do not see how this definition adds or removes any assets already defined by the registry criteria.

Organization	Yes or No	Question 6 Comment
City of Redding	No	Redding believes that this could be handled in the Statement of Compliance Registration Registry by specifically addressing distributed generation. This could be part of a tiered approach where these type of facilities would be included as a User of the BES instead of an owner and operator of BES elements.
Response: The goal of the SDT is to provide clarity to the definition of the BES and not to address registration criteria. No change made.		
Tennessee Valley Authority	No	Other than the NERC Registry Criteria definition, what is the technical justification for the 75 MVA threshold? The threshold level for inclusion should be technically based on the BES capacity and configuration at the location of the generating sources' connection to the BES.
Western Montana Electric Generating and Transmission Cooperative	No	WMG&T agrees that it is important to address wind generation facilities and similar generation facilities in which a large number of generating units, each with a relatively small capacity, are clustered and fed into the grid at a single interconnection point. That being said, WMG&T is concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.
Public Utility District No. 1 of Snohomish County, Washington	No	Snohomish agrees that it is important to address wind generation facilities and similar generation facilities in which a large number of generating units, each with a relatively small capacity, are clustered and fed into the grid at a single interconnection point. That being said, Snohomish is concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Company Consumers Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative	No	We are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.

Organization	Yes or No	Question 6 Comment
Northern Lights Inc Okanogan Electric Cooperative PNGC Power Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative		
Northern Wasco County PUD Clallam County PUD No.1 Chelan PUD – CHPD Public Utility District No. 1 of Franklin County Northwest Requirements Utilities Big Bend Electric Cooperative, Inc. Utility System Efficiencies, Inc Cowlitz County PUD	No	Northern Wasco County PUD agrees that it is important to address wind generation facilities and similar generation facilities in which a large number of generating units, each with a relatively small capacity, are clustered and fed into the grid at a single interconnection point. That being said, Northern Wasco County PUD is concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.
Clark Public Utilities	No	Generators should only be part of the Bulk Electric System if they are connected through a GSU to a Transmission Element determined to be part of the BES. The current inclusion language would apply to all generators connected to facilities greater the 100 kV with no exclusion or exception process. Without a change, it appears that a generator connected to a facility greater than 100 kV would be a BES asset even if the transmission assets could be excluded or excepted. I5 should be rewritten to state: Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a Transmission Element determined to be part of the Bulk Electric System.Additionally, as indicated by Clark in its comments on the core definition

Organization	Yes or No	Question 6 Comment
		of the BES, Clark believes the 75 MVA threshold lacks an adequate technical justification and is a purely arbitrary quantity. The use of a capacity threshold in the definition of the BES should have technical reasons.
Santee Cooper	Yes	What is the rationale for 75 MVA.
Response: The SDT appreciates the concern regarding the lack of technical justification for a 75 MVA threshold; however, the SDT has not been presented with a technical basis upon which to suggest a change from this value. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.		
Intellibind	No	Though the intent is understood through the discussion, the language presented is not clear enough. The drafting team should be cautioned on how Standards are read through many different entities and audiences. The team should also understand if the issue is not clearly defined, there will continue to be ambiguity through the registration and compliance processes.As previously stated on an earlier question, I do not think that the 20 MVA threshold has technical merit, I do not believe that the 75MVA limit has technical merit either. Further the impact should be measured at the buss bar not at the nameplate. The aggregate rating should be the same as the individual unit rating on a single plant, unless the plant can prove that there is not a common failure mode to lose more than 20MVA.
Response: The SDT appreciates the concern regarding the lack of technical justification for a 20/75 MVA threshold; however, the SDT has not been presented with a technical basis upon which to suggest a change from this value. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.		
Electric Reliability Council of Texas, Inc.	No	See response to question 3 - ERCOT ISO agrees with the substance but not the approach.
Southwest Power Pool	No	Please see SPP's response to question 3 - SPP agrees with the substance but not the approach.

Organization	Yes or No	Question 6 Comment
Response: See response to Q3.		
Duke Energy	No	I5 is not defined clearly enough. It appears that distributed generators connected to a 44 kV load pocket that is fed radially from a 100 kV source would be included, but it's not clear that this was the intent. Adding generator before collector system would provide greater precision.
Response: The SDT believes the re-wording of Inclusion I5 (now Inclusion I4) should address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ,~~ connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
Fayetteville Public Works Commission	No	Because no differentiation has been defined between "power producing resources" in Inclusion I5 and "generating units" from Inclusions I2 and I3, this Inclusion has the potential to conflict with other Inclusions. It should be modified to read "Dispersed power producing resources with individual capacity of 20 MVA or less (gross nameplate rating) but with aggregate capacity greater than 75 MVA. . ."
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.		
MidAmerican Energy Company	No	It is suggested that the inclusion be modified to include a more definitive description of the portion of the facility that would be considered to be in the BES. It is suggested that the phrase "from the point where the aggregated rating exceeds 75 MVA" be added after collector system in I5. The revised inclusion would then read as follows: Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system from the point where the aggregated rating exceeds 75 MVA through a common point of interconnection to a system Element at a voltage of 100 kV or above.
Muscatine Power and Water	No	MP&W recommends to have Inclusion 5 be revised as follows "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system from the point where the aggregated rating exceeds 75 MVA through a common point of interconnection to a system Element at a voltage of 100 kV or above."

Organization	Yes or No	Question 6 Comment
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
Springfield Utility Board	No	What is a collector system? Does this include a Local Distribution Network? A Local Distribution Network (E3) may have multiple generating units within its service area that serve all or part of retail load (E2). Would the aggregate nameplate rating of these units be included even though they would otherwise be excluded by application of E2? For example, there may be multiple end users with 500 kW photovoltaic systems whose total nameplate capacity is 100 MVA. All or most of the power used is consumed by the retail consumers.SUB suggests that the language be restated to say “Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) that are not excluded under E2 utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above” Or”Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a cCollector sSystem through a common point of interconnection to a system Element at a voltage of 100 kV or above. For purposes of this inclusion, a Collector System is any infrastructure not connected to load - where parasitic load associated with a generation unit or units is not considered load.” While Springfield Utility Board does not own any power producing resources, we do recognize the importance of the restoration of the Grid, and the generation necessary for the Grid, regardless of voltage level.
Springfield Utility Board	No	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of

Organization	Yes or No	Question 6 Comment
		inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
Response: The SDT believes that the re-wording of the inclusion should address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. I~~5~~4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
City of St. George	No	See comments to questions 3 & 4 above. The requirements for an entity or facility should match the impact of that facility to the system.
Response: The SDT carefully debated the generating threshold for the inclusion. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Inclusion I5 has been re-numbered as Inclusion I4. I~~5~~4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
Southern California Edison Company	No	Please refer to SCE's answer for Question No. 3 above.If the SDT goes forward and includes I5 into either the proposed BES definition or the Technical Principles for Demonstrating BES Exceptions, the following additional clarification should be made:(i) Clarify the terms "Dispersed power producing resources" and "collector system"; (ii) When referencing "collector system," does it include the lines connecting the generation?; (iii) Why the 75 MVA threshold? This seems to be a somewhat arbitrary number which does not correlate with specific operational risks, operational limits, or network capability. This is highlighted when taking SCE's system into consideration, as we carry operational spinning reserves that are 10 to 20 times greater than the 75 MVA threshold identified in the proposed BES Definition. If SCE were to lose 75 MVA in an event, there would be no reliability risk or perceptible frequency deviation that would attend the event. The proportionality

Organization	Yes or No	Question 6 Comment
		of risk and benefit does not seem to fit within the application and philosophy behind the mandatory limit. Setting the BES Definition in this manner in order to bring in the smallest utilities is not appropriate for application to the larger utilities.; and (iv) As written, I5 could unintentionally bring into scope sub-trans/distribution systems with enough generation as these radial systems could be categorized as "collector systems". Specifically, there are radially-connected distribution systems in the Desert Southwest designed to enable the interconnection of multiple renewable resources which could be viewed as grouping this collective generation at the point of interconnection with the transmission system. In many cases, the sum total of this generation could be greater than 75 MVA.
Response: 1. The SDT re-worded the definition to address these concerns. 2. There is no contiguous path requirement and the SDT has revised the wording for clarity. 3. The SDT appreciates the concern regarding the lack of technical justification for a 75 MVA threshold; however, the SDT has been presented with no technical basis upon which to suggest a change from this value. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. 4. The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. I~~5~~4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
The Dow Chemical Company	No	The language is not clear enough to understand what is covered.
Response: Please consider the revised language. Inclusion I5 has been re-numbered as Inclusion I4. I~~5~~4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or		

Organization	Yes or No	Question 6 Comment
above.		
New England States Committee on Electricity	No	As noted in comment under 4 above, the 75 MVA threshold may unintentionally impose unnecessary added costs that may ultimately be paid by New England ratepayers. The exception process should provide flexibility as to total MVA rating. In addition, NESCOE believes this language should be clarified to exclude collector systems and include only elements that actually impact the BES.
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. I~~5~~4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
Oncor Electric Delivery Company LLC	No	The ERCOT Region already considers load in any combination equal to and over 20 MVA through a single Point of Interconnect as part of the BES
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Inclusion I5 has been re-numbered as Inclusion I4. I~~5~~4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
Consolidated Edison Co. of NY, Inc.	No	Please define the terms "collector system" and "common point."
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. I~~5~~4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed		

Organization	Yes or No	Question 6 Comment
primarily for aggregating capacity~~collector system~~ , connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
Orange and Rockland Utilities, Inc.	No	See comments from question 4.
Response: See response to Q4.		
BPA	No	Does the interconnection point have to be the only interconnection point for all of the resources? Additionally BPA would like to see a definition of :dispersed power."
Response: The SDT has revised Inclusion I5 to clarify the interconnection point as a 'common point' where the aggregated capacity of the dispersed power producing resource is connected to the BES. The SDT is responsible for the revision of the BES definition. In fulfilling this responsibility the SDT is developing a definition that properly classifies facilities as BES or non-BES Elements. Defining 'dispersed power' is not within the scope of Project 2010-17, however the term is used in the definition to capture resources such as wind farms, solar arrays, etc. that utilize installations over a larger area than would typically be seen at a conventional generation facility. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system~~ , connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
Tacoma Power		Tacoma Power generally supports Inclusion I5. However, the term 'gross aggregate nameplate rating' is not defined and should be replaced with a specific definition. Additionally, no justification for the 75 MVA level has been provided and therefore it appears arbitrary. Since this measurement will define Elements for absolute inclusion in the BES, the threshold for dispersed power producing resources should be based on a need to maintain transmission reliability. Further, there is no traceable definition for 'collector system.' Rather than defining it, it can be replaced with a 'common interconnection point.' Lastly, such dispersed resources located within a Local Distribution Network (LDN), which do not exit the LDN, should not be included. We propose changing Inclusion I5 to read,"The common interconnection point for dispersed power producing resources with aggregate capacity greater than 75 MVA (aggregate capacity based on the Code of Federal Regulation, CFR 18, Part 287.1, "Determination of powerplant design capacity") connected to an Element that is part of the BES, except for common interconnection points that are within a Local Distribution Network (LDN) and do not have a net export out of the LDN."

Organization	Yes or No	Question 6 Comment
Response: The goal of the SDT is to provide clarity to the definition of the BES and not to address registration criteria. The SDT feels that the term "gross aggregate nameplate rating" is a widely understood term within the industry and does not require additional definition. No changes made. I5 (now I4) was revised and no longer uses the term, 'collector system.' **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system -~~ , connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
Portland General Electric Company		It is not clear what the SDT is attempting to capture with this inclusion thatis not already captured in I3. In addition, the term "collector system" needs to bedefined.
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system -~~ , connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
Midstate Electric Cooperative		MSEC agrees that it is important to address wind generation facilities and similar generation facilities in which a large number of generating units, each with a relatively small capacity, are clustered and fed into the grid at a single interconnection point. That being said, MSEC is concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4. This would lump together many IPP's that are spread out over a large distribution network that happen to be tied into a single point of interconnection.
Response: The SDT re-worded the definition to better clarify these concerns. The SDT appreciates the concern regarding the lack of technical justification for a 75 MVA threshold; however, the SDT has been presented with no technical basis upon which to suggest a change from this value. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that		

Organization	Yes or No	Question 6 Comment
have arisen from SDT deliberations. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system -~~, connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
Florida Municipal Power Agency	Yes	FMPA agrees with the concept of Inclusion I5 but suggests a language change to clarify what we understand to be the drafting team's intent, that the inclusion is intended to apply to dispersed wind and solar generating plants, and not, for example, to a radially-connected city with an aggregate of 75 MW of small generators behind-the-meter. This distinction is appropriate because such a city cannot have the same impact on the grid as a 75 MW wind farm; loss of the radial connecting the city to the grid would result in loss of its load as well as its generation, so that the supply-demand mismatch would be far less significant. FMPA thus suggests that I5 be revised to read:I5 Wind farm or solar power installation with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system -~~, connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
Western Electricity Coordinating Council	Yes	WECC agrees in concept, but it is unclear why there is the new term "power producing resources." Is this meant to include both Real Power Resources and Reactive Power Resources (terms used in the base definition)? This should be clarified. In addition, it appears from comments of the drafting team that the intent of this inclusion was primarily for wind and solar farms, but the language would also pull in traditional generation that happens to be connected at a single point. The language should be clarified so that it only captures the intended generation.
Response: The SDT used this term intentionally. Generation resources suggest a "generator". Using the term power producing resources is to include devices now and in the future that could produce energy (like wind and solar). No change made.		
Edison Electric Institute	Yes	EEI suggests that the following language more clearly expresses the intent of the SDT:Dispersed power producing resources with aggregate capacity greater than 75 MVA gross aggregate nameplate rating) utilizing

Organization	Yes or No	Question 6 Comment
		a collector system from the point where the aggregate rating exceeds 75 MVA through a common point of interconnection to a system Element at a voltage o 100 kV or above.
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ,~~ connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
ReliabilityFirst	Yes	but the term "Dispersed Power Producing Resuorces" needs to be defined.
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ,~~ connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
Transmission Access Policy Study Group	Yes	TAPS agrees with the concept of Inclusion I5 but suggests a language change to clarify what we understand to be the drafting team's intent, that the inclusion is intended to apply to dispersed wind and solar generating plants, and not, for example, to a radially-connected city with an aggregate of 75 MW of small generators behind-the-meter. This distinction is appropriate because such a city cannot have the same impact on the grid as a 75 MW wind farm; loss of the radial connecting the city to the grid would result in loss of its load as well as its generation, so that the supply-demand mismatch would be far less significant. TAPS thus suggests that I5 be revised to read:I5 Wind farm or solar power installation with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.
Northern California Power Agency	Yes	NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed		

Organization	Yes or No	Question 6 Comment
primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
New York Power Authority	Yes	This inclusion should be specific to the type of generation that the team envisioned it to capture (e.g. wind and solar). Since the term "dispersed power producing resources" can be interpreted to include generation resources from a few KW up to 50 MW, this inclusion can be misinterpreted to include "peaker GT's", fuel cells and microturbines, etc.
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
Central Maine Power Company New York State Electric & Gas and Rochester Gas & Electric	Yes	Please note that this departs from NERC's Registry Criteria in that the unit of measurement is MVA instead of MW.
Response: The SDT believes that MVA is the correct way to measure this. No change made.		
PacifiCorp	Yes	PacifiCorp understands the SDT is looking for technical reasons for something other than 75 MVA. PacifiCorp believes it is not feasible to determine a value that is consistent across the continent. Although PacifiCorp believes 75 MVA is too low, it is an acceptable number for any configuration of generation. Those above 75 MVA believed to be exempt from the BES definition can be processed through the proposed ROP inclusion/exclusion process.
Response: The SDT agrees that the exception process will be the proper venue to sort out differences.		
Sacramento Municipal Utility District (SMUD)	Yes	SMUD agrees with the Inclusion 5 concept. However, there are a few terms that require clarification to support the "Bright-Line" application. It is unclear what is meant to be captured by the term "Dispersed power producing resources". As reflected in the intent statement it would be preferred to indicate the applicability of the wind and solar resources or the term intermittent in the Inclusion 5 language. The term "collector system through a common point" is rather vague that lends to varied interpretations that perhaps a defined level of MW through a single element bottleneck would help quantify BES impacts.

Organization	Yes or No	Question 6 Comment
		In addition, the BES delineation should be the single "bottleneck" element for aggregate connection of 75 MVA as it is that element's interruption is what would impact the BES. Additional concerns of I-5 suggests that the wind and solar resources would be BES components where their singular contribution has no appreciable impact to the BES. Including the bottleneck option seems to identify an aggregate BES impact for a loss of a 75 MW block that could have an impact on the BES.
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
Illinois Municipal Electric Agency	Yes	Please see comments under Question 13.
Response: See response to Q13.		
Idaho Power	Yes	Generally agreed but please revise to one Inclusion for I2, I3 and I5 at 75 MVA, see Question 3 and 4 comments.
Response: The SDT believes that Inclusion I4 (formerly Inclusion I5) is sufficiently distinct from Inclusion I2 that it needs to be retained. No change made.		
MEAG Power	Yes	This inclusion should be specific to the type of generation that the team envisioned it to capture (e.g. wind and solar). Since the term "dispersed power producing resources" can be interpreted to include generation resources from a few KW up to 50 MW, this inclusion can be misinterpreted to include "peaker GT's", fuel cells and microturbines, etc.
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
Michgan Public Power Agency	Yes	I would suggest I5 be revised to say Wind farm or solar power installation with aggregate capacity greater

Organization	Yes or No	Question 6 Comment
		than 75 MVA (gross aggregate nameplate rating) utilizing a collector system
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. I~~5~~4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
Sierra Pacific Power Co d/b/a NV Energy	Yes	Similar to the response to Q4, the 75MVA has no technical basis as being a threshold for determining necessity in the reliable operation of the interconnected transmission system; however, no technical data supports an alternate value.
Sweeny Cogeneration LP	Yes	The threshold for widely distributed and aggregated generation units (wind farms) is consistent with the NERC functional registry criterion.
Public Service Enterprise Group LLC	Yes	
Tri-State Generation and Transmission Association, Inc.	Yes	
SERC Planning Standards Subcommittee	Yes	
ACES Power Participating Members	Yes	
SERC OC Standards Review Group	Yes	
National Rural Electric Cooperative Association (NRECA)	Yes	

Organization	Yes or No	Question 6 Comment
Overton Power District No. 5	No	
Arizona Public Service Company	Yes	
Rayburn Country Electric Cooperative, Inc.	Yes	
Southern Company	Yes	
Luminant Energy	Yes	
Western Area Power Administration	Yes	
US Bureau of Reclamation	Yes	
Grand Haven Board of Light and Power	Yes	
Glacier Electric Cooperative	Yes	
FHEC	Yes	
South Texas Electric Cooperative, Inc.	Yes	
National Grid	Yes	
Dayton Power and Light Company	Yes	
ExxonMobil Research and Engineering	Yes	

Organization	Yes or No	Question 6 Comment
Alberta Electric System Operator	Yes	
South Carolina Electric and Gas	Yes	
Florida Keys Electric Cooperative	Yes	
American Electric Power	Yes	
East Kentucky Power Cooperative, Inc.	Yes	
Farmington Electric Utility System	Yes	
Colorado Springs Utilities	Yes	
Consumers Energy Company	Yes	
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	Yes	No comment.
Puget Sound Energy	Yes	
GTC	Yes	
Long Island Power Authority	Yes	
Cogentrix Energy, LLC	Yes	
Manitoba Hydro	Yes	
ISO New England, Inc.	Yes	

Organization	Yes or No	Question 6 Comment
City of Anaheim	Yes	
Golden Spread Electric Cooperative, Inc.	Yes	
Response: Thank you for your support. Based on stakeholder comments, the SDT made some modifications to the inclusion. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Please see the revised definition.		

7. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system.

In addition, the SDT wishes to point out that the definition also includes Exclusion E3 that can be used for multiple connections serving local networks.

The SDT realizes that a bright-line definition may require entities to seek exceptions through the Rules of Procedure exception process.

This BES definition does not address protection or control systems. Standards and requirements can be written against components that are not BES Elements.

The SDT does not specify the type of normally open switch that will be used to separate the systems described in Exclusion E1 but understands that any such switch needs to be operated in such a fashion that insures safety, utilizes the best operating practices, and maintains reliability.

Changes due to industry comments are as follows:

Bulk Electric System (BES): Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.

E1 - ~~Any r~~Radial systems: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

a) Only ~~servingserves~~ Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or,
b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,
c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

Organization	Yes or No	Question 7 Comment
Public Service Enterprise Group LLC	No	Again, in similar comments to item 1 above, where is the BES line of demarcation between BES elements (the interrupting device itself) connecting the non-BES radial system? The term "Generation resource" is not defined and open for interpretation.
Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system. The SDT believes that generation resource is a widely used and understood term and therefore, a definition is not required. **E1** - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating). Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.		
Northeast Power Coordinating Council	No	The concept is consistent with the statements in the FERC Order. However, it is imperative to understand that the limitations of E1 will have a direct impact on many entities (big and small) along with distribution companies across North America. The exclusion requirements are restrictive and these restrictions mayhave an adverse affect on future transmission investment, for example the addition of a second line removing the radial status exclusion. Consideration should be given to allowing entities to build additional transmission and not automatically compromise the exclusion status of any given facilities. For example, a redundant double circuit designed to supply the load with adequate protection and isolation beyond the radial tap could be

Organization	Yes or No	Question 7 Comment
		significantly better for load supply-continuity and reliability. If more than one transmission source feed radial load to ensure customer supply continuity and reliability, then this should be either part of the bright-line definition E1 exclusion as long as there is adequate protection and, the loss of any single transmission source does not affect the interconnected transmission network. The SDT should: o Carefully craft the exception criteria and procedure that is flexible and technically sound to adequately allow entities to present their case to the ERO for exclusion o Exception criteria should be at a high-level with items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) mentioned in exclusions or inclusions based on technical assessment, evidence and justification for its unique characteristics, configuration, and utilization o Acknowledge and provide provisions in both NERC exception criteria and exception process for federal, state and provincial jurisdictions.
Tri-State Generation and Transmission Association, Inc.	No	A “single Transmission source” is unclear and may be interpreted differently by different Regional Entities. A circuit switcher-protected transformer serving only distribution load may be tapped to a single transmission line but the transmission line has two or more sources. Is the system then connected to a single Transmission source, thus making it radial and being excluded? Or will the Regional Entity declare that, since the transmission line has two sources that the radial system also has two sources? We suggest changing the opening sentence of Exclusion E1 to “Any radial system that is connected to a Transmission source through an automatic interrupting device or devices and:”
American Municipal Power and Members	No	The words “described as” should be deleted from the exclusion to avoid confusion. What matters is how the system is actually connected, not how someone describes it. In addition, “a single Transmission source” could be defined, and should be generic enough to encompass the various bus configurations. It is not the case, for example, that each individual breaker position in a ring bus is a separate Transmission source; in that case, a bus at one voltage level at one substation should be considered “a single transmission source.” Some examples of configurations that should be considered a single transmission source for this purpose are at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf, Examples 1-6. The phrase “automatic interrupting device” should be replaced with the phrase “switching device”.” Many radials are connected to ring buses or breaker-and-a-half schemes where the breakers (automatic interrupting devices) are within the bus arrangement where the appropriate division between BES and non-BES is at the disconnect switch as the radial “takes off” from the bus arrangement.

Organization	Yes or No	Question 7 Comment
Central Maine Power Company New York State Electric & Gas and Rochester Gas & Electric	No	The definition of radial needs to be clear and comply with Order 743. We do not know what a radial "system" is. Also, "automatic interruption device" is not defined. This exclusion includes "radial" "systems" with more than one supply from a single "source" - including normally-open switches, even those which are intended to be normally closed before further switching takes place ("make-before-break"). This seems to be a problem, per Order page 32. We suggest a compliant and straightforward "radial" exclusion, and recommend that E1 be replaced with, "Those Transmission Elements interconnected to only one other substation through only one transmission line; except those elements included in I2, I3, and I5." It is clear and it can be applied in a "bright-line", consistent fashion.
Intellibind	No	Small radial systems that have two interconnection points at the same location or very close to the same location, but are not used for Transmission flow through should also be excluded. There are numerous examples of two interconnection points that are paralleled by much higher voltage systems and do not flow power through the system, but are redundant to increase distribution reliability. This should be left to the Transmission Operator/Transmission Owner to determine if there is flow through and impact to the BES before designating these as BES assets based on interconnection points. Radial should be defined as power flowing one direction only, not based on how it is interconnected to 100KV or higher lines.
Hydro-Quebec TransEnergie	No	It is too much restrictive to refuse exclusion of radial system when they have generator greater than 20 MVA, or multiple generating units of aggregate capacity greater than 75 MVA, especially when a system is able to function reliably with the loss of generation much higher than this amount. The fact that no Reliability Standards apply to generators excluded from BES is problematic. Generators should be allowed to be excluded but reliability standards should apply to them in specific. Also, the connection through only a single Transmission source is again too restrictive. Other Transmission source could be used for load continuity of service and the restriction should be limited to radial transmission paths where the power flow is greater than the first contingency lost.
National Grid	No	We feel that there might be some confusion between I1 and E1 because while I1 only includes transformers with 2 windings greater than 100kV, E1 specifically says a tap must have an automatic interruption device to be excluded.So, we are concerned that radial tapped lines with a transformer whose low-side voltage is less than 100kV, but do not have an automatic interruption device are not excluded. We would like to see some additional clarity in this exclusion to address this situation Does automatic interruption device only include breakers/circuit switchers? Would a device such as a motorized loadbreak be considered an automatic interruption device? If motorized loadbreaks are also

Organization	Yes or No	Question 7 Comment
		considered as an automatic interruption device, then there would be less confusion between E1 and I1. We also request that this issue be addressed by adding clarity to the exclusion. Another concern is that this exclusion requirement is restrictive and may have an adverse affect on future transmission investment for redundant radial supply to improve local load service, for example the addition of a second line removing the radial status exclusion. Consideration should be given to allowing entities to build additional transmission without automatically compromising the exclusion status of any given facilities.
CenterPoint Energy	No	CenterPoint Energy believes that some radial systems described in Exclusion E1 are similar to the local distribution networks (LDNs) described in Exclusion E3. A radial system may be connected to more than one automatic interrupting device in certain substation designs, such as a ring bus configuration. CenterPoint Energy believes similar wording should be used for Exclusion E1 and Exclusion E3. Utilizing wording from Exclusion E3, CenterPoint Energy recommends changing the beginning of Exclusion E1 to "Any radial system which is described as separable by automatic fault interrupting devices: Wherever connected to the BES, the radial system must be connected through automatic fault-interrupting devices; and:".
ISO New England, Inc.	No	The definition of radial needs clarification; we suggest "fed from a single transmission source, i.e. fed from a single substation at a single voltage". It is clear and it can be applied in a "bright-line", consistent fashion. As currently drafted, if the interruption device is not automatic, E1 would not exclude tapped "radial - i.e. single fed" equipment. Does the SDT mean to imply that even transformers which do not have an automatic interruption device on the high side, but have low voltage side at lower than 100 kV, will be considered part of the BES? If so, is the BES considered to extend to where the circuit has an automatic interruption device? Would the bus conductor and leads to the high side of the transformer be BES? This would not be acceptable if the answer is yes. It is important to keep in mind that the in the instance of a radial line served via a tap, the system needs to be designed for loss of the line in any event and requiring an automatic switching device is not necessary.In short, the term radial should be better defined and the requirement for an automatic interruption device should be eliminated.

Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system.

In addition, the SDT wishes to point out that the definition also includes Exclusion E3 that can be used for multiple connections serving local networks. The SDT realizes that a bright-line definition may require entities to seek exceptions through the Rules of Procedure exception process.

E1 - ~~Any r~~Radial systems: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

Organization	Yes or No	Question 7 Comment
a) Only ~~servingserves~~ Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~includingincludes~~ generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating). Note – A normally open switching device between radial systems does not affect this exclusion.		
NERC Staff Technical Review	No	Exclusion E1 would be acceptable if (i) switching the radial system to connect it to the BES at a second point of interconnection is modified to require that when a make-before-break connection is used, it occurs at a voltage below 100 kV and (ii) the automatic interrupting device is not excluded as part of the radial system. >>>>>>>>>>> The allowance for make-before-break connections of radial facilities at voltages 100 kV or higher will result in operating conditions with the potential to degrade system reliability if the subject Elements are not planned, designed, maintained, and operated in accordance with NERC Reliability Standards. The risk is most pronounced when the make-before-break connection is automated, increasing the likelihood of adverse reliability impacts occurring as a result of placing the system into an unplanned operating condition. If the make-before-break connection is made at a voltage below 100 kV the impedance in the parallel connection will mitigate the reliability impact. When the radial system is connected to the BES at a second point of interconnection 100 kV or higher, the radial system should not be excluded unless a break-before-make connection is used because system protection during the momentary parallel network operation is critical to overall BES reliability. >>>>>>>>>> The reason for requiring an automatic interrupting device between the BES and the excluded radial system is to prevent faults and other abnormal conditions on the radial system from negatively impacting reliability of the BES. Given the reliance on the interrupting device to support BES reliability, it is appropriate to include the interrupting device in the BES so that it is planned, designed, maintained, and operated in accordance with NERC Reliability Standards the same as other BES Elements. Thus, when excluding a radial system operated at 100 kV or higher, the BES line of demarcation should be on the load side of the automatic interrupting device. >>>>>>>>>> The main clause and part (a) of the exclusion should be changed to read; >>>>>>>>>> Exclusion E1 - Any radial system which is described as connected from a single Transmission source originating on the load side of an automatic interruption device and:a) Only serving Load. A normally open switching device between

Organization	Yes or No	Question 7 Comment
		radial systems may operate in a 'break-before-make' fashion at 100 kV or higher or a 'make-before-break' fashion below 100 kV to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, etc. ...
Small Entity Working Group (SEWG)	Yes	Yes, with some minor changes. Delete the words "described as" in the sentence: Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and. How the radial system is actually connected is important not the description. The SEWG believes that "a single Transmission source" should be defined in such a way to ensure all the various bus configurations are captured. The SEWG recommends modifying the language in E1 to allow for the use of a "switching device" rather than an "automatic reclosing device" for two specifics situations as follows: 1) When a radial transmission line is feed from a ring bus, but only serve load and/or non-registered generation: 2) When a radial transmission line is feed from a breaker and half bus and it only serves load and/or non-registered generation. In both cases, faults on the radial transmission line will not interrupt network transmission flows and therefore has minimal impact on the BES. For direct connection of radial transmission lines to a networked transmission line, the SEWG agrees that an automatic interrupting device is required to protect the BES.

Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by most of the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system.

E1 - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or,

b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,

c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

Organization	Yes or No	Question 7 Comment
Dominion	No	Dominion can agree with Exclusion E1 only if the exclusion is applied to any radial Facility, regardless of whether it is used to connect load or generation to the bulk power system.
SPP Standards Review Group	No	We could concur with this exception providing the 'automatic interruption device' is not considered a part of the BES. Additionally, what are the implications for a radial element connected in a ring bus via two breakers or a radial element connected via a breaker and a half scheme?
Edison Electric Institute	No	EEI suggests the following change to E1:Any radial system which is described as connected from a single Transmission source [Delete "originating with an automatic interruption device"] and:
Idaho Falls Power	No	This exclusion speaks to radial systems with generation resouces not identified in I2, I3, I4, or, I5, thus seemingly only to apply to generation resouces smaller than 20MVA. We wonder why this exclusion then exists as these resources are already excluded by not being large enough to fall under the registry criteria, and thus need not comply with the reliability standards.
Tennessee Valley Authority	No	We suggest the first statement in E1 to read, "Any radial system connected to a single BES transmission source, operating with an automatic interruption device, including the facilities between the connection to the transmission source and the automatic interruption device which are within the transmission source's zone of protection, and:"
New York State Reliability Council	No	E1 too prescriptive. Suggest developing a general, flexible definition of radial system in NERC Glossary such as "A system connected from a single Transmission source originating with an automatic interruption device".
New York Power Authority	No	The definition of Exclusion E1 does not cover radial systems that are connected to a single transmission source by more than one automatic interruption device, such as occurs with a "breaker-and-a-half" arrangement. The definition should be modified as follows:"Any radial system which is described as connected from a single Transmission source originating with one or more automatic interruption devices and: ...."This exclusion uses many terms that are not defined under NERC's standard definitions: "radial load", "automatic interruption device" and "make-before-break". If these terms are used to define an exclusion and can be understood or interpreted differently by different people, then the terms should be formally defined.
Electricity Consumers Resource Council (ELCON)	No	The existing language in the NERC Statement of Compliance Registry for radial exclusions should be maintained since the change proposed by the SDT could result in a significant increase in entities and/or facilities that would have to be registered or included (because of the addition of the automatic interruption

Organization	Yes or No	Question 7 Comment
		device). The burden for proving the need for such significant changes should be placed on the ERO and the Regional Entities through the BES Exception Process, not on the users of the BES. In particular, it could force retail load (customers) to register as transmission owners, or engage in other maneuvers to avoid registration, when this is clearly a transmission owner/customer issue (as to whether to install automatic interruption devices). These lines are non-jurisdictional and are obvious under the purview of the state commissions.
The Dow Chemical Company	No	The existing language in the NERC Statement of Compliance Registry for radial exclusions should be maintained since the change proposed by the SDT could result in a significant increase in entities and/or facilities that would have to be registered or included (because of the addition of the automatic interruption device). See ELCON comments for additional details.
Grand Haven Board of Light and Power	No	Exclusion E1 addresses a radial, load serving system, but it does not address whether the automatic interrupting device should be defined as a part of the BES or not. In our case, the ONE automatic interrupting device that we own would force us to register as a TO/TOP, and as a result incur significant costs. This does not comply with FERC Order No. 743 (and No. 743a) and should be addressed in this exclusion if not in the core definition.
FHEC	No	Suggest the word single be moved later in the sentence, see below-From: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: To:E1 - Any radial system which is described as connected from a Transmission source originating with a single automatic interruption device and:
ExxonMobil Research and Engineering	No	The inclusion or exclusion of radial lines serving load should not be contingent on whether the radial line is isolated by a single automatic fault interrupting device. Many of the radial lines impacted by the requirement for the presence of an automatic fault interrupting device are industrial companies that are fed via 138 kV and 230 kV systems that are hard-tapped or fed from breaker and a half or ring buss transmission substations. The requirement for the installation of an automatic fault interrupting device on the radial line is predicated on the assumption that an event on a hard-tapped line serving load will produce a negative impact on the interconnected transmission network. Accepting this assumption as a true fact, the SDT is following the logic that they should expand the scope of the interconnected transmission network to include the hard-tapped line (used to locally distribute power) due to the fact that the transmission owner has neglected to properly protect their facilities from the impact of an event on the hard-tapped line. In effect, the SDT is allowing the transmission planner to take credit for protective devices installed on the distribution network when they conduct their contingency studies as part of NERC Reliability Standards TPL-002 and TPL-003; thus shifting the responsibility of protecting the interconnected transmission network from the owners of the transmission network to the customers and their local distribution facilities. The SDT should revisit their assertion that

Organization	Yes or No	Question 7 Comment
		facilities should be included based on the presence of an automatic fault interrupting device based on the fact that if a contingency study indicates that an automatic fault interrupting device should be present in order to preserve system stability or prevent a cascading outage during an N-1 or N-2 contingency, the transmission planner should be recommending such a device is installed on the interconnected transmission system and not a customer owned facility or any facility used to locally distribute electric power. It is inappropriate to let transmission owners take credit for customer owned and local distribution facilities in their reliability studies and require customer's and local distribution facilities to protect the interconnected transmission network when those facilities are explicitly excluded from the bulk power system in Section 215 of the Federal Power Act and the interconnected transmission system is owned and operated by entities that the customers and local distribution facility owners pay to provide them with reliable transmission service.
MidAmerican Energy Company	No	The statement "originating with an automatic interruption device" seems to go beyond differentiating what is radial. If that were removed, the rest of the draft exclusion seems to capture what is radial.
Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)	No	(Note: Inserted language provided in brackets; deleted language denoted by empty brackets: [ ].) Exclusion E1 contradicts the plain language of Section 215 of the Federal Power Act ("FPA"), which denies FERC jurisdiction over facilities used in the local distribution of electric energy (16 U.S.C. Â§ 824o(a)(1) (stating the Bulk Power System "does not include facilities used in the local distribution of electric energy")). For example, Exclusion E1 would impermissibly include within the definition of the Bulk Electric System ("BES") a retail customer's self-provided "hard-tapped" radial line that is located behind the retail delivery point. The Standard Drafting Team ("SDT") stated in commentary to Exclusion E1 that it has clarified the existing exclusion for radial systems by specifying that protection for the BES is a required element, and that it believes that faults on radial lines without protection devices could negatively impact the BES. Even if faults on radial lines could negatively impact the BES, however, radial lines that are used in local distribution of electric energy are outside of FERC's jurisdiction. Congress did not place any qualifications on the exclusion of facilities used in the distribution of electric energy, and certainly did not make the exclusion contingent on whether the facility is "originating with an automatic interruption device." Exclusion E1 would rewrite Section 215 of the FPA to exclude from the definition of the BES only "facilities [with an automatic interruption device] used in the local distribution of electric energy." Such an interpretation, as discussed further below in response to Questions 11 and 12, is unlawful as it is in direct contravention of Congress' intent. To make Exclusion E1 consistent with the jurisdictional requirements of Section 215 of the FPA, Exclusion E1 could be rewritten as follows:Any radial system which is described as connected from a single Transmission source [ ] and: a) Only serving Load. [ ] Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5. Please see further discussion in response to Questions 11, 12 and 13.

Organization	Yes or No	Question 7 Comment
Alliant Energy	No	We believe the first sentence should be revised to read “Any radial system which is described as connected from a single Transmission source at 100 kV or above originating with . . .” In this way it is clear that E1 covers radial transmission, not radial distribution systems.
Exelon	No	Exelon points out that this is another case where facilities used in local distribution of electric energy that are presently under state jurisdiction might be included in the BES. Depending on the location of the automatic interrupting device, the radial facilities in between the tap point at the transmission sources and the interrupting device would be included in the BES.
City of St. George	No	Radial systems should be excluded as outlined in E1a; however the generation level requirements of 20 MVA and 75 MVA (I2, I3, & I5) should be revisited. As long as the normal power flow is into the radial system, the amount of generation on a radial segment should not automatically trigger an inclusion to the BES.
Golden Spread Electric Cooperative, Inc.	No	We recommend modifying "Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and..." to read EITHER1. "Any radial system which is described as connected from a single Transmission source and... [remove originating with an automatic interruption device] OR2. "Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device or manual isolating switch..."
Michigan Public Service Commission(MPSC)		MPSC Staff Comments: The MPSC supports this exclusion with the exception that Inclusion I2 should be removed from the E1(c) provision. Keeping the I2 here will result in too many subtransmission load-serving elements losing their non-BES status.
Georgia System Operations		A. The phrase “which is described as” is unclear. If the intention is to mean “which is defined as,” the term “Radial System” should be capitalized and added to the glossary. Otherwise, consider deleting the phrase. B. It is not clear whether the automatic interruption device on the excluded system is itself in or out of the BES. Can the drafting team clarify this intent with respect to breakers protecting radial lines (perhaps compared to circuit switchers protecting load serving transformers)? Drawings could be very beneficial here. C. The second part of sub-bullet “a” (the sentence beginning “A normally open switching device...”) applies not only to “a” but to all the sub-bullets, and therefore should be moved to either the initial sentence or to be a closing item after the last sub-bullet. For example, if the sub-bullets are indented, and then this sentence returns to the original margin, that would show that it applies to any “radial system” and not just to a system falling under a single sub-bullet.

Organization	Yes or No	Question 7 Comment
United Illuminating		UI suggests the following change to E1 eliinating the automatic device:Any radial system which is described as connected from a single Transmission source.These taps are not necessary for the opeation of the interconnected system.
Florida Municipal Power Agency Florida Keys Electric Cooperative	Yes	FMPA agrees with the intent / concept, but has suggested wording changes to add clarity.The words "described as" should be deleted from the exclusion to avoid confusion. What matters is how the system is actually connected, not how someone describes it. In addition, "a single Transmission source" should be defined, and should be generic enough to encompass the various bus configurations. It is not the case, for example, that each individual breaker position in a ring bus is a separate Transmission source; in that case, a bus at one voltage level at one substation should be considered "a single transmission source." Some examples of configurations that should be considered a single transmission source for this purpose are at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf, Examples 1-6. The phrase "automatic interrupting device" should be replaced with the phrase "switching device." Many radials are connected to ring buses or breaker-and-a-half schemes where the breakers (automatic interrupting devices) are within the bus arrangement where the appropriate division between BES and non-BES is at the disconnect switch as the radial "takes off" from the bus arrangement.As written, E1 would eliminate most radials from automatic exclusion and force most of them into the Exception Procedure. For instance, see examples 2 of the FRCC draft BES definition Appendix A at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf).Switch "A" in example 2 is usually not automatic. Breaker D and E are automatic. Switch A is radial, Breakers D&E may not be. FMPA recommends replacing "automatic interrupting" with "switching" and allow manual switching devices to establish the boundary between BES and non-BES, otherwise we get into splitting up ring-buses or breaker-and-a-half schemes, or flooding the Exception Procedures with a lot of needless requests.Also, "device" is singular whereas the exclusion is for a "radial system". I presume that the SDT intends that if there are two lines originating at the same substation supply a load in a redundant nature, that the "radial system" would be excluded (see examples 1, 3 and 4 of the FRC draft BES Definition Attachment A), which would mean there would be more than one device.Also, the phrase "A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service." is misplaced in bullet a) and belongs in the non-bulleted section.FMPA recommends re-wording E1 to be:"Any radial system which is connected from a single Transmission source (such as a contiguous bus configuration like a ring bus or breaker-and-a-half scheme) originating with switching device(s) and meeting the criteria in bullets a, b or c below. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.a) Only serving Loadb) Only including generation

Organization	Yes or No	Question 7 Comment
		resources not identified in Inclusions I2, I3, I4 and I5c) A combination of (a) and (b)"
MRO's NERC Standards Review Forum	Yes	We recommend the phrase “originating with an automatic interruption device” be clarified as to the location of the interruption device. An entity may not have interruption devices at both ends of a radial fed line. If the interruption device is at the load end of the radial line, then the “up-stream” portion of the radial line is unprotected. Please clarify.Please add the Brightline Criteria that all facilities less than a 100kV are excluded unless those facilities meet the criteria of an Inclusion.
Hydro One Networks Inc	Yes	We agree with this concept as part of establishing a bright-line definition, as well as clarifying this exclusion as part of the revised BES definition. Although the concept is consistent with the statements in the FERC Order, it is imperative to understand that the limitations of E1 will have a direct impact on many entities (big and small) along with distribution companies across North America. The exclusion requirements are extremely restrictive with little or no technical basis and are limited to the fact that these parametric restrictions may not have any reliability impact in terms of location, configuration of element, and system characteristics. The radial characteristics and/or the reliability of the interconnected transmission network should not be determined by the amount of installed generation or a single transmission source or an interrupting device. For example, a redundant double circuit designed to supply the load with adequate protection and isolation beyond the radial tap could be significantly better for load supply-continuity and reliability. We suggest if more than one transmission source feed radial load to ensure customer supply continuity and reliability then this should be either part of the bright-line definition as long as there is adequate protection and, the loss of any single transmission source does not affect the interconnected transmission network. We suggest SDT to consider revising E1 as follows:Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device or can be isolated with adequate protection without affecting the BES and: a) Serves load, or, b) Includes generation resources not identified in Inclusions I2, I3, I4 and I5, unless excluded by E2, or, c) Has any combination of items (a) and (b). The radial system can have a normally open switching device for connecting it to a second Transmission source in a ‘make-before-break’ fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.
National Rural Electric Cooperative Association (NRECA)	Yes	NRECA requests that the drafting team state explicitly whether the automatic interruption device is included or excluded from the BES. Examples of automatic interruption devices should be included in a reference or FAQ document, and drawings/diagrams on typical configurations would be beneficial. Consistent language is needed in the Inclusions/Exclusions. E1 states “automatic interruption device” and E3(a) states “automatic fault interrupting devices.” NRECA recommends adding the word “fault” as in E3(a)

Organization	Yes or No	Question 7 Comment
		and also stating “device(s)” in E1 and E3(a) and wherever else the phrase may be used in the BES definition and inclusions/exclusions.Additional clarification is needed in explaining E1(c) to ensure industry understands the scenario.
ReliabilityFirst	Yes	teh term "Single Transmission Source" needs defined, and as well what elemnents are defined by "automatic interrupting devices" there is debate out in the industry.
Transmission Access Policy Study Group Michgan Public Power Agency	Yes	TAPS suggests some clarifying changes:The words “described as” should be deleted from the exclusion to avoid confusion. What matters is how the system is actually connected, not how someone describes it. In addition, “a single Transmission source” should be defined, and should be generic enough to encompass the various bus configurations. It is not the case, for example, that each individual breaker position in a ring bus is a separate Transmission source; in that case, a bus at one voltage level at one substation should be considered “a single transmission source.” Some examples of configurations that should be considered a single transmission source for this purpose are at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf, Examples 1-6. The phrase “automatic interrupting device” should be replaced with the phrase “switching device.” Many radials are connected to ring buses or breaker-and-a-half schemes where the breakers (automatic interrupting devices) are within the bus arrangement where the appropriate division between BES and non-BES is at the disconnect switch as the radial “takes off” from the bus arrangement.
Northern California Power Agency	Yes	NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.
Texas Industrial Energy Consumers (TIEC)	Yes	TIEC supports excluding radial loads serving only load or generation resources that do not trigger NERC registration requirements. This is consistent with the FERC’s intent and the existing BES definition. However, TIEC believes that this exclusion should not be contingent upon a radial system “originating with an automatic interruption device” as proposed by the SDT. Radial feeds serving a system that contains only load and generation that does not trigger registration requirements should be categorically excluded from the BES definition regardless of whether the radial lines originate with an automatic interruption device. It should be the responsibility of the transmission provider to ensure that its facilities and interconnection properly protect the grid from facilities that fall under this exclusion, just as the transmission providers do for other load and unregistered generation. The absence of automatic interruption device should not trigger inclusion as a part of the BES, but should trigger a requirement upon the transmission provider to install such a device on its side of the facilities or take other measures to insulate the grid from the activities of a radial network. Accordingly, TIEC would proposed to strike the phrase “originating with an automatic interruption device” from the

Organization	Yes or No	Question 7 Comment
		proposed exclusion language.
National Association of Regulatory Utility Commissioners	Yes	We agree with Exclusion E1. Radial systems are clearly local distribution and excluded from FERC and NERC jurisdiction. This is consistent with FERC Order 743 and 743a (see e.g. Order 743A P 1, 76 Fed. Reg. 16264 (March 23, 2011)). We suggest that I2 be removed from this exclusion (and from the standard as a whole) as discussed in response to question 3.
Oregon Public Utility Commission Staff	Yes	Exclusion I as currently proposed adequately defines radial systems; however, Inclusion I2 language should be removed per the rationale stated in the response to Question 3 above. To retain the Inclusion I2 language herein would sweep in an abundance of distribution elements that have no impact on the reliable operation of the interconnected bulk transmission system.
PUD No. 2 of Grant County, Washington	Yes	E1 specifically states “Any radial system which is described as connected from a single transmission source originating with an automatic disconnection device and...”. The example of concern is a radial tap to a single distribution power transformer that is connected to a ring bus or breaker and a half bus. In this case the transformer would have 2 automatic disconnection devices from what is essentially a single source. Typically ring bus and breaker and a half bus are used to improve reliability, limiting the exclusion to a single disconnecting device appears to bring a hypothetical radial tap fed from a ring bus or breaker and a half bus into the BES definition. Although the LDN exclusion might apply there is the potential for many situations where it might not.A possible remedy is to revise the exclusion as follows:”Any radial system which is described as connected from a single transmission source that originates with automatic disconnection device(s) and...” In addition, a definition for “a single transmission source” should be provided to clarify the intent. Suggestion:”A single transmission source would be any transmission source located within a single facility, yard or fenced area and electrically continuous at a single voltage level”.
FortisBC AltaLink	Yes	We agree with this concept as part of establishing a bright-line definition, as well as clarifying this exclusion as part of the revised BES definition. Although the concept is consistent with the statements in the FERC Order, it is imperative to understand that the limitations of E1 will have a direct impact on many entities (big and small) along with distribution companies across North America. The exclusion requirements are extremely restrictive with little or no technical basis and are limited to the fact that these parametric restrictions may not have any reliability impact in terms of location, configuration of element, and system characteristics. The radial characteristics and/or the reliability of the interconnected transmission network is determined by the amount of installed generation or a single transmission source or an interrupting device. For example, a redundant double circuit designed to supply the load with adequate protection and isolation beyond the radial tap could be significantly better for load supply-continuity and reliability. We suggest if more than one

Organization	Yes or No	Question 7 Comment
		transmission source feed radial load to ensure customer supply continuity and reliability then this should be either part of the bright-line definition as long as there is adequate protection and, the loss of any single transmission source does not affect the interconnected transmission network. Accordingly, it will be an understatement to suggest that the SDT: o Carefully craft the exception criteria and procedure that is flexible and technically sound to adequately allow entities to present their case to the ERO for exclusion o Exception criteria should be at a high-level with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) mentioned in exclusions or inclusions based on technical assessment, evidence and justification for its unique characteristics, configuration, and utilization o Acknowledge and provide provisions in both NERC exception criteria and exception process for federal, state and provincial jurisdictions.
American Electric Power	Yes	AEP supports the concept of the exclusion of radial systems, however further clarification is needed regarding whether or not the source equipment is included as part of the radial system (for example, ring bus or breaker and a half bus configurations). In addition, “automatic interruption device” should be defined to alleviate any ambiguity.
East Kentucky Power Cooperative, Inc.	Yes	EKPC has a concern with the wording of the definition for Exclusions:E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and:a) Only serving Load. A normally open switching device between radial systems may operate in a ‘make-before-break’ fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.”This wording leads EKPC to believe that a radial 138 kv line that steps down into a 69 kv looped system that have no facilities included in the BES would not be excluded as radial. This line cannot have any more impact on the BES than the 69 kv system it connects to that is excluded from the BES. Therefore I would add to exclusion E1a, “or only connecting to a transformer stepping down to a voltage below 100kv”.
American Transmission Company, LLC	Yes	ATC offers the following alternative language:ATC suggests replacing the wording of “connected from a single Transmission source” with “connected to the Bulk Electric System”. Furthermore, ATC believes that Exclusion E1 is appropriate and should be part of the definition of the BES. However, ATC believes that a registered entity should be given the option to not be required to follow the exclusions in the E1 criteria. Some registered entities for operational and business purposes may wish to continue to classify their radial system assets, which are operated above 100 kV, as BES components.

Organization	Yes or No	Question 7 Comment
Muscatine Power and Water	Yes	MP&W recommends to clarify the phrase "originating with an automatic interruption device" regarding the location of the interruption device. An entity may not have interruption devices at both ends of a radial fed line. If the interruption device is at the load end of the radial line, then the "up-stream" portion of the radial line is unprotected. Furthermore, please make it unambiguous that all facilities operated at less than a 100kV are excluded unless those facilities meet the criteria of an Inclusion.
Sacramento Municipal Utility District (SMUD)	Yes	SMUD support with the Exclusion 1 concept. However to maintain the clarity for a "Bright-line" the term "single Transmission source" needs to be expanded as it could be read to be a single line, common bus or a single entity, that will change the meaning of this exclusion.
GTC	Yes	Agree, but further clarification requested. E1 reads as if the originating automatic interrupting device is to be excluded with the radial system. Can the drafting team clarify this intent with respect to breakers protecting radial lines versus for example a breaker or circuit switcher protecting an excluded transformer which is not part of the BES? Drawings would be very beneficial here.
Illinois Municipal Electric Agency	Yes	With the following clarifying edits. Delete the words "described as" in the first sentence. Also, "a single Transmission source" should be defined to encompass various bus configurations. For example, an individual breaker position in a ring bus is not a single Transmission source, but a bus at one voltage level at one substation should be considered a single Transmission source. Also, the phrase "automatic interrupting device" should be replaced with the phrase "switching device". The current wording does not take into account that a radial system is often connected to a ring bus or a breaker-and-a-half scheme where the breaker/automatic interrupting device is within the bus arrangement. The appropriate division between BES and non-BES is at the disconnect switch where the radial line attaches to the bus arrangement.
Public Utilities Commission of Ohio	Yes	Exclusion E1 is appropriate. However, any inclusion that are inconsistent with this exclusion should be eliminated. Any facility that has an impact on the bulk system could be considered for inclusion under a case by case basis.
Long Island Power Authority	Yes	For clarification purposes, we understand "Transmission source" to be a substation and not a line. A substation connected to only one other substation "source" by two lines would still be considered radial and thus excluded.
Idaho Power	Yes	Generally agreed assuming that the make-before-break may be performed manually.

Organization	Yes or No	Question 7 Comment
New England States Committee on Electricity	Yes	NESCOE generally supports these exclusions. However, NESCOE also notes that subsections (b) and (c) could (depending on the final definition of Inclusions I2 through I5) sweep many sub-transmission load serving elements into the BES, at a cost that is not justified in terms of reliability benefits. Regarding sub transmission, Exclusion Criteria E1 and E2 are concerned with radial configurations while E3 relates to Local Distribution Networks (LDN's). None of these apply to sub transmission networks that may contain both looped and radial configurations. Also, sub transmission networks may have power flowing parallel to the BES and may have power flowing into the BES with no potential for adverse impact on the reliability of the BES. Sub transmission networks operated at voltages less than 100 kV, connected to the BES via non-GSU transformers, should be excluded from the BES regardless of their configuration. It should be clear that all generation facilities connected to sub transmission are not BES as these units are adequately covered under other applicable NERC and/or regional reliability criteria. These units have no direct impact on the reliability of the BES.Regarding facilities at operated at 100 kV and above, the switching configuration as defined is not clear and possibly overly restrictive. The definition should incorporate language related to avoiding "parallel paths" with diverse electrical nodes in the BES.
Big Bend Electric Cooperative, Inc.	Yes	Our only concern about this exclusion is the timeframe we'd have to get an appropriate automatic interruption device installed. Currently, we have a short radial that hasn't yet caused us to be registered as a TO or TOP. Having time to get a solution in place would be crucial for us, as a small utility, to avoid additional regulatory fees and requirements.
Modern Electric Water Company	Yes	Clear exclusionary language for radial systems is absolutely necessary for a usable BES definition, particularly since radial systems serving load are already excluded from the existing NERC definition, radial systems serving load can only be used for the local distribution of energy (and are thus excluded by Congress in Sec. 215 of the FPA), and radial systems serving load have been confirmed excluded from the BES by previous FERC Orders. However, the proposed language could be improved to be more explicit and further remove the opportunity for improper/unintended interpretation. The currently-drafted E1 language has several issues that need to be addressed. For instance: The use of "automatic interruption device" in E1 is not consistent with "automatic fault interruption device" in E3-a, and could lead to different interpretations. Another issue is the use of the un-clarified phrase "single Transmission source", and deserves additional attention. Presumably, this language exists to describe the commonly-used radial tap from a networked (two-station) line, as detailed in NERC Project 2009-17-Response to Request for an Interpretation of PRC-004-1 and PRC-005-1 for Y-W Electric and Tri-State G&T. In Project 2009-17, diagrams show a radial tap placed on a line between Station A and Station B, and could be interpreted to indicate that the tap connects to two sources. Unless "single Transmission source" is clarified, then a radial line originating from a Double-Bus-Double-Breaker or a Breaker-and-a-Half station would also connect to two sources.

Organization	Yes or No	Question 7 Comment
		The drafted language does not go far enough to consider how networked lines are operated - sometimes radially, sometimes with multiple protection and isolation schemes and equipment. As drafted, this exclusion cannot be utilized by many insignificant taps (some of such insignificant length that no automatic fault interrupting device was deemed necessary). This situation leaves those insignificant elements to apply the LDN exclusion whose characteristics are dissimilar to a simple, load-serving radial tap. We support the intent of the language of E1-a, "A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service....", but suggest that it be re-written as follows: "The existence and use of 'make-before-break' switching devices, which temporarily connect otherwise radial load-serving systems to alternate sources for purposes of service continuity, do not affect the BES status of the system before, during, or after their use." This clarification is needed to address a position held in the WECC region (WECC Compliance Bulletin #4, April 15, 2011) that make-before-break switches render systems part of the BES, and discourage distribution providers from "reliably" serving their customers.We do not intend to air grievances, but ambiguous radial exclusion language has led to an extreme misuse of resources in the WECC region. It is imperative that industry and the SDT get this exclusionary language correct and put into use as soon as possible.In an explanatory bullet below Exclusion E1-c (herein) the SDT states "The SDT believes that faults on radial lines without protection devices could negatively impact the BES." Where this reasoning errs is that it assumes that everything upstream of a radial element is already determined to be BES. Many radial taps connect to LDN lines without AFIDs. The language proposed does not allow for a radial exclusion directly, but forces the insignificant tap to apply the LDN exclusion E3 - E1's success at being complete depends on another exclusion. Additionally, this reasoning implies that the mere existence of a AFID is the cure-all to reliability or that technical analysis hasn't already established the proper balance of equipment to adequately serve and protect these elements. We suggest including additional isolation devices as the demarcation point of small radial systems wishing to apply this exclusion.
Utility System Efficiencies, Inc.	Yes	USE agrees in concept with this Exclusion. However, it is unclear what is required to demonstrate the "make-before-break" connection. Is this statement intended to mean that the normally-open switch is mechanically or electrically interlocked to ensure the "make-before-break" requirement is met? It would be a normal switching practice to close the normally-open switch to make the parallel before opening the normally-closed switch, but is the normal switching practice sufficient to make this claim? Also, it is unclear whether the automatic interruption device itself is a part of the BES.
Duke Energy	No	This needs further clarification as to what constitutes a "single Transmission source". Does having a double/multiple circuit line(s) from a single transmission station constitute a radial system?.
Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally		

Organization	Yes or No	Question 7 Comment
open switch to a note, and clarified the generation allowed within the system through changes. **E1** - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating). Note – A normally open switching device between radial systems does not affect this exclusion.		
SERC OC Standards Review Group	No	This exclusion is acceptable if the suggestions in Questions 3 and 4 are incorporated. We also suggest modifying Exclusion E1a as follows: a) Only serving Load or only connecting to a transformer stepping down to a voltage below 100kv. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or,
Response: See responses to Q3 & 4 The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system. **E1** - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and~~		

Organization	Yes or No	Question 7 Comment
		~~I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating). Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.
Luminant Energy	No	E1 a) Omit or clarify-Sentence beginning "A normally open switch..." Does not say what to do with it. Is it included or excluded. Suggested wording would be "An example would be a line with a normally open switching device between radial systems that may operate in a 'make -before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service." E1 b)-Clarify- Sentence beginning "Only including..."Are those resources that are included in the exclusions that are not included in the inclusions? Or are they resources that are included in the inclusions that are not included in the inclusions? This meaning of this sentence is not clear. It should not be necessary to say that resources are excluded that are not included. Suggested wording would be "Generation resources that are not specifically described in the Inclusions I2, I3, I4 and I5."
Response: a) The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the respondents. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system. **b)** The SDT believes these changes provide clarification to how the Exclusions and Inclusions are related. If a generation resource is included in the Inclusions then it can not be excluded by the Exclusions. In addition, the SDT wishes to point out that the definition also includes Exclusion E3 that can be used for multiple connections serving local networks. The SDT realizes that a bright-line definition may require entities to seek exceptions through the Rules of Procedure exception process. **E1** – ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).		

Organization	Yes or No	Question 7 Comment
Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.		
Vermont Transco	No	Does “a single transmission source” mean a single “substation” at 100 kV or above? The wording of this exclusion appears to allow distribution (<100 kV) level generating units to be excluded from the definition of BES. If so then this generation exclusion is appropriate to the FERC order. However, the definition of “automatic interruption device” should be defined fully. Specifically what types of equipment are considered an AID? If a transformer has a high side voltage of 115 kV and a low side voltage of 34.5 kV it would not be part of the BES definition, however depending on how one interprets the exclusion for a radial feed, if the transformers automatic interruption device were on the low side of this transformer, it appears that this transformer would then need to be “included” as BES. In addition, would the protection schemes associated with the breaker failure on the low side of a transformer (voltage <100 kV) designed to send a signal to the high side (which is greater than 100KV) for a breaker failure scenario fall into the “included” facilities even though the transformer would not be “included”?

Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the respondents. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system.

In addition, the SDT wishes to point out that the definition also includes Exclusion E3 that can be used for multiple connections serving local networks. The SDT realizes that a bright-line definition may require entities to seek exceptions through the Rules of Procedure exception process. This BES definition does not address protection or control systems. Standards and requirements can be written against components that are not BES Elements.

E1 - ~~Any r~~Radial system~~s~~: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make before break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or,

b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,

c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

Organization	Yes or No	Question 7 Comment
Electric Reliability Council of Texas, Inc. Southwest Power Pool	No	See response to question 1 - while ERCOT ISO does not necessarily disagree with the substance of the proposed exclusions, it believes all exceptions should occur pursuant to the separate processes and criteria being developed that will be established in the NERC ROP. The BES definition should be more general in nature, focusing on objective thresholds. All exclusions should be addressed in the separate proceeding being conducted in parallel with this proceeding to develop the exception process, and ERCOT ISO reserves its right to comment on the substance of such proposals in that proceeding.
Response: Please see response to Q1. The SDT has developed a draft core definition, together with BES designations (Inclusions and Exclusions) that provide the specificity necessary to identify the vast majority of BES Elements by utilizing the existing definition and criteria previously approved for this purpose. The remaining facilities will be candidates for the Exception Process (RoP) where the Technical Principles will be utilized to determine if the facility is necessary for the reliable operation of the interconnected transmission network.		
Fayetteville Public Works Commission	No	Exclusion E1 references Inclusions I2 and I3. Therefore the comments provided in Question 3 with respect to Inclusion I2 are pertinent here as well. The radial system cannot be excluded if it includes any generation resources that are included in Inclusion I2. The ambiguity that exists in Inclusion I2 could, therefore, also have consequences in determining if a radial system can be excluded. If the recommended changes are made in Inclusion I2 then Exclusion E1 is acceptable as is.
Response: The SDT believes these changes provide clarification to how the Exclusions and Inclusions are related. If a generation resource is included in the Inclusions then it can not be excluded by the Exclusions. In addition, the SDT wishes to point out that the definition also includes Exclusion E3 that can be used for multiple connections serving local networks. The SDT realizes that a bright-line definition may require entities to seek exceptions through the Rules of Procedure exception process.		
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	No	BGE generally agrees with the “radial” exclusion, but votes “NO” due to a lack of clarity. The definition does not make it clear if radial facilities operating above 100 kV with automatic interrupting devices (which would otherwise be classified as non-BES under exclusion E1, part a) and serving networks operating below 100 kV are classified as non-BES. We believe E1 should make it clear that such radial facilities are non-BES. BGE would like to note that under the current RFC BES definition, such facilities are not designated as BES.To illustrate and clarify the BGE questions, please see the BGE Diagram attached. The BES designations included on the diagram are BGE’s interpretation of BES facilities under the proposed definition. Questions regarding the BGE Diagram:1. If the 13.8 kV device TB is operated “normally closed” as shown, is it the SDT’s understanding that the two 115 kV lines classified as Non-BES in the diagram are no longer

Organization	Yes or No	Question 7 Comment
		considered "radial"? 2. If the SDT does not consider the two 115 kV lines described above as "radial" with device TB closed, would this configuration be excluded as BES under exclusion E3? Or would the Exception Process be required to classify such a configuration as non-BES? See diagram at end of report.
Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system. The SDT is not in a position to provide advice on specific cases. **E1** - ~~Any r~~Radial systems: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating). Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.		
Springfield Utility Board	No	SUB agrees with the exclusion for radial systems, but would like clarification regarding the definition of "radial". SUB appreciates NERC developing a more clear and consistent definition of "radial". For clarity, SUB suggests the following language:" o Exclusion E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and that is characterized by any of the following:a)Only serving Load. A normally open switching device between radial systems with the same or different transmission sources may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Systems with a normally open switching device(s) that would otherwise result in a system with more than one transmission source if the switching device(s) is closed are considered radial systems. Or,b)Only including generation resources not identified in

Organization	Yes or No	Question 7 Comment
		Inclusions I2, I3, I4 and I5. Or,c)Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5?" As a side note, some in the industry appear to place a demarcation based on whether there is a fuse separating two systems. SUB is concerned with interpretations that indicate that if there is a fuse, they are separate. This could result in "closed" systems being considered "open" because there are fuses installed within the network. For example, consider a 115 kV interconnection point stepped down to distribution level service with a fuse continues along the distribution network to another fuse that is interconnected to a 115kV system with another transmission source. Is this fused system closed or open? Is this an intended outcome? SUB is hopeful that E1 will provide clarity to this issue.
Springfield Utility Board	No	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.

Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system.

In addition, the SDT wishes to point out that the definition also includes Exclusion E3 that can be used for multiple connections serving local networks. The SDT realizes that a bright-line definition may require entities to seek exceptions through the Rules of Procedure exception process. This BES definition does not address protection or control systems. Standards and requirements can be written against components that are not BES Elements. The SDT does not specify the type of normally open switch that will be used to separate the systems described in Exclusion E1 but understands that any such switch needs to be operated in such a fashion that insures safety, utilizes the best operating practices, and maintains reliability. Fuses are not considered normally open switches.

E1 - ~~Any r~~Radial systems~~:~~ ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV

Organization	Yes or No	Question 7 Comment
		or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating). Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.
Southern California Edison Company	No	SCE cannot support this exclusion as it will only apply if generation on the radial system does not exceed the criteria identified in I2, I3 and I5. SCE has identified its concerns regarding these aforementioned items in its previous responses.If the SDT goes forward with E1 criteria, the criteria should be modified as follows: (i) Delete "originating with an automatic interrupting device." This statement does not change or describe the flow to or from a radial system; (ii) E1 should be modified to identify that generation interconnected to a radial system should not exceed a measureable threshold of electrical demand on the radial system - an example being "5% occurrence in the past XXX years". This would negate some of the concerns identified regarding I2, I3 and I5; and (iii) SCE also feels that if the core BES definition is to reference protection devices, it should not identify the particular type of protection device as it did in E1, by specifically calling out "make before break" switching, as there are other types of protection with similar functionality.
Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular, the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system. In particular, the SDT has changed the inclusions to further specify what generation resources are included in a radial (refer to Exclusion E1 and Inclusion I3). **E1** - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or,		

Organization	Yes or No	Question 7 Comment
b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating). Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.		
Cogentrix Energy, LLC	No	This exclusion is acceptable if the suggestions in Questions 3 and 4 are incorporated.
Response: Please see responses to Q3 & 4.		
PPL Energy Plus and PPL Generation	No	See comments in Question 13
Response: See response to Q13.		
Consolidated Edison Co. of NY, Inc.	No	We agree with the concept of a allowing a radial exclusion from the BES. However, we ask that the term "device" be modified to include the optional plural; "device(s)." Some radial systems may require isolation by more than one automatic interrupting device.
Response: The SDT has eliminated the automatic interrupting device qualification. **E1** - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).		

Organization	Yes or No	Question 7 Comment
Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.		
MEAG Power	No	The definition of Exclusion E1 does not cover radial systems that are connected to a single transmission source by more than one automatic interruption device, such as occurs with a "breaker-and-a-half" arrangement. The definition should be modified as follows:"Any radial system which is described as connected from a single Transmission source originating with one or more automatic interruption devices and: .... "This exclusion uses many terms that are not defined under NERC's standard definitions: "radial load", "automatic interruption device" and "make-before-break". If these terms are used to define an exclusion and can be understood or interpreted differently by different people, then the terms should be formally defined.
Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system. In addition, the SDT wishes to point out that the definition also includes Exclusion E3 that can be used for multiple connections serving local networks. The terms in question are no longer used. **E1** - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating). Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.		
Independent Electricity System Operator	No	Again, we agree with the goal of E1 but we repeat the same concerns expressed in our responses to Q1 and Q3 with respect to the generation capacity thresholds. A majority of the transmission elements excluded by E1 would already be excluded by E3 and, therefore, E1 may be redundant. The SDT may wish to consider combining Exclusion E1 with Exclusion E3, modified as proposed in our response to Q9.

Organization	Yes or No	Question 7 Comment
		In Exclusion E1, we suggest changing "automatic interruption device" to "automatic fault-interrupting device" for consistency with E3(a).

Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular, the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system.

In addition, the SDT wishes to point out that the definition also includes Exclusion E3 that can be used for multiple connections serving local networks and there are sufficient differences between radial systems to warrant Exclusions E1 and E3.

E1 - ~~Any r~~Radial system~~s:~~ ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or,

b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,

c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

BPA	No	Exclusions E1 and E3 use the similar yet different terms "automatic fault interruption device" and "automatic fault interrupting device" respectively to refer to the specific type of device that must be used to separate the excluded area from the BES. Neither "automatic interruption device" nor "automatic fault interrupting device" are specifically defined in the NERC Glossary; leaving them up to auditor interpretation. From a compliance perspective, the fact that different terms are used seems to lead to a conclusion that different types of devices are being referred to in each case. However, given the technical characteristics of these exclusions, we are not able to discern how these devices might differ when used to isolate a "radial system" or a "Local Distribution Network", from the BES, as defined in E1 and E3 respectively. BPA would like to see the definition of "automatic fault interruption device" and "automatic fault interrupting device" If the intention is to refer to the same set of devices as being acceptable for E1 exclusion of Radial Systems and E3 exclusion of Local Distribution Networks, then please modify the language to be identical in each case. If the intention is to refer to a difference in the types of devices acceptable for providing separation from the BES in each case, then

Organization	Yes or No	Question 7 Comment
		please modify the language as necessary to further clarify the specific intention in a manner that enables consistent interpretation and application by auditors from the full spectrum of backgrounds and perspectives. If necessary, we further recommend that the drafting team consider creating a specific defined term (or 2) to add to the NERC Glossary that provides specific clarification to a clear and consistent manner in which these exclusions are to be applied. BPA would also like to point out a possible way to make E1 more clear – "Any radial system which is connected to a single Transmission source which connection originates with an automatic interruption device and . . ." BPA seeks clarification on whether, if a normally open breaker is switched in-service, it can still be considered radial. BPA understands this to mean that if a normally open switch is closed to maintain load service until the original source is disconnected, the system may still be considered radial.
Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system. Your assumption is correct. The SDT does not specify the type of normally open switch that will be used to separate the systems described in Exclusion E1 but understands that any such switch needs to be operated in such a fashion that insures safety, utilizes the best operating practices, and maintains reliability. **E1** - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating). Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.		
Tacoma Power		Tacoma Power supports Exclusion E1.

Organization	Yes or No	Question 7 Comment
Response: Thank you for your support.		
Chevron Global Power, a division of Chevron U.S.A. Inc.		See response to question 13
PacifiCorp	Yes	: Please refer to additional comments in question 13 regarding a contiguous BES.
Response: See response to Q13.		
ATCO Electric		Is a load substation categorized as a "radial substation" if its 144kV bus connects to another 144kV bus at an adjacent substation via two 144kV parallel transmission lines?
Response: The SDT is not in position to respond to this question as more information may be required to make a proper determination.		
City of Redding	Yes	Redding supports this high level exclusion of Radial systems as a clarification to the Brightline definition as long as it is part of the SDT's overall plan to make a clear distinction between distribution and transmission facilities. Redding's support rests on the assumption that the SDT will adequately address the distribution and transmission facilities issue via the Exception Process. There needs to be a fair and equable method where radial elements that do not meet this criterion can be identified as distribution acilities. This will hinge on the ability of the SDT to adequately address the two major issues: clarify the term "*necessary for operating the interconnected transmission network" and to "establish whether a particular facility is local distribution or transmission".*
Response: The SDT has clarified the core definition in this regard. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Western Electricity Coordinating Council	Yes	WECC generally agrees in concept. However, it is unclear what is required to demonstrate the "make-before-break" connection. Is this intended to mean that the normally-open switch is mechanically or electrically interlocked to ensure the "make-before-break" requirement is met? It would be a normal switching practice to close the normally-open switch to make the parallel before opening the normally-closed switch, but is the normal switching practice sufficient to make this claim?

Organization	Yes or No	Question 7 Comment
		Also, it is unclear whether the automatic interruption device itself is a part of the BES.

Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system.

The SDT does not specify the type of normally open switch that will be used to separate the systems described in Exclusion E1 but understands that any such switch needs to be operated in such a fashion that insures safety, utilizes the best operating practices, and maintains reliability.

E1 - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or,

b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,

c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusions ~~-~~I2, I3, or I4 ~~and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

Cowlitz County PUD	Yes	FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained. Cowlitz believes the exclusion as drafted adequately defines radials. Further, we would point out that two transmission systems that are operated radial with a normal open between them can't be operated reliably with the normal open indefinitely closed. Such extended closures are not possible were transmission protection systems are not designed for networked systems.
New York State Dept of Public Service	Yes	We agree with exclusion E1. As described, the facilities are clearly local distribution. Requiring a "make-before-break" switching device, between the BES and the excluded radial system, as a condition-precedent for such exclusion is proper. Such switches are necessary to promote reliable operation by enabling removal of radial systems principally serving load for maintenance and other reliable system operations. If the "make-before-break" switching capability is not included as part of the exclusion, the specification would undermine reliable system operation.
Sierra Pacific Power Co d/b/a NV	Yes	Agree with this exception and emphasize that the make-before-break language is essential to be retained in

Organization	Yes or No	Question 7 Comment
Energy		this exclusion.
Sweeny Cogeneration LP	Yes	We agree that all radial connections serving a single load, small generator, or combination should be excluded
Western Montana Electric Generating and Transmission Cooperative Public Utility District No. 1 of Snohomish County, Washington Blachly Lane Electric Cooperative Northern Wasco County PUD Central Electric Cooperative Clearwater Power Company Consumers Power Inc. Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Inc. Okanogan Electric Cooperative PNGC Power Raft River Rural Electric Cooperative Salmon River Electric	Yes	FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained. We believe the exclusion as drafted adequately defines radials.

Organization	Yes or No	Question 7 Comment
Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Clallam County PUD No.1 Chelan PUD – CHPD Kootenai Electric Cooperative Public Utility District No. 1 of Franklin County Midstate Electric Cooperative Central Lincoln Northwest Requirements Utilities		
Imperial Irrigation District	Yes	
Santee Cooper	Yes	
SERC Planning Standards Subcommittee	Yes	
ACES Power Participating Members	Yes	
Overton Power District No. 5	Yes	
Arizona Public Service Company	Yes	
Rayburn Country Electric Cooperative, Inc.	Yes	
Southern Company	Yes	

Organization	Yes or No	Question 7 Comment
Western Area Power Administration	Yes	
US Bureau of Reclamation	Yes	
Glacier Electric Cooperative	Yes	
South Texas Electric Cooperative, Inc.	Yes	
Portland General Electric Company	Yes	
South Texas Electric Cooperative, Inc.	Yes	
Dayton Power and Light Company	Yes	
Alberta Electric System Operator	Yes	
South Carolina Electric and Gas	Yes	
Farmington Electric Utility System	Yes	
Colorado Springs Utilities	Yes	
Consumers Energy Company	Yes	
Puget Sound Energy	Yes	
Clark Public Utilities	Yes	
Pepco Holdings Inc	Yes	

Organization	Yes or No	Question 7 Comment
PJM	Yes	
Oncor Electric Delivery Company LLC	Yes	
Manitoba Hydro	Yes	
City of Anaheim	Yes	
Xcel Energy	Yes	
Orange and Rockland Utilities, Inc.	Yes	
Response: Thank you for your support. The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the respondents. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system.		

8. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: The SDT believes that Exclusion E2 should be dedicated to the situation faced by behind-the-meter (i.e., retail customer owned) generation that are PURPA qualifying facilities (in the US) (e.g., see 18 CFR Part 292 for the regulations that are applicable in the US).and similarly situated generators in Canada. Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying facilities. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. The references to Inclusions I2 and I3 in Exclusion E2 have been deleted. Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA. The SDT has also modified Exclusion E3 to make non-retail generation in a local network (LN) subject to a comparable exclusion designation as that for customer-owned generation in Exclusion E2.

Due to industry comments, some slight changes were made for clarity:

E1 - ~~Any r~~Radial system~~s~~: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or,
b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,
c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example does not affect this exclusion.

E2 - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~group~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Organization	Yes or No	Question 8 Comment
Tri-State Generation and Transmission Association, Inc.	No	This Exclusion should also include "wholesale" meters for the instance where an electric distribution cooperative has some small generation connected to its distribution system that meets the same criteria.
Response: The SDT believes that Exclusion E2 should be dedicated to the situations faced by behind-the-meter (i.e., retail customer owned) generation that are PURPA qualifying facilities (in the US) and similarly situated generators in Canada. For example, see 18 CFR Part 292 for the regulations that are applicable in the US. Exclusion E2 has also been clarified by replacing the reference to "retail Load" with "retail customer Load." **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
NERC Staff Technical Review	No	The second condition (ii) in E2 is confusing. While the condition is appropriate and has specific meaning, the meaning will not be readily understood by most users of the definition. This condition should be clarified.
SPP Standards Review Group	No	We think we may concur with E2, but we are uncertain as to what is included in (ii). Could you please clarify?
Response: Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying cogeneration and small power production		

Organization	Yes or No	Question 8 Comment
facilities. For example, see 18 CFR §292.101 and §292.305(b) for the requirements specific to the US. The SDT believes that the meaning of the definition will be understood in Balancing Authority Areas where it is applicable. No change made.		
SERC Planning Standards Subcommittee	No	While we agree with the first part of E2, but we do not see the rationale for section (ii) and suggest it be deleted.
Response: The SDT believes that condition (ii) in Exclusion E2, which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. No change made.		
SERC OC Standards Review Group	No	This exclusion is acceptable if the suggestions in Questions 3 and 4 are incorporated.
Cogentrix Energy, LLC	No	This exclusion is acceptable if the suggestions in Questions 3 and 4 are incorporated.
Response: See response to Q3 & 4.		
Idaho Falls Power	No	We do not agree with E2(i). If the generation assets listed in the inclusions of I2 and I3 are not permitted to be excluded in E2, then what is the point of E2? The generation assets would already be in or out based upon the registry's MVA nameplate capacity. We would support E2 if provision (i) were struck. If generation assets are behind the meter on a local distribution network (fitting the criteria E3 for exemption) then too the generation should be exempted regardless of MVA rating. Moreover, we do not agree that there is a brightline MVA threshold of materiality to the BES. We would hope that the drafting team could demonstrate how the 20MVA brightline is a valid threshold for generation while the 100kV for transmission is not.We are concerned that relatively small generation on a local distribution network wherein generation is always serving local retail load behind the meter will be labelled a BES asset. As such, then is the LDN to the point of interconnection a BES asset as well, and therefore subject to the suite of TO/TOP standards? We feel such an outcome is unreasonable. It seems to us, as is stated under section 215 of the FPA, that the term BES "does not include facilities used in the local distribution of electric energy." To a logical conclusion, the generation attached to local distribution was considered and is intended to be one of the "facilities" and should therefore be exempted form inclusion in the BES. However, should the drafting team deem that all generation above 20MVA are a BES assets, we would hope that the exclusion for Local Distribution Networks could still stand and that the generation on the LDN would be divorced and defined separately. Our opinion is the BES is not one large contiguous system, but is rather comprised of assets across the region, which due to their size or location are vital to a sound BES but are not necessarily connected to each other. This principle would allow the generation to be regulated yet remove the burden of

Organization	Yes or No	Question 8 Comment
		transmission standards from small entities.

Response: Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA. The SDT has also modified Exclusion E3 to make non-retail generation in an LN subject to a comparable exclusion designation as that for customer-owned generation in Exclusion E2.

> **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.
>
> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:
>
> ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~
>
> **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;
>
> **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and
>
> ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~
>
> c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

The SDT has changed Inclusion I2 to simply reference the ERO Statement of Compliance Registry Criteria.

Tennessee Valley Authority	No	We suggest adding a reference to "I5" in the (i) section as follows: "the net capacity provided to the BES does not exceed the criteria identified in the inclusions I2, I3, or I5."

Response: The SDT believes that situations where the resources captured in Inclusion I5 directly serve its own Load are extremely rare and therefore may be demonstrated in the Exception Process. No change made.

Organization	Yes or No	Question 8 Comment
Western Montana Electric Generating and Transmission Cooperative	No	As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold (through reference to Inclusion I2) lacks an adequate technical justification in this context. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit ("standby, back-up, and maintenance power...") should be eliminated.
Northern Wasco County PUD Chelan PUD – CHPD Public Utility District No. 1 of Franklin County Northwest Requirements Utilities Big Bend Electric Cooperative, Inc Midstate Electric Cooperative Cowlitz County PUD	No	As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold (through reference to Inclusion I2) lacks an adequate technical justification in this context. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit ("standby, back-up, and maintenance power...") should be eliminated.
Response: Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA. The SDT believes that condition (ii) in Exclusion E2, which requires that the generation serving the retail customer Load self provide reserves, is essential for the integrity of the exclusion. **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
Southern Company	No	Section (i) is confusing because it mixes MW with MVA. The net capacity in section (i) would be in MW while the values referenced in I2 and I3 would be in MVA. This will create confusion. Also, we do not see any need for section (ii). Section (i) is sufficient without section (ii). We recommend Exclusion E2 to be re-written as follows:Exclusion E2 - A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if the net capacity provided to the BES does not exceed 20 MW for a single generating unit or 75 MW

Organization	Yes or No	Question 8 Comment
		for multiple generating units located at a single site.
Response: The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. No change made. The SDT believes that condition (ii) in Exclusion E2, which requires that the generation serving the retail customer Load self provide reserves, is essential for the integrity of the exclusion. No change made. Exclusion E2 has been revised due to industry comments: **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
Central Maine Power Company New York State Electric & Gas and Rochester Gas & Electric	No	E2 refers to "net capacity provided to the BES" (which seems to be a flow on an interconnection, not generator capacity), yet I2 and I3 refer to generator MVA. These are not the same unit which leads to inconsistency.This Exclusion appears to add confusion or additional criteria to that of the Compliance Registry.We recommend that E2 be stricken.
Response: The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. No change made.		
Intellibind	No	This is very confusing. Understanding the Drafting Team's goal, it would better to adjust the I2 and I3 criteria to address NET generation and behind the meter generation. E2 appears to try and address the net generation versus nameplate issue, but not fully. Station service power is behind the meter and it is a commitment of the resource. Many small generators have multiple processes outside of power generation they must provide for, and these should be considered in the exceptions.
Response: The SDT believes that Exclusion E2 should be dedicated to the situations faced by behind-the-meter (retail customer owned) generation that are PURPA qualifying facilities (in the US) and similarly situated generators in Canada. Exclusion E3 has been modified to accommodate non-retail generation in the LN. Exclusion E2 has also been clarified by replacing the reference to "retail Load" with "retail customer Load." The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail		

Organization	Yes or No	Question 8 Comment
		meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
US Bureau of Reclamation	No	The term "retail load" is ambiguous and unnecessary. The term should be changed to "load". The change is justified by the conditions (i) and (ii) placed on the generators.
Springfield Utility Board	No	The proposed language for Exclusion E2 refers to the "customer's side of the retail meter". There may be multiple customers with different resources within the geographic area served by a Registered Entity. Because E2 also refers to "net capacity provided to the BES", SUB assumes that E2 is intended to address resources within the Registered Entity that are served to a single customer or multiple customers. A Registered Entity may have Elements that are separate and independent but that are connected to the BES. Individually, these elements may not have resources that serve customer load that meet I2 or I3, but collectively the sum or resources and elements served do meet I2 or I3. SUB believes that the issue of reliability comes down to both resources, load served, and what paths are shared (or not) between resources and loads. SUB suggests that isolated loads and resources that are functionally independent from a

Organization	Yes or No	Question 8 Comment
		Registered Entities overall system do not need to be added together. SUB suggests the following language: "A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity along shared Elements provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority. For purposes of this exclusion, if a Registered Entity is responsible for elements that serve loads and resources that are separate from other elements that the Registered Entity is responsible for, then each set of loads and resources that are connected to Elements the Registered Entity is responsible for shall be evaluated separately and resources will not be added together.While Springfield Utility Board does not own any generating units, we do recognize the importance of the restoration of the Grid, and the generation necessary for the Grid.
Springfield Utility Board	No	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.

Response: The SDT believes that Exclusion E2 should be dedicated to the situations faced by behind-the-meter (retail customer owned) generation that are PURPA qualifying facilities (in the US) and similarly situated generators in Canada. Exclusion E3 has been modified to accommodate non-retail generation in the LN. Exclusion E2 has also been clarified by replacing the reference to "retail Load" with "retail customer Load."

> **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided

Organization	Yes or No	Question 8 Comment
		pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Sweeny Cogeneration LP	No	Generators which serve local retail load (cogeneration) should be excluded if the net capacity available to the BES does not exceed 20 MW Single Unit/75 MW Multiple Units thresholds. We believe there are further items to be added to the list related to generator interconnections, a task that was passed to this project from Project 2010-07. Just as is the case with complex distribution systems, there are a variety of generator-transmission interconnection architectures which are driving the Regions to inappropriately register Generator Owner/Operators as Transmission Owners.
Response: The SDT is aware of Project 2010-07 ("Generator Requirements at the Transmission Interface") and believes that this SDT should not attempt to duplicate that effort. A primary objective of Project 2010-17 is to clarify the BES definition, make it more transparent, and eliminate regional discretion with respect to the definition. No change made.		
Electric Reliability Council of Texas, Inc.	No	See response to question 7.
Southwest Power Pool	No	See response to question 7.

Organization	Yes or No	Question 8 Comment
Response: See response to Q7.		
South Carolina Electric and Gas	No	We agree with the first part of E2, but we do not see the rationale for section (ii) and suggest it be deleted.
Central Lincoln	No	We support excluding behind the meter generation below the limits, but the string of "ands" and "ors" in this exclusion are far too confusing with numerous ways to parse them. Suggest eliminating bullet (ii) since the existence of obligations has no bearing on impact.
NERC Transmission Issues Subcommittee (TIS)		The last sub-bullet in E2 is terribly confusing. The TIS does not offer alternate wording because we are unsure of the meaning of the phrase: >>>>>>>>>> "...pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority."
PUD No. 2 of Grant County, Washington	Yes	Unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit ("standby, back-up, and maintenance power...") should be eliminated.
Response: Condition (ii) in Exclusion E2 is derived from FERC and provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR Part 292 for the regulations that are applicable in the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer Load self provide reserves, is essential for the integrity of the exclusion. No change made.		
Southern California Edison Company	No	SCE does not believe that the size of generator should dictate what system facilities, regardless of voltage, will or will not be included in the BES definition. More important, is the issue of whether or not the generation has net flow(s) out to the greater integrated networked transmission system. It is the "generation" and not the "generator" which has impacts on the BES.In addition, it would seem that if these are truly "behind-the-meter", non-export interconnected generation, then there is no scenario that would result in flow back onto the BES, no matter what the interconnection level. The focus should not be restricted to only "behind-the-meter" generation, but rather on the flow generation from the radial system.
City of Redding	Yes	Redding agrees that generators located in close proximity to the end user should be classified as distribution load modifier generators. Additionally, Redding believes small utilities that have distinct metered boundaries with installed generation intended to serve their customers (load displacement generators) should receive the same exclusion as generators behind retail meters. These generators installed on distribution facilities are almost identical to the generating units in Exclusion E2: "*a generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby,*

Organization	Yes or No	Question 8 Comment
		back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority." A local distribution network that is owned by a utility is directly serving load to the end user (retail customer), it has meters at the network boundaries where bulk power is transferred from the BES network to the distribution facilities, it has binding obligations with the BA or Reserve Sharing Group, to provide reserves (back up power), and meets the net capacity requirement. The distribution facilities are technically retail load to the BES network if owned by the retail user (example would be a Municipal, Public Utility District, Irrigation District, etc.). Redding has three suggestions to address our concerns: 1. The language in Exclusion E2 could be changed: From: "*electric energy on the customer's side of the retail meter*" To: "*electric energy on the customer's side of the retail, or distribution system, meter(s)".* This change will provide an equable exclusion for the small utility and for generation directly dedicated to local distribution load. OR 2. The LDN characteristic #b in Exclusion E3 could have the limits of generation removed and modified to read "*the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3" (identical to the language in E2).* 3. The SDT address this issue via the Exception Process by specifically creating an exception that addresses generation in a LDN used as a load modifier.

Response: The SDT believes that Exclusion E2 should be dedicated to the situations faced by behind-the-meter (i.e., retail customer owned) generation that are PURPA qualifying facilities in the US and similarly situated generators in Canada. Exclusion E3 has been modified to accommodate non-retail generation in the LN. The SDT has merged Inclusion I2 and Inclusion I3 and therefore Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed the criteria identified, which is greater than 75 MVA. The SDT has merged Inclusion I2 and Inclusion I3 and therefore Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed the criteria identified, which is greater than 75 MVA.

> **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable

Organization	Yes or No	Question 8 Comment
regulatory authority. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Clark Public Utilities	No	As indicated by Clark in its comments on the core definition of the BES, Clark believes the 20 MVA and the 75 MVA thresholds lack adequate technical justification and are a purely arbitrary quantities. The use of a capacity thresholds in the definition of the BES should have technical reasons.
Response: The MVA thresholds were adopted from the Statement of Compliance Registry Criteria. Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA. **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
The Dow Chemical Company	No	Clause (ii) should be revised as follows: "(ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or pursuant to a binding obligation with another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority."

Organization	Yes or No	Question 8 Comment
Manitoba Hydro	No	It is not clear what is meant by "retail Load". This is not a NERC defined term. Additional detail is required.
Florida Municipal Power Agency	Yes	We understand that E2 is intended to apply only to retail customers' generation. The exclusion should therefore be revised to make that limitation clear. Specifically, the first sentence should read: "A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the retail customer's side of the retail meter.
Transmission Access Policy Study Group	Yes	We understand that E2 is intended to apply only to retail customers' generation. The exclusion should therefore be revised to make that limitation clear. Specifically, the first sentence should read: "A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the retail customer's side of the retail meter."
Northern California Power Agency	Yes	NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.
Michgan Public Power Agency	Yes	I understand that E2 is intended to apply only to retail customers' generation. If that is the case then I would suggest the following changes be made to make that limitation clear. Specifically, the first sentence should read: "A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the retail customer's side of the retail meter."
Response: Exclusion E2 was modified to reflect your recommendation. **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
ISO New England, Inc.	No	E2 refers to net capacity and yet I2 and I3 refer to MVA. These are not the same unit which leads to inconsistency. This Exclusion appears to add additional criteria than that of the Compliance Registry; we suggest simply using the language from the Compliance Registry.
Response: The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to		

Organization	Yes or No	Question 8 Comment
the BES that does not exceed 75 MVA. Clarification of the original language adopted from the Statement of Compliance Registry Criteria (SCRC) was in response to industry comments. **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
Independent Electricity System Operator	No	Again, we echo the same comments stated in our responses to Q1 and Q3. We do not agree with the Exclusion E2 for the very same reasons specified in responses to questions 3, 4, and 6. Additionally, we are not clear of the intent for the restriction stated in Exclusion E2 (ii).
Response: See responses to Q1, Q3, Q4 and Q6. Condition (ii) in Exclusion E2 is derived from FERC and provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR Part 292 for the regulations applicable in the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer Load self provide reserves, is essential for the integrity of the exclusion. No change made.		
Utility System Efficiencies, Inc.	No	As noted in USE's response to Question 3, we believe the inclusion of the 20 MVA threshold (through reference to Inclusion I2) lacks an adequate technical justification in this context. In addition, whether or not there is provision of standby, back-up, and maintenance power services to the unit(s) or the load is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the item (ii) in this Exclusion should be eliminated.
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Company Consumers Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative		As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold lacks an adequate technical justification. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit should be eliminated.

Organization	Yes or No	Question 8 Comment
Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Inc Okanogan Electric Cooperative PNGC Power Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Clallam County PUD No.1		
Public Utility District No. 1 of Snohomish County, Washington	Yes	As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold (through reference to Inclusion I2) lacks an adequate technical justification in this context. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit ("standby, back-up, and maintenance power...") should be eliminated.

Response: Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA.

Condition (ii) in Exclusion E2 is derived from FERC and provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR Part 292 for the regulations applicable to the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer Load self provide reserves, is essential for the integrity of the exclusion.

> **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.

Organization	Yes or No	Question 8 Comment
BPA	No	BPA seeks clarification on exactly what "net capacity provided to the BES" means. BPA would like to suggest a minor clarification in brackets below: A generating unit or multiple generating units located on, and that serve all or part of retail Load with electric energy on, the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3 or I5 and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.
Response: Exclusion E2 is dedicated to the situations faced by behind-the-meter (retail customer owned) generation that are PURPA qualifying facilities in the US and similarly situated generators in Canada. While the criteria in Inclusions I2 and I3 were based on gross nameplate ratings in MVA, the first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. The "net capacity provided to the BES" is the behind-the-meter generation that exceeds the Load directly served by the generator. The SDT believes that situations where the resources captured in Inclusion I5 directly serve its own load are extremely rare and should therefore be demonstrate in the Exception Process. No change made.		
Georgia System Operations		How is "net capacity provided to the BES" measured (e.g., by nameplate capacity minus peak load, by actual generated energy - rather than capacity - minus actual load at each moment or over some period of time, etc.)? It is possible that a larger than currently necessary generator may be installed in anticipation of future load growth, but that it is never used to generate significantly more than what is needed for load. Depending on how "net capacity" is calculated, such a generator might unnecessarily be pulled into the BES.
Response: The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. Regardless of the nameplate rating of the generator(s), the "net capacity" is the behind-the-meter generation that exceeds the Load. No change made.		
Tacoma Power		Tacoma Power generally supports Exclusion E2. However, no justification for the 20 MVA and 75 MVA levels in Inclusion I2 and Inclusion I3 have been provided and therefore they appear arbitrary. Since this measurement will define Elements for absolute inclusion in the BES, the thresholds should be based on a need to maintain transmission reliability. We strongly urge the SDT to accept our proposed changes to Inclusion I2 and Inclusion I3, listed above in items 3 and 4.
Response: Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA. See responses to Q3 and Q4.		

Organization	Yes or No	Question 8 Comment
E2 - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
Dominion	Yes	Dominion agrees with Exclusion E2 because we agree that specific criteria can be applied and will indicate the Element or Facility is not necessary for operating an interconnected electric energy transmission network or is needed to maintain transmission system reliability. . However Dominion suggests that the SDT add a defined interval of time for measurement of net capacity so that planners can be assured that the exclusion should really be applied at the location. Dominion suggests use of an hour as the time increment.
Response: The SDT believes that the context of "net capacity" is understood and no change is necessary.		
American Municipal Power and Members	Yes	We understand that E2 is intended to apply only to retail customers' generation. The exclusion should therefore be revised to make that limitation clear. Specifically, the first sentence should read: "A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the retail customer's side of the retail meter." In addition, the first condition of exclusion, (i), "the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3," as written is vague and could be subjectively applied. I2 limits capacity supplied to the BES to 20MVA while I3 limits that capacity to 75MVA. A better way to state the exclusion would be as follows: (i), "the net capacity provided to the BES does not exceed the retail customer's total nameplate generation, or 75MVA, whichever is greater,".
Response: The term "retail Load" had been replaced with "retail customer Load." Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA. **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
Hydro One Networks Inc	Yes	We agree with most of the changes in Exclusion E2. However, we feel there is a need for evidence or technical study in regards to the limits described in I2 & I3. The real net aggregated power seen by the bulk

Organization	Yes or No	Question 8 Comment
		power system at the interconnection, with the outlook of distributed generation systems, may be different than past experience. Hence it requires to be reassessed based on technical studies with respect to the future integration of DG's. (Please refer to comments in questions: 3 & 4). To establish a bright-line definition, Exclusion E2 may be acceptable if the SDT provides adequate provisions within the exception procedure. (See response to Q7)
Response: Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA. The I2 Inclusion was adopted from the ERO Statement of Compliance Registry Criteria. See response to question 7. **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
Western Electricity Coordinating Council	Yes	WECC agrees in concept, but it is unclear what happens if/when the "binding obligation" ends, as well as what constitutes a "binding obligation." E2(ii) should be clarified as to what constitutes "standby, back-up, and maintenance power services provided...pursuant to a binding obligation." This may cause administrative burden to monitor such binding commitments.
Cogeneration Association of California and Energy Producers & Users Coalition	Yes	To respond to WECC's concern, please consider that facilities procure standby service because it is needed for the facility's operation, not to escape registration or compliance. This is a long-term commitment, and the sufficiency of the service will be monitored by the state regulatory authority. "Standby service" is a term well-understood in the industry and generally not further defined in any utility tariff.
Response: Binding obligations are retail tariffs approved by state PUCs or applicable Canadian provincial authorities, or the FERC-approved market rules of RTOs/ISOs in cases where FERC has granted a waiver to local utilities from those service obligations because the RTO/ISO market provides comparable services. In the US, the services are defined in 18 CFR §292.101 and §292.305(b). No change made.		
ReliabilityFirst	Yes	as long as the resources when removed from service have a load component that accompanies it, otherwise there could be an impact to the BES.
Response: That is the purpose of condition (ii) in Exclusion E2. Back-up power, as defined in the US in 18 CFR §292.101, means electric energy or capacity supplied by an electric utility to replace energy ordinarily generated by a facility's own generation equipment during an unscheduled outage of the facility.		

Organization	Yes or No	Question 8 Comment
Maintenance power, also as defined in 18 CFR §292.101, means electric energy or capacity supplied by an electric utility during scheduled outages of the qualifying facility. Provincial regulations do the same in Canada. No change made.		
Texas Industrial Energy Consumers (TIEC)	Yes	TIEC supports this exclusion with two clarifications. The language currently excludes generation on the customer's side of the meter as long at "the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3." There are special circumstances in which an regional Reliability Coordinator may ask that customer-owned generation export to its maximum capability (i.e., with its load curtailed to the lowest level) in order to support grid reliability. Circumstances such as this should not be considered in determining whether the "net" capacity exported to the BES exceeds the threshold for registration. Additionally, there are often instances when customer-owned generation and associated load are in start-up or shut-down processes that may cause the net export to the BES to vary such that it temporarily exceeds the registration thresholds. Outlying situations such as these should not trigger registration. Rather, the "net" capacity should be interpreted as the typical amount exported during steady-state operation of the site. This interpretation of "net capacity" should also apply to exclusions E1 and E3.

Response: The SDT has discussed your concern and agrees that emergency or other extraordinary situations should not impair the general applicability of the E2 Exclusion.

The SDT has changed E1 and E3 to clarify the criteria applicable to non-retail generation.

E1 - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

d) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or,

e) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,

f) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A G~~g~~roup~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to

Organization	Yes or No	Question 8 Comment
		accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection~~ as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
FortisBC	Yes	We agree with most of the changes in Exclusion E2. However, we feel there is a need for evidence or technical study in regards to the limits described in I2 & I3. The real net aggregated power seen by the bulk power system at the interconnection, with the outlook of distributed generation systems, may be different than past experience. Hence it requires to be reassessed based on technical studies with respect to the future integration of DG's. (Please refer to comments in questions: 3 & 4). To establish a bright-line definition, E2 exclusion may be acceptable if the SDT provides adequate provisions within the exception procedure. See response to Q8 Accordingly, we suggest the SDT carefully craft the exception criteria that will allow entities to present their case to the ERO for exclusion from E2 requirements.
AltaLink	Yes	We agree with most of the changes in Exclusion E2. However, we feel there is a need for evidence or technical study in regards to the limits described in I2 & I3. The real net aggregated power seen by the bulk power system at the interconnection, with the outlook of distributed generation systems, may be different than past experience. Hence it requires to be reassessed based on technical studies with respect to the future integration of DG's. To establish a bright-line definition, E2 exclusion may be acceptable if the SDT provides adequate provisions within the exception procedure. Accordingly, we suggest the SDT carefully craft the exception criteria that will allow entities to present their case to the ERO for exclusion from E2 requirements.

Organization	Yes or No	Question 8 Comment
Response: Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA. See response to Q8. **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
City of St. George	Yes	The limits on generation levels need to be revisited, with similar concerns as noted to questions 7 & 9 for exclusions E1 & E3.
Response: Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA. The SDT adopted the criteria from the ERO Statement of Compliance Registry Criteria. **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
Illinois Municipal Electric Agency	Yes	Please see comments under Question 13.
Response: See response to Q13.		
New England States Committee on Electricity	Yes	Please refer to comments in number 7 above. Additionally, there appears to be an inconsistency in how generating units are expressed in E2 (net capacity) and in I2 and I3 (MVA).
Response: See response to Q7. The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA. **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and		

Organization	Yes or No	Question 8 Comment
maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
New York State Dept of Public Service	Yes	This exclusion is appropriately specified. Behind the meter generation is mainly on the local distribution system and most likely modeled in power flow cases used to study the bulk system as netted against load. For the few sizable behind the meter generation that are: 1) connected at the 100 kV level and above; and, 2) exceed the 75 MVA threshold, if it is believed that these facilities will impact the bulk system they can be petitioned for inclusion under the rules of procedure.
Exelon	Yes	Exelon agrees with this Exclusion since this language is quoted from the Statement of Compliance Registry Criteria.
Public Utilities Commission of Ohio	Yes	Exclusion E2 is appropriate. Same as 7.
GTC	Yes	
Northeast Power Coordinating Council	Yes	
Imperial Irrigation District	Yes	
Santee Cooper	Yes	
MRO's NERC Standards Review Forum	Yes	
Michigan Public Service Commission(MPSC)	Yes	
ACES Power Participating Members	Yes	
National Rural Electric Cooperative Association	Yes	

Organization	Yes or No	Question 8 Comment
(NRECA)		
Overton Power District No. 5	Yes	
Arizona Public Service Company	Yes	
Rayburn Country Electric Cooperative, Inc.	Yes	
New York State Reliability Council	Yes	
New York Power Authority	Yes	
Luminant Energy	Yes	
Electricity Consumers Resource Council (ELCON)	Yes	
Western Area Power Administration	Yes	
National Association of Regulatory Utility Commissioners	Yes	
PacifiCorp	Yes	
Grand Haven Board of Light and Power	Yes	
Glacier Electric Cooperative	Yes	
FHEC	Yes	
South Texas Electric	Yes	

Organization	Yes or No	Question 8 Comment
Cooperative, Inc.		
Portland General Electric Company	Yes	
South Texas Electric Cooperative, Inc.	Yes	
National Grid	Yes	
Dayton Power and Light Company	Yes	
ExxonMobil Research and Engineering	Yes	
Duke Energy	Yes	
Alberta Electric System Operator	Yes	
Fayetteville Public Works Commission	Yes	
Florida Keys Electric Cooperative	Yes	
American Electric Power	Yes	
East Kentucky Power Cooperative, Inc.	Yes	
American Transmission Company, LLC	Yes	
Farmington Electric Utility System	Yes	

Organization	Yes or No	Question 8 Comment
Sierra Pacific Power Co d/b/a NV Energy	Yes	
Colorado Springs Utilities	Yes	
Consumers Energy Company	Yes	
Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)	Yes	
Muscatine Power and Water	Yes	
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	Yes	No comment.
Sacramento Municipal Utility District (SMUD)	Yes	
Puget Sound Energy	Yes	
GTC	Yes	
Idaho Power	Yes	
Long Island Power Authority	Yes	
PJM	Yes	
Oncor Electric Delivery Company LLC	Yes	

Organization	Yes or No	Question 8 Comment
City of Anaheim	Yes	
MEAG Power	Yes	
Xcel Energy	Yes	
Golden Spread Electric Cooperative, Inc.	Yes	
Response: Thank you for your support. The SDT modified Exclusion E3 to make non-retail generation in a local network subject to a comparable exclusion designation as that for customer-owned generation in Exclusion E2. Please see the modified definition.		

9. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: The SDT has modified the local network definition in the following manner:

- Elimination of the term "Distribution" in the label of this exclusion, making it a "local network".
- Changes were made to the introductory paragraph in Exclusion E3, which the SDT believes clarifies the intent of the local network, including a statement that the local network does not accommodate bulk power transfer across the interconnected system.
- Eliminated the provision in Exclusion E3.a which referred to automatic fault interrupting devices, and changed wording to clarify the connection point of the local network.

While the SDT disagrees with removal of restrictions on the amount of connected generation, it takes note of the concern about growing amounts of connected generation within the distribution system. As such, the SDT has made changes to those limits from the original posting in a new item E3.a limiting connected generation within a local network to 75 MVA aggregate non-retail generation similar to the provision in Exclusion E1.c. Commenters expressed concern about the lack of technical justification for a 75 MVA limit on connected generation; however, the SDT has been presented with no technical basis upon which to suggest a change from this value. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.

Items E3.c and E3.d were combined into a new item E3.b, incorporating the concepts of power flow into the Local Network and precluding energy transfers across the Local Network. This provision also effectively removed the comparison test between generation and minimum demand of the Local Network.

The SDT considered commenters' suggestions regarding allowance of some power flow out of the LN, and concluded that strict limits precluding out-flow are appropriate, particularly given that the local network comprises facilities that are electrically parallel to the BES.

Finally, the SDT, in consideration of regulatory concerns, inserted a provision in the local network exclusion to limit the operating voltage of the local network to 300 kV.

The revised Exclusion E3 reads as follows:

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection~~ as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Organization	Yes or No	Question 9 Comment
Northeast Power Coordinating Council	No	Regarding E3.a.--If the supply to a LDN is tapped off a Bulk Electric System facility, and the step down transformer is protected on its high side by a fault magnitude supervised automatic interrupting device (such as a circuit switcher), how does that affect the exclusion? The circuit switcher will only interrupt faults up to a certain magnitude. Above that threshold, depending on the system configuration, fault clearing might have to be done at the Bulk Electric System facility. Regarding E3.d.--The LDN cannot be used to transfer real or reactive power under all operating conditions. Suggest combining E3.c and E3.d to read as follows:Power is intended to flow only into the LDN. The generation within the LDN shall not exceed the electric real or reactive power demand within the LDN. The LDN only delivers real or reactive power to load, and is not to be used to transfer real or reactive power between different locations in the BES. Under no system condition is BES reliability to be dependent on LDN flow.

Response: The SDT has modified the local network definition, eliminating provision E3.a, which referred to the automatic fault interrupting devices. The point of demarcation of the local network may be clarified in subsequent guidance documents; however, it begins at the point where the three remaining characteristics (E3.a, b, and c) can be demonstrated. Additionally, the SDT has combined prior items E3.c and E3.d into a new item E3.b in the revised definition incorporating the concepts of power flow into the local network and precluding energy transfers across the Local Network.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to

Organization	Yes or No	Question 9 Comment
		accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection~~ as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Tri-State Generation and Transmission Association, Inc.	No	We believe that element c. needs to be changed to : "Power flows only into the Local Distribution Network, even under all contingency conditions that are considered under any TPL standard requirement dealing with transmission system performance: The generation within the LDN shall not exceed the electric Demand within the LDN;"
Response: The SDT has combined prior items E3.c and E3.d into a new item E3.b in the revised definition incorporating the concepts of power flow into the Local Network and precluding energy transfers across the Local Network. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the Interconnected System. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~		

Organization	Yes or No	Question 9 Comment
c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
NERC Staff Technical Review	No	Exclusion E3 is acceptable in general; however, (i) including the word "distribution" in the exclusion could be interpreted to imply that certain distribution facilities are included in the BES unless specifically excluded, (ii) item d) is unclear as to whether it applies to any parallel flow or only to parallel flow for which the group of Element(s) are part of the contract path, and (iii) interrupting devices should be included in the BES for the same reasons as stated above for Exclusion E1. >>>>>>>>>> The concern with the word distribution in the term "Local Distribution Network" can be avoided by eliminating use of this phrase. The proposed definition already defines the Elements covered by Exclusion E2 and does not require defining a term for use in this standard. An alternate solution would be to establish a different term to describe the groups of Elements that does not include the word distribution. >>>>>>>>>> The phrase "is used to" in item d) lacks clarity. Clarity should be provided by stating that the group of Elements does not transfer energy originating outside the group of Elements; this is consistent with item c) that requires that power flows only into the group of Elements. >>>>>>>>>> The reason for requiring automatic interrupting devices between the BES and the excluded LDN is to prevent faults and other abnormal conditions in the LDN from negatively impacting reliability of the BES. Given the reliance on the interrupting devices to support BES reliability, it is appropriate to include the interrupting devices in the BES so that they are planned, designed, maintained, and operated in accordance with NERC Reliability Standards the same as other BES Elements. Thus, when excluding groups of Elements at 100 kV or higher, the BES line of demarcation should be on the load side of the automatic interrupting devices. >>>>>>>>>> To address our concerns, Exclusion E3 should be changed to read: >>>>>>>>>> E3 - Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. Such groups of Elements are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. These groups of Elements are characterized by all of the following:a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the group of Elements must be connected through automatic fault-interrupting devices (the automatic interrupting device is part of the BES);b) Limits on connected generation: Neither the group of Elements, nor any underlying Elements operated at 100 kV or below, includes more than 75 MVA generation (in aggregate);c) Power flows only into the group of Elements: The generation within the group of Elements shall not exceed the electric Demand within the group of Elements;d) Not used to transfer bulk power: The

Organization	Yes or No	Question 9 Comment
		group of Elements does not transfer energy originating outside the group of Elements for delivery through the group of Elements; ande) Not part of a Flowgate or transfer path: The group of Elements does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Response: The term "Distribution" has been removed; these facilities are now referred to as "local networks". The SDT has combined prior items E3.c and E3.d into a new item E3.b in the revised definition incorporating the concepts of power flow into the local network and precluding energy transfers across the local network. Item E3.a has been removed from the definition, and as such, there is no longer any mention of the interrupting devices within this exclusion. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the Interconnected System. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Dominion	No	An Element or Facility should only be excluded where the Element or Facility is not necessary for operating an interconnected electric energy transmission network or is needed to maintain transmission system reliability.
Response: The SDT believes that the revised Exclusion E3 properly identifies facilities that are not necessary for operating an interconnected electric energy		

Organization	Yes or No	Question 9 Comment
transmission network and not needed to maintain transmission system reliability.		
SPP Standards Review Group	No	While the principle contained in (c) is valid, the explanation following it is too restrictive. This does not allow the LDN to maintain any excess generation for contingencies and normal load fluctuations. In (b) the implication is that the LDN is being treated like a single site in I3 whereby the total generation capability is restricted to 75 MVA. Is this a valid assumption for municipals? In (e) permanent flowgates may change from month to month, therefore an LDN could bounce into and back out of the BES depending upon what happens regarding a specific facility which may be included as part of a flowgate. This creates a very fluid situation which can lead to confusion.
Response: The SDT has revised the language concerning limits on connected generation in new item E3.a. A 75 MVA aggregate non-retail generation limit is proposed, and the SDT believes that this is consistent with the similar provision in the radial exclusion, E1.c. The SDT appropriately uses the word "permanent" in connection with the flowgates in E3.c, as its intent is to prevent facilities that might temporarily be considered to be a flowgate from qualifying for exclusion as a local network. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the Interconnected System. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
MRO's NERC Standards Review	No	The SDT is defining what a Local Distribution Network is but the term transfer bulk power is ambiguous.

Organization	Yes or No	Question 9 Comment
Forum		Please clarify what the intent of this exclusion is.

Response: The SDT has modified the definition such that the term "bulk power" is no longer used in the characteristics, specifically new item E3.b. The term "bulk power" was retained in paragraph E3, as the SDT believes it provides conceptual value to the exclusion principle.

> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:
>
> ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~
>
> **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;
>
> **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and
>
> ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~
>
> c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

SERC OC Standards Review Group	No	"b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;" The SERC SDT believes you intended to grant exception E2 in this case; however, it is not explicitly identified" c)Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN;" Is this intended for each hour of the year or is it possible for some hours that generation may exceed load? This needs to be clarified.

Response: The revised definition includes a revised item E3.a, which clarifies the limits on connected generation within the local network.

It is the intent of the SDT that the power flowing into the local network be demonstrated through integrated hourly measurements over a period of time consistent with the ROP Exception Process, which is currently contemplated to be a period of two years.

Idaho Falls Power	No	We support this exclusion, however generation assets on a Local Distribution Network should be excluded

Organization	Yes or No	Question 9 Comment
		regardless of MVA rating if all other defining critera in E3 are met. Additionally, it is unclear as written whether a single generation asset greater than 20MVA would be excluded as E3(b) states 75 MVA, but is inconsist with E2(i). Some clarification of intent is needed to resolve the ambiguities between these two exclusions.

Response: The SDT disagrees with removing restrictions on the amount of connected generation, but has made changes to those limits to address industry concerns.

Please refer to the new item E3.a.

> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:
>
> ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~
>
> **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;
>
> **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and
>
> ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~
>
> c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Tennessee Valley Authority	No	The following comments are specific to subsections of E3:Section (c): We suggest the section to read, "Power flows out of the LDN shall not exceed the limitations imposed in Inclusions I3 and I5. "Section (d): We suggest the section be read, "Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN, except for the power flowing in a normally open switching device between radial systems operating in a make-before-break fashion as defined in exclusion E1."

Response: The SDT considered this suggestion regarding allowance of some power flow out of the local network, and concluded that strict limits precluding out-

Organization	Yes or No	Question 9 Comment
flow are appropriate, particularly given that the local network comprises facilities that are electrically parallel to the BES. The revised definition has included a change to the prior E3.d language, which is now reflected in the revised item E3.b. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
ReliabilityFirst	No	the LDN term must be a NERC defined term and if this is allowed as mentioned in the first comment, we feel the intent of the FERC Order was to simplify and not complicate the definition and the inclusion/exclusion process. This definition is now even more complex. we also feel that as a result of several defined terms such as the LDN teh proposed definition will in most cases exclude portions of networks in locations such as Washington DC, New York and other Metro Areas, many Munis and citiies that are currently registered. If the intent is to remove entities from the registry this will in most likely do it.
Response: The SDT intends to fully explain the characteristics of a "local network" within the BES definition, and as such, the term is not necessary in the Glossary. It is not the SDT's intent to specifically exclude any facilities in major metropolitan areas; it expects that the specific examples mentioned (NYC, Washington DC) would not qualify for exclusion under the revised Exclusion E3. No change made.		
Electricity Consumers Resource	No	There are two different types of LDN: utility owned and customer owned. They should not be treated the

Organization	Yes or No	Question 9 Comment
Council (ELCON)		same. Criteria (a) through (e) in Exclusion E3 may be appropriate for distinguishing between utility-owned LDN and utility-owned BES transmission often owned and operated by the same integrated utility. A separate, stand-alone exclusion criteria should be established for customer-owned elements that serve to distribute electric energy to on-site loads, including all or part of the electric energy from behind-the-meter generation. Thus, E3 criteria (a) through (e) would apply exclusively to utility-owned elements. For customer-owned elements, the new criterion (f) might read:"Or the LDN is also characterized by:"f) The Elements are customer owned and used to distribute electric energy to on-site loads, including all or part of the electric energy from behind-the-meter generation."See response to #11 below for further justification for this recommendation.

Response: The SDT has revised item E3.a to clarify that retail generation would not contribute toward the limits of connected generation within the local network.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups ~~of~~ contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Central Maine Power Company New York State Electric & Gas and Rochester Gas & Electric	No	This exclusion is vague, but needs to be clear and comply with Order 743. Also, "distribution" is already excluded from transmission and therefore "BES." Also, E1 refers to "automatic interruption device" and E3 refers to "automatic fault interrupting device", neither of which are defined.We think that large portions of the network may be inappropriately excluded under this exclusion and exclusion E3 should be deleted.

Organization	Yes or No	Question 9 Comment
Response: The term "Distribution" has been removed, and now this exclusion refers to "local networks". Also, the prior item E3.a, referring to automatic fault interrupting devices, has been removed in this revision of the definition. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Hydro-Quebec TransEnergie	No	Part b) is again very restrictive. It is not necessary to refuse exclusion when generation is above 75 MVA. However, a provision should be made so that reliability standards related to generator shall apply.
Response: The SDT disagrees with removing restrictions on the amount of connected generation, but has made changes to those limits to address industry concerns. Please refer to new item E3.a. The application of the reliability standards to generators will continue to be determined by the Statement of Compliance Registry Criteria. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and		

Organization	Yes or No	Question 9 Comment
		do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
National Grid	No	E3.c and E3.d - These two points can be combined into one:Power is intended to flow only into the LDN. The generation within the LDN shall not exceed the electric real or reactive power demand within the LDN. The LDN only delivers real or reactive power to load, and is not to be used to transfer real or reactive power between different locations in the BES. Under no system condition is BES reliability to be dependent on LDN flow. E3.e - We would like more clarification on flowgates and what they are. We are interpreting flowgate as the lines that make up defined operational interface, as defined by the Operations group not the Planning group. Is this the correct interpretation of flowgate?

Response:

Flowgate is a defined term in the Glossary of Terms used in Reliability Standards as follows:

1.) A portion of the Transmission system through which the Interchange Distribution Calculator calculates the power flow from Interchange Transactions.

2.) A mathematical construct, comprised of one or more monitored transmission Facilities and optionally one or more contingency Facilities, used to analyze the impact of power flows upon the Bulk Electric System.

Items E3.c and E3.d were indeed combined as suggested, and now have become new item E3.b.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusions I3, and

Organization	Yes or No	Question 9 Comment
		do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Electric Reliability Council of Texas, Inc.	No	See response to Question 7.
Southwest Power Pool	No	See response to question 7.
Response: See response to Q7.		
ExxonMobil Research and Engineering	No	Similar to the comments provided on Exclusion E1, the inclusion of a requirement for automatic fault interrupting device to separate the local distribution network from the interconnected transmission network will in many cases shift the onus of securing a reliable interconnected transmission network from the owners and operators of that interconnected transmission network to the customers and owners of local distribution networks that pay the owners and operators of the interconnected transmission network a fee for providing reliable transmission services. Furthermore, the Federal Power Act excludes all facilities used in the local distribution of electric energy and does not distinguish whether such local distribution facilities must be isolated by automatic fault interrupting devices.
Response: Item E3.a has been removed from the definition, and as such, there is no longer any mention of the interrupting devices within this exclusion. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA~~		

Organization	Yes or No	Question 9 Comment
		~~generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Colorado Springs Utilities	No	Colorado Springs Utilities generally supports Exclusion E3 that provides for the exclusion of Local Distribution Networks (LDNs) from the BES, with the following modifications: 1) It is not necessary to articulate the nature of the LDN's connection to the BES. If the characterizations are met, the number of connections and the reasons for the connections are immaterial. 2) If the LDN is a normal net import, there is no need to limit the amount of connected generation since the generation will have no material effect on the BES. 3) 'Bulk power transfers' are acceptable across an LDN if the transfer is to a nested LDN. Contractual energy, originating outside the LDN and delivered to a nested LDN, for example, is still load delivery and has the same physical characteristics of a holistic LDN and the transfer of bulk power is immaterial.We propose changing Exclusion E3 to read,"Local Distribution Networks (LDN): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the Interconnected System. The LDN is characterized by all of the following:a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;b) Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN;c) Not used to transfer bulk power, except transfers to nested LDNs: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN, except transfers to nested LDNs; andd) Not part of a Flowgate or Transfer Path: The LDN does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL)."
Response: The SDT has revised Exclusion E3 Local network in a way that removes the mention of automatic fault interrupting devices. This is a continent-wide definition that applies to all cases of a local network. One can not assume that a local network will always be a net importer in all situations, hence the limit on generation.		

Organization	Yes or No	Question 9 Comment
While the SDT does not fully understand the concept of "nested LDN", we believe that the revised Exclusion E3 in sum captures the concept of networks that are providing a distribution function. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)	No	(Note: Inserted language provided in brackets; deleted language denoted by empty brackets: [ ].) Exclusion E3 is also contrary to the plain language of Section 215 of the FPA. The SDT stated in commentary to E3 that it "believes that any network that simply supports distribution and is providing adequate protection should be excluded from the BES." This statement highlights the fundamental disconnect between the proposal and Section 215 of the FPA, which excludes facilities used in the local distribution of electric energy from the definition of the BES regardless of whether the facilities are "providing adequate protection." That is, Section 215 of the FPA states that the definition of the BES excludes "facilities used in the local distribution of electric energy," not "facilities used in the local distribution of electric energy [providing adequate protection]."With respect to the enumerated criteria in Exclusion E3, the requirement that Local Distribution Networks ("LDNs") "must be connected through automatic fault-interrupting devices" violates the FPA because, as discussed in response to Question 7, it places a condition on the unqualified exemption granted by Congress to facilities used in the local distribution of electric energy. Moreover, the other enumerated criteria also fail under Section 215 of the FPA and case law because they ignore, as discussed further in response to Question 11, a long line of precedent that requires a fact-specific analysis to be conducted to determine whether a facility is used in local distribution (see, e.g., Order No. 888 at 31,980). To make Exclusion E3 consistent with the requirements of Section 215 of the FPA and case law, Exclusion E3 could be rewritten as follows:E3 - [All

Organization	Yes or No	Question 9 Comment
		facilities used in the distribution of electric energy] ([“]Local [D]istribution [N]etworks,[“ or “]LDNs[“]): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN[]s are [normally] connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:a) [ ]b) Limits on connected generation: [Generally], neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;c) Power flows only into the LDN: The generation within the LDN [normally does] [ ] not exceed the electric Demand within the LDN;d) Not used to transfer bulk power: The LDN is [generally] not used to transfer energy originating outside the LDN for delivery through the LDN; ande) Not part of a Flowgate or transfer path: The LDN normally does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).Please see further discussion in response to Questions 11 and 12.

Response: The SDT has revised the Exclusion E3 Local network in a way that removes the mention of automatic fault interrupting devices, which it believes addresses the concern about the apparent disconnect between Section 215 and the prior proposal.

The SDT disagrees with the use of terms such as “normally” and “generally” as these tend to lack precision and objectivity. Please see the revised exclusion.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N’s emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Organization	Yes or No	Question 9 Comment
Muscatine Power and Water	No	The SDT is defining what a Local Distribution Network is but the expression "transfer bulk power" is ambiguous. Please clarify the purpose of this exclusion.

Response: The SDT has modified the definition such that the term "bulk power" is no longer used in the characteristics, specifically new item E3.b. The term "bulk power" was retained in paragraph E3, as the SDT believes it provides conceptual value to the exclusion principle.

> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:
>
> ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~
>
> **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;
>
> **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and
>
> ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~
>
> c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Exelon	No	Exelon has issues with the ambiguity of this Exclusion item. It seems that Local Distribution Networks will all need to be approved via the Rules of Procedure Exception Process because the characteristics of each LDN as described are not bright line. For example, does (b) refer to any generation, including behind-the-meter generation? Does (c) mean always, i.e., generation can never exceed the load under any condition? In theory or in actuality? How does (d) deal with parallel flows under abnormal conditions when some energy may go in and out? Exelon understands the concept that an LDN primarily serves load, but how will the owners prove that there is no impact to the BES under contingency configurations?

Response: The SDT has modified exclusion E3 in a manner that addresses the ambiguity of the proposal, clarifies the amount of connected generation rather

Organization	Yes or No	Question 9 Comment
than the prior comparison of demand and generation, and clarifies that the power flow must always be into the Local Network. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Springfield Utility Board	No	SUB agrees with items, a), b), and e) of the characteristics of an LDN. SUB believes that the language regarding c) and d) needs clarification.c) states: "Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN." There may be times where a closed system creates a situation where power flows through the system on an unscheduled basis (electron's will follow the path of least resistance). Left as is, there may be a situation where on a planning basis there is no power flowing out of the LDN, but on a real time basis power does flow in and out. "Power flows only into the Local Distribution Network: The sum of all power being delivered into the LDN at the points of measurement is greater than the sum of all the power measured as being delivered out of the LDN at the points of measurement" The generation within the LDN shall not exceed the electric Demand within the LDN."SUB suggests that the generation language should be deleted, but if the language "The generation within the LDN shall not exceed the electric Demand within the LDN." is retained, what does "Demand" mean? The lowest demand? The highest demand? Instantaneous demand?SUB suggests that if some generation language is added that the exclusion read:"Power flows only into the Local Distribution Network: The sum of all power being delivered into the LDN at the points of measurement is greater than the sum of all the power measured as being delivered out of the LDN at the points of measurement The generation within the LDN shall not exceed the

Organization	Yes or No	Question 9 Comment
		maximum electric Demand within the LDN, where the maximum electric Demand is the maximum electric Demand within the LDN as measured for over the prior sixty (60) months." d) states: "Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN". Again, this language needs clarification. How would an LSE/DP/TO (or other similar entity) know that their system is not being used to transfer bulk power when other parties are scheduling transmission paths via a Balancing Authority or other overarching entity?SUB suggests that the language be clarified to read "Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN. This would be evaluated using scheduled transmission paths and not measured amounts at the point of measurement. It is the responsibility of the Balancing Authority to notify the Registered Entity with an LDN twelve (12) months in advance of when an LDN would be used to schedule the transfer of energy outside the LDN for delivery through the LDN."Collectively, E3 would read:The LDN is characterized by all of the following:a)Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices; andb)Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation; and c)Power flows only into the Local Distribution Network: The sum of all power being delivered into the LDN at the points of measurement is greater than the sum of all the power measured as being delivered out of the LDN at the points of measurement; andd)Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN. This would be evaluated using scheduled transmission paths and not measured amounts at the point of measurement. It is the responsibility of the Balancing Authority to notify the Registered Entity with an LDN twelve (12) months in advance of when an LDN would be used to schedule the transfer of energy outside the LDN for delivery through the LDN.;ande)Not part of a Flowgate or Transfer Path: The LDN does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL). o Local distribution networks were added to the exclusion list after considerable discussions among the SDT and various registered entities that have configurations meeting these conditions. The SDT believes that any network that simply supports distribution and is providing adequate protection should be excluded from the BES.
Springfield Utility Board	No	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of

Organization	Yes or No	Question 9 Comment
		determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
Response: Items E3.c and E3.d were indeed combined as suggested, and now have become the new item E3.b. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
City of St. George	No	Local distribution networks should have an exclusion provision. However, the local generation limit of 75 MVA is too restrictive. As long as power flows into a LDN the amount of generation should not trigger a LDN to be included in the BES. E3b should be removed from these exclusion criteria or maybe a reasonable ratio of load level to allowed generation on the LDN.

Organization	Yes or No	Question 9 Comment
Response: The limits on connected generation, now described in item E3.a, have been revised, resulting in a less restrictive exclusion characteristic. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Southern California Edison Company	No	SCE is in support of the general LDN premise, but believes that this definition should more closely track the FERC seven-factor test from Order 888. As written, the five factors identified could lead to the reclassification of radial sub-transmission system facilities above 100kV from "distribution facilities" to "network facilities". For example, interconnection amounts within an LDN may exceed an aggregate level of 75MVA, but will not exceed the load in the LDN. SCE suggests striking characteristics "B" and "D" from Exclusion E3, and allowing characteristic "C" to stand alone as the generation characteristic which would define an LDN.The SDT may want to incorporate the following revision:"LDN's are connected to the Bulk Electric System (BES) at one or more location solely to improve the level of service to retail customer load."
Response: The genesis of the characteristics in the local network exclusion is the FERC seven-factor test; however, the SDT seeks to establish bright-line characteristics that add specificity and objectivity to these principles through this exclusion. The definition differentiates between radial systems and LNs by clarifying the connection points to the BES from these systems. Radial systems have a single connection point and LNs have multiple connection points. This alone establishes a bright-line between radial systems and LNs which does not allow for the re-classification of such systems as alluded to in the comment. Items E3.c and E3.d have now been combined, and have become the new item E3.b. After much discussion, the SDT believes that there must be a limit on		

Organization	Yes or No	Question 9 Comment
connected generation (new item E3.a) as well as a provision ensuring that power flow only into the local network (new item E3.b). **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Long Island Power Authority	No	Revise last two sentences in the introductory paragraph to read as follows: "LDN's are connected to the bulk electric system (BES) at several points and are characterized by all of the following:"; This removes ambiguity that exists in the deleted portion of the text.See also response to question 11 regarding Exclusion E3-b.
Response: The SDT has made changes to the introductory paragraph in E3, which it believes clarifies the intent of the local network; however, the SDT believes that the descriptive language adds necessary context to the entire exclusion principle and therefore should be retained. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;		

Organization	Yes or No	Question 9 Comment
		b) Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
The Dow Chemical Company	No	The Dow Chemical Company ("Dow) is an international chemical and plastics manufacturing firm and a leader in science and technology, providing chemical, plastic, and agricultural products and services to many essential consumer markets throughout the world. Dow and certain of its worldwide affiliates and subsidiaries, including Union Carbide Corporation, own and operate electrical facilities at a number of industrial sites within the U.S., principally, in Texas and Louisiana. The electrical facilities at these various industrial sites are configured similarly and perform similar functions. In most cases, a tie line or lines connect the industrial site to the electric transmission grid. Power is delivered from the electric transmission grid to the industrial site through the tie line(s). Lines within the industrial site then deliver power to individual manufacturing plants within the site. Additionally, cogeneration facilities are located at a number of industrial sites owned by Dow and its subsidiaries. These cogeneration facilities generate power that is distributed within the industrial site and used for manufacturing plant operations. In some instances, excess power not required for plant operations is delivered back into the electric transmission grid through the tie line(s) connecting the industrial site to the grid. Under all circumstances, electricity is not flowing into and out of such industrial sites at the same time. While the tie lines and some of the internal lines at these industrial sites operate at 100kV or higher, they do not perform anything that resembles a transmission function. Rather than transmit power long distances from generation to load centers, the tie lines and internal lines perform primarily a local distribution function consisting of the distribution of power brought in from the grid or generated internally to different plants within each industrial site. In some cases, the facilities also perform an interconnection function to the extent they enable power from cogeneration facilities to be delivered into the grid. The voltage of the tie lines and internal lines at these industrial sites is dictated by the load and basic configuration of each site. Higher voltage lines are used when necessary to meet applicable load requirements or to reduce line losses. That does not mean that such lines perform a transmission function. At some sites, Dow is registered as a Generation Owner and Generation Operator. At other sites, the applicable Regional Entity has found that such registration is not required because of the relatively small amount of power supplied to the grid from the applicable cogeneration resources, even though those cogeneration resources have an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating). Tie lines (to the grid) and internal lines at an industrial site that operate at 100kV or higher should be excluded from the BES definition if, due to the relatively small amount of power supplied to the grid from the generation resources at the site, the owner of those generation resources is not required to be registered as

Organization	Yes or No	Question 9 Comment
		a Generation Owner and the operator of those generation resources is not required to be registered as a Generation Operator.At sites where the owner of the generation resources is registered as a Generation Owner and the operator of those generation resources is registered as a Generation Operator, the internal lines (between the generation resources and the manufacturing plants) that operate at 100kV or higher should be excluded from the BES definition, because they are distribution and not transmission facilities. The lines interconnecting the generation resources at such sites to the transmission grid should be included in the BES definition, but the owner and operator of such interconnection lines should not be registered as a Transmission Owner or Transmission Operator. In no instance has a Regional Entity determined that Dow or any subsidiary should be registered as a Transmission Owner or Transmission Operator. Instead, such interconnection lines should be considered as part of the generation resource and Generation Owners and Generation Operators should be subject to reliability standards specifically developed for such interconnection lines. Dow is strongly opposed to any BES definition that would result in either the tie lines or the internal lines at industrial sites being subject to the mandatory reliability standards applicable to Transmission Owners and Transmission Operators. Complying with reliability standards would cause Dow and its subsidiaries to incur substantial compliance costs and create potential exposure to penalties in the future for noncompliance. Perhaps such costs and exposure could be justified if subjecting these facilities to compliance with reliability standards resulted in a material increase in reliability of the BES, but there is no reason to believe that will be the case. In fact, the opposite might be true. The tie lines and internal lines at industrial sites owned by Dow and its subsidiaries have been operated for decades as distribution and interconnection facilities, and practices and procedures have developed over the years that have enabled such operations to achieve a high degree of reliability for such sites. Requiring these facilities to now operate in a different manner as transmission facilities may well result in a degradation of the reliability of the manufacturing plants located at such sites. For example, outages would have to be coordinated with the RTO, which may not be interested in coordinating such outages with scheduled manufacturing plant outages.Dow recommends that a separate exclusion be added to the BES definition to address industrial distribution facilities. Proposed exclusion E-3 for local distribution networks is not sufficient to ensure that all industrial distribution facilities are excluded. For example, criteria b), entitled “Limits on connected generation” states that “Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation”. This criteria makes no sense for an industrial site with on-site electricity generation and a number of manufacturing plants that has internal power lines and lines interconnecting with the transmission grid that operate at 100 kV or higher where the owner and operator of the on-site electricity generation facilities are not registered as a Generation Owner and a Generation Operator because only a small amount of electricity is ever exported from the on-site electricity generation facilities to the transmission grid. This criteria also makes no sense with respect to internal electric lines (operated at 100 kV or higher) at such industrial sites even where the owner and operator of the on-site electricity generation facilities are registered as a Generation Owner and a Generation Operator.Criteria c) also causes proposed exclusion E-3 not to be sufficient to ensure that all industrial distribution facilities are excluded where the owner and operator of the

Organization	Yes or No	Question 9 Comment
		on-site electricity generation facilities are not registered as a Generation Owner and a Generation Operator because only a small amount of electricity is ever exported from the on-site electricity generation facilities to the transmission grid. Criteria c), entitled "Power flows only into the LDN", states: "The generation within the LDN shall not exceed the electric Demand within the LDN." Criteria c) also makes no sense with respect to internal lines at such industrial sites even where the owner and operator of the on-site electricity generation facilities are registered as a Generation Owner and a Generation Operator.
Response: Criteria E3.c has been revised to separate the concepts of power flow into the network from the comparison of generation to demand. Additionally, the new E3.a addresses the limits on connected generation and in so doing, excludes from consideration all retail generation. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Central Lincoln	No	Central Lincoln strongly supports the exclusion of LDNs. These networks are used for improving local service, not for BES reliability; and their use should not be discouraged. However, we see problems with the language of part d. Part d uses the term the undefined term "bulk power" as part of the overall definition of "bulk power system," leading to a circular definition. Did the SDT mean to indicate that no power may be transferred though an LDN? If so, suggest striking the word "bulk." We also believe the SDT meant to define the LDN in terms of normal operating conditions, since all LDNs would transfer power under the right contingency (such as a complete loss of load within the LDN). Please make it clear that part d test applies during normal operating conditions.

Organization	Yes or No	Question 9 Comment
Response: The SDT has modified the definition such that the term "bulk power" is no longer used in the characteristics, specifically new item E3.b. The term "bulk power" was retained in the paragraph E3, as we believe it provides conceptual value to the exclusion principle. The SDT disagrees with the use of the concept "normal operating conditions" as it tends to lack precision and objectivity for use in an effective definition. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection~~ as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
PPL Energy Plus and PPL Generation	No	See comments in Question 13.
Response: See response to Q13.		
Manitoba Hydro	No	Exclusion E3 needs to be strengthened to ensure that the LDN will have no impact on the BES. The protective elements preventing the LDN from impacting the BES should be included in the BES. As well, the term Local Distribution Network (LDN) should be defined as a separate NERC Glossary term, instead of being defined in the BES definition.
Response: The SDT has revised the E3 local network exclusion in a way that removes the mention of automatic fault interrupting devices. The SDT intends to fully explain the characteristics of a "local network" within the BES definition, and as such, the term is not necessary in the Glossary.		

Organization	Yes or No	Question 9 Comment
		E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
ISO New England, Inc.	No	We think that large portions of the network may be inappropriately excluded under this exclusion and the exclusion should be deleted.If E-3 is retained, then it is recommended that the SDT change the sentence "LDN's are connected to the Bulk Electric System (BES)" to "LDN's include transmission connected to the Bulk Electric System (BES)..." An Automatic Interruption device needs to be defined. For example, Iis a fuse an Automatic Interruption device? The definition needs clarification in the phrase: Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN;Should this be "Net power ..."? One transmission path could be exporting power but the net sum of all paths would always be importing power.
Response: The SDT has debated Exclusion E3 and has determined that it should be retained. However, the language has been changed to provide clarification similar to what your comment suggested. The SDT has revised the Exclusion E3 local network in a way that removes the mention of automatic fault interrupting devices. The revised Exclusion E3 now combines the prior items E3.c and E3.d into a revised item E3.b. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute		

Organization	Yes or No	Question 9 Comment
		power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Consolidated Edison Co. of NY, Inc.	No	Multiple Connections - The current wording in the second sentence "at more than one location" could be misinterpreted. Replace this sentence with the following wording:LDN's use multiple connections to the Bulk Electric System (BES) solely to improve the level of service to retail customer load.
Response: The SDT considered this suggestion and believes that reference to "more than one location" has sufficient clarity; therefore this language was retained. The paragraph has been revised to eliminate the term "solely" and to explain that the local network does not accommodate bulk transfer across the interconnected system. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN		

Organization	Yes or No	Question 9 Comment
		does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Independent Electricity System Operator	No	Consistent with our earlier comments in response to Q1, we do not agree that an LDN should be characterized by a 75 MVA limit on the connected generation as described in part (b). It is expected that under various "green energy" programs that the development and implementation of distributed generation will grow considerably in the future. The 75 MVA generation limit may discourage this development of distributed generation (in general, it may discourage the installation of generation in lieu of transmission to supply load) because installing generation in an LDN would cause the entire LDN to be classified as BES and, as a result, subject the LDN to NERC planning standards that are inconsistent with well established jurisdictional planning criteria. To avoid subjecting the LDN to NERC requirements, the planning authority may elect to build generation outside of the LDN, which is undesirable because of increased transmission losses and reduced reliability. We suggest that (b) be deleted or revised in keeping with our earlier suggestions. We also suggest modifying Exception E3 (c) and (d) for consistency with language used in Technical Principles for Demonstrating BES Exceptions, since Bullet 1 recognizes that the system for which the exemption is being applied, may not be necessary for BES reliability and may experience power flows out to the BES under specified conditions. The suggested modified wording for E3 (c) and (d) is shown below: (c) Power is intended to flow only into the LDN: the total net Generation output within the LDN shall not exceed the total electric Demand of the LDN. (d) Not intended for use in transferring bulk power: While the LDN is intended to deliver power to load and not transfer bulk power between different locations in the BES, it is acceptable that under specified system conditions, bulk power transfers may take place between different points of the BES via the LDN, when it can be demonstrated that these power flows through the LDN are not necessary for maintaining BES reliability.
Response: The SDT takes note of the concern about growing amounts of connected generation within the distributed generation arena, and has proposed a revision to the limits on connected generation, now found in item E3.a. Regarding the suggestion for language changes in sub-items c and d, the SDT has made a modification in the revised definition item E3.b to address both the power flow into the local network and the prohibition of use of a candidate local network for power flow transactions through the network (commonly referred to as "wheel-through" transactions). Since the local network is electrically parallel to facilities presumed to be BES, and hence, may have some interactive effect upon the BES, the SDT believes that in order to qualify for exclusion, the local network must exhibit characteristics that mimic a classic radial system; i.e., flow		

Organization	Yes or No	Question 9 Comment
only into the network and no utilization for "through" transactions. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
BPA	No	[As requested above BPA would like "automatic interruption device" and "automatic fault interrupting device" to be defined terms] Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices; BPA seeks clarification on: E3 – couldn't E2 and E3 both apply to the same system? If so, wouldn't the generation limit in E3(b) (75 MVA maximum) eliminate the exemption in E2 (can be above 75 MVA if maximum net capacity provided to BES does not exceed 75 MVA)? BPA seeks to have "transfer bulk power" defined. If an LDN had two connections, 200 MW flowed in on one, and 150 MW flowed out on another, how would that be counted?) How do you determine if the LDN is being used for bulk power transfer or not? One interpretation could be: any path that is scheduled across for purposes other than serving load

Organization	Yes or No	Question 9 Comment
		contained therein would be determined to be used to "transfer bulk power". In other words, transactions can only flow INTO an LDN. If transactions flow out of an area at any point, then from a compliance perspective that area would not meet this component of the LDN definition. The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and (end of comment)

Response: The SDT has revised the Exclusion E3 local network in a way that removes the mention of automatic fault interrupting devices.

The revised Exclusion E3 now specifically excludes from consideration the "behind the meter" generation in the limits on connected generation.

The SDT has modified the definition such that the term "bulk power" is no longer used in the characteristics, specifically new item E3.b. The term "bulk power" was retained in the paragraph E3, as the SDT believes it provides conceptual value to the exclusion principle.

In the example of 200 MW in-flow and 150 MW out-flow, this network would not meet the revised item E3.b, as power is flowing out at one or more of the interfaces; therefore the exclusion would not be satisfied.

The determination of use of the local network for transfer of bulk power would be characterized by the demonstration that power is flowing only in to the network and that the network is not accommodating power transfers for instance, it is not a contract path for power transactions.

> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:
>
> ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~
>
> **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;
>
> **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and
>
> ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~
>
> c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Portland General Electric Company		While PGE appreciates the SDT's efforts to exclude distribution systems, asrequired by the statute, PGE believes that this Exclusion needs further clarification to beworkable. PGE has specific concerns with the following aspects of the Exclusion:(b) The phrase "nor its underlying Elements (in aggregate)" is ambiguous.

Organization	Yes or No	Question 9 Comment
		It does notmake it clear how a utility could differentiate between the multiple Local DistributionNetworks within its service territory. (c) The phrase "Power flows only into the Local Distribution Network" does not makeclear that under certain abnormal circumstances power may flow out of a LocalDistribution Network. Wording such as "the predominant direction of flow is into theLocal Distribution Network during normal (non-outage) conditions" could account forsuch abnormal circumstances. (d) The phrase "Not used to transfer bulk power" should similarly be modified toindicate that it is meant to describe normal rather than abnormal conditions. Inaddition, this aspect of the Exclusion should account for the fact that two utilities mayhave multiple interchange points at the distribution level, but the fact that energy istransferred at these points does not inherently make them transmission paths. A phrasesuch as "none of the LDN facilities are identified as belonging to or having direct ratingimpact on a regionally-recognized constrained transmission path used to deliver energyto points outside of the LDN" could address this concern.
Response: The SDT appreciates your concern about the possible ambiguity in "underlying Elements"; however, the SDT believes that this language is appropriate in order to clarify that the lower than 100 kV facilities contribute to the limits on connected generation. The SDT has determined that it will refrain from the use of "predominant direction", "normal circumstances" etc., as the use of this language tends to lack precision and objectivity and is therefore unsuitable in a definition. No changes made for these comments.		
Georgia System Operations		In item c, What is meant by "generation" and by "electric Demand," and how is whether "generation within the LDN…exceed[s] the electric Demand within the LDN" to be calculated? Is this installed nameplate capacity (rather than energy) minus peak Demand, or minus forecast Demand, or minus actual Demand - in each case either for some period of time or at every moment (the NERC Glossary defines Demand as either)? Is it the actual generated energy minus actual or forecast Demand for some period of time or at every moment? If the definition is based on capacity, this exclusion should allow for the possibility that a larger than currently necessary generator may be installed in anticipation of future load growth, so long as it is never used to generate significantly more than what is needed for load. If actual generated energy is intended, the exclusion should provide for inadvertent and/or de minimis power flows.
Response: The SDT has removed the concept of comparison of generation to electric demand, and instead has moved to a simpler limit on connected generation. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to		

Organization	Yes or No	Question 9 Comment
		accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection~~ as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Tacoma Power		Tacoma Power generally supports Exclusion E3 that provides for the exclusion of Local Distribution Networks (LDNs) from the BES, with the following modifications: 1) It is not necessary to articulate the nature of the LDN's connection to the BES. If the characterizations are met, the number of connections and the reasons for the connections are immaterial. 2) If the LDN is a normal net import, there is no need to limit the amount of connected generation since the generation will have no material effect on the BES. 3) 'Bulk power transfers' are acceptable across an LDN if the transfer is to a nested LDN. Contractual energy, originating outside the LDN and delivered to a nested LDN, for example, is still load delivery and has the same physical characteristics of a holistic LDN and the transfer of bulk power is immaterial. We propose changing Exclusion E3 to read,"Local Distribution Networks (LDN): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the Interconnected System. The LDN is characterized by all of the following:a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;b) c) Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN;d) Not used to transfer bulk power, except transfers to nested LDNs: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN, except transfers to nested LDNs; ande) Not part of a Flowgate or Transfer Path: The LDN does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an

Organization	Yes or No	Question 9 Comment
		Interconnection Reliability Operating Limit (IROL)."

Response: The SDT considered this suggestion and believes that reference to "more than one location" has sufficient clarity; therefore this language was retained. The paragraph has been revised to eliminate the term "solely" and to explain that the Local Network does not accommodate bulk transfer across the interconnected system.

The primary goal of the SDT in the revision of the definition of the BES is to improve clarity in the current language and to provide as much certainty as possible in the identification of BES and non-BES Elements. The Commission provided guidance within Order Nos. 743 & 743a which identified the current application of the existing BES definition was essentially correct for the majority of the continent and directed clarification of the existing language to support consistent application across all regions. Additional guidance from the Commission spoke to significant changes in the scope of the definition with an expectation that the revision to the definition would not significantly expand or contract what is currently considered to be the BES. The SDT disagrees with removal of all limits on connected generation, as this could significantly change the scope of the definition and potentially limit the amount of generation that would be classified as BES Elements.

While the SDT does not fully understand the concept of "nested LDN", it believes that the revised Exclusion E3 in sum captures the concept of networks that are providing a distribution function.

> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:
>
> ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~
>
> **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;
>
> **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and
>
> ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~
>
> c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

City of Redding	Yes	Redding will support this high level exclusion of Local Distribution in the light that it is a "sharpening" of the Brightline and is part of the SDT's overall plan to make the distinction between distribution and transmission facilities. As Redding mentioned with the radial exclusion (E1), Redding's support rests on the fact that the

Organization	Yes or No	Question 9 Comment
		Exception Process will adequately address the distribution and transmission facilities issue and there will be a fair and equable method where LDN's that do not meet this criteria will be adequately identified as distribution facilities. However, Redding does believe (as noted in question #4) that the 75 MVA threshold has very little justification as "necessary" for the transmission system. Generators connected to LDNs are a classic example where the generation installed acts only as a load modifier. Redding suggests using the 200 MVA level for generation connected to a LDN.

Response: The SDT has determined that a generation limit is essential to qualify these local networks as distribution; however, in the revised Exclusion E3, the limits on connected generation have been made somewhat less restrictive as indicated in item E3.a.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

American Municipal Power and Members Florida Municipal Power Agency Florida Keys Electric Cooperative	Yes	The exclusion refers to groups of Elements that "distribute power to Load rather than transfer bulk power across the interconnected system." The use of the term "bulk power" is vague and could be read incorrectly as a reference to the "bulk-power system," which is defined in the Federal Power Act but is not a NERC defined term. If the LDN is connected to the BES at more than one location, there will by definition be some loop flow. We recommend below that Exclusion 3(d) be revised to quantify the amount of loop flow that is permissible in an excluded LDN. In the context of the first sentence of Exclusion E3, less specificity is needed, and the sentence should only

Organization	Yes or No	Question 9 Comment
		be revised for the sake of accuracy to state: "Groups of Elements operated above 100 kV that are primarily intended to distribute power to load rather than to transfer power across the interconnected System. "The exclusion's reference to connection "at more than one location" is vague. The sentence should be revised to read "connected to the Bulk Electric System (BES) from more than one Transmission source solely to improve the level of service to retail customer Load," and "Transmission source" should have the same meaning that it does in E1. E3(a) should require that there be switching devices between the LDN and the BES, not specifically automatic fault-interrupting devices. The term "separable by" in "Separable by automatic fault interrupting devices" is unclear and should be reworded. E3(b) To avoid pulling an LDN into the BES based on very small customer-owned generation (such as rooftop photovoltaics and hospital backup diesel generators) that the utility does not consider or rely on, or necessarily even know about, the item should be reworded: "Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA of generation used to meet the resource adequacy requirements of electric utilities." E3(d) states "Not used to transfer bulk power." As noted above, "bulk power" is a vague term. There will necessarily be some loop flow on a system that is connected to the BES at more than one location. The amount of permissible loop flow for this purpose needs to be determined and stated in this item.

Response: The SDT has modified the definition such that the term "bulk power" is no longer used in the characteristics, specifically new item E3.b. The term "bulk power" was retained in paragraph E3, as the SDT believes it provides conceptual value to the exclusion principle.

The SDT has made changes to the introductory paragraph in Exclusion E3, which it believes clarifies the intent of the local network; however, the SDT believes that the descriptive language adds necessary context to the entire exclusion principle and therefore should be retained.

The SDT considered this suggestion and believes that reference to "more than one location" has sufficient clarity; therefore this language was retained. The paragraph has been revised to eliminate the term "solely" and to explain that the Local Network does not accommodate bulk transfer across the interconnected system.

The SDT has revised the Exclusion E3 local network in a way that removes the mention of automatic fault interrupting devices.

The revised Exclusion E3 now specifically excludes from consideration the "behind the meter" generation in the limits on connected generation.

> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

Organization	Yes or No	Question 9 Comment
		~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Small Entity Working Group (SEWG)	Yes	Yes, with some clarifying edits. The first sentence of Exclusion 3 should be revised for accuracy as follows: ""Local Distribution Networks (LDN): Groups of Elements operated above 100 kV that are primarily intended to distribute power to Load rather than to transfer bulk power across the Interconnected System. "The second sentence should be revised for clarity as follows: "LDN's are connected to the Bulk Electric System (BES) from more than one Transmission source solely to improve the level of service to retail customer Load."Exclusion E3 a) should be revised as we note in our comments in Question#7 to allow for the use of switching devices in specific situations
Response: The SDT has made changes to the introductory paragraph in Exclusion E3, which it believes clarifies the intent of the local network; however, the SDT believes that the descriptive language adds necessary context to the entire exclusion principle and therefore should be retained. The SDT considered this suggestion and believes that reference to "more than one location" has sufficient clarity; therefore this language was retained. The paragraph has been revised to eliminate the term "solely" and to explain that the Local Network does not accommodate bulk transfer across the interconnected system. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA~~		

Organization	Yes or No	Question 9 Comment
		~~generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Hydro One Networks Inc	Yes	We agree with this concept of LDN as part of establishing a bright-line definition along with Exclusion E3. However, restrictions for LDN such as connected Generation must neither be more restrictive than radial nor should generation limits be applicable unless they impact the reliability of interconnected transmission network.Requirements in Exclusion E3 are very restrictive and we do not agree to the limits on connected generation for Local Distribution Networks (LDN), described in part (b). We suggest that bullet b) be revised and limits on connected generation must not include generation resources identified in Inclusions I2, I3, I4 and I5. The development and implementation of distributed generation will grow considerably in the future and will operate together with conventional sources of energy. The real net aggregated power of distributed generation seen by the bulk power system at the interconnection may be larger than past experience; hence it requires to be reassessed based on technical studies with respect to the future integration of DG's. (Please refer to comments in questions: 3 & 4) Also, we suggest combining exception E3 (c) and (d) as follows:"(c) Power is intended to flow only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN; The LDN is intended to deliver power to load and not be used to transfer bulk power between different locations in the BES. It is recognized that under specified system conditions, bulk power transfers may take place between different points of the BES via the LDN. However, for these conditions BES reliability is not dependent on the existence of these power flows through the LDN."
Response: The SDT has made changes to Exclusion E3 which promotes improved consistency between the restrictions of Exclusions E1 and E3. As well, the revised item E3.a now provides specific reference to items of the inclusion list. The SDT has made revisions to combine items E3.c and E3.d into a new item E3.a. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:		

Organization	Yes or No	Question 9 Comment
		~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
City of Santa Clara, California, dba Silicon Valley Power	Yes	Yes, Silicon Valley Power agrees with proposed Exclusion E3 that "Local Distribution Networks (LDNs): Groups of Elements above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System," that are (among the other characterizations) "connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer load" should be specifically excluded from the Bulk Electric System definition. SVP also agrees with the majority of the characteristics of an LDN set forth in proposed Exclusion E3. However, SVP believes that alternative language may be more appropriate with respect to characteristic "b" of proposed Exclusion E3. Part "b" to proposed Exception E3 states "Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation." SVP submits that the use of a fixed level of generation to determine whether an entity qualifies as an LDN is too arbitrary and does not reflect engineering reality. If a fixed level of generation is used, it will often be too high, if the registered entity has a small system, or too low, when the registered entity has a large system. SVP submits that NERC should consider modifying part "b" to proposed Exception E3 to give the Regional Entities discretion to determine whether 75 MVA of generation is the appropriate benchmark for an individual utility. Therefore, SVP submits that with respect to draft exception E3 b), "Limited connected generation to the LDN or its underlying Elements (in aggregate), as determined by the LDN's Regional Entity, using 75 MVA as a benchmark" may be appropriate. Alternatively, SVP submits that instead of a fixed level of generation, NERC could consider modifying the language of proposed Exception E3 b) to limit an LDN's connected generation to a high percentage of local minimum demand, or to a high percentage of generation not already committed to run to meet local reliability needs. Either option would meet the purpose of the LDN: a registered entity with connected generation that is, for the most part, only used to serve native or local load.SVP thanks NERC for the opportunity to comment

Organization	Yes or No	Question 9 Comment
		on its 1st Draft definition of BES, and its proposed inclusions and exceptions.

Response: The SDT appreciates the concern regarding the lack of technical justification for a 75 MVA limit on connected generation; however, the SDT has been presented with no technical basis upon which to suggest a change from this value. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The revised Exclusion E3 has resulted in a somewhat less restrictive limit on connected generation as provided in revised item E3.a.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Public Utility District No. 1 of Snohomish County, Washington	Yes	Snohomish strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. But providing an exclusion for radials without providing an equivalent exclusion for LDNs will have the opposite effect, to the ultimate detriment of electric consumers.Snohomish also

Organization	Yes or No	Question 9 Comment
		supports, with the reservations discussed below, the LDN exclusion as drafted by the SDT. At least conceptually, we believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system.Although Snohomish supports the LDN exclusion, we believe the exclusion should be refined in the following respects: o The SDT's draft states that:"LDN's are connected to the Bulk Electric System (BES) at more than one location SOLELY to improve the level of service to retail customer Load." (emphasis added) We are concerned that the use of the term "solely" implies the need for an examination of the motives of a local distribution utility in connecting to the BES at more than one location. This result is problematic because it defeats the purpose of the exclusion, which is to allow LDNs to be excluded from the BES without an in-depth and expensive inquiry into the exact nature of the LDN. In addition, the local utility may have a number of motives for connecting to the BES at more than one location, but the local utility's motives have nothing to do with how the LDN interacts with the interconnected bulk system, which should be the key determinant in including or excluding any Element from the BES. With these concerns in mind, we therefore recommend that the SDT revise the sentence quoted above as follows: "LDNs are connected to the Bulk Electric System (BES) at more than one location to improve the level of service to retail customer load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances. o We believe the characteristics specified by the LDN in subsections (b) and (c) of the exclusion are redundant. Subsection b specifies that the LDN would not interconnect more than 75 MVA of generation in aggregate. Subpart c specifies that power flows only into the LDN. We believe the SDT can eliminate subpart b of the definition and simply rely on subpart c because if power only flows into the LDN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system, only with the LDN. Further, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LDN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the subpart c criteria, would be wholly absorbed within the LDN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. In addition, the 75 MVA criterion would make an LDN interconnecting more than 75 MVA part of the BES. For the reasons set forth by the Project 2010-07 SDT, we are concerned the result will be the local utility being improperly classified as a Transmission Owner and Transmission Operator, which would subject the local utility to a number of reliability standards that would significantly increase its compliance burden without substantially improving bulk system reliability. In fact, in the LDN situation, there is even less reason to impose these burdens on the local utility than in the situation addressed by the Project 2010-07 team, where generators are interconnected to the BES by

Organization	Yes or No	Question 9 Comment
		dedicated interconnection facilities. Because the LDN is interconnected at multiple points, the generators interconnected to the LDN could continue to operate even if one or two interconnection points are out of service. On the other hand, in the situation addressed by the Project 2010-07 team, if the dedicated interconnection facility is out of service, the generation is unavailable because there is no alternative route to deliver it to load. Finally, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception.
Overton Power District No. 5	No	we support Snohomish's clarifications

Response: The introductory paragraph in Exclusion E3 has been revised to eliminate the term "solely" and to explain that the local network does not accommodate bulk transfer across the interconnected system.

The Commission provided guidance within Order Nos. 743 & 743a which identified the current application of the existing BES definition was essentially correct for the majority of the continent and directed clarification of the existing language to support consistent application across all regions. Additional guidance from the Commission spoke to significant changes in the scope of the definition with an expectation that the revision to the definition would not significantly expand or contract what is currently considered to be the BES. Based on these expectations, the SDT believes that there must be a limit on connected generation as well as a provision to ensure that power flows only into the local network. Elimination of the generation limit would potentially limit what generation is currently considered to be BES Elements. The SDT has proposed revised characteristics E3.a and E3.b to capture these concepts.

The SDT has made revisions to combine the items E3.c and E3.d into a new item E3.a.

The revised definition, Exclusion E3, and item E3.a makes the limit on connected generation somewhat less restrictive than in the prior definition document.

> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:
>
> ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~
>
> **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;
>
> **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN

Organization	Yes or No	Question 9 Comment
		does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Western Electricity Coordinating Council	Yes	WECC agrees in concept. However, in sub-bullet b), it should be clarified that the 75 MVA is gross-aggregate nameplate, as described in the inclusions. In sub-bullet c), it should be clarified whether this requirement is at any time or is for hourly integrated values. Also, the use of the term "major transfer paths" should be modified to be "major transfer paths in the Table titled Major WECC Transfer Paths in the Bulk Electric System." Finally, the reference to "above 100 kV" should be "at or above 100 kV" for consistency.
Response: The suggestion regarding "gross aggregate nameplate" has been incorporated into this revision of the definition. The SDT has removed the concept of comparison of connected generation to electric demand. The SDT has incorporated the suggestion to add the words in the introductory paragraph of Exclusion E3. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec		

Organization	Yes or No	Question 9 Comment
Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Western Montana Electric Generating and Transmission Cooperative	Yes	WMG&T strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. WMG&T supports the LDN exclusion, but we believe the exclusion should be refined in the following respects: o The SDT's draft states that:"LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load." We recommend that the SDT revise the sentence quoted above as follows: "LDN's are connected to the Bulk Electric System (BES) at more than one location to improve the level of service to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances.

Response: The introductory paragraph in Exclusion E3 has been revised to eliminate the term "solely" and to explain that the local network does not accommodate bulk transfer across the interconnected system.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~group~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a

Organization	Yes or No	Question 9 Comment
		major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Transmission Access Policy Study Group	Yes	The exclusion refers to groups of Elements that "distribute power to Load rather than transfer bulk power across the interconnected system." The use of the term "bulk power" is vague and could be read incorrectly as a reference to the "bulk-power system," which is defined in the Federal Power Act but is not a NERC defined term. If the LDN is connected to the BES at more than one location, there will by definition be some loop flow. We recommend below that Exclusion 3(d) be revised to quantify the amount of loop flow that is permissible in an excluded LDN. In the context of the first sentence of Exclusion E3, less specificity is needed, and the sentence should only be revised for the sake of accuracy to state: "Groups of Elements operated above 100 kV that are primarily intended to distribute power to load rather than to transfer power across the interconnected System. "The exclusion's reference to connection "at more than one location" is vague. The sentence should be revised to read "connected to the Bulk Electric System (BES) from more than one Transmission source solely to improve the level of service to retail customer Load," and "Transmission source" should have the same meaning that it does in E1. E3(a) should require that there be switching devices between the LDN and the BES, not specifically automatic fault-interrupting devices. The term "separable by" in "Separable by automatic fault interrupting devices" is unclear and should be reworded. E3(b) To avoid pulling an LDN into the BES based on very small customer-owned generation (such as rooftop photovoltaics and hospital backup diesel generators) that the utility does not consider or rely on, or necessarily even know about, the item should be reworded: "Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA of generation used to meet the resource-adequacy requirements of electric utilities. "E3(d) states "Not used to transfer bulk power." As noted above, "bulk power" is a vague term. There will necessarily be some loop flow on a system that is connected to the BES at more than one location. The amount of permissible loop flow for this purpose needs to be determined and stated in this item.
Response: The SDT has modified the definition such that the term "bulk power" is no longer used in the characteristics, specifically new item E3.b. The term "bulk power" was retained in the paragraph E3, as the SDT believes it provides conceptual value to the exclusion principle. The SDT has found no technical basis upon which to establish any limits on the amount of allowable loop flow in a local network; however, the technical exception process may be an avenue for considering such a metric. The SDT has made changes to the introductory paragraph in Exclusion E3, which the SDT		

Organization	Yes or No	Question 9 Comment
believes clarifies the intent of the local network; however, the SDT believes that the descriptive language adds necessary context to the entire exclusion principle and therefore should be retained. The SDT considered this suggestion and believes that reference to "more than one location" has sufficient clarity; therefore this language was retained. The paragraph has been revised to eliminate the term "solely" and to explain that the Local Network does not accommodate bulk transfer across the interconnected system. The SDT has revised Exclusion E3 local network in a way that removes the mention of automatic fault interrupting devices. The revised Exclusion E3 now specifically excludes from consideration the "behind the meter" generation in the limits on connected generation, and the SDT has made revisions that allow up to 75 MVA of connected generation to exist while still qualifying for this exclusion. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Northern California Power Agency	Yes	NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.In addition to this support, NCPA asks for consideration of an alternative approach for determining an exception in this regard, as opposed to having it based on a somewhat arbitrary fixed level of generation (75 MVA). NCPA suggests consideration be given for an approach based on a determined percentage of actual demand for a given LDN. As such, NCPA submits the following with respect to draft exception E3 (b), Limits on Connected Generation: Neither the LDN, nor its underlying Elements (in aggregate), include more than a certain percentage of minimum area load, as determined by the regional entity." Such an approach would require the regional entity to look at the amount of connected generation on a case-by-case basis.

Organization	Yes or No	Question 9 Comment
Response: The SDT has made modifications to the exclusion criteria under Exclusion E3; however, the SDT continues to believe that a flat, fixed value of generation is the most suitable approach in order to promote consistency and repeatability in the determination. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Texas Industrial Energy Consumers (TIEC)	Yes	Proposed exclusion E3 should be revised to categorically exclude all facilities that are part of a local distribution network (LDN), regardless of the specifics of the LDN's interconnection with the Bulk Electric System. As currently drafted, Exclusion 3 places a number of inappropriate limits on a whether a local distribution system is excluded from the Bulk Electric System definition. As recognized by the Commission in Order No. 743-A, Section 215 of the Federal Power Act categorically excludes local distribution systems from the Bulk Power System definition without qualification. As a result, LDNs are outside the FERC's jurisdiction and are outside the scope of this rulemaking. The SDT should revise the approach to Exclusion 3 to exclude all facilities that are part of a LDN, regardless of how the LDN is interconnected to the grid. Specifically, making exclusion of an LDN contingent upon the LDN being connected through automatic fault-interrupting devices is inappropriate. Similar to the concerns TIEC expressed in response to Question 7, above, if there are concerns about LDNs impacting the Bulk Electric System, then it is the responsibility of the transmission provider serving the LDN to ensure that systems and facilities are in place to protect the grid. The specifics of an LDN's interconnection to the grid should not dictate whether it is subject to regulation. TIEC would therefore recommend removing proposed qualification (a) to the LDN exclusion. Further, the requirement that generation in the LDN can never exceed demand is inappropriate. As the SDT

Organization	Yes or No	Question 9 Comment
		properly recognized in Exclusion 2, as long as the generation within an LDN does not trigger registration requirements, the LDN should be able to export power to the grid without subjecting itself to regulation. Many LDNs export small amount of power intermittently to balance the flow within the LDN. Subjecting these networks to regulation as a result of this balancing activity is inconsistent with the existing generation registration requirements and would exceed the scope of this rulemaking. The existing generation registration requirements exempt customer-owned generation that serves retail load from generation registration requirements as long as the net capacity provided to the bulk power system does not exceed the nameplate requirements for stand-alone generators. Consistent with this approach, an LDN should not have to be registered as long as its net exports to the grid do not exceed the generation registration requirements. TIEC accordingly requests that proposed LDN characteristics (c) and (d) be removed as qualifications to the LDN exclusion, and that the exclusion be revised to allow generation output to the grid as long the net export to the grid does not exceed the threshold levels for registration as a generator owner/operator.

Response: One of the objectives of the revised definition of the BES is to provide a deterministic method of identifying and excluding facilities that are used for distribution, and Exclusion E3 is one of the mechanisms by which the SDT proposes to accomplish this. The SDT has revised the Exclusion E3 local network in a way that removes the mention of automatic fault interrupting devices which the SDT believes addresses the concern about the apparent disconnect between Section 215 and the prior proposal.

The SDT believes that generation connected within a network that would otherwise be a distribution system, can change the functionality of that network to one that serves transmission functions; hence, the SDT believes that some limit on connected generation must continue to exist in this exclusion principle.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec

Organization	Yes or No	Question 9 Comment
Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
PacifiCorp	Yes	PacifiCorp believes this meets FERC's intent in Order Nos. 743 and 743A, however additional clarification may be added particularly around items b and c. Regardless of the generation level (item b), if the power only flows into the Local Distribution Network ("LDN") (item c) then the the level of generation is not material and should have no impact on the reliable operation of the BES.
Response: The primary goal of the SDT in the revision of the definition of the BES is to improve clarity in the current language and to provide as much certainty as possible in the identification of BES and non-BES Elements. The Commission provided guidance within Order Nos. 743 & 743a which identified the current application of the existing BES definition was essentially correct for the majority of the continent and directed clarification of the existing language to support consistent application across all regions. Additional guidance from the Commission spoke to significant changes in the scope of the definition with an expectation that the revision to the definition would not significantly expand or contract what is currently considered to be the BES. Therefore the SDT disagrees with removal of all limits on connected generation, but it has made this provision somewhat less restrictive as shown in the revised item E3.a. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Intellibind	Yes	This does address some of my concerns on small radial transmission systems. I think that there will be confusion when small entities try and apply both E3 and E1 to their particular situations. The ambiguity will cause more questions than it is trying to answer.
Response: The revisions to Exclusion E3 are intended to bring more clarity and consistency to the application of this exclusion principle. The SDT believes this		

Organization	Yes or No	Question 9 Comment
revision removes the ambiguity mentioned in your comment. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Company Consumers Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Inc	Yes	We strongly support the categorical exclusion of Local Distribution Networks from the BES. For reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are likely the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. We also support, with the reservations discussed below, the LDN exclusion as drafted by the SDT. We believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system.However, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

Organization	Yes or No	Question 9 Comment
Okanogan Electric Cooperative PNGC Power Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative		

Response: The SDT has revised the Exclusion E3 Local Network in a way that removes the mention of automatic fault interrupting devices, which the SDT believes addresses the concern about the apparent disconnect between Section 215 and the prior proposal.

The limits on connected generation, now described in item E3.a, have been revised, resulting in a less restrictive exclusion characteristic. The SDT notes, however, that the responses to the comments in the first posting of the BES Definition did not yield any technically-based alternatives to the generation thresholds of the ERO Statement of Compliance Registry Criteria (SCRC), and as such, the SDT has no technical rationale to deviate from the SCRC. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.

> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:
>
> ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~
>
> **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;
>
> **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

Organization	Yes or No	Question 9 Comment
		~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Northern Wasco County PUD Chelan PUD – CHPD Kootenai Electric Cooperative Public Utility District No. 1 of Franklin County Midstate Electric Cooperative Northwest Requirements Utilities Big Bend Electric Cooperative, Inc	Yes	Northern Wasco County PUD strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. Northern Wasco County PUD supports the LDN exclusion, but we believe the exclusion should be refined in the following respects: o The SDT's draft states that:"LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load." (emphasis added) We recommend that the SDT revise the sentence quoted above as follows: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances.
Response: The SDT agrees with your suggestion, and has incorporated this concept into the revised introductory paragraph for Exclusion E3. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~		

Organization	Yes or No	Question 9 Comment
c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
PUD No. 2 of Grant County, Washington	Yes	Grant supports the categorical exclusion of Local Distribution Networks from the BES. We believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. Grant supports the LDN exclusion, but we believe the exclusion should be refined in the following respects: o The SDT's draft states that:"LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load." (emphasis added) We recommend that the SDT revise the sentence quoted above as follows: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances.Two more suggestions: Bullet d, starts with "bulk power" and ends with generic "energy" transferred through and out of the LDN. This is inconsistent and will likely lead to confusion. In addition, "paper only" contract path transfers that result in no physical flow across the LDN should be specifically excluded.

Response: The SDT agrees with your suggestion, and has incorporated this concept into the revised introductory paragraph for Exclusion E3.

The SDT has modified the definition such that the term "bulk power" is no longer used in the characteristics, specifically new item E3.b. The term "bulk power" was retained in the paragraph E3, as the SDT believes it provides conceptual value to the exclusion principle.

The SDT disagrees with the suggestion that "paper only" contract path transfers that result in no physical flow be specifically excluded, as the use of a local network for transaction scheduling purposes causes it to be serving a transmission function. Where transactions are scheduled through the facilities of a local network, some physical flow change will occur in accordance with the transfer distribution factor of the network in relation to the transaction source and sink.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups ~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

Organization	Yes or No	Question 9 Comment
		~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Clallam County PUD No.1	Yes	Clallam strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. Clallam also supports, with the reservations discussed below, the LDN exclusion as drafted by the SDT. At least conceptually, we believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system.Although Clallam supports the LDN exclusion, we believe the exclusion should be refined in the following respects: o The SDT's draft states that:"LDN's are connected to the Bulk Electric System (BES) at more than one location solelyto improve the level of service to retail customer Load." (emphasis added)We are concerned that the use of the term "solely" implies the need for an examination of the motives of a local distribution utility in connecting to the BES at more than one location. This result is problematic because it defeats the purpose of the exclusion, which is to allow LDNs to be excluded from the BES without an in-depth and expensive inquiry into the exact nature of the LDN. In addition, the local utility may have a number of motives for connecting to the BES at more than one location, but the local utility's motives have nothing to do with how the LDN interacts with the interconnected bulk system, which should be the key determinant in including or excluding any Element from the BES. With these concerns in mind, we therefore recommend that the SDT revise the sentence quoted above as follows: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load and not to accommodate

Organization	Yes or No	Question 9 Comment
		bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances. o We believe the characteristics specified by the LDN in subsections (b) and (c) of the exclusion are redundant. Subsection b specifies that the LDN would not interconnect more than 75 MVA of generation in aggregate. Subpart c specifies that power flows only into the LDN. We believe the SDT can eliminate subpart b of the definition and simply rely on subpart c because if power only flows into the LDN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system, only with the LDN. Further, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LDN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the subpart c criteria, would be wholly absorbed within the LDN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. In addition, the 75 MVA criterion would make an LDN interconnecting more than 75 MVA part of the BES. For the reasons set forth by the Project 2010-07 SDT, we are concerned the result will be the local utility being improperly classified as a Transmission Owner and Transmission Operator, which would subject the local utility to a number of reliability standards that would significantly increase its compliance burden without substantially improving bulk system reliability. In fact, in the LDN situation, there is even less reason to impose these burdens on the local utility than in the situation addressed by the Project 2010-07 team, where generators are interconnected to the BES by dedicated interconnection facilities. Because the LDN is interconnected at multiple points, the generators interconnected to the LDN could continue to operate even if one or two interconnection points are out of service. On the other hand, in the situation addressed by the Project 2010-07 team, if the dedicated interconnection facility is out of service, the generation is unavailable because there is no alternative route to deliver it to load. Finally, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception.
Response: The SDT has made changes to the introductory paragraph in Exclusion E3, which the SDT believes clarifies the intent of the local network; however, the SDT believes that the descriptive language adds necessary context to the entire exclusion principle and therefore should be retained. The SDT has determined that a generation limit is appropriate from a bright-line perspective to qualify these local networks as distribution; however, in the revised Exclusion E3, the limits on connected generation have been made somewhat less restrictive as indicated in E3.a. Also, the revised Exclusion E3 now		

Organization	Yes or No	Question 9 Comment
specifically excludes from consideration the "behind the meter" generation in the limits on connected generation. Entities that own/operate facilities that are not necessarily captured for exclusion by Exclusion E3 can still pursue exclusion through the RoP Exception Process. The SDT notes that the responses to the comments in the first posting of the BES Definition did not yield any technically-based alternatives to the generation thresholds of the ERO Statement of Compliance Registry Criteria (SCRC), and as such, the SDT has no technical rationale to deviate from the SCRC. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
FortisBC	Yes	We agree with this concept as part of establishing a bright-line definition along with this clarifying exclusion in the revised BES definition. However, requirements in Exclusion E3 are restrictive and we do not agree to the limits on connected generation for Local Distribution Networks (LDN), described in part (b). The development and implementation of distributed generation will grow considerably in the future and will operate together with conventional sources of energy. The real net aggregated power of distributed generation seen by the bulk power system at the interconnection may be larger than past experience; hence it requires to be reassessed based on technical studies with respect to the future integration of DG's. (Please refer to comments in questions: 3 & 4)

Organization	Yes or No	Question 9 Comment
		Also, we suggest combining exception E3 (c) and (d) as follows:"(c) Power is intended to flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN; The LDN is intended to deliver power to load and not be used to transfer bulk power between different locations in the BES. It is recognized that under specified system conditions, bulk power transfers may take place between different points of the BES via the LDN. However, for these conditions BES reliability is not dependent on the existence of these power flows through the LDN."Finally, we suggest and urge the SDT to carefully craft the exception criteria & procedure that is flexible and technically sound to adequately allow entities to present their case, and/or unique characteristics of the elements under exception to the ERO for exclusion

Response: The SDT has determined that a generation limit is essential to qualify these local networks as distribution; however, in the revised Exclusion E3, the limits on connected generation have been made somewhat less restrictive as indicated in E3.a. Also, the revised Exclusion E3 now specifically excludes from consideration the "behind the meter" generation in the limits on connected generation.

The revised Exclusion E3 now combines the prior items E3.c and E3.d into a revised item E3.b.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Sierra Pacific Power Co d/b/a NV Energy	Yes	NV Energy strongly supports the definitional exclusion of LDN's from the BES, and such exclusion is necessary to ensure that the BES definition meets the statutory requirement to exclude all facilities used in the local distribution of electric power.In the characteristics of the LDN, item (d) should be clarified to eliminate the ambiguity that arises from the term "used". We suggest the following revision:Not intentionally

Organization	Yes or No	Question 9 Comment
		used to transfer bulk power: The LDN is not used to provide a transaction scheduling path for, nor intentionally used to accommodate the transfer of, energy originating outside the LDN for delivery through the LDN;

Response: The SDT has incorporated this suggestion into the revised language of Exclusion E3.

> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:
>
> ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~
>
> **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;
>
> **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and
>
> ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~
>
> c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Consumers Energy Company	Yes	LDN needs to be specifically defined. The draft appears to come close with the term "Groups of Elements operated above 100kV that distribute power to Load rather than transfer bulk power across the interconnected System." These Groups of Elements should be contiguous to avoid confusion. We are also concerned with the limits on connected generation.

Response: The SDT agrees with the suggestion regarding the contiguous nature of these local networks and has incorporated that suggestion into the revision of Exclusion E3.

The SDT received many comments on the limits of connected generation, and it has made this provision somewhat less restrictive as shown in the revised item E3.a.

> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher

Organization	Yes or No	Question 9 Comment
		~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Sacramento Municipal Utility District (SMUD)	Yes	SMUD agrees with the concept for Exclusion 3. However, sub-bullet "C" should address potential for integral values for variations of the load to the connected resource.

Response: The SDT has removed the concept of comparison of generation to electric demand, and instead has moved to a simpler limit on connected generation.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a

Organization	Yes or No	Question 9 Comment
		major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Puget Sound Energy	Yes	As suggested in Q1. If a limit on total aggregate load served by LDN is included, that would improve the clarity of this exclusion.
Response: To address similar concerns about the size of a local network, the SDT has now introduced a voltage cap for the LN exclusion of 300 kV. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Illinois Municipal Electric Agency	Yes	With the following clarfying edits. "Local Distribution Networks (LDN): Groups of Elements operated above 100 kV that are primarily intended to distribute power to Load rather than to transfer bulk power across the Interconnected System." The second sentence should be revised as follows: "LDN's are connected to the Bulk Electric System (BES) from more than one Transmission source solely to improve the level of service to retail customer Load."
Response: The SDT has made changes to the introductory paragraph in Exclusion E3, which the SDT believes clarifies the intent of the local network. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to		

Organization	Yes or No	Question 9 Comment
		accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection~~ as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Clark Public Utilities	Yes	Clark strongly supports the categorical exclusion of Local Distribution Networks from the BES. Clark also believes that adopting a 200 kV bright-line threshold will result in most, if not all, LDN being exempted from the BES without any need to analyze or self-certify an LDN. This is another case where a higher threshold (with an appropriate inclusion process) will have no affect on BES reliability but will focus resources on investigation low voltage facilities that truly have an impact on interconnected system operations. Clark does recommend a revision to the LDN exclusion language. E3 - Local distribution networks (LDNs): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system. The LDN is characterized by all of the following:
Response: The SDT has not uncovered nor been presented with any technical rationale for deviating from the voltage threshold of 100 kV in the definition of BES; however, the SDT believes that the revised definition speaks to, and sufficiently identifies, the exclusion of the facilities used for distribution functions. The SDT has made changes to the introductory paragraph in Exclusion E3, which the SDT believes clarifies the intent of the local network. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~		

Organization	Yes or No	Question 9 Comment
		a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
City of Anaheim	Yes	In E3 (b) use the same language as in E1 (b), i.e. Only including generation resources not identified in Inclusions I2, I3, I4, and I5. This avoids re-defining all of the generator provisions here. At a minimum "operated at a voltage of 100 kV or above" should be added at the end of E3 (b).

Response: The SDT has made modifications to the new item E3a, which addresses this concern.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~group~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Organization	Yes or No	Question 9 Comment
AltaLink	Yes	We agree with this concept as part of establishing a bright-line definition along with this clarifying exclusion in the revised BES definition. However, requirements in Exclusion E3 are restrictive and we do not agree to the limits on connected generation for Local Distribution Networks (LDN), described in part (b). The development and implementation of distributed generation will grow considerably in the future and will operate together with conventional sources of energy. The real net aggregated power of distributed generation seen by the bulk power system at the interconnection may be larger than past experience; hence it requires to be reassessed based on technical studies with respect to the future integration of DG's. We suggest and urge the SDT to carefully craft the exception criteria & procedure that is flexible and technically sound to adequately allow entities to present their case, and/or unique characteristics of the elements under exception to the ERO for exclusion.

Response: The SDT has determined that a generation limit is appropriate from a bright-line perspective to qualify these local networks as distribution; however, in the revised Exclusion E3, the limits on connected generation have been made somewhat less restrictive as indicated in E3.a. Also, the revised Exclusion E3 now specifically excludes from consideration the "behind the meter" generation in the limits on connected generation. Entities that own/operate facilities that are not necessarily captured for exclusion by Exclusion E3 can still pursue exclusion through the RoP Exception Process.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Modern Electric Water Company	Yes	Similar to our Question #7 comments regarding radial exclusions in E1, a usable BES definition excluding local distribution networks (LDNs) is needed to allow this industry to focus on and conduct business in a

Organization	Yes or No	Question 9 Comment
		fashion that promotes reliable and efficient system operation. In line with a 1/18/2011 Executive Order directing federal regulatory agencies to base their practices on science and to consider costs, excluding LDNs from the BES definition would achieve that aim on a national scale. While differing only in connectivity, LDNs operate and function exactly as radial systems. We suggest modifying the second and third sentences of E3 as "LDNs are normally operated such that they are connected to the BES through more than one AFID simultaneously, and exist to promote the level of service to Loads as commonly defined by states' utility commissions. For a System to be characterized as an LDN, it must meet all of the following:"Sub-bullet E3-c should be clarified to indicate conditions, timeframes and metrics used to demonstrate power flow direction.We support the intent of the remaining sub-bullets.
Response: The SDT has made changes to the introductory paragraph in Exclusion E3, which the SDT believes clarifies the intent of the local network. The SDT has revised the Exclusion E3 local network in a way that removes the mention of automatic fault interrupting devices. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~group~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Michigan Public Power Agency	Yes	I question the technical justification for the 75 MVA and the 100 KV as pointed out in my comments above. But given those points addressed above I would suggest the following clarification be considered. The exclusion refers to groups of Elements that "distribute power to Load rather than transfer bulk power across the interconnected system." The use of the term "bulk power" is vague and could be read incorrectly as a reference to the "bulk-power system," which is defined in the Federal Power Act but is not a NERC

Organization	Yes or No	Question 9 Comment
		defined term. If the LDN is connected to the BES at more than one location, there will by definition be some loop flow. We recommend below that Exclusion 3(d) be revised to quantify the amount of loop flow that is permissible in an excluded LDN. In the context of the first sentence of Exclusion E3, less specificity is needed, and the sentence should only be revised for the sake of accuracy to state: "Groups of Elements operated above 100 kV that are primarily intended to distribute power to load rather than to transfer power across the interconnected System." The exclusion's reference to connection "at more than one location" is vague. The sentence should be revised to read "connected to the Bulk Electric System (BES) from more than one Transmission source solely to improve the level of service to retail customer Load," and "Transmission source" should have the same meaning that it does in E1. E3(a) should require that there be switching devices between the LDN and the BES, not specifically automatic fault-interrupting devices. The term "separable by" in "Separable by automatic fault interrupting devices" is unclear and should be reworded. E3(b) To avoid pulling an LDN into the BES based on very small customer-owned generation (such as rooftop photovoltaics and hospital backup diesel generators) that the utility does not consider or rely on, or necessarily even know about, the item should be reworded: "Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA of generation used to meet the resource -adequacy requirements of electric utilities." E3(d) states "Not used to transfer bulk power." As noted above, "bulk power" is a vague term. There will necessarily be some loop flow on a system that is connected to the BES at more than one location. The amount of permissible loop flow for this purpose needs to be determined and stated in this item.
Response: The SDT has not uncovered nor been presented with any technical rationale for deviating from the voltage threshold of 100 kV or 75 MVA in the definition of BES; however, the SDT believes that the revised definition speaks to, and sufficiently identifies, the exclusion of the facilities used for distribution functions. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The SDT has modified the definition such that the term "bulk power" is no longer used in the characteristics, specifically new item E3.b. The term "bulk power" was retained in the paragraph E3, as the SDT believes it provides conceptual value to the exclusion principle.		

Organization	Yes or No	Question 9 Comment
The SDT has revised the Exclusion E3 Local Network in a way that removes the mention of automatic fault interrupting devices. The SDT has made changes to the introductory paragraph in Exclusion E3, which the SDT believes clarifies the intent of the local network. After consideration of the establishment of limits on flow-through, the SDT has elected to make modifications to the local network characteristics to preclude the scheduled use of the network for flow-through rather than establishing a MW limit or transfer distribution factor. The SDT has determined that this is appropriate from a bright-line perspective to qualify these local networks as distribution; Entities that own/operate facilities that are not necessarily captured for exclusion by Exclusion E3 can still pursue exclusion through the RoP Exception Process. The revised Exclusion E3 now specifically excludes from consideration the "behind the meter" generation in the limits on connected generation. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Utility System Efficiencies, Inc.	Yes	USE agrees in concept with this Exclusion. However, in sub-bullet b), as noted in our response to Question 4, there is no technical justification for the 75 MVA threshold on connected generation. In sub-bullet c), it should be clarified whether this requirement is at any time or is for hourly integrated values. Also in sub-bullet e), the use of the term "major transfer paths" should be modified to be "major transfer paths in the Table titled Major WECC Transfer Paths in the Bulk Electric System." Finally, the reference to "above 100 kV" should be "at or above 100 kV" for consistency with the rest of the definition.
Response: See response to Q4.		

Organization	Yes or No	Question 9 Comment
The SDT has determined that a generation limit is appropriate from a bright-line perspective to qualify these local networks as distribution; however, in the revised Exclusion E3, the limits on connected generation have been made somewhat less restrictive as indicated in E3.a. Also, the revised Exclusion E3 now specifically excludes from consideration the "behind the meter" generation in the limits on connected generation. Entities that own/operate facilities that are not necessarily captured for exclusion by Exclusion E3 can still pursue exclusion through the RoP Exception Process. The revised version of the Exclusion E3 language removes the comparison of connected generation to network demand. The new item E3.c clarifies the language regarding WECC major paths. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Cowlitz County PUD	Yes	Cowlitz strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. Cowlitz supports the LDN exclusion, but we believe the exclusion should be refined in the following respects: o The SDT's draft states that:"LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load." (emphasis added) We recommend that the SDT revise the sentence quoted above as follows: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service

Organization	Yes or No	Question 9 Comment
		to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances. We propose that a reliable BES will help insure a reliable LDN. If the LDN is not reliable, it should then be an issue to be resolved by the local authorities. If the BES is not reliable, the local authorities lack the tools to remedy the situation.

Response: The introductory paragraph in Exclusion E3 has been revised to eliminate the term "solely" and to explain that the local network does not accommodate bulk transfer across the interconnected system.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection~~ as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

New England States Committee on Electricity	Yes	NESCOE believes that this language appropriately excludes facilities that serve local distribution loads from the BES.
Public Utilities Commission of Ohio	Yes	Exclusion 3 is appropriate. This reflects the reality that local distribution can be at any level. As a reminder the Commission proposed seven indicators of local distribution to be evaluated on a case-by-case basis:(1) Local distribution facilities are normally in close proximity to retail customers.(2) Local distribution facilities are primarily radial in character.(3) Power flows into local distribution systems; it rarely, if ever, flows out.(4) When power enters a local distribution system, it is not reconsigned or transported on to some other market.(5) Power entering a local distribution system is consumed in a comparatively restricted geographical

Organization	Yes or No	Question 9 Comment
		area.(6) Meters are based at the transmission/local distribution interface to measure flows into the local distribution system.(7) Local distribution systems will be of reduced voltage.This test clearly indicates that not all radial circuit lines are the same. This exclusion would not only appropriately apply the seven factor test, but also comply with the Federal Power Act regarding appropriate authority.
New York State Dept of Public Service	Yes	This exclusion properly recognizes that local distribution facilities can be at any voltage level. It also properly recognizes that reliable service to load often requires parallel circuits. As written, the exclusion respects FERC's concern that major generation facilities should not be part of the LDN, by limiting the exclusion to generation of75 MVA or less, and to only facilities that move energy down to the LDN.
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	Yes	No comment.
Oregon Public Utility Commission Staff	Yes	Exclusion E3 is absolutely necessary for excluding local distribution elements from the interconnected bulk transmission system as required by Section 215 of the FPA of 2005. This exclusion mirrors the Seven Factor Test (established in FERC Order 888), which sets sound overarching principles for differentiating local distribution elements from bulk transmission elements. Also, the conversion of radial systems to local distribution networks is generally implemented by a distribution provider to improve the level of service to local retail customers, not to accommodate bulk transfer of wholesale power.Retaining Exclusion E3 is absolutely crucial for maintaining the 100 kV brightline in the core BES definition. Without the distribution network E3 exclusion, the voltage threshold in the core BES definition would need to be changed to the 200 kV level. Otherwise, NERC and Regional Entities will have to deal with endless exception applications and evaluations associated with the removal of local distribution elements that have no impact on the reliable operation of the interconnected bulk transmission system.
National Association of Regulatory Utility Commissioners	Yes	Exclusion 3 is essential for the standard to conform to Federal Power Act Section 215 that clearly excludes local distribution from FERC and NERC jurisdiction. The exclusion properly recognizes that local distribution can operate at above 100 kV. This exclusion seems to reflect the essence of the Seven Factor test from FERC's Order 888. Although FERC Order 743A did not bind NERC to the Seven Factor test, it makes sense to pursue consistency between these tests.
Michigan Public Service Commission(MPSC)	Yes	MPSC Staff Comments: The MPSC strongly supports this exclusion because it should exclude a large number of subtransmission facilities that are used for the distribution of local load. Also, this exclusion

Organization	Yes or No	Question 9 Comment
		together with E1 parallels the seven-factor technical-functional test for classifying transmission and distribution. The problem with the seven-factor test is that it does not provide an on-going clear bright line for BES determination. For example, an engineer cannot apply the seven-factor test using a one-line diagram of an electric power network and determine - without supplemental evidence - that an element is classified as distribution or not.
FHEC	Yes	We support the current wording of E3.
Public Service Enterprise Group LLC	Yes	
Imperial Irrigation District	Yes	
Santee Cooper	Yes	
ACES Power Participating Members	Yes	
National Rural Electric Cooperative Association (NRECA)	Yes	
Arizona Public Service Company	Yes	
Rayburn Country Electric Cooperative, Inc.	Yes	
New York Power Authority	Yes	
Southern Company	Yes	
Luminant Energy	Yes	
Western Area Power Administration	Yes	

Organization	Yes or No	Question 9 Comment
US Bureau of Reclamation	Yes	
Grand Haven Board of Light and Power	Yes	
Glacier Electric Cooperative	Yes	
South Texas Electric Cooperative, Inc.	Yes	
South Texas Electric Cooperative, Inc.	Yes	
Sweeny Cogeneration LP	Yes	
Dayton Power and Light Company	Yes	
Duke Energy	Yes	
Alberta Electric System Operator	Yes	
Fayetteville Public Works Commission	Yes	
MidAmerican Energy Company	Yes	
American Electric Power	Yes	
East Kentucky Power Cooperative, Inc.	Yes	
American Transmission Company, LLC	Yes	

Organization	Yes or No	Question 9 Comment
Farmington Electric Utility System	Yes	
GTC	Yes	
Idaho Power	Yes	
Pepco Holdings Inc	Yes	
PJM	Yes	
Oncor Electric Delivery Company LLC	Yes	
MEAG Power	Yes	
Xcel Energy	Yes	
Orange and Rockland Utilities, Inc.	Yes	
Golden Spread Electric Cooperative, Inc.	Yes	

Response: Thank you for your support. Based on stakeholder comments, the SDT modified the local network exclusion in the following manner:

Elimination of the term "Distribution" in the label of this exclusion, making it a "local network".

Changes were made to the introductory paragraph in Exclusion E3, which the SDT believes clarifies the intent of the local network, including a statement that the local network does not accommodate bulk transfer across the interconnected system.

Eliminated the provision in Exclusion E3.a which referred to automatic fault interrupting devices, and changed wording to clarify the connection point of the local network.

Please see the revised definition.

10. The SDT is discussing an exclusion from the Bulk Electric System (BES) for small utilities based on statements in Order No. 743 that FERC does not believe its suggested approach to the BES definition and exemption process will have a significant economic impact on a substantial number of small entities and that small entities will not adversely impact the reliability of the Bulk Electric System. The SDT has been made aware that organizations that are not presently required to be registered by the NERC Statement of Compliance Registry Criteria would meet the requirements to be registered as Transmission Owners given the current proposed BES definition. These small utilities could use the Rules of Procedure (ROP) exception process but this may be an issue that could be handled more appropriately through the BES definition. This would alleviate the paperwork burden for these small utilities and also avoid a possibly unnecessary and significant impact on the administration of the ROP exception process during the transition period to the revised BES definition. The proposed exclusion language is:

Exclusion E4: Transmission Elements, from a single Transmission source connected at a voltage of 100 kV or greater, owned by a small utility whose connection to the BES is solely through this single Transmission source, and without interconnected generation as recognized in the BES Designation Inclusion Items I2, I3, I4, or I5. A small utility is recognized as an entity that performs a Distribution Provider or Load Serving Entity function but is not required to register as a Distribution Provider or Load Serving Entity by the ERO.

Do you agree with this approach and the proposed language? If not, please be specific in your response with a technical reason for your disagreement and, if appropriate, suggested language for such an exclusion if you agree in general but feel that alternative language would be more appropriate.

Summary Consideration: The basis for the additional exclusion was predicated by the circumstances of radial systems and the demarcation of the automatic interrupting device. With the change of the demarcation point back to the point where the tap line intersects with the transmission line; this proposed exclusion is unnecessary. The SDT will drop consideration for this proposed exclusion given the change to radial systems. This shall serve as a single response to all comments submitted in response to this question.

Organization	Yes or No	Question 10 Comment
Northeast Power Coordinating Council Hydro One Networks Inc	No	Small utility or distribution provider is a relative term. A distribution provider may have an impact on the transmission network based on its design, configuration, connection point, and protection. Such an exception should apply regardless of the size of an entity. The concept discussed here is to define a radial system and not a small utility, as mentioned in the FERC Order. We do not believe that the SDT had sufficient discussions while crafting the proposed exclusion in regards to small utilities. The language used in the proposed clause

Organization	Yes or No	Question 10 Comment
		is only appropriate to establish a bright-line definition for a radial system.Many small utilities (and individual load customers or generation connections) have more than a single transmission source with a solid tap and, at the same time, be adequately protected and effectively isolated without any adverse impact on the transmission network. Such a practice and design is widely used across North America. Hence, we do not agree that this exclusion is an attempt to address the issue of small utilities. The definition and inclusions will force many small entities, load customers and generation unit owners to act and register as Transmission Owners. This may be in conflict with state or provincial regulatory act, Codes and Licenses. Consistent with the FERC Order, the ERO and the SDT should be aware of these conflicts and should not ignore them. The ERO and the SDT address this by providing explicit but simple provisions in the exception procedure by considering sound technical exception criteria that is flexible based on demonstration of evidence to justify the element's necessity for operation. Regulatory Acts and Rules will always overrule NERC requirements and the only evidence that should be required of small utilities/entities is: o Regulatory evidence o Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of their connection.
Tri-State Generation and Transmission Association, Inc.	No	We disagree with adding E4. This issue should be resolved by enhancing the NERC Statement of Compliance Registry Criteria, not by integrating registration exemptions in NERC definitions.
NERC Staff Technical Review	No	The basis for exclusion must be based on system reliability. The need for an interrupting device between the BES and excluded radial Elements is necessary for system reliability independent of ownership of the excluded radial Elements.
Dominion	No	It is Dominion's position that, all things being equal a generator or a load have similar, but typically inverse impacts of the bulk power system. The burden for small entities is similar, whether that entity is a LSE, DP, GO or GOP.
SPP Standards Review Group	No	What's the difference between the proposed E4 and E1(a)? Wouldn't they be the same? Would it be more appropriate to use single point of Transmission interconnection rather than single Transmission source in E1 and E4?
SERC Planning Standards Subcommittee	No	This seems to be covered by E1.
South Carolina Electric and Gas	No	This seems to be covered by E1.

Organization	Yes or No	Question 10 Comment
Michigan Public Service Commission(MPSC)	No	MPSC Staff Comments: The BES definition proposed by the SDT should not use the term “transmission”. BES should not equal transmission. A system element defined as BES should not determine jurisdiction, ownership, or require duplicative NERC registration.
SERC OC Standards Review Group	No	We suggest that our comments to Question 3 and Question 4 be incorporated. We also question whether this is going to have an unintended consequence of requiring Distribution Providers to register that otherwise wouldn’t have to register because some technical aspect has not been included in this exception.
Idaho Falls Power	No	Just as 100kv is an arbitrary number, so is 20MVA. We appreciate the NERC efforts made to define transmission material to the BES, and likewise feel the same efforts should be applied to small generation resources. There exists a large number of utilities with small generation serving local load on an LDN that will be possibly drawn into TO/TOP standard's compliance by the language in this draft.We hope the drafting team will define BES generation beyond a brightline criteria, as 20MVA lends no more clarity as to what is a BES asset than does 100kV.We believe it should be demonstrated as to why 20MVA is deemed a generation threshold of materiality to the BES. The opportunity now exists to address thresholds, not just the 100kV.
Western Electricity Coordinating Council	No	As written, it is unclear how this exclusion differs from the Radial exclusion. The term “single Transmission source” needs to be clarified - it could be read to be a single line or a single entity, which would change the meaning of this exclusion. It is also improper to include registration criteria in a definition. Furthermore, “small utility” needs to be defined more clearly. The last sentence appears circular because ownership of a transmission element would draw the owner into registration.
ReliabilityFirst	No	it needs to be clear that "all" items must be met to be excluded in E4, E4b seems to conflict with I2 that states it needs included, E4a should state a single source unless LDNs are allowed mutilple sources and then could be considered networked, E4c needs to define who make a the determination on flow and under all system configurations
Southern Company	No	This seems to be covered by Exclusions E1 and E3.
Electricity Consumers Resource	No	We support the concept and intent of the exclusion but it should apply equally to similarly situated loads such as manufacturing facilities that have loads comparable to small municipalities or rural cooperative utilities.

Organization	Yes or No	Question 10 Comment
Council (ELCON)		Thus the language should be amended as noted below:"Exclusion E4: Transmission Elements, from a single Transmission source connected at a voltage of 100 kV or greater, owned by a small utility or similarly situated load whose connection to the BES is solely through this single Transmission source, and without interconnected generation as recognized in the BES Designation Inclusion Items I2, I3, I4, or I5. A small utility or similarly situated load is recognized as an entity that performs a Distribution Provider or Load Serving Entity function but is not required to register as a Distribution Provider or Load Serving Entity by the ERO."
Central Maine Power Company New York State Electric & Gas and Rochester Gas & Electric	No	This exclusion E4 seems to already be covered under the E1 “radial” exclusion.
Intellibind	No	This does not address the full concerns of these small entities. In on case I am familiar with the entity has a switchyard over 100KV and it was convenient for the interconnected utility to utilize the location of the switchyard to add a line for the Transmission Operators purpose, however now that there are two lines into the switchyard it has affected the small utility and they will not have exemption as described in Question 10. The financial burden is very high for these entities when not exempted. In this particular case noted above, the entity is planning to eventually decommission its system, but is caught in having to bear the cost of operating a transmission system even though it is only one substation that is immediatly stepped down to 13.8Kv and feeding a small distributed load. The proposed exemption will still not allow this entity to be exempt.The ROP process does not serve these small utilities well as an alternative and the Drafting Team should resolve these issues in the definition of the BES if possible.
Hydro-Quebec TransEnergie	No	The case of small Utility is covered through other exclusions. However, the Facilities owned by small utility should have protection requirement applied.
US Bureau of Reclamation	No	The small entities can seek exclusion using the BES Exception Process developed under this project.
Grand Haven Board of Light and Power	No	We agree with addition of Exclusion E4, except that it should apply to small load serving distribution utilities even if they are required to register as a Distribution Provider and Load Serving Entity. In our last fiscal year, July 2009 through June 2010, the Grand Haven Board of Light and Power served 262,847 MWh and peaked at 54 MW. Even though we are required to register as DP/LSE, we are still a small utility. Please revise the definition of a small entity for the purpose of this exception to use more reasonable criteria.
South Texas Electric Cooperative, Inc.	No	I agree with everything up to “...but is not required to register...by the ERO”. There are many small utilities that fit into the scope and spirit of the exclusion BUT were required to register as DP and/or LSE by their ERO. This has generally been on the interpretation of “better safe”. Please remove the language which gives

Organization	Yes or No	Question 10 Comment
		this discretion to the ERO and insert language allowing already registered small utilities with have their registrations revoked or surrendered.
National Grid	No	This exclusion is not necessary. Many small utilities (and individual load customers or generation connections) have more than a single transmission source with a solid tap and, at the same time, be adequately protected and effectively isolated without any adverse impact on the transmission network. Such a practice and design is widely used across North America. Hence, we do not agree that this exclusion is an attempt to address the issue of small utilities. The definition and inclusions will force many small entities, load customers and generation unit owners to act and register as Transmission Owners. This may be in conflict with state or provincial regulatory act, Codes and Licenses, and may lead to jurisdictional challenges that could cause uncertainty and delay in implementing the new BES definition. Consistent with the FERC Order, the ERO and the SDT should be aware of these conflicts and should not ignore themThe ERO and the SDT address this by providing explicit but simple provisions in the exception procedure by considering sound technical exception criteria that is flexible based on demonstration of evidence to justify the element's necessity for operation. The only evidence that should be required of small utilities/entities is: o Regulatory evidence. o Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of their connection.
Electric Reliability Council of Texas, Inc.	No	These entities should be subject to the exception process. They may warrant "first instance" exclusion in that process, but any such action should occur there, as opposed to the definition of BES. ERCOT ISO believes this is more consistent with FERC's position that BES should reflect an objective threshold, with exceptions being subject to review by the ERO and FERC, as applicable. Accordingly, ERCOT ISO suggests that this issue be raised in the concurrent BES exception proceeding and ERCOT ISO reserves its right to comment on the substance in that proceeding.
ExxonMobil Research and Engineering	No	While the exclusion for a small utility makes sense, the exclusion should not be limited to a utility company. The SDT should extended the exclusion to similarly situated facilities or organizations with other primary business functions, such as industrial companies.
FortisBC	No	Small utility or distribution provider is a relative term. A smaller distribution provider may have an impact on the transmission network while a large one may not; this is based on their design, configuration and protection. Hence, such an exception should apply regardless of the size of an entity. Having said that, the concept discussed here is to define a radial system and not a small utility, as mentioned in the FERC Order. We do not believe that the SDT had sufficient discussions while crafting the proposed exclusion in regards to small utilities. The language used in the proposed clause is only appropriate to establish a bright-line definition for a radial system.It is worth noting that many small utilities (and individual load customers or generation connections) would have more than a single transmission source with a solid tap and, at the same

Organization	Yes or No	Question 10 Comment
		time, be adequately protected and effectively isolated without any adverse impact on the transmission network. Such a practice and design is widely used across North America. Hence, we do not agree that this exclusion is an attempt to address the issue of small utilities. The definition and inclusions will force many small entities, load customers and generation unit owners to act and register as Transmission Owners. In some parts of the continent this would be in conflict with state or provincial regulatory act, Codes and Licenses. Consistent with the FERC Order, the ERO and the SDT should be aware of these conflicts and should not ignore them for later. Hence, we suggest the ERO and the SDT address this by providing explicit but simple provisions in the exception procedure by considering sound technical exception criteria that is flexible based on demonstration of evidence to justify the element's necessity for operation. Regulatory Acts and Rules will always trump NERC requirements and hence we suggest that the only evidence that should be required of small utilities/entities is: o Regulatory evidence o Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of their connection.
American Transmission Company, LLC	No	ATC believes that small utilities have interfacing responsibilities, and should not be exempt if they own elements (e.g. CTs, batteries, etc.) that are part of a protection scheme that protects the BES Elements.
Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)	No	There is no legal basis to distinguish between "small utilities" and other similarly situated entities. Thus, to avoid unlawful discrimination, Exclusion E4 should be revised as follows:(Deleted language denoted by empty brackets: [ ].) Exclusion E4: Transmission Elements, from a single Transmission source connected at a voltage of 100 kV or greater [ ] whose connection to the BES is solely through this single Transmission source, and without interconnected generation as recognized in the BES Designation Inclusion Items I2, I3, I4, or I5. [ ]
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	No	An automatic interruption device should be required as in exclusion E1.
City of St. George	No	Is the transmission source a single line, a single substation? This needs to be defined. What is a small utility? This needs to be defined. Generation limits should also be revisited, see previous comments.
Southern California Edison Company	No	Small utilities should not be automatically excluded from the BES if the BES Definition continues to focus on the size of interconnecting generators to determine what facilities are included in the BES. Instead, small

Organization	Yes or No	Question 10 Comment
		utilities should be required to justify their exclusion using the exemption procedure and the Technical Principles for Demonstrating BES Exceptions. This would provide the necessary oversight to ensure these smaller systems continued to stay under the thresholds stipulated in the BES definition. In many areas, it is both faster and less expensive for renewable generators to interconnect with these systems, thus potentially allowing for the addition of large amounts of generation totaling more than the draft BES allowances within a relatively short period of time.
Idaho Power	No	As written, it is unclear how this exclusion differs from the Radial exclusion. The term “single Transmission source” needs to be clarified - it could be read to be a single line or a single entity, which would change the meaning of this exclusion. It is also improper to include registration criteria in a definition. Furthermore, “small utility” needs to be defined more clearly. The last sentence appears circular because ownership of a transmission element would draw the owner into registration.
Cogentrix Energy, LLC	No	We suggest that our comments to Question 3 and Question 4 be incorporated. We also question whether this is going to have an unintended consequence of requiring Distribution Providers to register that otherwise wouldn’t have to register because some technical aspect has not been included in this exception.
Clark Public Utilities	No	This proposed exclusion has no affect or benefit. If an entity is not required to register as a DP or LSE why do they then need to be exempted from a standard that does not apply to the entity. The Commission was obviously focusing on a small utility with facilities greater that 100 kV making that entity a Transmission Owner. A 100 kV facility owned by a utility with a small amount of load is either material or immaterial to the reliability of the BES irrespective of the amount of load that entity serves. Therefore the term ‘small utility” must refer to some other measure of size. This may be size of load, but also may include circuit miles of transmission greater than 100 kV, capacity of largest line greater than 100 kV line, and possible other measures of “smallness.”
The Dow Chemical Company	No	If this is adopted, it should apply to industrial sites as well as small utilities.
PJM	No	There is no technical justification to include/exclude elements based on the asset size of the owning company. The exclusion should be based on the technical merits.
New England States Committee on Electricity	No	This appears overly restrictive in that it only includes networks connected at a single source. Please see comments under 7 above.

Organization	Yes or No	Question 10 Comment
Southwest Power Pool	No	These entities should be subject to the exception process within the exclusion criteria. They warrant a "first instance" exclusion in that process, but any such action should occur there, as opposed to the definition of BES. SPP believes this is more consistent with FERC's position that BES should reflect an objective threshold, with exceptions being subject to review by the ERO and FERC, as applicable. It may prove through that process that these entities receive the presumption of exclusion, but that should take part in that process as opposed to being granted a de jure exemption from the definition. Accordingly, SPP suggests that this issue be raised in the concurrent BES exception proceeding as an exclusion criterion, and SPP reserves its right to comment on the substance in that proceeding.
Manitoba Hydro	No	Small utilities should be excluded under the definition of the BES without requiring an additional and specific exclusion.
ISO New England, Inc.	No	This exclusion would not be required if the automatic disconnect requirement was removed from E1. If E1 is not modified as proposed herein then a MW threshold might have to be considered for this E4 definition. E4 should have also been included in the draft definition as well as this comment form.
Xcel Energy	No	There seems to be an implication that if a facility is determined to be BES, registration is required. Yet, the registration criteria already includes exclusion of users, owners and operators of the BES from registration, if they do not meet all the criteria. So, we fail to see why a special exclusion is necessary.
Independent Electricity System Operator	No	Small utilities may be impactive to the bulk power system and as such should not be subject to a carte-blanche exemption but should be subject to assessment and if necessary exclusions after going through the exception process. The outcome of the exception process may well be that such small utilities can be excluded but this cannot be determined a priori. In addition, Exclusion E4 is worded very similarly to Exclusion E1. It is not clear what additional facilities will be excluded by E4 that are not already excluded by E1.
Golden Spread Electric Cooperative, Inc.	No	Suggested revision: Transmission Elements, from a single Transmission source connected at a voltage of 100 kV or greater, owned by a small utility whose connection(s) to the BES is(are) solely through this(these) single Transmission source(s), and without interconnected generation as recognized in the BES Designation Inclusion Items I2, I3, I4, or I5. The intent of the revision is to exlude a small utility with multiple radial connections to BES elements owned by others.
AltaLink	No	Small utility or distribution provider is a relative term. A smaller distribution provider may have an impact on the transmission network while a large one may not; this is based on their design, configuration and

Organization	Yes or No	Question 10 Comment
		protection. Hence, such an exception should apply regardless of the size of an entity. Having said that, the concept discussed here is to define a radial system and not a small utility, as mentioned in the FERC Order. We do not believe that the SDT had sufficient discussions while crafting the proposed exclusion in regards to small utilities. The language used in the proposed clause is only appropriate to establish a bright-line definition for a radial system.It is worth noting that many small utilities (and individual load customers or generation connections) would have more than a single transmission source with a solid tap and, at the same time, be adequately protected and effectively isolated without any adverse impact on the transmission network. Such a practice and design is widely used across North America. Hence, we do not agree that this exclusion is an attempt to address the issue of small utilities. The definition and inclusions will force many small entities, load customers and generation unit owners to act and register as Transmission Owners. In some parts of the continent this would be in conflict with state or provincial regulatory act, Codes and Licenses. Consistent with the FERC Order, the ERO and the SDT should be aware of these conflicts and should not ignore them for later. Hence, we suggest the ERO and the SDT address this by providing explicit but simple provisions in the exception procedure by considering sound technical exception criteria that is flexible based on demonstration of evidence to justify the element's necessity for operation. Regulatory Acts and Rules will always trump NERC requirements and hence we suggest that the only evidence that should be required of small utilities/entities is: o Regulatory evidence o Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of their connection.
Modern Electric Water Company	No	The BES definition has already had a significant economic (and operational) impact on a substantial number of small entities and those small entities have not adversely impacted the reliability of the BES. The Commission (and the SDT) should also consider the other side of the coin - an improved BES definition could have a positive impact on a significantly greater number of small entities than it will negatively impact small entities otherwise not currently registered. Crafting exclusions properly with industry suggestions should limit the small number affected by this proposed definition. Additionally, we point out that in one instance the SDT states that the BES definition does not address registration or the applicability of standards, yet in another instance is concerned what impact the definition will have on an entity's possible registration status. We don't believe you can have it both ways or continue to keep one's proverbial head in the sand any longer. We understand the SDTs scope is to provide a USABLE definition of the BES, but also understand that its intent is two-fold: 1) to correct what the Commission believes is a gap in reliability due to regional discretion, and 2) to remove ambiguity in what constitutes the BES so that industry can focus on and conduct business in a fashion that promotes reliable and efficient system operation and so that the RROs can implement their CMEPs. This second point is absolutely related to registration and the applicability of standards, and shouldn't be ignored.

Organization	Yes or No	Question 10 Comment
		As drafted, Exclusion E4 still would not allow for the exclusion of ALL small utilities that may inadvertently be included in the BES based on the currently-drafted definition, even though they are, indeed, small utilities that should be excluded from the BES. It appears that the SDT is struggling with the idea that the BES definition should properly evaluate every single element in North America by itself. We believe this is why the term "generally" was used in NERC's Statement of Compliance Registry Criteria (SCRC), and why the issue of the BES definition presently in front of the SDT cannot be entirely separated from registration and applicability of standards. If the SCRC will not be examined and modified similarly as the NERCs Rules of Procedure, then the BES definition must include some "grey area deference" for small utilities such as is the intent of E4. If it is the intent of the definition to exclude most small utilities from the BES, then exclusions should be granted based entirely on the definition. Otherwise, as the SDT correctly states, the RoP-based exclusion process will be flooded and ineffectual. As stated in the SCRC, the definition will initially identify those necessary, but still allows for refinements later. The SCRC utilizes NERC's approved definition of the BES, and will be "improved" by this BES definition. Therefore, craft E4 with language that does not limit its intent to exclude small utilities from the BES. Do not use metrics already used in other exclusions. Do not reference registration requirements in exclusions that comprise the definition of the BES - the BES should not be defined in terms of registration criteria. In Order 743, FERC defines a small utility in terms of an entity's annual MWhs sold. Consider aligning NERC's and FERC's definitions similarly.
City of Redding	No	Redding in theory supports this concept however the language proposed does little to improve the current LDN and Radial exemptions. Redding would like the SDT to continue exploring the issue however we have no suggestions for the definition level at this time. Redding does suggest that a viable alternative is to target this issue via the exception process by allowing a exception method to use system or entity "characteristics" as proof for an exception. This would allow a shorter and less burdensome exception process for small entities.
Tacoma Power		Tacoma Power supports the SDT's thoughtful approach to minimizing impacts to small entities. They have no measureable impact to the BES and should not be burdened with the exemption process.
Vermont Transco		The exclusion wording is difficult to understand and apply. Are their voltage levels where this would not apply (ex. 230 kV) or load levels that would be seen as too high? Cannot agree or disagree due to the wording
Exelon		Exelon is abstaining from voting on this item. How would this exclusion be different from E1? Furthermore, Exelon suggests that a definition of "Small Utility" would need to be developed.
BPA	Yes	Generally agree BPA would like to provide an exclusion for a small utility with multiple connections to a single Transmission source connected at a voltage of 100 kV or greater. An example would be a single long 115 kV

Organization	Yes or No	Question 10 Comment
		transmission line passing through a rural area where a small utility utilizes multiple taps to the 115 kV line to serve several radial systems
Cowlitz County PUD Cowlitz County PUD	Yes	Cowlitz supports the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that can ill afford the substantial costs that accompany imposition of mandatory compliance with reliability standards. Further, we agree that the small utilities covered by the exemption will have no measurable impact on the operation of the interconnected BES. In the Pacific Northwest, many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid. Further, the such resources used to comply with the reliability efforts unjustly take away from necessary resources needed for local quality of service efforts.
Small Entity Working Group (SEWG)	Yes	Yes, with some clarifying edits. The final sentence should be revised as follows: "For purposes of this exclusion, a 'small utility' is an entity that performs a distribution provider or load serving entity function but is not required to register as a Distribution Provider or Load Serving Entity by the ERO."
Florida Municipal Power Agency Transmission Access Policy Study Group Northern California Power Agency	Yes	FMPA supports this exclusion. For the sake of clarity, the final sentence should be revised to read as follows: "For purposes of this exclusion, a "small utility" is an entity that performs a Distribution Provider or Load Serving Entity function but is not required to register as a Distribution Provider or Load Serving Entity by the ERO."
American Municipal Power and Members	Yes	For the sake of clarity, the final sentence should be revised to read as follows: "For purposes of this exclusion, a "small utility" is an entity that benefits from the utility of the BES, but does not meet the registry criteria to perform functions in the BES."
National Rural Electric Cooperative Association (NRECA)	Yes	NRECA agrees with this approach, but also believes this could be addressed in the Statement of Compliance Registry Criteria document.
Overton Power District No. 5	Yes	We support exclusion E4, for small utilities, but we are unclear how small utilities are defined in the exclusion language presented here.

Organization	Yes or No	Question 10 Comment
PacifiCorp	Yes	PacifiCorp believes this concept is appropriate with the following concern: Essentially the only difference between this proposed exclusion and E1a is this proposed exclusion does not include “an automatic interruption device”. So if the proposed E4 is left as a stand-alone exclusion it should also require “an automatic interrupting device” qualifier. Technical justification for requiring an interrupting device is the same justification used by the SDT in E1.
FHEC	Yes	this begs the question of the Statement of Compliance Registry Criteria being updated also.
South Texas Electric Cooperative, Inc.	Yes	There are many small utilities that fit into the scope and spirit of the exclusion BUT are currently registered as a DP and/or LSE. Will this exclusion remove them from registration OR should language be inserted that automatically revokes the NERC registrations of “already registered” small utilities. I recommend that any such revocation be handled by NERC and NOT by the various EROs for the sake of consistency.
Sacramento Municipal Utility District (SMUD)	Yes	As written, it is unclear how this exclusion differs from the Radial exclusion. Furthermore, “small utility” needs to be defined more clearly. The last sentence appears circular because ownership of a transmission element would draw the owner into registration. Small entities have no measurable impact to the BES and should not be burdened with the exemption process.
Illinois Municipal Electric Agency	Yes	With the following clarifying edits. The final sentence should be revised as follows: “For purposes of this exclusion, a ‘small utility’ is an entity that performs a distribution provider or load serving entity function but is not required to register as a Distribution Provider or Load Serving Entity by the ERO.”
Michgan Public Power Agency	Yes	But I question if the "Small Entity definition" as indicated in Order 743 language "we certify that this Final Rule will not have a significant economic impact on a substantial number of small entities." has been appropriately addressed.
Public Utilities Commission of Ohio	Yes	It appears this could be applied consistently with other exclusions.
New York State Dept of Public Service	Yes	This exclusion is consistent with E1 and E2. There should not be discrimination against similarly situated loads.
Springfield Utility Board	Yes	Springfield Utility Board supports the SDT in its efforts to avoid unintended consequences from changes to

Organization	Yes or No	Question 10 Comment
		the BES definition, especially for small entities that cannot afford the substantial costs that accompany imposition of mandatory compliance with Reliability Standards. Further, we agree that the small utilities covered by the exemption will have no measureable impact on the operation of the interconnected BES. In the Pacific Northwest, many small entities were required to register by virtue of owning a very small portion of the region's 115 kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance, therefore, will have no measurable effect in improving the reliability of the interconnected Grid.
Springfield Utility Board	Yes	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
American Electric Power	Yes	AEP agrees with the proposed exclusion to the extent that such excluded small utilities would continue to provide any needed information the registered entities have requested from the excluded small utilities to ensure the reliability compliance of those registered entities.
MidAmerican Energy Company	Yes	Arbitrarily excluding small entities could affect reliability depinding on the specific transmission facilities the entity owns and/or operates.
Western Area Power Administration	Yes	As discussed in the Applicability of Federal Power Act Section 215 to Qualifying Small Power Production and Cogeneration Facilities document, the concerns regarding the Regulatory Flexibility Act Analysis of 1980 stated in section VII does not define the phrase a 'significant economic impact' from the perspective of a small entity. A small entity may have staffed maintenance personnel, to accomplish its' own maintenance but now prefers to transfer by written agreement with another entity based upon NERC's compliance registry criteria,

Organization	Yes or No	Question 10 Comment
		in order to bypass the NERC registration. The significant economic impact is the cost associated with the reduced work load for the small entity, maintenance personnel, and the work contracted to another entity.
Western Montana Electric Generating and Transmission Cooperative Public Utility District No. 1 of Snohomish County, Washington Blachly Lane Electric Cooperative Northern Wasco County PUD PUD No. 2 of Grant County, Washington Central Electric Cooperative Clearwater Power Company Consumers Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Inc Okanogan Electric Cooperative PNGC Power Raft River Rural Electric Cooperative Salmon River Electric	Yes	WMG&T supports the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that can ill afford the substantial costs that accompany imposition of mandatory compliance with reliability standards. Further, we agree that the small utilities covered by the exemption will have no measurable impact on the operation of the interconnected BES. In the Pacific Northwest, many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.

Organization	Yes or No	Question 10 Comment
Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Clallam County PUD No.1 Chelan PUD – CHPD Kootenai Electric Cooperative Public Utility District No. 1 of Franklin County Midstate Electric Cooperative Central Lincoln Northwest Requirements Utilities Big Bend Electric Cooperative, Inc		
Imperial Irrigation District	Yes	
Santee Cooper	Yes	
MRO's NERC Standards Review Forum	Yes	
ACES Power Participating Members	Yes	
Tennessee Valley Authority	Yes	
Arizona Public Service Company	Yes	
Rayburn Country Electric	Yes	

Organization	Yes or No	Question 10 Comment
Cooperative, Inc.		
New York Power Authority	Yes	
Luminant Energy	Yes	
Dayton Power and Light Company	Yes	
Fayetteville Public Works Commission	Yes	
Florida Keys Electric Cooperative	Yes	
East Kentucky Power Cooperative, Inc.	Yes	
Farmington Electric Utility System	Yes	
Sierra Pacific Power Co d/b/a NV Energy	Yes	
Colorado Springs Utilities	Yes	
Chevron Global Power, a division of Chevron U.S.A. Inc.	Yes	
Muscatine Power and Water	Yes	
Puget Sound Energy	Yes	
GTC	Yes	
Long Island Power Authority	Yes	

Organization	Yes or No	Question 10 Comment
Pepco Holdings Inc	Yes	
Oncor Electric Delivery Company LLC	Yes	
City of Anaheim	Yes	
MEAG Power	Yes	
Utility System Efficiencies, Inc.	Yes	
Response: The basis for the additional exclusion was predicated by the circumstances of radial systems and the demarcation of the automatic interrupting device. With the change of the demarcation point back to the point where the tap line intersects with the transmission line; this proposed exclusion is unnecessary. The SDT will drop consideration for this proposed exclusion given the change to radial systems.		

11. In Order No. 743, the Commission addressed the need to differentiate between Transmission and distribution in the revised definition of the Bulk Electric System (BES). Specifically, the Commission stated that local distribution facilities are to be excluded from the BES. The SDT believes that it has excluded local distribution facilities through the revised bright-line core definition and specific inclusions and exclusions. Do you agree with this position? If not, please provide specific comments and suggestions on what else needs to be addressed or added.

Summary Consideration: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT has also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that the revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunities to exclude distribution facilities above 100 kV. In addition, the "cranking path" and "automatic interrupting devices" language have been removed from the draft BES definition.

Bulk Electric System (BES): Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.

I~~3~~2 - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.

I~~4~~3 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.

E1 - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or,

b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,

c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

E3a. Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

E3b. Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

E3c. Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Organization	Yes or No	Question 11 Comment
Northeast Power Coordinating Council	No	The current definition drafted by the SDT has not differentiated between Transmission and Distribution, nor excluded distribution facilities from the BES, nor addressed the issue of local distribution facilities above 100kV. It is important for the ERO and the SDT to understand and be consistent with the FERC Order for these important but complex issues. Many parts of the continent could be in conflict with state or provincial regulatory act, Codes, and Licenses. The ERO and SDT and RoP teams be aware of these conflicts and not disregard them, as they will pose many implementation complexities and confusion within the industry. Regulatory Acts and Rules will always supersede NERC requirements and hence it is important that ERO should neither be caught in regulatory conflict nor put entities in these situations.As responded to in Question 10, the ERO and SDT can address this by providing explicit but simple provisions in the exception criteria (to be used by exception procedure) by putting forward required technical assessments , which are based on a demonstration of evidence to justify the element's necessity for operation. For example, suggest that for local distribution, the evidence that should be required is: o Regulatory evidence o Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of

Organization	Yes or No	Question 11 Comment
		their connection Some of the other key attributes of such an exception criteria should be: o Elements are not to be part of interconnection between two balancing authority or contribute to IROLs o Entire system cannot be classified as contiguous o Entity to justify whether or not the elements are necessary for the operation of the interconnected transmission network o Distinguish if the element in question supplies load centers, major cities, serves the national interest and/or possibly impact national commerce or national security, or is identified by the relevant regulatory authority Accordingly, the exception criteria should ONLY list a menu of items and a prescribed report template that should be assessed and presented by an entity as their evidence and justification for exception to a RE, the ERO and any relevant regulatory authority. This evidence and justification would be used by the ERO as part of its decision making process.
Hydro One Networks Inc	No	We commend the SDT for their concept in putting forward a 100kV BES bright-line definition. However, we do not believe that the current definition drafted by the SDT has differentiated between Transmission and Distribution or excluded distribution facilities from the BES, or addressed the issue of local distribution facilities above 100kV. It is worth noting that different jurisdictions may use different terminology for "distribution" or non transmission facilities or elements. For example, some jurisdictions label certain facilities as distribution which connect and are owned and operated by the distribution utility, customer or a generator customer while other label them as connection facility or elements.(See Q10 response)
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT has also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Pepco Holdings Inc	No	see answer to #5
Response: See response to Q5.		
American Municipal Power and Members	No	

Organization	Yes or No	Question 11 Comment
Response: Thank you for your response. In the future please provide more information to let us know more specifically what you disagree with.		
Tri-State Generation and Transmission Association, Inc.	No	See the comments to Question 7.
Response: See the response to Q7.		
Dominion	No	Dominion believes the core BES definition should include any non-radial Element or Facility operated at 100 Kv or higher and should exclude any radial Element or Facility (regardless of operating voltage) as well as non-radial Element or Facility operated below 100 kV. The core definition should also include defined criteria that are applied to an Element or Facility to determine whether or not it meets the intent of the Section 215 of Federal Power Act Section 215 defines the bulk power system as (1) facilities and control systems necessary for operating an interconnected electric energy transmission network; and (2) electric energy from generation facilities needed to maintain transmission system reliability. (3) However, Section 215 excludes facilities used in the local distribution of electric energy From the definition of the bulk power system. An Element or Facility should be included where the Element or Facility is necessary for operating an interconnected electric energy transmission network or is needed to maintain transmission system reliability. Likewise an Element or Facility should be excluded where the Element or Facility is not necessary for operating an interconnected electric energy transmission network or is needed to maintain transmission system reliability.Dominion agrees that the BES definition should exclude local distribution facilities under state jurisdiction. In specific instances (including UFLS programs and transmission protection systems that are implemented on distribution elements or radial transmission) local distribution facilities can be included in approved NERC reliability standards following under explicit standards dedicated to their explicit mission without their automatic inclusion in a definition of BES that could infringe on state jurisdiction.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT has also included in the definition a statement that excludes facilities used in local distribution of electric energy. NERC Reliability Standards can apply to non-BES Facilities and compliance can be enforced for those entities in the NERC Compliance Registry. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
SPP Standards Review Group	No	The inclusion of Cranking Paths into the BES without regard to voltage level has the potential to pull distribution facilities into the BES. (See Question 5)

Organization	Yes or No	Question 11 Comment
Response: The SDT removed Cranking Paths from the BES definition. **I43** - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
Michigan Public Service Commission(MPSC)	No	MPSC Staff Comments: The intent of the updated BES definition should be to classify facilities required to meet mandatory NERC reliability standards. Unnecessary and costly duplication of standards work should be avoided.
Response: The SDT is revising the BES definition to meet the FERC directives in Order Nos. 743 and 743-A. The SDT does not believe it is contributing to any unnecessary and costly duplication of standards work. No change made.		
National Rural Electric Cooperative Association (NRECA)	No	NRECA believes the definition should explicitly state that facilities used in local distribution are excluded from the BES.
United Illuminating	No	The core definition should state that local distribution facilities are not included.
Response: The SDT included in the definition a statement that excludes facilities used in local distribution of electric energy. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy as established by applicable regulatory authorities.		
Idaho Falls Power	No	In the exclusions, we feel there has not been given enough clarification of generation assets on a LDN, specifically, is a single generation resource >20MVA but <75 MVA excluded? This does not seem clear because of the seeming inconsistencies of E2(i) and E3(b).Further, we believe generation on an LDN serving local load wherein the net flow is into the LDN should be excluded.
Response: The SDT made changes to the LDN, now LN, to address your comment and the comments of others. Specifically, LNs are permitted to have generating resources that in the aggregate do not exceed 75 MVA, and such generating resources are not already included under I3 of the BES definition. The SDT believes these changes clarify the amount of generation permitted in the LN. **E3a**. Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;		

Organization	Yes or No	Question 11 Comment
Overton Power District No. 5	No	Facilities used in local distribution should not be swept up into the BES
Western Montana Electric Generating and Transmission Cooperative	No	While WMG&T agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions - will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1, WMG&T believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. As discussed in our answer to Question 3, WMG&T notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that "users" of the BES can be subject to reliability regulation. Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BESDTF Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.
Texas Industrial Energy Consumers (TIEC)	No	TIEC appreciates the SDT's effort to identify situations where facilities rated above 100 kV should still be categorically excluded from the BES definition This recognition is consistent with the concerns raised by TIEC and many of its individual members in comments to the FERC in Docket RM09-18-000. However, TIEC submits that the SDT's approach to these exclusions should be revised to meet FERC's express recognition in Order No. 743-A that "facilities used for local distribution are excluded from the Bulk-Power System definition under section 215, and thus are excluded from the bulk electric system." Order No. 743-A at Â¶58. It is crucial that the BES definition is drafted in a way that recognizes that it is the transmission provider's responsibility to ensure that equipment is in place to protect the BES from the operations of excluded facilities, not the responsibility of a person owning facilities involved in the local distribution of electricity. These issues are addressed in further detail in response to the specific exclusions.
Electricity Consumers Resource Council (ELCON)	No	Section 215 of the Federal Power Act denies FERC jurisdiction over facilities used in the local distribution of electric energy. FERC has recognized that since facilities used in the local distribution of electric energy "are exempted from the Bulk-Power System, they also are excluded from the bulk electric system." Section 215 of the Federal Power Act does not qualify the exclusion from FERC jurisdiction of "facilities used in the local distribution of electric energy." For example, Section 215 does not state that:--The term "bulk power system" "does not include facilities used in the local distribution of electric energy [unless needed for reliability purposes];" or --The term "bulk power system" "does not include facilities [with automatic interruption devices] used in the local distribution of electric energy."Any definition of the bulk electric system that does not exclude all "facilities used in the local distribution of electric energy" is unlawful.

Organization	Yes or No	Question 11 Comment
		Further, the definition of the bulk electric system must recognize that Section 215 of the Federal Power Act does not allow the potential reliability impact of a facility to determine whether the facility is local distribution or transmission. By excluding all facilities used in the local distribution of electric energy from the definition of the Bulk-Power System in Section 215, Congress recognized that while facilities used in the local distribution of electric energy may be part of the Bulk-Power System, they are, nonetheless, not FERC jurisdictional. Thus, "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" that are used in the local distribution of electric energy are not FERC jurisdictional regardless of the potential reliability impact of the facilities.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Tennessee Valley Authority	No	We cannot be certain of the effect of the BES definition on distribution facilities until our comments to the inclusions and exclusions above are considered.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes these changes address your concerns. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Alabama Public Service Commission	No	In drafting the inclusions and exclusions that accompany the core BES definition, the SDT needs to be very careful in considering jurisdictional issues. FERC has recognized in its recent orders regarding the BES definition that local distribution facilities are not subject to its jurisdiction under Section 215 of the Federal Power Act. As the SDT considers the scope of the inclusions and exclusions from the BES Definition, it needs to consider whether the proposed provisions only include: 1) facilities or control systems that are "necessary" for operating an interconnected electric transmission network and 2) whether they involve generation facilities that are "needed" to maintain transmission system reliability. If the proposed inclusions and exclusions result in the BES definition applying to facilities beyond this "necessary" and "needed" scope (such as local distribution facilities), then the definition would be inconsistent with Section 215 and could improperly make those facilities subject to "reliability standards" contrary to the Federal Power Act.

Organization	Yes or No	Question 11 Comment
		The APSC generally supports the BES Core Definition and all three Exclusions proposed by the SDT. The APSC strongly supports Exclusion E3 for local distribution networks and Exclusion E1 for radial systems (subject to the concerns below). Exclusion E3 will ensure State jurisdiction over facilities that are used in the local distribution of electric energy. The APSC does not support Inclusion I2 for individual generating units greater than 20 MVA. Inclusion I2 should be eliminated entirely because it will result in too many radial sub-transmission load serving facilities losing their non-BES status, when those facilities are not "necessary" for bulk power system reliability. The APSC supports Inclusion I3 (75MVA) as a sufficient generating unit threshold for purposes of this definition.If Inclusion I2 is eliminated, then the reference to Inclusion I2 within Exclusion E1 should also be eliminated.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
ReliabilityFirst	No	we feel that BES elements have been included in teh exclusions
PJM	No	The bright line exclusion includes facilities that would normally be BES facilities but are excluded based on the asset size of the owner.
Response: The SDT does not believe it has excluded BES Elements in the draft BES definition. The SDT made a number of clarifying changes to the draft BES		

Organization	Yes or No	Question 11 Comment
definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Central Maine Power Company New York State Electric & Gas and Rochester Gas & Electric	No	Transmission and distribution facilities are already mutually exclusive and are already classified and reported in FERC Form 1. The SDT definition may have rolled in considerable portions of the distribution system for consideration as BES. A small generator that is entered into the black start program would make the complete cranking path BES. As documented previously this inclusion of immaterial generators and subsequently their distribution cranking paths is at odds with the Compliance Registry.
Exelon	No	As highlighted in the answers to Questions 5 and 7, Exelon does not believe that facilities used in local distribution of electric energy have been fully excluded in the draft BES definition. For example, there are many examples of black start cranking path facilities that are <100kV and that are currently defined as facilities used in the "local distribution of electric energy".
Response: The SDT removed Cranking Paths from the BES definition. The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy. **I43** - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
Western Area Power Administration	No	Numerous distribution lines in the western US are 115kV, and some are being upgraded from 115kV to 230kV.
Intellibind	No	Due to the voltage bright line of 100kV there is still a question of what makes up sub-transmission. Many rural companies with large geographic areas use the 115kV system internally as sub transmission, but because of the bright line it is considered part of the transmission system. This is not its purpose, or how it is operated. There are no commercial paths, and no transmission flow through. On the other hand there are significant generation resources (significantly over 20MVA) that are interconnected directly through the sub transmission system to the BES, and by definition, since they are not interconnected at 100kV, they are

Organization	Yes or No	Question 11 Comment
		exempted from BES status. Some of these facilities do have direct impact on the BES.
Public Utility District No. 1 of Snohomish County, Washington	No	While Snohomish County PUD agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions - will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1, Snohomish believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. To give a further example, assume that a local distribution utility operates a distribution network that currently would be excluded from the SDT's definition, but that a cogeneration facility with a capacity of 30 MVA and average production of 15 MW is constructed in one of the industrial areas served by local distribution facility and the output is purchased by one of the industrial customers. Because of inclusion I2, the local utility would now be classified as owning BES facilities, even though the output of the generator rarely exceeds 20 MW in practice and the output is, as a matter of physics, absorbed by the surrounding industrials loads rather than being transmitting onto the interconnected grid. Further, the fundamental nature of the local distribution facilities has not changed. They are still used to deliver electric power to the utility's end-use customers, not to deliver power on the wholesale market across the interconnected bulk grid. Hence, the result of the SDT's definition is to include "facilities used on the local distribution of electric energy" in contravention of FPA Section 215(a)(1), 16 U.S.C. Â§ 8240(a)(1). The practical result of the improper classification would be that the local utility would be required to register as a Transmission Owner and Transmission Operator, and would incur substantial costs to comply with requirements that are designed to ensure the reliable operation of transmission lines that are part of the interconnected grid, not local distribution facilities. For the reasons explained in the papers published by the Project 2010-07 Task Force, the result is substantially increased compliance costs that produce little or no improvement in the reliability of the interconnected bulk system. Accordingly, if viewed in isolation, the SDT's core definitions and list of inclusions/exclusions do not comply with the statute or produce optimum benefits for bulk system reliability. Whether the SDT's approach complies with the statute can only be determined by examining the Exception process now under development, in conjunction with the SDT's definition. If the Exception process results in the exclusion of facilities that are improperly swept into the BES by the bright-line thresholds included in the SDT's definition, and the Exception can be attained at a reasonable cost to the involved entities, then the SDT will have achieved a result that complies with the statute. But this conclusion can be reached only upon review of the entire package, not just the core definition and list of inclusions/exclusions. In this regard, as discussed in our answer to Question 3, Snohomish notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that "users" of the BES can be subject to reliability regulation. 16 U.S.C. Â§ 824o(b). Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BES Task Force

Organization	Yes or No	Question 11 Comment
		generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Company Consumers Power Inc. Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Inc Okanogan Electric Cooperative PNGC Power Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative	No	We agree that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions - will be effective in removing some local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed in our answer to Question 1, the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES.
Northern Wasco County PUD Chelan PUD – CHPD Kootenai Electric Cooperative	No	While Northern Wasco County PUD agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions - will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1, Northern Wasco County PUD believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. As discussed in

Organization	Yes or No	Question 11 Comment
Public Utility District No. 1 of Franklin County Northwest Requirements Utilities Big Bend Electric Cooperative, Inc. Cowlitz County PUD		our answer to Question 3, Northern Wasco County PUD notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that "users" of the BES can be subject to reliability regulation. Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BESDTF Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.
Clallam County PUD No.1	No	While Clallam County PUD agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions - will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1, Clallam believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. To give a further example, assume that a local distribution utility operates a distribution network that currently would be excluded from the SDT's definition, but that a cogeneration facility with a capacity of 30 MVA and average production of 15 MVA is constructed in one of the industrial areas served by local distribution facility and the output is purchased by one of the industrial customers. Because of inclusion I2, the local utility would now be classified as owning BES facilities, even though the output of the generator rarely exceeds 20 MVA in practice and the output is, as a matter of physics, absorbed by the surrounding industrials loads rather than being transmitting onto the interconnected grid. Further, the fundamental nature of the local distribution facilities has not changed. They are still used to deliver electric power to the utility's end-use customers, not to deliver power on the wholesale market across the interconnected bulk grid. Hence, the result of the SDT's definition is to include "facilities used on the local distribution of electric energy" in contravention of FPA Section 215(a)(1), 16 U.S.C. Â§ 8240(a)(1). The practical result of the improper classification would be that the local utility would be required to register as a Transmission Owner and Transmission Operator, and would incur substantial costs to comply with requirements that are designed to ensure the reliable operation of transmission lines that are part of the interconnected grid, not local distribution facilities. For the reasons explained in the papers published by the Project 2010-07 Task Force, the result is substantially increased compliance costs that produce little or no improvement in the reliability of the interconnected bulk system. Accordingly, if viewed in isolation, the SDT's core definitions and list of inclusions/exclusions do not comply with the statute or produce optimum benefits for bulk system reliability. Whether the SDT's approach complies with the statute can only be determined by examining the Exception process now under development, in conjunction with the SDT's definition. If the Exception process results in the exclusion of facilities that are improperly swept into the BES by the bright-line thresholds included in the SDT's definition, and the exclusion can be accomplished at a reasonable cost to the involved entities, then the SDT will have achieved a result that complies with the statute. But this

Organization	Yes or No	Question 11 Comment
		conclusion can be reached only upon review of the entire package, not just the core definition and list of inclusions/exclusions. In this regard, as discussed in our answer to Question 3, Clallam notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that "users" of the BES can be subject to reliability regulation. 16 U.S.C. Â§ 824o(b). Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BES Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.
Electric Reliability Council of Texas, Inc.	No	See response to question 1 - ERCOT ISO agrees that distribution facilities should be excluded, and such facilities are generally excluded in ERCOT ISO's proposed alternative definition. However, FERC stated in 743 and 743-A that it has the right to determine if facilities are distribution or transmission. Accordingly, to respect the FPA explicit exclusion of distribution facilities and FERC's authority to determine if a facility is transmission or distribution, ERCOT ISO position is that the general exemption should be in the BES definition, but any such exemptions must be subject to the exemption process to facilitate FERC's authority to make the relevant determination. With respect to that process, it may provide for a presumptive exclusion with additional at FERC's discretion. ERCOT ISO reserves its rights to comment on the criteria for exclusion/exemption/inclusion in that proceeding. In addition, the exception process should provide for the ability to include certain distribution facilities if the inclusion criteria of the exception process indicate such action is appropriate.
MidAmerican Energy Company	No	We disagree that the SDT has appropriately excluded local distribution facilities through the revised bright-line core definition and specific inclusions and exclusions. A similar bright line criterion excluding facilities below 100 kV would be better. The intent is to clearly define facilities below 100kV (exclusive of resources added under criterion I4) as local distribution (excluded from FERC jurisdiction in accordance with the Federal Power Act). Critical facilities below 100 kV would be brought back in under the provisions of inclusion exception criteria of the Technical Principles for Demonstrating BES Exceptions procedure.
Springfield Utility Board	No	While SUB agrees that the approach adopted by the SDT, a core definition, couple with specific inclusions and exclusions, will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. SUB believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. SUB notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt.

Organization	Yes or No	Question 11 Comment
Springfield Utility Board	No	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
Midstate Electric Cooperative	No	While MSEC agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions - will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1,MSEC believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. As discussed in our answer to Question 3, MSEC notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that “users” of the BES can be subject to reliability regulation. Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BESDTF Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.
Public Utilities Commission of Ohio	No	While it appears there was an attempt to draft the standard to comply with the Federal Power Act, the issues outlined throughout the questions above raise concerns that local distribution could easily get captured in NERC and FERC reliability standards needlessly and inappropriately.

Organization	Yes or No	Question 11 Comment
New England States Committee on Electricity	No	As stated in 1 above, NESCOE is concerned that the proposed definition may unintentionally incorporate facilities into the BES that do not have a direct impact on the reliability of the system, potentially imposing significant costs without meaningful reliability benefits.
AltaLink	No	We commend the SDT for their concept in putting forward a 100kV BES bright-line definition. However, we do not believe that the current definition drafted by the SDT has differentiated between Transmission and Distribution or excluded distribution facilities from the BES, or addressed the issue of local distribution facilities above 100kV. We believe that the ERO and SDT can address this by providing explicit but simple provisions in the exception criteria (to be used by exception procedure) by putting forward a menu of key technical assessments , which are based on demonstration of evidence to justify the element's necessity for operation. For example, we suggest that for local distribution, the evidence that should be required is: o Regulatory evidence o Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of their connectionWe suggest that the exception criteria should ONLY list a menu of items and a prescribed report template that should be assessed and presented by an entity as their evidence and justification for exception to a RE, the ERO and any relevant regulatory authority. This evidence and justification would be used by the ERO as part of its decision making process.
Modern Electric Water Company	No	The proposed definition continues to inject ambiguity in that it introduces the use of the separately-defined capitalized term "Transmission". In NERC's Glossary of Terms (May 24, 2011), "Transmission" is defined in terms of function rather than voltage. As it should, the core definition implies that only Elements used for the transfer of energy to points where it is transformed for delivery to customers as well as certain resources are considered to be included in the BES. However, it also uses voltage, and we do not believe that the proposed definition goes far enough to distinguish between T and D. Under the language of the core definition, there exists a two-stage qualifier for non-resource Elements - namely that it must first be used for Transmission and not for "Distribution", and secondly, that it be operated above 100kV. Rather, the BES cannot contain Elements used for "Distribution" (a term not explicitly defined, but extrapolated from other NERC glossary terms to mean the "wires" between the transmission system and the end-use customer, and NOT defined by voltage). While the Exclusions detail characteristics of specific distribution-like Elements, we suggest that the core BES definition contain language explicitly excluding Distribution (there are Elements that are neither qualifying radials as defined in E1 nor local distribution networks as defined in E3). Section 215(a)(1) contains specific language that could be used in the core definition in this instance.
Michgan Public Power Agency	No	As I have indicated in my comments above the "small entity definition" is not being used when the 100 KV, 20 MVA, and 75 MVA aggregate are being used only. A unit with a long start up time and a low capacity factor and/or availability factor and connected to a local distribution system is interconnected to the BES has little opportunity to be counted on to support the BES during a critical event. With the environmental issues out

Organization	Yes or No	Question 11 Comment
		there it could be expected that owners of these types of units may well decide on economics of the issue and retire such units. How would the reliability of the BES be served then?
City of Redding	No	Redding agrees that addressing Radial's and LDN's in the core definition is a great first step in identifying distribution facilities, however there will still be a sizeable amount of elements operated over 100 kV that will not be identified as distribution facilities through the efforts of the brightline. Additionally, as noted in question #1, in the Western Interconnect the majority of 100 kV elements are used as Distribution facilities. Therefore, the exclusions E1 & E2 will help ease the burden of NERC and the Regional Entity in the West by reducing the number of Exception Process applications. Also, Redding believes the SDT needs to take a more literal approach to FERC's Orders and define the term "*necessary for operating the interconnected transmission network"* and clearly *"establish whether a particular facility is local distribution or transmission".* Without a clear distinction of these two foundational principles it will be difficult to remove the confusion between the Regulators and Entities as to the term "necessary".
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Hydro-Quebec TransEnergie	No	See comments on E3 (Q.9)
Response: See response to Q9.		
Oregon Public Utility Commission Staff	No	Without BES "demarcation" and "contiguous" principles being addressed in the proposed BES definition, this question is difficult to answer. NERC Staff has submitted written comments to this project stating that the BES "must be contiguous." Instituting a contiguous BES with Inclusion I2, for example, would result in a substantially over-inclusive BES definition. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of distribution elements that nothing to do with improving or protecting the reliability of bulk transmission system.There is no compelling reason to adopt a "contiguous" BES down into local distribution systems. Section 215 of the FPA of 2005 gives FERC jurisdictional authority over "users" as well as "owners" and "operators" of the bulk power system. Consequently, FERC has the jurisdictional authority to require generation and other entities in the Compliance Registry to comply with applicable NERC requirements. Hence, even where an entity does not own or

Organization	Yes or No	Question 11 Comment
		operate BES assets, it could still be required, for example, to provide necessary information to the applicable Reliability Coordinator or Planning Coordinator and to participate in programs to prevent instability, uncontrolled separation, or cascading outages to the bulk transmission system. This approach would fully achieve the goals of bulk transmission system reliability without imposing the full BES regulatory compliance burden on local distribution elements.
National Association of Regulatory Utility Commissioners		The standard as currently written seems to exempt most local distribution from NERC and FERC reliability standards. Section 215 of the Federal Power Act requires such exemptions. There remain some outstanding concerns, however. For example, earlier comments from NERC staff have suggested that the BES needs to be contiguous. If the definition were to require continuity, it would likely sweep in many local distribution facilities that should not (and cannot under the statute) be included in the BES definition.
Response: The SDT did not adopt a "contiguous" BES down into the local distribution systems. The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Grand Haven Board of Light and Power	No	The exclusions do not properly address the exclusion of single automatic interrupting device that serves a radial, load serving system and, through its operation, does not affect the BES.
Response: The SDT removed the requirement for an automatic interrupting device for radial exclusions. **E1** - ~~Any r~~Radial system~~s~~: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:		
FHEC	No	Not until the Statement of Compliance Registry Criteria is conformed to this proposed definition.
South Texas Electric Cooperative, Inc.	Yes	I agree, but believe that those distribution companies that were forced to register as LSEs under FERC interpretation should be excluded as well.
South Texas Electric Cooperative, Inc.	Yes	I agree, but believe that those local distribution companies operating below the bright-line that were forced to register as LSEs under FERC Order on Compliance Filing (October 16, 2008) should be excluded as well. For example, BAL-005-0.1b, CIP-001-1a, EOP-002-3 and others do not apply to DPs but affect small local

Organization	Yes or No	Question 11 Comment
		utilities as LSEs. If, according to FERC Order 743 a small local distribution utility would be rightly excluded from DP standards, then, by the same logic and as a distribution-level LSE, they should be excluded from LSE standards as well.If an operating system voltage below 100kV is too low to affect the BES/BPS, then it stands to reason that their connected load is too small as well. If not - then another bright-line should be established in the spirit of FERC Order 743 to differentiate between power flow across the BES/BPS and power flow to end-use consumers.
Response: The SDT was assigned the job of revising the BES definition as required by FERC Order Nos. 743 and 743-A. Any changes to the ERO Statement of Compliance Registry Criteria are outside the scope of the SDT's assigned work. No change made.		
Vermont Transco	No	The inclusion of all black start units "regardless of voltage", the unclear definition of "automatic interruption device" and "common bus" could lead to local distribution company facilities being included in the definition of BES.
ISO New England, Inc.	No	The SDT definition will unnecessarily roll in portions of the distribution system for consideration as BES. A small generator that is entered into the black start program would make the complete cranking path BES. As documented previously this inclusion of immaterial generators and subsequently their distribution cranking paths is at odds with the Compliance Registry.
Response: The SDT removed the requirement for (1) an automatic interrupting device for radial exclusions and (2) all Cranking Paths regardless of voltage from the draft BES definition. In addition, the "common bus" language has been deleted from the draft BES definition. **E1** - ~~Any r~~Radial systems: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: **I43** - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
National Grid	No	We don't believe the bright-line core definition and specific inclusions and exclusions prevent distribution from being considered as BES. Actually, it seems like a lot of distribution will be considered BES according to the inclusions and exclusions. (E1 may be interpreted to include step downs if they don't have automatic interruption devices and possibly the tied through distribution system to the other step-down transformer that doesn't have an automatic interruption device from the same Transmission source) If the definition is not revised to exclude more distribution, we are concerned about how the distribution elements that will be considered BES under the new definition will be classified. The BES definition should not be used to differentiate between transmission and distribution. It is important for the ERO and the SDT to understand and be consistent with the FERC Order for these important but complex issues. There could be conflicts with state or provincial jurisdictions. The ERO and SDT and RoP teams should be aware of these conflicts and not

Organization	Yes or No	Question 11 Comment
		disregard them, as they will pose many implementation complexities and confusion within the industry, and may lead to jurisdictional challenges that could cause uncertainty and delay in implementation of the new BES definition. It is important for the ERO to not put entities in situations where there is some confusion or conflict.Removing I4, the inclusion regarding blackstart resources and cranking paths, will prevent distribution from being considered as BES. Also, clarification that step downs which have one winding which is less than 100 kV but are tapped off of the BES system without an automatic interruption device are not BES could also prevent distribution from being considered as BES.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. In addition, the Cranking Path and automatic interruption device language has been removed from the draft BES definition. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy. **I43** - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~. **E1** - ~~Any r~~Radial systems: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:		
ExxonMobil Research and Engineering	No	The SDT has defined a specific type of local distribution facility in their bright-line definition of the bulk electric system. The SDT's definition focuses on a specific type of local distribution system that has a minimum impact on an interconnected transmission system when that interconnected transmission system does not include the facilities necessary to properly protect itself from faults originating on its boundary. Section 215 of the Federal Power Act does not qualify the type of local distribution facility that should be excluded. It exempts ALL facilities used in the local distribution of electric energy, regardless of whether the owners and operators of the interconnected transmission system have installed facilities that are necessary to secure the reliability of the interconnected transmission system from incidents originating at its boundaries.Additionally, the SDT should consider making its definition of a local distribution network consistent with exclusion E2. If a generation facility with a net aggregate rating less than 75 MVA or single unit with a net export capacity below 20 MVA is not a part of the bulk electric system, what is the technical justification of including a local distribution network that exports less than 75 MVA in the bulk electric system when it is not used to transmit electric energy between geographic regions? Many QFs and large industrial facilities may fall under the description of local distribution network due to the breadth of their private use network, connection to mulitple

Organization	Yes or No	Question 11 Comment
		138 kV / 230 kV substations (done to improve reliability in order to provide safer operation of the industrial process), and possible cyclical generation exports (sometimes exporting / sometimes importing).
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy as established by applicable regulatory authorities. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.		
FortisBC	No	We commend the SDT for their concept in putting forward a 100kV BES bright-line definition. However, we do not believe that the current definition drafted by the SDT has differentiated between Transmission and Distribution or excluded distribution facilities from the BES, or addressed the issue of local distribution facilities above 100kV. It is important for the ERO and the SDT to understand and be consistent with the FERC Order for these important but complex issues. Otherwise, many parts of the continent could be in conflict with state or provincial regulatory act, Codes, and Licenses. We urge the ERO and SDT and RoP teams be aware of these conflicts and not disregard them, as they will pose many implementation complexities and confusion within the industry. Regulatory Acts and Rules will always trump NERC requirements and hence it is important that ERO should neither be caught in regulatory conflict nor put entities in these situations. It is worth noting that different jurisdictions may use different terminology for "distribution" or non transmission facilities or elements. For example, some jurisdictions label certain facilities as distribution which connect and are owned and operated by the distribution utility, customer or a generator customer while other label them as connection facility or elements.As stated earlier (Q10), we believe that the ERO and SDT can address this by providing explicit but simple provisions in the exception criteria (to be used by exception procedure) by putting forward a menu of key technical assessments , which are based on demonstration of evidence to justify the element's necessity for operation. For example, we suggest that for local distribution, the evidence that should be required is: o Regulatory evidence. o Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of their connection.Some of the other key attributes of such an exception criteria should be: o Elements are not to be part of interconnection between two balancing authority or contribute to IROLs o Entire system cannot

Organization	Yes or No	Question 11 Comment
		be classified as contiguous o BESS Elements within exclusion can still be subject to relevant NERC Standards o Entity to justify whether or not the elements are necessary for the operation of the interconnected transmission network o Distinguish if the element in question supplies load centers, major cities, serves the national interest and/or possibly impact national commerce or national security, or is identified by the relevant regulatory authority.Accordingly, we suggest that the exception criteria should ONLY list a menu of items and a prescribed report template that should be assessed and presented by an entity as their evidence and justification for exception to a RE, the ERO and any relevant regulatory authority. This evidence and justification would be used by the ERO as part of its decision making process.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. Your comments regarding the exception process criteria will be addressed separately in the response to the exception process comments. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Consumers Energy Company	No	The proposed definition appears to treat “BES” and “Transmission” synonymously, and this is highly likely to have a significant effect on registration, even if this is not intended. To support consistency between reliability and tariffs, we recommend that more direct consideration be given to the FERC 7-factor test that has been consistently used to delineate transmission facilities for tariff purposes, and to discriminate between registration requirements for TO and DP based on this delineation. Further, reliability gaps will not be created (or can be addressed by minor changes to the applicable standards) if this recommendation is adopted because all aspects of the applicable standards/requirements are (or will be) captured by the current registration process.
Response: The SDT reviewed and considered the FERC 7-factor test and has included some concepts of that test in the LN portion of the draft BES definition. No change made.		
Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)	No	Local distribution facilities have not been excluded from the proposed definition of the BES. As FERC recognized in Order No. 743-A in directing NERC to exclude local distribution facilities from the revised definition of the BES, any definition that does not exclude all “facilities used in the local distribution of electric energy” is unlawful. FERC, as well as federal courts, have repeatedly stated that whether a facility is used in local distribution must be determined on a “case-specific” basis (see, e.g., Order No. 888 at 31,980-81). As a threshold matter, before devoting any additional time and resources to developing a definition of the BES, there must be a clear understanding of the factors to consider when determining whether a facility is either a

Organization	Yes or No	Question 11 Comment
		local distribution facility or a transmission facility. Currently, such a determination is made by considering a "seven-factor test" that FERC has adopted, and the U.S. Supreme Court has upheld. The "seven-factor test," of which no one factor is determinative, evaluates the following indicators: (1) Local distribution facilities are normally in close proximity to retail customers.(2) Local distribution facilities are primarily radial in character.(3) Power flows into local distribution systems; it rarely, if ever, flows out.(4) When power enters a local distribution system, it is not reconsigned or transported on to some other market. (5) Power entering a local distribution system is consumed in a comparatively restricted geographical area. (6) Meters are based at the transmission/local distribution interface to measure flows into the local distribution system.(7) Local distribution systems will be of reduced voltage (Order No. 888 at 31,981). The seven-factor test, which recognizes that a bright-line between transmission and distribution is a not a workable approach, is designed to ensure FERC does not impermissibly usurp state and local regulation of local distribution facilities. There is no evidence that the seven-factor test was considered in drafting the proposed definition of the BES. Please see further discussion in response to Question 12.
Central Lincoln	No	We believe the SDT has excluded most distribution facilities, but not all. The remaining distribution facilities will find it necessary to go through a lengthy exception process. As stated in Q1, we support the PNGC comments stating that local distribution as determined by the seven factor test should be excluded by definition. We note that the SDT has also developed a technical principal document that uses language similar to the seven factor test. To use it, though, an entity must apply for exception first. We believe the seven factors or technical principles should be part of the definition in order to avoid numerous exception applications and resulting delays.
City of Anaheim	No	A functional test, similar to the seven factor test used for FERC Order 888, should be used to identify transmission network facilities independent of voltage. All other electrical facilities not identified as transmission network facilities should be deemed local distribution facilities, and should excluded from the Bulk Electric System pursuant to the statutory Bulk Power System definition provided under federal law (18 CFR 39.1, Title 18, Chapter I, Subchapter B, Part 39)i.e. "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof), and electric energy from generating facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Please note that the statute does not reference any voltage level, therefore both transmission network and local distribution facilities each can operate at voltages higher or lower than 100 kV. The radial (E1) and local distribution network (E3)exclusions are a good starting point under the definition, but the exception procedure should have a functional exception for local distribution facilities independent of voltage level.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and		

Organization	Yes or No	Question 11 Comment
distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. In addition, the SDT reviewed and considered the FERC 7-factor test and has included some concepts of that test in the LN portion of the draft BES definition. However, the 7-factor test, in and of itself, has been cited by FERC as insufficient to prove a facility is distribution. The SDT has attempted to provide additional tests that will hopefully pass FERC scrutiny. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	No	BGE votes “NO” due to the lack of clarity in exclusion E1.
Response: The SDT made significant revisions to Exclusion E1 and hopes that addresses the lack of clarity referred to in your comment. **E1** - ~~Any r~~Radial system~~s~~: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating). Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.		
City of St. George	No	The way the definition is currently written it will include many entities with lines, generation and other facilities whose only purpose is for the local generation and distribution of energy to local customers. The generation restrictions and other language in the proposed definition will add additional registrations (i.e. TO/TOP) to many smaller entities which will have a significant economic impact to those utilities with little or no benefit to

Organization	Yes or No	Question 11 Comment
		the main bulk system. The problems may stem more from the "one size fits all" approach to the standards requirements, with the TO/TOP requirements being the most onerous and difficult to comply with especially for smaller entities. Allowed generation levels and the actual use of the transmission and generation facilities should be considered in what is and is not included in the BES. As the proposed definition stands now along with the current reliability standards a small utility with a few segments of 115 kV or 138 kV lines and with some generation to serve local load must comply with the same requirements as a very large utility with hundreds of miles of 345 kV or 500 kV lines and 1,000's of MVA of generation. The use of applying small, medium and large criteria to many of the standard requirements, similar to what is being considered for the CIP standards with low, medium and high requirements should be considered.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. The SDT is focused solely on revisions to the BES definition, and changes to specific standards are outside the scope of this project. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Puget Sound Energy	No	The language on total aggregate load served by LDN should be added for the exclusion list.
Response: The SDT did not see a need to provide an aggregate Load limitation on any of the draft BES definition exclusions. No change made.		
Southern California Edison Company	No	SCE believes that the BES Definition, as currently proposed, relies too heavily on the characterization of interconnected generation in its "Inclusion" criteria.
Response: The SDT made significant revisions to the draft BES definition, including changes to the inclusion and exclusion portions to address your concerns and those of others.		
GTC	No	Since distribution facilities are to be excluded can the drafting team clarify if the automatic interrupting protective device (breaker or circuit switcher) operating at 100kV or above and protecting an excluded transformer (non-BES) should be excluded with the excluded transformer? Perhaps an additional separate exclusion could eliminate any uncertainty.
Response: The SDT removed the automatic interrupting device language from the draft BES definition. **E1** - ~~Any r~~Radial systems: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of		

Organization	Yes or No	Question 11 Comment
100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:		
New York State Dept of Public Service	No	See comments under question 1.
Response: See response to Q1.		
Long Island Power Authority	No	We don't believe the bright-line definition and specific inclusions and exclusions prevents distribution from being considered as BES. It seems like the intent to exclude non bulk distribution systems would still be included because of E3b. We don't believe that the SDT has fully excluded local distribution facilities as required by the FERC Order. Specifically E3b should be eliminated. The other remaining items a,c,d,e adequately define the LDN.
Independent Electricity System Operator	No	The existing definition and the associated inclusions and exclusions do not exclude local distribution facilities because the 75 MVA limit on generation within LDNs in E3 (b) will result in portions of the power system that are serving a distribution function being classified as BES. As stated before, we suggest subjecting the LDNs to assessment to determine their impact on the BES and including them if impactive by using the Exception Process.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. In addition, item E3b) was revised to provide further clarity. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy. **E3b**) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating).		
The Dow Chemical Company	No	The Dow Chemical Company ("Dow) is an international chemical and plastics manufacturing firm and a leader in science and technology, providing chemical, plastic, and agricultural products and services to many essential consumer markets throughout the world. Dow and certain of its worldwide affiliates and subsidiaries, including Union Carbide Corporation, own and operate electrical facilities at a number of industrial sites within the U.S., principally, in Texas and Louisiana. The electrical facilities at these various industrial sites are configured similarly and perform similar functions. In most cases, a tie line or lines connect

Organization	Yes or No	Question 11 Comment
		the industrial site to the electric transmission grid. Power is delivered from the electric transmission grid to the industrial site through the tie line(s). Lines within the industrial site then deliver power to individual manufacturing plants within the site. Additionally, cogeneration facilities are located at a number of industrial sites owned by Dow and its subsidiaries. These cogeneration facilities generate power that is distributed within the industrial site and used for manufacturing plant operations. In some instances, excess power not required for plant operations is delivered back into the electric transmission grid through the tie line(s) connecting the industrial site to the grid. Under all circumstances, electricity is not flowing into and out of such industrial sites at the same time. While the tie lines and some of the internal lines at these industrial sites operate at 100kV or higher, they do not perform anything that resembles a transmission function. Rather than transmit power long distances from generation to load centers, the tie lines and internal lines perform primarily a local distribution function consisting of the distribution of power brought in from the grid or generated internally to different plants within each industrial site. In some cases, the facilities also perform an interconnection function to the extent they enable power from cogeneration facilities to be delivered into the grid. The voltage of the tie lines and internal lines at these industrial sites is dictated by the load and basic configuration of each site. Higher voltage lines are used when necessary to meet applicable load requirements or to reduce line losses. That does not mean that such lines perform a transmission function. At some sites, Dow is registered as a Generation Owner and Generation Operator. At other sites, the applicable Regional Entity has found that such registration is not required because of the relatively small amount of power supplied to the grid from the applicable cogeneration resources, even though those cogeneration resources have an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating). Tie lines (to the grid) and internal lines at an industrial site that operate at 100kV or higher should be excluded from the BES definition if, due to the relatively small amount of power supplied to the grid from the generation resources at the site, the owner of those generation resources is not required to be registered as a Generation Owner and the operator of those generation resources is not required to be registered as a Generation Operator.At sites where the owner of the generation resources is registered as a Generation Owner and the operator of those generation resources is registered as a Generation Operator, the internal lines (between the generation resources and the manufacturing plants) that operate at 100kV or higher should be excluded from the BES definition, because they are distribution and not transmission facilities. The lines interconnecting the generation resources at such sites to the transmission grid should be included in the BES definition, but the owner and operator of such interconnection lines should not be registered as a Transmission Owner or Transmission Operator. In no instance has a Regional Entity determined that Dow or any subsidiary should be registered as a Transmission Owner or Transmission Operator. Instead, such interconnection lines should be considered as part of the generation resource and Generation Owners and Generation Operators should be subject to reliability standards specifically developed for such interconnection lines. Dow is strongly opposed to any BES definition that would result in either the tie lines or the internal lines at industrial sites being subject to the mandatory reliability standards applicable to Transmission Owners and Transmission Operators. Complying with reliability standards would cause Dow and its subsidiaries to incur

Organization	Yes or No	Question 11 Comment
		substantial compliance costs and create potential exposure to penalties in the future for noncompliance. Perhaps such costs and exposure could be justified if subjecting these facilities to compliance with reliability standards resulted in a material increase in reliability of the BES, but there is no reason to believe that will be the case. In fact, the opposite might be true. The tie lines and internal lines at industrial sites owned by Dow and its subsidiaries have been operated for decades as distribution and interconnection facilities, and practices and procedures have developed over the years that have enabled such operations to achieve a high degree of reliability for such sites. Requiring these facilities to now operate in a different manner as transmission facilities may well result in a degradation of the reliability of the manufacturing plants located at such sites. For example, outages would have to be coordinated with the RTO, which may not be interested in coordinating such outages with scheduled manufacturing plant outages.Dow recommends that a separate exclusion be added to the BES definition to address industrial distribution facilities. Proposed exclusion E-3 for local distribution networks is not sufficient to ensure that all industrial distribution facilities are excluded. For example, criteria b), entitled “Limits on connected generation” states that “Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation”. This criteria makes no sense for an industrial site with on-site electricity generation and a number of manufacturing plants that has internal power lines and lines interconnecting with the transmission grid that operate at 100 kV or higher where the owner and operator of the on-site electricity generation facilities are not registered as a Generation Owner and a Generation Operator because only a small amount of electricity is ever exported from the on-site electricity generation facilities to the transmission grid. This criteria also makes no sense with respect to internal electric lines (operated at 100 kV or higher) at such industrial sites even where the owner and operator of the on-site electricity generation facilities are registered as a Generation Owner and a Generation Operator.Criteria c) also causes proposed exclusion E-3 not to be sufficient to ensure that all industrial distribution facilities are excluded where the owner and operator of the on-site electricity generation facilities are not registered as a Generation Owner and a Generation Operator because only a small amount of electricity is ever exported from the on-site electricity generation facilities to the transmission grid. Criteria c), entitled “Power flows only into the LDN”, states: “The generation within the LDN shall not exceed the electric Demand within the LDN.” Criteria c) also makes no sense with respect to internal lines at such industrial sites even where the owner and operator of the on-site electricity generation facilities are registered as a Generation Owner and a Generation Operator.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. In addition, the SDT made extensive changes to Exclusion E3 to address your concerns and those of others.		

Organization	Yes or No	Question 11 Comment
		Bulk Electric System (BES): Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): **A** ~~G~~groups ~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **E3a**. Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **E3b**. Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ **E3c.** Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Southwest Power Pool	No	See response to question 1 - SPP does not necessarily disagree with the characterization of excluded distribution facilities, but believes that issue should be addressed in the concurrent BES exemption proceeding for the reasons described in question 1. SPP reserves its rights to comment on the criteria for exclusion/inclusion in that proceeding.
Response: The SDT believes it is appropriate to exclude Facilities used in the local distribution of electric energy in the BES definition. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Golden Spread Electric Cooperative, Inc.	No	All load serving radials need to be excluded from the BES.

Organization	Yes or No	Question 11 Comment
Response: The SDT believes that the draft BES definition excludes Load-serving radial systems as your comment recommends. No change made.		
Tacoma Power		Tacoma Power supports the work of the SDT towards a revised BES definition directly linked to the exemption process of inclusions and exclusions. The definition must be closely coupled to the exemption process and the two must move forward together. This will ensure that only the facilities that materially impact the reliability of the BES will be burdened with the regulatory requirements.
Response: The SDT is working closely with the Rules of Procedure team to ensure that the respective work products are appropriately linked and proceed forward in a parallel manner.		
Edison Electric Institute		See comments to Question 13.
Response: See response to Q13.		
Portland General Electric Company		As stated above, PGE believes that the Exclusion for Local DistributionNetwork needs to be more explicit.
Response: The SDT made significant clarifying changes to the LDN, now LN, exclusion of the draft BES definition to address your concerns and those of others.		

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

E3a. Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

E3b. Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

E3c. Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the

Organization	Yes or No	Question 11 Comment
Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
SERC OC Standards Review Group	Yes	Exception E4 potentially does have issues - see our response to Question 10.
Response: See response to Q10.		
Colorado Springs Utilities	Yes	Please refer to comments on question 9 - Exclusion 3
Response: See response to Q9.		
Alliant Energy	Yes	In general we believe that the bright line has been created. There should however be one additional exclusion - Distribution Protection Systems designed specifically to protect Distribution System assets should not be considered part of the BES, even if they open an element of the BES (ie; Distribution Breaker Failure Relaying), as long as the action is to protect the Distribution System and not the BES.
Response: The SDT does not see a need to add the exclusion you requested since distribution protection systems that protect distribution systems are not determined to be BES under the draft BES definition. No change made.		
Illinois Municipal Electric Agency	Yes	Please see comments under Question 13.
Response: See response to Q13.		
Sacramento Municipal Utility District (SMUD)	Yes	SMUD does agree that the differentiation is established between the transmission & distribution systems. Although there is concern that the general “Bright-line” is not definitive and could afford additional value through incorporating clarifying language.
Sierra Pacific Power Co d/b/a NV Energy	Yes	Through the radial exclusion and the LDN exclusion (E1 and E3), the definition has made a delineation between distribution and bulk transmission. In this exclusion language, the definition as proposed addresses the quantifiable parameters from the FERC 7-factor transmission test.
American Transmission Company, LLC	Yes	ATC agrees that the revised bright-line core definition and associated inclusion and exclusion criteria excludes distribution, however, recognizes that there are protection elements that may be owned by distribution which may trip a BES Element. (Covered by NERC Standard PRC-005)

Organization	Yes or No	Question 11 Comment
PUD No. 2 of Grant County, Washington	Yes	Grant supports the concepts as presented in the draft. Exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. The statutes provide that "users" of the BES can be subject to reliability regulation. Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BESDTF Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.
Glacier Electric Cooperative	Yes	I do believe that the language in its plain sense does exclude local distribution systems, but I do see the possibility of differeing interpretations of the language across the regions again. Perhaps adding some example system diagrams showing what would and would not be included in the BES would help alleviate any possible ambiguity and increase consistency across the regions.
PacifiCorp	Yes	PacifiCorp understands that no single bright line can accommodate all the various scenarios of local distribution. The proposed definition appears to capture a high percentage of LDNs. Additional LDNs can be addressed through the exemption process. Also, please refer to additional comments in question 13 regarding a contiguous BES.
Santee Cooper	Yes	The commission should remain open to future modifications of the bright-line core definition and specific inclusion and exclusions.
BPA	Yes	
Utility System Efficiencies, Inc.	Yes	
Imperial Irrigation District	Yes	
Florida Municipal Power Agency	Yes	
NERC Staff Technical Review	Yes	
MRO's NERC Standards Review Forum	Yes	

Organization	Yes or No	Question 11 Comment
SERC Planning Standards Subcommittee	Yes	
ACES Power Participating Members	Yes	
Arizona Public Service Company	Yes	
Western Electricity Coordinating Council	Yes	
Transmission Access Policy Study Group	Yes	
Northern California Power Agency	Yes	NCPA supports the comments of the Transmission Access Policy Study Group in this regard.
New York Power Authority	Yes	
Southern Company	Yes	
Luminant Energy	Yes	
US Bureau of Reclamation	Yes	
Sweeny Cogeneration LP	Yes	
Dayton Power and Light Company	Yes	
Duke Energy	Yes	
Alberta Electric System Operator	Yes	

Organization	Yes or No	Question 11 Comment
South Carolina Electric and Gas	Yes	
Fayetteville Public Works Commission	Yes	
Florida Keys Electric Cooperative	Yes	
American Electric Power	Yes	
East Kentucky Power Cooperative, Inc.	Yes	
Farmington Electric Utility System	Yes	
Muscatine Power and Water	Yes	
Idaho Power	Yes	
Cogentrix Energy, LLC	Yes	
Clark Public Utilities	Yes	
Oncor Electric Delivery Company LLC	Yes	
Manitoba Hydro	Yes	
MEAG Power	Yes	
Xcel Energy	Yes	
Response: Thank you for your support. Several stakeholders made suggestions for clarifying changes to the draft BES definition that were adopted to provide a greater distinction between transmission and distribution facilities. Please see the revised definition.		

12. Are you aware of any conflicts between the proposed definition and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? If so, please identify them here and provide suggested language changes that may clarify the issue.

Summary Consideration: The task of the SDT is to put forward a 100 kV bright-line for the BES definition. The SDT has modified the definition and distribution facilities are now specifically excluded from the BES. However, the SDT acknowledges that there may still be regulatory conflicts as many of the commenters have voiced. The definition is neither intended to nor can it supersede any regulatory orders and/or rulings by relevant Federal, State, or Provincial Authorities. Although the SDT can not resolve all regulatory conflicts, it believes that a) proposed revisions to the definition should address many of these concerns; and b) remaining issues may be effectively addressed by the Rules of Procedure exception procedure currently under development.

Changes to the definition due to industry comments are as follows:

Bulk Electric System (BES): Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.

I~~3~~2 - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.

I~~4~~3 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.

E1 - ~~Any r~~Radial systems: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

Organization	Yes or No	Question 12 Comment
AltaLink	Yes	
East Kentucky Power Cooperative, Inc.	Yes	

Organization	Yes or No	Question 12 Comment
Response: Without any details the SDT is unable to respond.		
BPA	Yes	The Low Voltage Ride Through standard is a U.S. industry standard via FERC Order 611A and applies to wind generation without regard to size. The I2 definition appears to be in conflict with the LVRT set by Order 611A. Request NERC clarification including when it will be issuing a LVRT reliability standard. DGF supports Rebecca Berdahl Comment 2, as discussed below.
Response: Inclusion I2 has been modified by the SDT in the revised BES definition to address your concerns and those of others. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Northeast Power Coordinating Council	Yes	The proposed definition will have a direct impact on entities not under FERC jurisdiction, and may be in conflict with regulatory requirements with which those entities must comply.
Dominion	Yes	The inclusion of an element or facility that is not integral to the reliable operation of the integrated bulk power system is in conflict with the intent of Section 215 of the FPA . This is especially true for radial facilities, whether used to connect generators or load to the bulk power system.
Michigan Public Service Commission(MPSC)	Yes	MPSC Staff Comments: The proposed BES definition creates friction with Order 888's seven-factor technical-functional test as implemented by state regulatory agencies. The resulting inconsistent treatment is likely to result in challenges by entities with FERC-defined distribution assets being now considered as transmission assets as inconsistent with the FPA. FERC's Order 888 discusses the two components of an unbundled transaction in interstate commerce has "for jurisdictional purposes -- a transmission component and a local distribution component." p 439 The Order also states that the Commission "will defer to recommendations by state regulatory authorities concerning where to draw the jurisdictional line under FERC's technical test for local distribution facilities" p 437, also known as the seven-factor technical-functional test. This test was applied by Michigan utilities, filed with the Michigan Public Service Commission in contested case-specific dockets, and after deliberation approved. These state-approved jurisdictional bright-line determinations were subsequently filed with and approved by FERC.
Hydro-Quebec TransEnergie	Yes	There appears to be a conflict between the proposed definition and the regulatory framework applicable in Quebec or at least there are some important differences between both.NERC's proposed definition of Bulk Electric System ("BES") is made in response to FERC's Order 743. FERC is looking to remove regional discretion, and in some cases to make sure BES includes the most important national load centers.As for

Organization	Yes or No	Question 12 Comment
		HQT's System, the BES definition shall meet the expectations of Quebec's regulator, the RÃ©gie de l'Ã‰nergie du QuÃ©bec, (Quebec Energy Board) which has the responsibility to ensure that electric power transmission in QuÃ©bec is carried out according to the reliability standards it adopts. In a recent order (D-2011-068), the RÃ©gie de l'Ã‰nergie du QuÃ©bec has recognized several level of application for the Reliability Standards in QuÃ©bec. It stated specifically that most reliability standards in QuÃ©bec shall be applied to the Main Transmission System (MTS). One other level of application recognised by this decision is the NPCC Bulk Power System (BPS) to which the standards related to the protection system (PRC-004-1 and PRC-005-1) and those related to the design of the transmission system (TPL 001-0 to TPL-004-0) will be applicable. The Main Transmission System definition is somewhat different than the Bulk Electric System definition. The Main Transmission System includes elements that impact the reliability of the grid, supply-demand balance and interchanges. It can be described as follows :The transmission system comprised of equipments and lines generally carrying large quantities of energy and of generating facilities of 50 MVA or more controlling reliability parameters: o Generation/load balancing o Frequency control o Level of operating reserves o Voltage control of the system and tie lines o Power flows within operating limits o Coordination and monitoring of interchange transactions o Monitoring of special protection systems o System restorationTherefore, it will be necessary to accommodate NERC's proposed definition of BES or the exception process with the QuÃ©bec situation where Entities are under a different jurisdiction. These differences include more than one level of application for the reliability standards, the Main Transmission System definition being the main one to which most reliability standards apply.
Hydro One Networks Inc		See earlier comments and suggestions. NERC's revised definition will have a direct impact on many entities across North America and could also be in conflict with regulatory requirements, Codes, and Licenses, which non FERC jurisdictional must comply. It would be hard if not impossible to identify the conflicts. For example: in one of the the provincial energy acts, NERC Standards maycan only apply to generation over 50 MVA which will cause one or more of the requirements to be in conflict and /or what constitutes distribution and what is not considered transmission (such as connection facility to a load or generation and owned by the proponent). However, we agree to establish a 100kV BES bright-line definition and we believe that the best venue to address avoiding compliance conflicts is through the exception criteria and the exception procedure. The benefits of such an approach are: o Establishment of a continent wide bright line definition o Avoidance of regulatory conflicts and legal complexities o Assurance of the reliability of the interconnected transmission network
Public Utility District No. 1 of	Yes	As noted in our responses to Question 1 and Question 11, we believe the SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used

Organization	Yes or No	Question 12 Comment
Snohomish County, Washington		in the local distribution of electric energy. Unless the SDT adopts some approach other than a core definition with inclusions and exclusions based on brightline thresholds, the SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities.
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Company Consumers Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Inc Okanogan Electric Cooperative PNGC Power Raft River Rural Electric Cooperative Salmon River Electric Umatilla Electric Cooperative West Oregon Electric Cooperative		As discussed in our answers to Question 1 and Question 11, the SDT proposal does not reflect the jurisdictional limitations of the FPA.
Northern Wasco County PUD Clallam County PUD No.1	Yes	The Exceptions process is a necessary part of making this proposal complaint with the Federal Power Act. As noted in our responses to Question 1 and Question 11, we believe the basic SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used in the local distribution of electric energy. The SDT's approach can meet the statutory requirements only if

Organization	Yes or No	Question 12 Comment
Chelan PUD – CHPD Kootenai Electric Cooperative Public Utility District No. 1 of Franklin County Midstate Electric Cooperative Northwest Requirements Utilities Big Bend Electric Cooperative, Inc		the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities.
PUD No. 2 of Grant County, Washington	Yes	The Exceptions process is a necessary part of making this proposal complaint with the Federal Power Act. The SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities.
ExxonMobil Research and Engineering	Yes	Section 215 of the Federal Power Act excludes facilities used in the local distribution of electric energy without any qualifications of the type of local distribution facility.
FortisBC	Yes	See earlier comments and suggestions. NERC's revised definition will have a direct impact on many entities across North America and could also be in conflict with regulatory requirements, Codes, and Licenses, which non FERC jurisdictional must comply. It would be impossible to identify each of these conflicts. For example: in one of the energy acts, NERC Standards can only apply to generation over 50 MVA which will cause one or more of the requirements to be in conflict and /or what constitutes distribution and what is not considered transmission (such as connection facility to a load or generation and owned by the proponent).However, we agree to establish a 100kV BES bright-line definition and we believe that the best venue to address avoiding compliance conflicts is through the exception criteria and the exception process. The benefits of such an approach are: o Establishment of a continent wide bright line definition o Avoidance of regulatory conflicts and legal complexities o Assurance of the reliability of the interconnected transmission network
Consumers Energy Company	Yes	The proposed definition creates a tension between FERC Order 888 and the resulting 7-factor test as applied for tariff purposes, and the registry criteria for registration of Transmission Owners and Transmission Operators. Entities with assets defined by FERC as Distribution might challenge any rules that treat Distribution assets as Transmission as not being consistent with the Federal Power Act of 2005.

Organization	Yes or No	Question 12 Comment
Exelon	Yes	To the extent facilities used in local distribution of electric energy may be included in the definition of BES, the proposed definition is in conflict with the Federal Power Act.
Springfield Utility Board	Yes	The exceptions process is a necessary part of making this proposal compliant with the Federal Power Act. As noted in responses to Questions 1 and 11, SUB believes the basic SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used in the local distribution of electric energy. The SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities.
New York State Dept of Public Service	Yes	As expressed in comments under question 1, we believe that use of a 100 kV brightline definition is an overreach of authority and that any definition must respect the limitations itemized in FPA 215. The FPA recognizes that only a subset of the electric system facilities have the capacity to impact multi-state portions of the electric system and rise to the level of federal attention. As a practical matter, however, the electric system is a continuous machine and efforts to maintain reliability on both the transmission and local distribution portions of the electric system must be compatible. That is the key role that the regional entities play and that role should be maintained and respected by NERC efforts. The time and effort it takes to draft standards to address issues on the bulk system is directly attributable to the many different options to design and operate transmission facilities, and options to ensure reliability are different for each design and mode of operation. Multiply that a hundred fold to the different approaches there are to design, operate and to ensure reliability on the local distribution system. Attempts at the federal level to design uniform standards to apply at lower and lower levels of the system are doomed to failure given the nuances of each local system. These attempts will only lead to needless complications and the actual undermining of the reliability on the local distribution system. NERC staff comments seeking to sweep into NERC standards behind the meter generation, meters and relays located deep within the distribution system, etc. and then insist that the bulk system be contiguous is a phenomenal overreach and an intrusion on the design and functioning of the distribution system which will a) complicate efforts to maintain a reliable distribution system; and 2) will needlessly incur costs on ratepayers. NERC needs to stay focused on the authorities extended to it in the FPA. Leave it to the regions to interface locally with utilities, state authorities and other stakeholders to shape seamless reliability protocols that will benefit us all.The question asks if there are orders that relate to this effort. In 1997, the New York Public Service Commission held a proceeding Case No. 97-E-0251 that supplemented the FERC Seven Factor Test with three additional factors to be used in New York to distinguish between transmission and local distribution. This order can be found at the following link:http://documents.dps.state.ny.us/public/Common/ViewDoc.aspx?DocRefId={3C7602E0-62E0-4831-82B6-8C34A72934F4}

Organization	Yes or No	Question 12 Comment
Midstate Electric CooperativePublic Utilities Commission of Ohio	Yes	See concerns above with exceeding authority under the Federal Power Act Section 215. State Utility Commissions are charged with assuring safe, reliable service to their customers. We are in a much better situated position than FERC or NERC to provide any necessary regulation and oversight of the local distribution system.
The Dow Chemical Company	Yes	Comments: Section 215 of the Federal Power Act denies FERC jurisdiction over facilities used in the local distribution of electric energy. FERC has recognized that since facilities used in the local distribution of electric energy "are exempted from the Bulk-Power System, they also are excluded from the bulk electric system." Section 215 of the Federal Power Act does not qualify the exclusion from FERC jurisdiction of "facilities used in the local distribution of electric energy." For example, Section 215 does not state that:ï‚§ The term "bulk power system" "does not include facilities used in the local distribution of electric energy [unless needed for reliability purposes];" or ï‚§ The term "bulk power system" "does not include facilities [with automatic interruption devices] used in the local distribution of electric energy."Any definition of the bulk electric system that does not exclude all "facilities used in the local distribution of electric energy" is unlawful.Further, the definition of the bulk electric system must recognize that Section 215 of the Federal Power Act does not allow the potential reliability impact of a facility to determine whether the facility is local distribution or transmission. By excluding all facilities used in the local distribution of electric energy from the definition of the Bulk-Power System in Section 215, Congress recognized that while facilities used in the local distribution of electric energy may be part of the Bulk-Power System, they are, nonetheless, not FERC jurisdictional. Thus, "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" that are used in the local distribution of electric energy are not FERC jurisdictional regardless of the potential reliability impact of the facilities.
Central Lincoln	Yes	Improper classification of local distribution facilities, even if only for the duration of the exceptions process; puts these facilities under the regulatory jurisdiction of NERC contrary to the Federal Power Act when they should be under the exclusive jurisdiction of state utility commissions or local utility boards.
Cowlitz County PUD	Yes	The Exceptions process is a necessary part of making this proposal complaint with the Federal Power Act. As noted in our responses to Question 1 and Question 11, we believe the basic SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used in the local distribution of electric energy. The SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities. Cowlitz understands the difficulty in demonstrating what is and is not distribution to FERC due to the vague statute language. Cowlitz will work to help provide technical arguments which will buttress the BES definition in the future.

Organization	Yes or No	Question 12 Comment
Response: The definition is neither intended to nor can it supersede any regulatory orders and/or rulings by relevant Federal, State, or Provincial Authorities. Although the SDT can not resolve all regulatory conflicts, it believes that a) proposed revisions to the definition should address many of these concerns; and b) remaining issues may be effectively addressed by the Rules of Procedure exception procedure currently under development. Specifically, the SDT added a sentence to the core definition to address concerns about local distribution. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
SPP Standards Review Group	Yes	See our responses to Questions 5 and 11 regarding the issue of distribution facilities and Cranking Paths.
Response: See responses to Q5 and Q11.		
Idaho Falls Power	Yes	It is unclear how the reliability standards will be applied to registered entities should some assets be deemed not to be a part of the BES. As an example; will a an LSE with >25MW of load connected at 161kv be responsible for relay maintenance under PRC-005-1 if the 161 kv is exempted as a local distribution network? Clarification of this issue may be beyond the scope of the BES definition effort, however guidance in this area should accompany this effort.
Response: The application of Reliability Standards is not based solely on registration or an Element being classified as BES or not. There are several standards that are currently mandatory for Elements that are non-BES and they will continue to apply if those Elements are considered necessary for the operation of BES, such as UFLS. No change made.		
Alabama Public Service Commission	Yes	See comments in response to Question 11 above.
Response: See response to Q11.		
Western Montana Electric Generating and Transmission Cooperative	Yes	The Exceptions process is a necessary part of making this proposal complaint with the Federal Power Act. As noted in our responses to Question 1 and Question 11, we believe the basic SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used in the local distribution of electric energy. The SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities.

Organization	Yes or No	Question 12 Comment
Electricity Consumers Resource Council (ELCON)	Yes	See response to question 11 above. The definition of "local distribution" should be as defined and practiced in each state (US only) under state laws and regulations, and similarly by the Canadian provincial governments.
MRO's NERC Standards Review Forum	Yes	Within the Commission's definition of BPS, it is clearly stated that BPS does not include facilities used in the local distribution of electrical energy.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
PacifiCorp	Yes	The SDT proposal combined with the ROP may be in conflict with Section 215 of the Federal Power Act ("FPA") which excludes "facilities used in the local distribution of electric energy" from the definition of "bulk-power system." As identified in other responses, without a technical reason for setting the generation limit to 20 MVA and even 75 MVA and/or requiring a contiguous BES to include such generators may be over-inclusive and by default require several elements which are not required for the reliable operation of the BES to be included in the BES definition.
Response: The definition is neither intended to nor can it supersede any regulatory orders and/or rulings by relevant Federal, State, or Provincial Authorities. Although the SDT can not resolve all regulatory conflicts, it believes that a) proposed revisions to the definition should address many of these concerns; and b) remaining issues may be effectively addressed by the Rules of Procedure exception procedure currently under development. The SDT did not adopt a "contiguous" BES. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		

Organization	Yes or No	Question 12 Comment
Grand Haven Board of Light and Power	Yes	This current definition does not comply with FERC Order No. 743 (and 743a) by not addressing the exclusion of a single automatic interrupting device that serves a radial, load serving system.
Response: The SDT revised Exclusion E1 to address your concern and those of others. **E1** - ~~Any r~~Radial systems: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:		
National Grid	Yes	There could be some conflicts with the ISO-NE Pool Transmission Facility (PTF) definition. If something is considered non-PTF, but is considered BES with this new definition, it could lead to confusion about which criteria should be applied to these entities and potentially which tariff (non-PTF or PTF) is truly the correct tariff. We believe adding more clarity as previously mentioned in the other questions to the definition and excluding I4 and clarifying E1 will minimize these issues.
Response: The task of SDT is to put forward a 100 kV bright-line definition for BES. The SDT acknowledges that there may be regulatory conflicts but believes that many of these concerns may be addressed by the revised BES definition and exception procedure currently under development. SDT has made some changes to Inclusion I4 (now Inclusion I3) and Exclusion E1 that may address your concerns. **I43** - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~. **E1** - ~~Any r~~Radial systems: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:		
Electric Reliability Council of Texas, Inc.	Yes	See response to question 1 - ERCOT ISO believes defining BES in terms of the relevant exclusions may be contrary to FERC's suggested approach in 743 and 743-A. While FERC did not mandate a particular approach, and gave the ERO the opportunity to propose an alternative to its suggested approach, it stated that any alternative must be equal to or greater than its suggested approach in terms of remedying the identified flaws associated with the current definition. Part of the remedy envisioned by FERC included the removal of subjectivity in defining BES and the ability of the ERO and FERC to review any proposed exemptions from the bright line definition. Although the exclusions strive to apply objective criteria, it is arguable that any such circumstances may not be that clear and may require some level of subjective judgment as to whether elements deemed to be distribution according to the exclusion criteria actually are distribution, as opposed to transmission. In addition, FERC expressly stated that it reserved the right to make that determination in the first instance. This approach takes that away from FERC.
Southwest Power Pool	Yes	See SPP's response to question 1 - SPP believes defining BES in terms of the relevant exclusions may be contrary to FERC's suggested approach in 743 and 743-A. While FERC did not mandate a particular

Organization	Yes or No	Question 12 Comment
		approach, and gave the ERO the opportunity to propose an alternative to its suggested approach, it stated that any alternative must be equal to or greater than its suggested approach in terms of remedying the identified flaws associated with the current definition. Part of the remedy envisioned by FERC included the removal of subjectivity in defining BES and the ability of the ERO and FERC to review any proposed exemptions from the bright line definition. Although the exclusions strive to apply objective criteria, it is arguable that any such circumstances may not be that clear and may require some level of subjective judgment as to whether elements deemed to be distribution according to the exclusion criteria actually are distribution, as opposed to transmission. In addition, FERC expressly stated that it reserved the right to make that determination in the first instance. This approach takes that away from FERC.
Alberta Electric System Operator	Yes	Comments: Alberta's legislation enables reliability standards, but prevents the AESO from developing rules related to reliability standards. The AESO therefore would like to see retention of the following clause from the NERC "Statement of Compliance Registry Criteria (revision 5) included in the list of inclusions as well as identifying the authority that determines what generators are material to reliability:III.c.4 Any generator, regardless of size, that is material to the reliability of the bulk power system. The wording should reflect that, for example, in the case of Alberta, that the AESO has the authority to make this determination.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. The definition is neither intended to nor can it supersede any regulatory orders and/or rulings by relevant Federal, State, or Provincial Authorities. Although the SDT can not resolve all regulatory conflicts, it believes that a) proposed revisions to the definition should address many of these concerns; and b) remaining issues may be effectively addressed by the Rules of Procedure exception procedure currently under development. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)	Yes	The proposed definition conflicts with Section 215 of the FPA and case law because it ignores years of precedent regarding what constitutes "facilities used in local distribution" and defines the BES in such a way as to possibly cover local distribution facilities as well as transmission facilities. Specifically, FERC has jurisdiction over "all users, owners and operators of the bulk-power system" under Section 215 of the FPA (16 U.S.C. Â§ 824o(b)(1)). The bulk-power system is defined as:"(A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy" (Id. at Â§ 824o(a)(1)).By the plain language of Section 215 of the FPA, FERC's jurisdiction over the Bulk Power System cannot include any "facilities used in

Organization	Yes or No	Question 12 Comment
		the local distribution of electric energy." FERC has recognized that "[s]ince such facilities are exempted from the Bulk-Power System, they also are excluded from the bulk electric system" (Order No. 743-A at P 25). Congress specifically recognized that while facilities used in the local distribution of electric energy may be part of the Bulk-Power System, they are not FERC jurisdictional. Thus, "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" that are used in the local distribution of electric energy are not jurisdictional regardless of the potential reliability impact of the facilities. The proposed definition of the BES would rewrite Section 215 of the FPA to exclude only "facilities used in local distribution of electric energy [unless needed for reliability purposes]." As the DC Court of Appeals stated in Detroit Edison Co. v. FERC: "[s]uch an interpretation would eviscerate state jurisdiction over numerous local facilities, in direct contravention of Congress' intent" (Detroit Edison Co. v. FERC, 334 F.3d 48, 54 (U.S. App. D.C. 2003) (citation omitted)). In Detroit Edison Co. v. FERC, the DC Court of Appeals rejected FERC's proposed definition of a "FERC-jurisdictional distribution facility" as any distribution facility that is not "used exclusively to provide service to unbundled retail customers" (Id.). The Court stated: "FERC's position contradicts the plain language of the FPA," and further that "FERC would rewrite the statute to exclude only 'facilities used exclusively in local distribution'" (Id.). The exclusion of facilities used in the local distribution of electric energy from the definition of the BES does not mean that NERC lacks the ability to maintain the reliability of the BES. For example, if NERC determined that a retail customer's self-provided "hard-tapped" radial line that is located behind the retail delivery point created a reliability issue, NERC could require that the transmission facilities be equipped with automatic fault-interruption devices. NERC could not, however, define the BES to include such local distribution facilities, which is the result of the proposed bright-line core definition and specific inclusions and exclusions.While FERC "granted NERC discretion" in developing the revised definition of the BES because FERC wanted to give NERC "the greatest amount of flexibility to utilize its technical expertise" (Order No. 743-A at PP 0-71), NERC's discretion is not unbounded. Moreover, while FERC stated that it "will evaluate whether the [BES definition] proposal results in any conflicts with the statutory language" (Id. at P 72), it is imperative that NERC work within the statutory limitations of Section 215 of the FPA as to prevent submitting a proposal to FERC that is fundamentally unlawful. It would be a colossal waste of government and industry resources to develop and advance a definition that cannot withstand basic legal review. As provided above, the following are suggested language changes that may clarify the issue:Exclusion E1 - Any radial system which is described as connected from a single Transmission source [ ] and: a) Only serving Load. [ ] Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5. Exclusion E3 - [All facilities used in the distribution of electric energy] (["]Local [D]istribution [N]etworks,[" or "]LDNs["]): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN[]s are [normally] connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:a) [ ]b) Limits on connected generation: [Generally], neither

Organization	Yes or No	Question 12 Comment
		the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;c) Power flows only into the LDN: The generation within the LDN [normally does] [ ] not exceed the electric Demand within the LDN;d) Not used to transfer bulk power: The LDN is [generally] not used to transfer energy originating outside the LDN for delivery through the LDN; ande) Not part of a Flowgate or transfer path: The LDN normally does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).Exclusion E4 - Transmission Elements, from a single Transmission source connected at a voltage of 100 kV or greater [ ] whose connection to the BES is solely through this single Transmission source, and without interconnected generation as recognized in the BES Designation Inclusion Items I2, I3, I4, or I5. [ ]
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV.		
Muscatine Power and Water	Yes	Within FERC's definition of Bulk Power System, it is plainly stated that BPS does not include facilities used in the local distribution of electrical energy. Does this support or contradict the SDT's concept of Local Distribution Network?
Response: The LDN (now referred to as LN) is a unique case due to the multiple connections to the BES and as such the SDT believes it deserves a specific exclusion but it supports the SDT's concept.		
Southern California Edison Company	Yes	For participants in an ISO/RTO, such as the CAISO, the final BES Definition may change the party who will control system facilities, even if they are distribution or radial in nature, based on the amount or size of interconnected generation. Generally, within the CAISO, facilities that are included in the BES Definition are under CAISO's direct control, while radial and distribution facilities are not.
Response: Control of system facilities is not within the scope of the SDT and must be worked out locally.		
Clark Public Utilities	Yes	The BES Definition does not have any reference to the exception process being developed. Both the exclusion and inclusion sections of the BES Definition should have a reference to the process where "BES Definition included" Transmission Elements may be excluded and "BES Definition excluded" Transmission Elements may be included.

Organization	Yes or No	Question 12 Comment
Response: The reference to the exception process was inadvertently left off the posting. Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.		
New England States Committee on Electricity	Yes	A possible conflict exists with respect to state renewable resource objectives. Please refer to number 4 above regarding renewable energy objectives, which includes state legislation regarding renewable portfolio standards.
Response: The task of SDT is to put forward a 100 kV bright-line definition for BES. The definition is neither intended to nor can it supersede any regulatory orders and/or rulings by relevant Federal, State, or Provincial Authorities. Although the SDT can not resolve all regulatory conflicts, it believes that a) proposed revisions to the definition should address many of these concerns; and b) remaining issues may be effectively addressed by the Rules of Procedure exception procedure currently under development.		
PPL Energy Plus and PPL Generation	Yes	See comments in Question 13.
Edison Electric Institute		See comments to Question 13.
Response: See response to Q13.		
Manitoba Hydro	Yes	Canadian Entities are not under FERC jurisdiction, so the revised BES Definition may not apply. A number of Canadian Entities have the BES defined within their provincial legislation. This may introduce differences and even contradictions between elements that are included in the BES according to provincial legislation and the NERC definition.
Response: The definition is neither intended to nor can it supersede any regulatory orders and/or rulings by relevant Federal, State, or Provincial Authorities. Although the SDT can not resolve all regulatory conflicts, it believes that a) proposed revisions to the definition should address many of these concerns; and b) remaining issues may be effectively addressed by the Rules of Procedure exception procedure currently under development. Regional difference (vs. regional discretion), under the purview of the ERO, is acceptable methodology that will be consistently applied as a result of the definition and exception process.		
ISO New England, Inc.	Yes	The proposal to include all Blackstart units' cranking paths has the potential to roll into the BES facilities distribution level circuits. Inclusion of those circuits would appear to conflict with statutory exclusion of set out in Section 215(a)(1) of the Federal Power Act, which states that the term "bulk power system": "does not include facilities used in the local distribution of electric energy." Section 215 sets the limits on what may be included within the bulk electric system, and thus subject to regulation by the ERO and FERC under the

Organization	Yes or No	Question 12 Comment
		reliability standards regime.
Response: The SDT has eliminated Cranking Path from the definition. **I43** - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
Consolidated Edison Co. of NY, Inc.	Yes	As FERC stated in Order 743-A "... the Commission uses the term "exclusion" herein when discussing facilities expressly excluded by the statute (i.e., local distribution) and the term "exemption" when referring to the exemption process NERC will develop for use with facilities other than local distribution that may be exempted from compliance with the mandatory Reliability Standards for other reasons." (Footnote 82)Thereby, the Commission clearly established its preferred terminology; "exclusion" for local distribution and "exemption" for exceptions allowed under the NERC designations and Exception Process. The BES Definition and Designations do not fully utilize this FERC wording convention.
Response: The SDT and the corresponding Rules of Procedure team have created a set of terminology that is consistent across the two projects and in line with what they believe is the intent of FERC. No change made.		
Modern Electric Water Company	Yes	Exclusion E1 and WECC Compliance Bulletin #4 (April 15, 2011) conflict. We support the intent of E1 and have provided suggested language modifications to it in Question #7 herein.Link - http://compliance.wecc.biz/Documents/2%20-%20WECC%20-%20Compliance%20Bulletins/01.04%20-%20Compliance%20Bulletin%20-%204%20Interpretation%20PRC-004,%20PRC-005%20-%20April%2015,%202011.pdf
Response: Exclusion E1 has been modified under the revised BES definition to address your concerns and those of others. **E1** - ~~Any r~~Radial system<u>s:</u> ~~which is described as connected~~ <u>A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher</u> ~~from a single Transmission source originating with an automatic interruption device~~ and:		
American Municipal Power and Members	No	In Ohio, 50 MW is the threshold for siting. Although 20 MW has recently been the criteria for the BES, if there is no technical justification (a study of some kind) then we highly recommend raising the threshold for generators to 50 MVA for a single unit. In our experience, registered generators, even those that have had severe violations, have been routinely classified as not having an impact on the BES in the enforcement process. Due to this truth, we can not understand the justification for keeping such a low threshold. We suggest raising the threshold to 50 MVA for single units, unless a technical study justifies inclusion.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus		

Organization	Yes or No	Question 12 Comment
of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Tacoma Power		Tacoma Power is not aware of any conflicts at this time.
Independent Electricity System Operator	No	At this point, we are not aware of conflicts for our own jurisdiction. However, NERC must exercise caution while developing the exception criteria and the associated processes as these may result in jurisdictional issues between state/provincial and federal entities. We repeat our earlier point that the BES definition and TPC must be developed and approved simultaneously to provide assurances that mechanisms are in place to exclude those Facilities from BES classification that are not impactive on the BES.
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	No	We are not currently aware of any conflict, but have not had a chance to thoroughly consider the potential conflicts.
American Electric Power	No	AEP is not aware of any conflicts involving the proposed definition and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue.
City of Redding	No	
Illinois Municipal Electric Agency	No	
Tri-State Generation and Transmission Association, Inc.	No	
Imperial Irrigation District	No	
Florida Municipal Power Agency	No	

Organization	Yes or No	Question 12 Comment
NERC Staff Technical Review	No	
SERC Planning Standards Subcommittee	No	
ACES Power Participating Members	No	
SERC OC Standards Review Group	No	
Overton Power District No. 5	No	
Tennessee Valley Authority	No	
Arizona Public Service Company	No	
Western Electricity Coordinating Council	No	
ReliabilityFirst	No	
Rayburn Country Electric Cooperative, Inc.	No	
New York Power Authority	No	
Southern Company	No	
Luminant Energy	No	
Central Maine Power Company	No	
New York State Electric & Gas	No	

Organization	Yes or No	Question 12 Comment
and Rochester Gas & Electric		
Western Area Power Administration	No	
Intellibind	No	
US Bureau of Reclamation	No	
Glacier Electric Cooperative	No	
FHEC	No	
Vermont Transco	No	No Comment
South Texas Electric Cooperative, Inc.	No	
South Texas Electric Cooperative, Inc.	No	
Sweeny Cogeneration LP	No	
Dayton Power and Light Company	No	
Duke Energy	No	
South Carolina Electric and Gas	No	
Fayetteville Public Works Commission	No	
MidAmerican Energy Company	No	

Organization	Yes or No	Question 12 Comment
Florida Keys Electric Cooperative	No	
American Transmission Company, LLC	No	
Farmington Electric Utility System	No	
Sierra Pacific Power Co d/b/a NV Energy	No	
Colorado Springs Utilities	No	
Sacramento Municipal Utility District (SMUD)	No	
City of St. George	No	
Puget Sound Energy	No	
GTC	No	
Idaho Power	No	
Long Island Power Authority	No	
Cogentrix Energy, LLC	No	
PJM	No	
Oncor Electric Delivery Company LLC	No	
City of Anaheim	No	

Organization	Yes or No	Question 12 Comment
MEAG Power	No	
Xcel Energy	No	
Golden Spread Electric Cooperative, Inc.	No	
Michgan Public Power Agency	No	
Utility System Efficiencies, Inc.	No	
Response: Thank you for your response.		

13. Are there any other concerns with this definition that haven't been covered in previous questions and comments?

Summary Consideration: Comments received for Question 13 were mostly re-statements of comments expressed in the previous question. No changes were made to the core definition or Inclusions or Exclusions based solely on question 13 comments. However, changes were made to the Implementation Plan to clarify the effective date of the revised definition.

Organization	Yes or No	Question 13 Comment
Northeast Power Coordinating Council		Currently, the posted exception criterion is only a concept with many gaps and TBD, as posted details are later to follow. The exception criteria should be a menu of technical items (load flows, stability analysis etc) and non technical items (type of loads such as distribution companies versus major city center, national security, etc). Entities should be required to assess and provide their own justification under each category with a conclusion that takes into account all of the relevant items for element(s) under exception, in a consistent template and table of contents. Suggest the SDT to avoid specification of any parameters as they would differ under different design concepts, system configurations, system characteristics and regulatory requirements.The comments herein reflect thoughts on the document posted. An "all encompassing" comment is that the definition is too lengthy. The importance of the BES definition is recognized throughout the industry for its importance, and as such it should be simple, clear, and straightforward. The first draft definition posted was more along this line. I2, I3, and I5, being very similar, can they be combined into an encompassing generator inclusion criteria?
Response: Comments concerning the Technical Principles (Exception Criteria) associated with the RoP Exception Process will be addressed through the dedicated responses developed by the SDT and published in the specific Consideration of Comments document associated with that portion of the overall project. The primary goal of the SDT in the revision of the definition of the BES is to improve clarity in the language and to provide as much certainty as possible in the identification of Bulk Electric System (BES) and non-BES Elements. Although the clarifications added to the core definition and the inclusions and exclusions have lengthened the definition as a whole, the SDT feels that the improvements in clarity and the increased ability to apply the definition to achieve consistent results justify the overall length of the definition. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards		

Organization	Yes or No	Question 13 Comment
Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Tri-State Generation and Transmission Association, Inc.		We believe that this definition is not consistent with the response from the SPCS in Project 2009-17, "Interpretation of PRC-004-1 and PRC-005-1 for Y-W Electric and Tri-State" and could change its intent. Existing tapped distribution transformers are clearly not BES Elements at this time. Under the proposed definition that clarity is lost.There are instances where "automatic interruption device" or "automatic interrupting device" is used. Each should be changed to include "fault" after "automatic."
Response: The Interpretation speaks to which Protection Systems are applicable to the PRC Standards, not which Elements are BES or non-BES. The SDT believes that the bright-line established by the draft BES definition is not necessarily the same bright-line that should be utilized to identify the Protection Systems that are applicable to the PRC Reliability Standards and should be addressed by a separate development project. No change made.		
Santee Cooper		What was the rationale for using aggregate capacity greater than 75 MVA on I2 and I5. I2 and I3 inclusions are not the same as defined by the SERC Regional Entity for MOD-024. The SERC guideline does not include an aggregate value for generating units.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.		
NERC Staff Technical Review		The definition should include variable frequency transformers and back-to-back HVdc converters that connect portions of the system operated at 100 kV or higher, regardless of the dc voltage rating of the converter equipment, which often is less than 100 kV. Assuring reliable operation of nuclear plants requires that Elements subject to Nuclear Plant Interconnection Requirements are planned, designed, maintained, and operated in accordance with NERC Reliability Standards. An additional Inclusion I6 should be added to the definition to include "All transmission Elements subject to Nuclear Plant Interface Requirements (NPIRs) as agreed to by a Nuclear Plant Generator Operator and a Transmission Entity defined in NUC-001." Assuring reliable operation of the interconnected transmission network also is dependent on reliable operation

Organization	Yes or No	Question 13 Comment
		of generating units that system operators rely on for capacity and Contingency Reserves. Additional Inclusions I7 and I8 should be added to include: * Real Power resources fully or partially relied on to fulfill a capacity obligation, and * Real Power resources (supply-side or Demand-Side Management) relied on to provide Contingency Reserves to its Balancing Authority.
Response: The SDT believes that the language contained in the core definition (all Transmission Elements operated at 100 kV or higher) adequately captures specific components such as variable frequency transformers and back-to-back HVdc converters. No change made. The SDT does not believe that additional clarification beyond the designations currently established by the core definition and accompanying Inclusions and Exclusions are necessary to appropriately identify the vast majority of Elements that support the reliable operation of the interconnected transmission network. Additionally, the RoP Exception Process can be utilized to include facilities that are deemed necessary for the reliable operation of the interconnected transmission network but not captured by the BES definition. No change made.		
NERC Transmission Issues Subcommittee (TIS)		The definition should include variable frequency transformers and back-to-back HVdc converters that connect portions of the system operated at 100 kV or higher, regardless of the dc voltage rating of the converter equipment.
Response: The SDT believes that the language contained in the core definition (all Transmission Elements operated at 100 kV or higher) adequately captures specific components such as, variable frequency transformers and back-to-back HVdc converters. No change made.		
Dominion		Does the SDT assert that there is no reliability gap because the impact of load on the BES is covered because the DP and LSE are registered and therefore must comply with applicable reliability standards? If so, why shouldn't the same apply to generation elements? GO and GOPs, just like DPs and LSEs are registered users of the bulk power system and must adhere to applicable reliability standards. Other comments Dominion also has the following comments which are based, to a large degree upon the webinar of May 19th. Dominion is concerned that while the BES definition is going through the standards development process, where stakeholders have the ability to ballot, the exception process is being treated as a change to the Rules of Procedure, with no associated stakeholder ballot. For this reason, Dominion prefers that the exception criteria itself be part of the BES definition standards development process. As Dominion reviews the Inclusions and Exclusions included by the SDT in the BES definition, we believe that the SDT could just have easily developed criteria to determine whether impact on the BES is material. We believe this would negate the need for the exception process proposed for the Rules of Procedure. However, if this course is not chosen, then Dominion requests the NERC BOT apply these changes in an 'all or none' fashion. That is, the BES definition and the exception process should both require NERC BOT approval or neither should be moved to FERC for its approval. We are confused as to how the definition, in particular the Inclusions and Exclusions, and the exception process are meant to be applied to, or by, the registered entity.

Organization	Yes or No	Question 13 Comment
		We thought we heard differing views from the panel; one stating that, if the Element or Facility met the Inclusion or Exclusion in the BES definition, then an exception request submittal is not required. On the other hand, we thought we heard that, unless an exception request submittal had been approved then 'status quo' applies. What is 'status quo' based on, the current BES definition or the BES definition being proposed? Would an entity need to track the effective date of the BES definition change in order to determine 'status quo'? How will submittal or non-submittal of an exception request by the registered entity be applied for compliance purposes? Dominion believes the correct answer is that and Element or Facility that meets the BES definition is included and if it doesn't meet the BES definition, isn't included. Only when an exception request has been submitted by an entity, approved and any appeal resolved, is inclusion or exclusion based on the impact to the bulk power system as determined by the criteria used in the exception process.
Response: The SDT scope was determined by the language contained in Order Nos. 743 & 743a in which the Commission provided guidance to the ERO to clarify the definition for continent-wide application. The Commission did not propose significant changes to the current application of the existing definition over the majority of the continent. Therefore the SDT has developed a draft core definition, together with BES designations (Inclusions and Exclusions) that provide the specificity necessary to identify the vast majority of BES Elements by utilizing the existing definition and criteria previously approved for this purpose. Although load is a component that can impact the reliability of the BES, the development of the definition is bound by the limitations documented in Section 215 of the Federal Power Act. Expanding the definition to include load would exceed the jurisdictional boundaries into the area of local distribution facilities. No change made. Upon initiation of the development project in response to Order Nos. 743 & 743a, NERC staff and the NERC Standards Committee determined the appropriate mechanisms for the development of each aspect of the project. The revision of the BES definition and the development of the Technical Principles associated with the Exception Process are currently being developed through the Standards Development Process. The RoP Exception Process is being developed through the RoP process for the revision of the Rules of Procedure. The approvals will follow the applicable revision process. No change made. The BES definition (core definition and Inclusions & Exclusions) will be applied to classify BES vs. non-BES Elements. The SDT believes that this will cover the vast majority of the facilities in question. The remaining facilities will be candidates for the Exception Process (RoP) where the Technical Principles will be utilized to determine if the facility is necessary for the reliable operation of the interconnected transmission network. The term 'status quo' was referring to the draft BES definition. Once approved (BES definition, Exception Process and the Technical Principles) the current BES definition will be retired. No change made.		
MRO's NERC Standards Review Forum		In order to provide a clear and concise definition, please add the Brightline Criteria that all facilities less than a 100kV are excluded unless those facilities meet the criteria of an Inclusion.
Response: The SDT believes that the current draft BES definition provides sufficient clarity in establishing the bright-line of 100 kV and the identification of facilities operated at less than 100 kV for exclusion would be redundant and jeopardize the SDTs efforts of establishing clarity in the language of the definition. In an effort to provide additional guidance and in support of comments provided in response to Question 11, the SDT has modified the BES core definition with a		

Organization	Yes or No	Question 13 Comment
statement that specifically excludes 'local distribution facilities. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
SERC Planning Standards Subcommittee		The comments expressed herein represent a consensus of the views of the above-named members of the SERC EC Planning Standards Subcommittee only and should not be construed as the position of SERC Reliability Corporation, its board, or its officers.
Response: The SDT appreciates the clarification.		
ACES Power Participating Members		It is not clear if E1 covers networked sub-transmission. Consider the situation where a 138 kV line terminates into a 138/69 kV transformer, the 69 kV is networked and only serves load and possibly generation that does not meet any of the inclusion criteria. This is a situation that appears to meet the intent to exclude radial load under E1 and local distribution networks under E3 but does not appear to explicitly meet either criteria. E1 is not met because the 69 kV network is not radial and E3 is not met because it specifically limits the exclusion to 100 kV and above. This issue could be solved by making clear that E1 applies to even networked sub-transmission or by removing the voltage limit on E3 so that sub-transmission could be included within this exclusion criterion.
Response: Exclusions E1 & E3 identify facilities operated at a voltage of 100 kV or higher in an attempt to exclude those types of facilities that do not support the reliable operation of the interconnected transmission network. Facilities operated at a voltage level less than 100 kV are excluded by the 'bright-line' established by the BES core definition unless included through the RoP Exception Process. The SDT is unable to comment on specific system configurations without detailed information pertaining to the facility in question; however, the SDT believes that the application of the BES definition should start with the application of the 'bright-line' established at the 100 kV threshold.		
BPA		As presently written, this BES definition says that "Real Power resources … and Reactive Power resources connected at 100kV or higher" are to be considered as part of the BES unless one of the specified exclusions applies. Though exclusion E2 specifically excludes "generating units that serve all or part of a retail Load … on the customer's side of the meter", there is not a similar exclusion for Reactive Power resources that similarly provide such reactive support solely "on the customer's side of the meter". It seems that this results in such Reactive Power resources (i.e. capacitors, inductors, SVCs, etc.), customer side of the meter being defined as part of the BES. If this was not the SDT's intent, BPA requests a new exclusion to specifically exclude such Reactive Power resources "on the customer's side of the meter".

Organization	Yes or No	Question 13 Comment
Response: The SDT agrees with the commenter's concerns regarding retail customer-owned Reactive Power resources and has drafted an additional Exclusion E4 to address these concerns. **E4** – Reactive Power devices owned and operated by the retail customer solely for their own use.		
Hydro One Networks Inc		We believe that the concepts of inclusions and exclusions as part of the bright-line definition are excellent. However, these exclusions do not address adequately several complex issues along with directives in Order No. 743 and 743A, such as: differentiation between Transmission and Distribution, non-jurisdictional concerns, or distribution. BES definition itself is not a venue to address these complex issues and suggest that these should be addressed by the ERO's exception procedure. We suggest that SDT consider: Removing I5 and adding E4 to exclude intermittent renewable generation (wind and solar). As stated earlier, such units are intermittent and the planning and operational standards and practices ensure that their unavailability or unexpected (sudden) loss of generation won't jeopardize reliability of the network; therefore, they should not be BES. That the definition and/or exception process should provide acknowledgement and flexibility to avoid any regulatory conflicts. Introducing a concept of a new category of registration or BES Support (BESS) elements. These elements are NOT BES but support the reliable operation of the interconnected transmission network. A sub-set of relevant NERC Standards should still apply to BESS elements such as planning, design, and maintenance. However, they may not be contiguous or subject to mandatory compliance. We do plan to submit our comments on exception criteria and procedure as part of its process. However, we do suggest that the SDT: Carefully craft the exception criteria that is flexible and technically sound to adequately allow entities to present their case to the ERO for exception. Verify that the exception criteria should be at a high-level with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) mentioned in exclusions or inclusions based on technical assessment, evidence and justification for its unique characteristics, configuration, and utilization. Acknowledge and provide provisions in both NERC exception criteria and exception process for federal, state and provincial jurisdictions.
Response: The SDT agrees with the commenter that the Exception Process should be the primary mechanism for addressing the concerns surrounding issues such as: differentiation between Transmission and Distribution, non-jurisdictional concerns, or distribution. However, the SDT has made modifications to the BES core definition to address the issues associated with the jurisdictional concerns related to local distribution facilities. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		

Organization	Yes or No	Question 13 Comment
Although dispersed power producing resources (wind, solar, etc.) can be intermittent suppliers of electrical generation to the interconnected transmission network, the SDT has been made aware of geographical areas that depend on these types of generation resources for the reliable operation of the interconnected transmission network which has prompted the development of Inclusion I4 (previously Inclusion I5). Inclusion I4 has been revised to address industry concerns identified in responses to Question 6. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system~~ , connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above. The development of Reliability Standards is not limited in applicability to BES Elements. Reliability Standards are written against facilities that support the reliable operation of the interconnected transmission network. Therefore the SDT believes that the clarification of the BES definition does not require identification of these types of facilities and that the specific facilities in question are better addressed by the applicability of individual Reliability Standards and not through the BES definition or the Exception Process. No change made. Comments concerning the Technical Principles (Exception Criteria) associated with the RoP Exception Process will be addressed through the dedicated responses developed by the SDT and published in the specific Consideration of Comments document associated with that portion of the overall project.		
Edison Electric Institute		Comments: EEI appreciates the efforts of the SDT and offers these comments to help guide its efforts. EEI believes that the statutory framework of the Federal Power Act and Section 215 specifically must govern the definition of BES. While FERC has declined to further define the term "Bulk-Power System" ("BPS") and suggested in Order No. 743 that the BPS "reaches farther than those facilities that are included" in the BES, it is clear that the BES cannot extend further than the BPS, and therefore the statutory definition of BPS must be the guide for the SDT's efforts, particularly with regard to the treatment of local distribution facilities.The BPS definition in Section 215 includes:(1) facilities and control systems necessary for operating an interconnected electric energy transmission network; and (2) electric energy from generation facilities needed to maintain transmission system reliability. But the term BPS does not include facilities used in the local distribution of electric energy. The definition of BES must comply with the statutory definition.EEI points to several issues to which it believes the SDT should pay particular attention. First, the facilities and control systems to be included within the BPS/BES must be necessary for operating an interconnected electric transmission network. Therefore, each of the proposed inclusions and exclusions must be measured against this requirement - are they necessary? It is insufficient to include a particular facility or element within the BES definition merely because it would be desirable to have such a facility covered under the BES or a particular standard. In addition, EEI believes that imposing a requirement that all contiguous elements be included is too broad and may sweep in facilities to the BES definition that are statutorily excluded because they are not necessary. For example, while blackstart resources may be "necessary," including all facilities that are contiguous between a particular blackstart resource and the transmission system is likely to include elements that are not

Organization	Yes or No	Question 13 Comment
		"necessary" to the operation of the interstate transmission network and therefore not within the statutory definition. As a general rule, EEI believes it is appropriate to include contiguous elements or facilities above 100kV necessary for operating the interconnected transmission network, but not any below 100 kV unless the element is necessary to operate the interconnected transmission network.There is no reason to require a "contiguous" BES down to the local distribution facility level. Section 215 gives NERC and FERC jurisdiction over "users, owners and operators" of the BPS. Therefore, FERC has authority to require an entity that is not a BES facility to comply with applicable NERC requirements where necessary for BPS reliability. This approach would achieve the goals of BPS reliability without extending the full reach of BES applicability to facilities that may be local distribution facilities that are excluded from Section 215. Second, both the transmission and the generation facilities included within the BPS/BES must be tied to maintaining the reliable operation of the BPS. Section 215 defines the term "reliable operation" as "operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure. The statute does not require that there be no loss of load. The statute is aimed at avoiding uncontrolled separation or cascading failures. Therefore, consistent with the statute, the definition of BES should only include elements that are necessary to prevent these occurrences. Third, the statute contains a specific exclusion for facilities used in the local distribution of electric energy ("local distribution facilities"). FERC has agreed in Orders No. 743 and 743-A that local distribution facilities are not subject to Section 215. FERC, as the agency implementing Section 215, has the authority to interpret what that means. In Order 743-A, FERC left it to NERC, and therefore to the SDT, to determine in the first instance which facilities are local distribution and therefore excluded and whether or not to use tests such as the Seven Factor Test from Order No. 888. Order No. 888 set out seven indicators, a combination of functional and technical tests, to assist companies and state commissions with separating local distribution facilities from FERC jurisdictional transmission facilities on a case by case basis. The seven factors are: (1) Local distribution facilities are normally in close proximity to retail customers; (2) Local distribution facilities are primarily radial in character; (3) Power flows into local distribution systems; it rarely, if ever, flows out; (4) When power enters into a local distribution system, it is not reconsigned or transported on to some other market; (5) Power entering a local distribution system is consumer in a comparatively restricted geographical area; (6) Meters are based at the transmission/local distribution interface to measure flows into the local distribution facilities; and (7) Local distribution systems will be of reduced voltage. EEI acknowledges that the Seven Factor test does not draw a bright line between facilities used in local distribution and transmission facilities and may not be a perfect fit for applying to specific pieces of equipment as the SDT has tried to do. However, many state commissions have made determination of what are local distribution facilities and FERC has concurred with these determinations. Therefore, EEI proposes that if NERC or FERC seek to include facilities (or class of facilities) in the BES that have been previously determined by a state commission to be local distribution through application of the Seven Factor Test, that there is a rebuttable presumption that these are facilities used in local distribution for purposes of

Organization	Yes or No	Question 13 Comment
		the BES definition. In order to overcome this presumption, NERC/FERC must make a showing demonstrating that these facilities "necessary" for the reliable operation of the BPS. EEI will address this and a procedure for seeking exclusion of facilities that previously have been determined to be local distribution in its comments to be submitted on the exceptions process.In applying the statutory exclusion for local distribution facilities, the SDT should ensure that the inclusions do not include local distribution facilities and that the exclusions are sufficient to exclude local distribution facilities. Similarly, it is not sufficient to include an element that would otherwise be a local distribution facility merely to support a facility clearly within the BES. For example, the SDT should consider the how the proposed criteria would classify types of equipment such as distribution voltage equipment - some, such as cap banks in a generation switchyard do support the transmission system versus a regulator on a distribution feeder - the former may be part of the BES and the latter unlikely or not at all.
Response: The SDT has made modifications to the BES core definition to address the issues associated with the jurisdictional concerns related to local distribution facilities. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy. The SDT agrees that the establishment of a contiguous BES could have the unintended consequences of being overly-inclusive and has made corresponding changes to the Inclusions to address this concern. The primary goal of the SDT in the revision of the definition of the BES is to improve clarity in the current language and to provide as much certainty as possible in the identification of BES and non-BES Elements. The Commission provided guidance within Order Nos. 743 & 743a which identified the current application of the existing BES definition was essentially correct for the majority of the continent and directed clarification of the existing language to support consistent application across all regions. Additional guidance from the Commission spoke to significant changes in the scope of the definition with an expectation that the revision to the definition would not significantly expand or contract what is currently considered to be the BES. Limiting the draft definition to Elements where a loss could result in instability, uncontrolled separation, or cascading failures is a significant departure from the current definition and not in alignment with the expectations documented in the Orders (743 & 743a). No change made.		
LG&E and KU Energy LLC		YesLG&E and KU Energy have a concern that the approval and adoption of the BES definition project and BES exception procedure project are not linked. This would produce the possibility of the BES definition project completing and Registered Entities having to comply without having the appropriate and promised BES exception procedure in place to alleviate unreasonable compliance actions. More specifically, if the BES definition gets approved and BES exception procedure has not yet been approved (whether due to project delay or disapproval), then Registered Entities are required to ensure everything within the new definition is compliant, even if doing so is unreasonable or entirely unnecessary.

Organization	Yes or No	Question 13 Comment
Response: It is the intention of the SDT and the RoP team to file all portions of the project (BES definition, RoP Exception Process, and the Technical Principles) as a single response to the directives contained in Order Nos. 743 & 743a with the expectation that all portions would be approved at the same time.		
Alabama Public Service Commission		The Alabama Public Service Commission (APSC) appreciates the fact that a member of the Oregon PUC Staff is participating on this BES Definition drafting team. In reviewing the proposed definition, the APSC's focus is to ensure that appropriate definitional lines are drawn so that recognized jurisdictional boundaries are acknowledged and respected. The concern underlying this focus of the APSC is the fact that utilities must make significant investments to comply with mandatory reliability standards and, accordingly, compliance with such standards must be necessary and not duplicative. Furthermore, there should be a commensurate reliability benefit associated with the cost of the investments needed for compliance.The proposed definition and NERC's development of standards should focus on reliable operation of the interconnected electric transmission network (BES) in order to prevent local events from affecting other regions, not to ensure reliable operation at the local level.
Pennsylvania Public Utility Commission		The Pennsylvania Public Utility Commission offers the following comments in response to Standards Announcement Project 2010-17 BES Definition: As you know, Section 1211 of the Energy Policy Act of 2005, amending Section 215 of the Federal Power Act, provided for the promulgation of standards for the bulk power system by an Electric Reliability Organization subject to the approval of the U.S. Federal Energy Commission. Section 215 (a) states:'SEC. 215. ELECTRIC RELIABILITY.''(a) DEFINITIONS.-For purposes of this section:(1) The term 'bulk-power system' means-(A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability.The term does not include facilities used in the local distribution of electric energy.EPAct 2005, Section 1211, 16 U.S.C. Â§ 824 [emphasis supplied] While the PaPUC acknowledges the need for a more explicit definition of the Bulk Electric System (or, as it is stated in EPAct 2005, the "bulk power system"), we are concerned that the existing draft definition and stated exclusions is insufficiently clear and may be erroneously extended to distribution facilities that are currently subject to state jurisdiction expressly reserved by the language of EPAct 2005, Section 1211 (a).Exceptions E1-E4 are plainly drafted to address this issue, but there is a concern that the definition of "local distribution networks" contained in Exception E3 may not fully comport with the intent of Congress, particularly Exception E3 (d) which excepts facilities that are [n]ot used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN. The proposed language appears to be contrary to Congressional intent as it implies that some local distribution facilities which "transfer bulk power" are indeed subject to the ERO standards process. Additionally, the draft BES, which distinguishes local distribution facilities between those that "transfer bulk power" and those that do not appears insufficiently precise, as bulk power is ultimately transferred through every portion of the local distribution network to end users.Our major concern is that this draft standard definition will collide with state

Organization	Yes or No	Question 13 Comment
		regulation of distribution facilities, particularly where state commissions are seeking to impose standards and protective arrangements more stringent than might be required by the Electric Reliability Organization or Regional Reliability Organization. Accordingly, it is recommended that the Draft BES be modified to specifically define distribution facilities and exclude them from the ambit of the Bulk Electric System definition, as well as making it clear that State reliability standards relating to the local distribution network are not overridden or modified by standards applicable to the Bulk Electric System.
National Association of Regulatory Utility Commissioners		Congress clearly recognized that State utility commissions are concerned about and committed to reliability at the distribution level; that's why Congress explicitly limited FERC's reach, and directed FERC not to attempt to regulate facilities used in local distribution.The NERC standard setting process for defining the Bulk Electric System must respect the statutory limitations under Federal Power Act Section 215 that explicitly excluded local distribution from the definition of the Bulk Power System (BPS). The Bulk Electric System, while not necessarily equivalent to the BPS (See FERC Order 743 A P 102), cannot exceed the limitations of the BPS and cannot include facilities used in the local distribution of electric energy. State Utility Commissions are concerned about and committed to reliability. These Commissions are in the best position to provide reliability oversight and standards for the local distribution system in their State.
Response: The SDT is developing a revised definition of the BES to identify the facilities that support the reliable operation of the interconnected transmission network. The SDT has revised the draft BES definition to address the potential jurisdictional boundaries that currently exist in regards to local distribution facilities. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Western Electricity Coordinating Council		The definition should also reference the exception process and technical justification allowed for further inclusion or exclusion from the BES.
Utility System Efficiencies, Inc.		The definition should also reference the exception process and technical justification allowed for further inclusion or exclusion from the BES.
Response: Such a statement was inadvertently left off of the first posted version of the definition. Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.		
Western Montana Electric Generating and Transmission		WMG&T has these additional concerns: The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." WMG&T is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC

Organization	Yes or No	Question 13 Comment
Cooperative		BESDTF approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. For the reasons we have explained in our answer to Question 11, we believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process.
Response: The SDT believes that the burden of proof issue should be resolved through the development of the RoP Exception Process. Your comments will be forwarded to the RoP team for consideration. Upon initiation of the development project in response to Order Nos. 743 & 743a, NERC staff and the NERC Standards Committee determined the appropriate mechanisms for the development of each aspect of the project. The revision of the BES definition and the development of the Technical Principles associated with the Exception Process are currently being developed through the Standards Development Process. The RoP Exception Process is being developed through the RoP process for the revision of the Rules of Procedure.		
PacifiCorp		Effective dates: While understanding that additional facilities will require up to two years to come into compliance, several facilities will also be excluded that are currently under the current bright line definition. Are utilities going to be responsible to maintain all NERC reliability standards during the two year period for facilities or elements that will be excluded by the new bright line definition? PacifiCorp proposes that the effective date for facilities being removed from the bright line become effective on the first day of the first calendar quarter after applicable regulatory approval. It is reasonable to retain the two year period for facilities that will be added to the BES. NERC Staff has submitted written comments to this project stating that the BES “must be contiguous.”

Organization	Yes or No	Question 13 Comment
		Instituting a contiguous BES with Inclusion I2, for example, would result in a substantially over-inclusive BES definition. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of distribution elements that have nothing to do with improving or protecting the reliability of bulk transmission system.There is no compelling reason to adopt a "contiguous" BES that covers local distribution systems. Section 215 of the FPA provides FERC with jurisdictional authority over "users" as well as "owners" and "operators" of the bulk power system. Consequently, FERC has the jurisdictional authority to require generation and other entities to comply with applicable NERC requirements. Hence, even where an entity does not own or operate BES assets, it could still be required, for example, to provide necessary information to the applicable Reliability Coordinator or Planning Coordinator and to participate in programs to prevent instability, uncontrolled separation, or cascading outages to the bulk transmission system. This approach would fully achieve the goals of bulk transmission system reliability without imposing the full BES regulatory compliance burden on local distribution elements. Although not specifically the responsibility of the SDT, it should closely coordinate its efforts with the team developing the inclusion/exclusion process in the ROP. For instance, if the ROP team develops an overly onerous process to exclude elements which are not required to reliably operate the interconnected BES yet are not excluded through the bright-line definition then PacifiCorp would consider the bright-line definition to be over-inclusive.

Response: The SDT agrees with the commenter and has made revisions to the Implementation Plan to address these concerns surrounding the implementation dates.

The SDT agrees that the establishment of a contiguous BES could have the unintended consequences of being overly-inclusive. Inclusion I2 has been revised and merged with Inclusion I3 (now Inclusion I2) and as a result the implication of the continuity of the BES has been removed. Additionally, the SDT recognizes the limitations associated with FERC's jurisdiction as defined in the FPA Section 215 and has therefore provided additional clarification in the core BES definition to address these concerns.

> **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.
>
> **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.

It is the intention of the SDT and the RoP team to file all portions of the project (BES definition, RoP Exception Process, and the Technical Principles) as a single response to the directives contained in Order Nos. 743 & 743a with the expectation that all portions would be approved at the same time.

Organization	Yes or No	Question 13 Comment
Intellibind		Generation that is BES significant that is not connected at 100kV or above.
Response: This 'significant' generation should be identified with the appropriate technical justification, established and presented by the Regional Entity, in accordance with the Rules of Procedure Exception Process for 'inclusion' approval by the ERO. No change made.		
City of Redding		Additional concerns: The SDT has avoided directly addressing the predominate issues that plagues the industry. The two main issues are: a sound definition of the term "*necessary for operating the interconnected transmission network*" **and** "whether a particular facility is local distribution or transmission" as directed by FERC in both Orders 743 and 743A. As an example, in terms of pure operation of an interconnected transmission system there is only a small amount of the generation connected to the BES system where the energy is actually "necessary for operating the interconnected transmission network". As the users of the system increase load and remote generation responds then the transmission system only needs the VAR support and reserves from a select set of generators, therefore the Definition goes too far, and creates a generalization that all generators over 20 MVA are "necessary". This is especially not true if the generation is a load modifier embedded in a Distribution system and the generator only requires reserves from the BES. These services are a function of the BES and are paid for by the user. Redding is concerned that the SDT is intertwining the BES Definition and the Statement of Compliance Registry out of convenience. It is our view that the the NERC Registry Criteria serves a different function than the Definition in that it does not clarify what elements are BES elements but identifies the Owners, Operators, and Users of the BES and therefore the NERC Standards could be applied. The SDT does not have a technical justification to adopt the current thresholds in the Compliance Registry as part of the BES Definition. These thresholds have not been presented to the industry for validation or review. Additionally, the Statement of Compliance Registry was an initial attempt of NERC to begin a new regulation requirement and was not created through the NERC Standards Development Process. Redding suggests that the SDT, in the interest of reliability, recommend that the NERC Statement of Compliance Registry be modified to create a tiered level of responsibilities for entities. A 20 MVA generator has a different level of responsibility to the BES then an 800 MVA generation unit. A LDN that does not qualify for an exemption due to an impact on a path or flow gate should not be required to meet the full requirements of a Transmission Operator. This in fact reduces reliability by diverting the local training focus from the operation of a Local Control Center (LCC) and a sub-transmission system. Prior to the NERC Standards WECC had training classes for Sub-transmission Operators that were applicable to the reliable operation of a local Sub-transmission system. The implementation of the NERC Standards has decreased reliability in this area because the focus of coordinating with the LCC and sub-transmission level has been lost.

Organization	Yes or No	Question 13 Comment
Response: The SAR has clearly identified the responsibilities of the SDT in revising the definition of the BES. The scope does not include the additional definitions noted above. No change made. The Commission stated in Order Nos. 743 & 743a that they believe the current application of the definition is correct and should be maintained. The current application of the definition is based on Commission language contained Order 693 which directs the use of the BES definition and NERC Statement of Compliance Registry to identify the functional entities required to be registered and which Reliability Standards will apply. The linkage between the BES definition and Registry Criteria was established by the Commission in Order No. 693 and uncontested by the industry at the time of filing. No change made. The ERO Statement of Compliance Registry is governed by the Rules of Procedure and under the responsibilities of the ERO Certification and Registration Department and does not fall under the current responsibility of the SDT as defined by the scope in the SAR for Project 2010-17. No change made.		
Public Utility District No. 1 of Snohomish County, Washington		Snohomish County PUD has these additional concerns: We are concerned that the proposed 24-month delay in the effective date of the new definition will delay the potentially beneficial effects of the SDT's efforts, especially for utilities that have been inappropriately registered for BES-related functions, which is a common situation in WECC. We therefore urge the new BES definition to become effective immediately upon approval by FERC or other applicable regulatory agencies. Entities that have been improperly registered for BES functions can then immediately file for deregistration and obtain the benefits of the new definition as soon as possible. For entities that have not previously been registered for BES-related functions but that would be required to register under the new definition, we do not object to the 24-month transition period proposed by the SDT to allow the newly-registered entity to attain compliance with newly-applicable reliability standards, many of which require new training for employees, new maintenance procedures, and complex new operational protocols. However, the transition period for newly-registered entities should be structured in a way that does not prevent entities seeking deregistration from benefitting from the new definition at the earliest possible date. The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." Snohomish is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BES Task Force approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. For the reasons we have explained in our answer to Question 11, we believe the Exception process is critical

Organization	Yes or No	Question 13 Comment
		both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Compare NERC Rules of Procedure Â§ 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process. Further, we believe that the failure to vet all material elements of the BES definition through the Standards Development Process would constitute a violation of NERC's bylaws and the requirements of the Standards Development Process.
Response: The SDT agrees with the commenter and has made revisions to the Implementation Plan to address these concerns surrounding the implementation dates. The SDT believes that the burden of proof issue should be resolved through the RoP Exception Process. Your comments will be forwarded to the RoP team for consideration. Upon initiation of the development project in response to Order Nos. 743 & 743a, NERC staff and the NERC Standards Committee determined the appropriate mechanisms for the development of each aspect of the project. The revision of the BES definition and the development of the Technical Principles associated with the Exception Process are currently being developed through the Standards Development Process. The RoP Exception Process is being developed through the RoP process for the revision of the Rules of Procedure.		
Grand Haven Board of Light and Power		I can not over emphasize how unreasonable it would be for our utility to have to register as a TO/TOP because of one asset (138kV circuit switcher) that serves a radial, load serving system. It is equally unreasonable for us to have to use a long and arduous exception process to qualify for deregistration. Please take this into consideration as you prepare the final definition.
Response: The SDT is responsible for the revision of the BES definition. In fulfilling this responsibility the SDT is developing a definition that properly classifies facilities as BES or non-BES Elements. Defining registration requirements is not within the scope of Project 2010-17. No change made.		
National Grid		We are concerned that the proposed definition of BES and specified inclusions reaches farther into the electric system than the Bulk Power System (BPS) definition. The statutory framework of the Federal Power

Organization	Yes or No	Question 13 Comment
		and section 215 specifically must govern the definition of BES. It is clear in FERC's Order No. 743 that BES should not extend further than BPS, therefore the statutory definition of BPS must be the guide for the SDT's efforts, particularly with regard to the treatment of local distribution facilities. The BPS definition includes (1) facilities and control systems necessary for operating an interconnected electric energy transmission network; and (2) electric energy from generation facilities needed to maintain transmission system reliability. It does not include facilities used in the local distribution of electric energy. The definition of BES must comply with the statutory definition.First, the facilities and control systems to be included within the BPS/BES must be necessary for operating an interconnected electric transmission network. Therefore, one question to consider for each of the proposed inclusions and exclusions is "are they necessary?" A particular facility or element should not included in the BES definition just because it would be desirable to have the facility considered BES or covered by a particular standard. Imposing a requirement that all contiguous elements be included is too broad and may sweep in facilities to the BES definition that are statutorily excluded because they are not necessary. Second, both the transmission and the generation facilities included within the BPS/BES must be tied to maintaining the reliable operation of the BPS. Section 215 defines the term "reliable operation" as "operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure". The statute does not require that there be no loss of load. The statute is aimed at avoiding uncontrolled separation or cascading failures. Therefore, the definition of BES should only include elements that are necessary to prevent these occurrences.

Response: The SDT recognizes the limitations associated with FERC's jurisdiction as defined in the FPA Section 215 and has therefore provided additional clarification in the core BES definition to address these concerns.

> **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.

The SDT agrees that the establishment of a contiguous BES could have the unintended consequences of being overly-inclusive. Inclusion I2 has been revised and merged with Inclusion I3 (now Inclusion I2) and as a result the implication of the continuity of the BES has been removed.

> **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.

The primary goal of the SDT in the revision of the definition of the BES is to improve clarity in the current language and to provide as much certainty in the

Organization	Yes or No	Question 13 Comment
identification of BES and non-BES Elements. The Commission provided guidance within Order Nos. 743 & 743a which identified the current application of the existing BES definition was essentially correct for the majority of the continent and directed clarification of the existing language to support consistent application across all regions. Additional guidance from the Commission spoke to significant changes in the scope of the definition with an expectation of the revision to the definition would not significantly expand or contract what is currently considered to be the BES. Limiting the draft definition to Elements where a loss could result in instability, uncontrolled separation, or cascading failures is a significant departure from the current definition and not in alignment with the expectations documented in the Orders (743 & 743a). No change made.		
Northern Wasco County PUD		Northern Wasco County PUD has these additional concerns: The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." Northern Wasco County PUD is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BESDTF approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. For the reasons we have explained in our answer to Question 11, we believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process.
Clallam County PUD No.1 Chelan PUD – CHPD Public Utility District No. 1 of Franklin County		Clallam County PUD has these additional concerns: The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." Clallam is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BES Task Force approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions

Organization	Yes or No	Question 13 Comment
Northwest Requirements Utilities Big Bend Electric Cooperative, Inc. Cowlitz County PUD		listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. For the reasons we have explained in our answer to Question 11, we believe the exemption process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the exemption process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Compare NERC Rules of Procedure Â§ 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process. Further, we believe that the failure to vet all material elements of the BES definition through the Standards Development Process would constitute a violation of NERC's bylaws and the requirements of the Standards Development Process.
Response: The SDT believes that the burden of proof issue should be resolved through the development RoP Exception Process. Your comments will be forwarded to the RoP team for consideration. Upon initiation of the development project in response to Order Nos. 743 & 743a, NERC staff and the NERC Standards Committee determined the appropriate mechanisms for the development of each aspect of the project. The revision of the BES definition and the development of the Technical Principles associated with the Exception Process are currently being developed through the Standards Development Process. The RoP Exception Process is being developed through the RoP process for the revision of the Rules of Procedure.		
PUD No. 2 of Grant County, Washington		Grant has these additional concerns: We are concerned that the proposed 24-month delay in the effective date of the new definition will delay the potentially beneficial effects of the SDT's efforts, especially for utilities that have been inappropriately required to meet BES reliability standards, which is a common situation in WECC. We therefore urge the new BES definition become effective immediately upon approval by FERC or other applicable regulatory agencies. Entities that have been improperly required to meet standards can then immediately redirect resources to where they are truly needed. For entities that have not previously been

Organization	Yes or No	Question 13 Comment
		registered for BES-related functions but that would be required to register under the new definition, we agree that 24 months is an appropriate transition period to allow the newly-registered entity to attain compliance with newly-applicable reliability standards, many of which require new training for employees, new maintenance procedures, and complex new operational protocols. However, the transition period for newly-registered entities should be structured in a way that does not prevent entities seeking deregistration from benefitting from the new definition at the earliest possible date. The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." Grant is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BESDTF approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force.
Response: The SDT agrees with the commenter and has made revisions to the Implementation Plan to address these concerns surrounding the implementation dates. The SDT believes that the burden of proof issue should be resolved through the development RoP Exception Process. Your comments will be forwarded to the RoP DT for consideration.		
Wells Rural Electric Company		Dear NERC Standards Drafting Team:Enclosed are Wells Rural Electric Company's comments on NERC's Proposed Continent-wide Definition of Bulk Electric System. We believe that NERC's proposed Continent-wide Definition of Bulk Electric System is proceeding in the right direction on this important topic but that more work needs to the done. We would like to thank the Standards Drafting Team for their hard work. We support the detailed comments of the Snohomish County Public Utility District and Pacific Northwest Generating Cooperative with regard to the questions posed by the Comment Form for Project 2010-17 Definition of BES.We would like to emphasize these portions of Snohomish's and PNGC's comments: Question 1, both PNGC and Snohomish suggest that NERC start by adopting the statutory definition of the bulk power system as the core definition. We support that approach. That is, "(t) he term 'Bulk Electric System' means: (A) Facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and,(B) Electric energy from generation facilities needed to maintain transmission system reliability.The term does not include facilities used in the local distribution of

Organization	Yes or No	Question 13 Comment
		electric energy". See 16 U.S.C. Â§ 824o(a)(1)." Question 7, we support the exclusion for radial lines as drafted. Question 9, we support the categorical exclusion of Local Distribution Networks from the BES as defined here, but with Snohomish's clarifications. Question 10, we support exclusion E4, for small utilities, but we are unclear how small utilities are defined in the exclusion language presented here. Question 11, we support the approach to exclusion of local distribution facilities discussed in the draft but repeat that more work should be done on the definition so that facilities used in local distribution are not swept up into the BES.The primary value of clearly defining the BES is for registration determinations. We realize that clearly defining the BES also has value in determining which standards apply to registered entities. If a registered entity does not own any Elements of the BES that that registered entity should be able to efficiently and effectively demonstrate an exception. We encourage NERC to support the use of the BES definition for registration-issues and to develop the exception procedure for registered entities that do not own or operate any Elements of the BES.
Response: The SDT appreciates the industry support for this project. Please see the SDT responses in Questions 1, 7, 9, 10, and 11 of this document.		
ExxonMobil Research and Engineering		There are certain transmission network configurations in the south east portion of the country where the majority of the interconnected transmission network is owned and maintained by a single utility company, but approximately one hundred substations that are located along the interconnected transmission network and utilized to transmit power between regions are owned by separate companies (i.e. many companies own a single transmission substation). The SDT should consider this configuration and the lack of uniform operation and maintenance practices that may exist due to the differences in how the companies implement NERC compliance.
Response: The primary goal of the SDT in the revision of the definition of the BES is to improve clarity in the current language and to provide as much certainty as possible in the identification of BES and non-BES Elements. The Commission provided guidance within Order Nos. 743 & 743a which identified the current application of the existing BES definition was essentially correct for the majority of the continent and directed clarification of the existing language to support consistent application across all regions. Additional guidance from the Commission spoke to significant changes in the scope of the definition with an expectation of the revision to the definition would not significantly expand or contract what is currently considered to be the BES. The SDT is unable to comment on specific system configurations without detailed information pertaining to the facility in question.		
FortisBC		We believe that the concepts of inclusions and exclusions as part of the bright-line definition are excellent. However, these exclusions do not address several directives in Order No. 743 and 743A, such as:

Organization	Yes or No	Question 13 Comment
		differentiation between Transmission and Distribution, non-jurisdictional concerns, or distribution. We believe that the BES definition itself is not a venue to address these concerns but suggest that these issues should be explicitly addressed by the ERO's exception criteria and exception process. Currently, the posted exception criterion is only a concept with many gaps and TBD, as posted details are later to follow. We suggest that the exception criteria should be a menu of technical items (load flows, stability analysis etc) and non technical items (type of loads such as distribution companies vs. major city center, national security etc). Entities should be required to assess and provide their own justification under each category with a conclusion that takes into account all of the relevant items for element(s) under exception, in a consistent template and table of contents. We suggest the SDT to avoid specification of any parameters as they would differ under different design concepts, system configurations, system characteristics and regulatory requirements.
Response: The SDT agrees with the commenter that the Exception Process should be the primary mechanism for addressing the concerns surrounding issues such as: differentiation between Transmission and Distribution, non-jurisdictional concerns, or distribution. However the SDT has made modifications to the BES core definition to address the issues associated with the jurisdictional concerns related to local distribution facilities. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy. Comments concerning the Technical Principles (Exception Criteria) associated with the RoP Exception Process will be addressed through the dedicated responses developed by the SDT and published in the specific Consideration of Comments document associated with that portion of the overall project.		
MidAmerican Energy Company		While there were no questions directed to the draft implementation plan in the comment form, if the intent was to also solicit comments on that plan, the schedule in that plan is likely too agressive if the result of the revised BES definition is that new facilites are brought into the BES and are thereby obligated to now comply with standards they had not previously been required to meet. Perhaps a provision should be added to the implementation plan to address this situation and allow an extended schedule for new BES facilities to comply with applicable standards.
Response: The SDT believes that the 24 month schedule for implementation is a reasonable compromise considering the Commission suggested timeframe of 18 months and the burden of newly registered functional entities in establishing compliance with the applicable Reliability Standards. The SDT did, however, extend the effective date by an additional quarter of a year based on stakeholder comments.		
American Electric Power		Usage of the NERC term "Element" clearly excludes associated auxiliary equipment such as protective relay systems and metering systems. If this is not the intent of the SDT, then there needs to be more comprehensive BES nomenclature established that distinguishes among the applicable primary-voltage equipment, the associated auxiliary equipment having an impact to the BES, and the associated ancillary

Organization	Yes or No	Question 13 Comment
		equipment having no electrical impact to the BES.In addition, please see response to question 1 regarding the request for industry input on concurrent, closely related projects (approved definition of BES, the technical principles for demonstrating BES exception, and the exception process itself).
Response: The SDT has determined that the draft BES definition should identify BES Elements which are operated at a voltage of 100 kV or above. The SDT also has recognized the existence of facilities (i.e., auxiliary equipment and Protection Systems) that support the reliable operation of the interconnected transmission network but do not necessarily operate at voltages of 100 kV or above and should not necessarily be classified as BES Elements. Reliability of the interconnected transmission network is established by the application of Reliability Standards and the development of Reliability Standards is not limited in applicability to BES Elements. Reliability Standards are written against facilities that support the reliable operation of the interconnected transmission network. Therefore the SDT believes that the clarification of the BES definition does not require identification of these types of facilities and that the specific facilities in question are better addressed by the applicability of individual Reliability Standards and not through the BES definition or the Exception Process. No change made.		
Farmington Electric Utility System		The Rules of Procedure for Exceptions should define the compliance expectation of the entity while an exception is being considered; similar to the CIP TFE process.
Response: The SDT believes that compliance expectation issues should be resolved through the RoP Exception Process. Your comments will be forwarded to the RoP team for consideration.		
Colorado Springs Utilities		Colorado Springs Utilities supports the SDT's efforts to create an acceptable BES definition directly linked to an exemption process. Know that WECC has a task force, the Bulk Electric System Definition Task Force (BESDTF), which has done some notable work on this task. See WECC BESDTF Proposal 6, Appendix C (http://www.wecc.biz/Standards/Development/BES/default.aspx). The BES definition is very complex and the BESDTF has already addressed many of the tough issues that have yet to be addressed in this process, such as: o Local Distribution Network definition for automatic exemption o Determination of radial facilities o Demarcation of BES and non-BES Elements o Alternate dispute resolution process o Assignment of the burden of proof for the exemption process o Technical approach for the inclusion/exclusion determination
Sacramento Municipal Utility District (SMUD)		SMUD supports the SDT's efforts to create an acceptable BES definition directly linked to an exemption process. SMUD would also like to bring to the BES SDT's attention that the WECC the Bulk Electric System Definition Task Force has constructed the framework on this task that we encourage the SDT to review their work. SMUD would like to thank the BES SDT for consideration of these comments.
Tacoma Power		Tacoma Power supports the SDT's efforts to create an acceptable BES definition directly linked to an exemption process. Please be aware that the WECC has a task force, the Bulk Electric System Definition Task Force (BESDTF), which has done some notable work on this task. See WECC BESDTF Proposal 6, Appendix C (http://www.wecc.biz/Standards/Development/BES/default.aspx). The BES definition is very

Organization	Yes or No	Question 13 Comment
		complex and the BESDTF has already addressed many of the tough issues that have yet to be addressed in this process, such as: o Local Distribution Network definition for automatic exemption o Determination of radial facilities o Demarcation of BES and non-BES Elements o Alternate dispute resolution process o Assignment of the burden of proof for the exemption process o Technical approach for the inclusion/exclusion determinationThank you for consideration of our comments.
Response: The SDT has taken into account the work product of several regional efforts in the development of the draft BES definition.		
Consumers Energy Company		Yes.We propose an alternative core BES definition to read as follows: "All network System Elements operated at 100 kV or higher, Real Power resources as described below, and Reactive Power resources connected at 100 kV or higher unless such designation is modified by the list shown below." We support extending the transition period to 24 months.
Response: The SDT believes that the revised draft BES definition provides sufficient clarity in establishing the bright-line of 100 kV. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy. Thank you for your support.		
Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)		Occidental Energy Ventures Corp ("OEVC") would like to emphasize that the proposed definition of the BES does not only impact OEVC and its affiliates. The proposed BES definition would include numerous facilities that are used for the local distribution of electric energy, not transmission, in direct contravention of Section 215 of the FPA. For example, there are likely hundreds, if not thousands, of retail customers that have self-provided "hard-tapped" facilities behind the retail delivery point. Those retail customers, many of who are likely unaware of the proposed BES definition, much less its impact, will have their facilities under the proposed BES definition suddenly become transmission facilities simply because their facilities are not separated from the BES by an automatic fault-interruption device.
Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenter's. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system. In addition, the SDT wishes to point out that the definition also includes Exclusion E3 that can be used for multiple connections serving local networks. The SDT realizes that a bright-line definition may require entities to seek exceptions through the Rules of Procedure exception process.		

Organization	Yes or No	Question 13 Comment
Chevron Global Power, a division of Chevron U.S.A. Inc.		Chevron U.S.A. Inc. has reviewed the proposed Bulk Electric System definition and is concerned that the proposed changes designed to enhance reliability and accountability of Transmission and Generation are inadvertently catching parties whose prime operations are distribution in nature. Chevron is proposing minor changes that will not affect the necessary regulation of the bulk power industry, but will exempt parties that are not crucial to reliability and provide mostly, if not entirely, distribution or self use service.In remote areas of west Texas, Chevron has hundreds of non contiguous producing properties and facilities located over hundreds of square miles. In some cases where the utility was close and had the capability to serve, Chevron took utility service. Where service was not available or the utility did not have the capability, Chevron built its own private power distribution system to service its own facilities. Chevron has no generation and takes all of its power from transmission providers. In at least one instance Chevron takes power at over 100 kV from a transmission provider. Chevron has an automated interruption device between its facilities and the transmission facilities. Currently this field takes power from an ERCOT transmission owner at above 100 kV and then distributes the power over a Chevron owned and operated power distribution system to Chevron facilities. This Chevron system includes a substation, transformers and other facilities necessary to take power at above 100 kV and distribute and step down the power as necessary. Chevron uses the power for offices, repair facilities, oil wells, separation facilities, gas plants, drilling new wells and other related oil and gas activities. Located within the area of the Chevron power distribution system are ranchers, pump stations, third party oil wells and other small users. These parties are not located near any utility or coop facilities. For decades Chevron has worked to accommodate these parties by working with the local utility, transmission owners and the Texas Public Utility Commission to allow electrical service to these remote users. Many of these ranchers and other users are not located near any utility lines. Costs could run to the hundreds of thousands of dollars (or more) to provide an interconnect from the utility. Instead of leaving these parties with no electrical service, a procedure was developed that allowed parties such as Chevron to accommodate the small end user. For example if a utility/coop was unable or unwilling to serve a rancher at a reasonable cost, the rancher could approach Chevron. The goal would be to execute a three party agreement between the rancher, Chevron and the service provider. Under the terms of the agreement, the Rancher would interconnect with the Chevron system. A utility quality meter capable of remote reading would be installed and the rancher would be responsible for all costs beginning at the meter. The rancher contracts with a power provider for his power. Every month the meter between the Transmission owner and Chevron would be read. This smart meter located at the interconnect with the transmission system and its soft ware would show all deduct metering (such as our rancher) so that any non Chevron parties on the Chevron distribution system's usage would clearly be listed. The transmission owner then provides the billing information to the rancher's power provider. Chevron receives no compensation from the rancher, power provider or transmission owner. Chevron provides the service strictly on an accommodation basis. The Texas Public Utility Commission recognizes the needs of parties in remote areas of Texas and has blessed this type of service. Chevron is not considered a utility for providing this type of service.Chevron is concerned that the above described private power distribution system may inadvertently be forced to register as a bulk electric

Organization	Yes or No	Question 13 Comment
		system provider. This private distribution system is clearly at the terminus of a radial line and provides service to Chevron owned and operated facilities. The system is large in area and has been built over a period longer than any current employee's memory. Through what can be called "accidents of history" and a good neighbor policy, Chevron has accommodated parties that otherwise could not connect to utility quality power. This arrangement is blessed and encouraged by the State PUC. Chevron charges nothing for the service. The system is entirely distribution in nature and does not contribute to the reliability of the grid in any manner. The intent of the current rule making is not to encompass such a system. NERC needs to encourage parties such as Chevron to help bring power to remote areas and not discourage, or worse yet greatly increase the cost to provide such service.Chevron requests that the NERC include in its definition a statement making it clear that systems such as those described above should not be required to register. Chevron supports the technical changes suggested by ELCON in its filing.A party's facility should not be considered an essential facility where the facility would otherwise be considered exempt except that it is providing distribution services as an accommodation to third parties. This is especially true when1. The incumbent utility or coop is unable or unwilling to serve the third parties at a reasonable cost2. The service to the third party is provided as an accommodation3. The facility is not generating and/or selling power to the third party4. The third party is purchasing power from a power provider
Response: The primary goal of the SDT in the revision of the definition of the BES is to improve clarity in the current language and to provide as much certainty as possible in the identification of BES and non-BES Elements. The Commission provided guidance within Order Nos. 743 & 743a which identified the current application of the existing BES definition was essentially correct for the majority of the continent and directed clarification of the existing language to support consistent application across all regions. Additional guidance from the Commission spoke to significant changes in the scope of the definition with an expectation of the revision to the definition would not significantly expand or contract what is currently considered to be the BES. The SDT believes that establishing a 'bright-line' approach to identify BES Elements will inherently incorrectly identify a small number of facilities. The Exception Process is designed to clear up these discrepancies and render the proper classification of those questionable facilities. The SDT believes that with the draft core definition and the BES designations (Inclusions and Exclusions) the vast majority of facilities will be correctly identified as BES or non-BES Elements and therefore will produce the consistent application and results as desired by the Commission's language in Order Nos. 743 & 743a. The SDT made several revisions to the definition that should address your concerns.		
Muscatine Power and Water		In order to provide a unambiguous and concise definition of the BES, we ask the SDT to please include in the bright-line criteria that "all facilities less than a 100kV are excluded unless those facilities meet the criteria of an Inclusion."
Response: The SDT believes that the current draft BES definition provides sufficient clarity in establishing the bright-line of 100 kV and the identification facilities operated at less than 100 kV for exclusion would be redundant and jeopardize the SDTs efforts of establishing charity in the language of the definition. If an effort to provide additional guidance and in support of comments provided in response to Question 11, the SDT has modified the BES core definition with a statement		

Organization	Yes or No	Question 13 Comment
that specifically excludes 'local distribution facilities. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch		BGE agrees with the SDT's position that support equipment such as UVLS and UFLS not be classified as BES. BGE strongly believes that including control centers and other BES support equipment in the BES definition is not necessary and will cause confusion. BGE commends the BES Definition Standards Drafting Team for the informative webinar on 5/19/2011. We were encouraged that the SDT's developed a transition plan for the implementation of the new BES definition. BGE urges the SDT to also address the issue of the addition of new BES elements (i.e., such as new designated blackstart resources which may include a cranking path that is reclassified as BES). A transition period would also be required for these situations. BGE appreciates the work of the drafting team and supports the goal to produce clear definition language so that upwards of 95% of the assets are clearly distinguished as either included or excluded from the BES. We are particularly sensitive to the potential for burdensome processes (e.g. TFEs) to be added to reliability compliance, so we appeal to the team for continued, vigilant consideration of the arduousness of the BES determination process.Also important to consider is that the subject of this comment form, the proposed BES definition, is only one part of the BES definition project. The accompanying technical principles for BES Exceptions and the Rule of Procedure Process must be evaluated together with the BES Definition to sufficiently understand the revisions. In the end, the Technical Principles and the BES Definition must coalesce and be clearly coordinated and understood. The BES Definition language must include reference to the role of the associated defining documents. One unambiguous document must not be made ambiguous by an associated document or process.
Response: The SDT appreciates the supportive comments and has taken into consideration the concerns raised by the commenter in its deliberations.		
Exelon		The definition assumes some inclusions or exclusions based on levels of generation used in the NERC Compliance Registry Criteria. Exelon does not view Orders 743 and 743-A as requiring a view or justification of these thresholds. See Order No. 743-A at P 47 ("it was not our intent to disrupt the NERC Rules of Procedure or the Statement of Compliance Registry Criteria").
Response: The SDT agrees with the commenter.		
Kootenai Electric Cooperative		Kootenai has these additional concerns: We are concerned that the proposed 24-month delay in the effective date of the new definition will delay the potentially beneficial effects of the SDT's efforts, especially for utilities that have been inappropriately registered for BES-related functions, which is a common situation in WECC.

Organization	Yes or No	Question 13 Comment
		We therefore urge the new BES definition to become effective immediately upon approval by FERC or other applicable regulatory agencies. Entities that have been improperly registered for BES functions can then immediately file for deregistration and obtain the benefits of the new definition as soon as possible. For entities that have not previously been registered for BES-related functions but that would be required to register under the new definition, we agree that 24 months is an appropriate transition period to allow the newly-registered entity to attain compliance with newly-applicable reliability standards, many of which require new training for employees, new maintenance procedures, and complex new operational protocols. However, the transition period for newly-registered entities should be structured in a way that does not prevent entities seeking deregistration from benefitting from the new definition at the earliest possible date. The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." Kootenai is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BESDTF approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. For the reasons we have explained in our answer to Question 11, we believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process.
Response: The SDT agrees with the commenter and has made revisions to the Implementation Plan to address these concerns surrounding the implementation dates. The SDT believes that the burden of proof issue should be resolved through the development RoP Exception Process. Your comments will be forwarded to the		

Organization	Yes or No	Question 13 Comment
RoP team for consideration. Upon initiation of the development project in response to Order Nos. 743 & 743a, NERC staff and the NERC Standards Committee determined the appropriate mechanisms for the development of each aspect of the project. The revision of the BES definition and the development of the Technical Principles associated with the Exception Process are currently being developed through the Standards Development Process. The RoP Exception Process is being developed through the RoP process for the revision of the Rules of Procedure.		
Springfield Utility Board		Springfield Utility Board requests that NERC create a distinction between the terms BPS and BES. Are the two to be used interchangeably, or will BPS no longer be used? SUB suggests NERC consider adopting the statutory definition of the Bulk Power System as the core definition of the Bulk Electric System. May 26, 2011Dear NERC Standards Drafting Team:Thank you for the opportunity to comment on NERC's proposed Continent-wide Definition of Bulk Electric System. We believe that NERC 's proposed Bulk Electric System definition is proceeding in the right direction, but that more work needs to be done. SUB's specific concerns are as follows: Bulk Power System (BPS) and Bulk Electric System (BES) - Springfield Utility Board requests that NERC create a distinction between the terms BPS and BES. Are the two to be used interchangeably, or will BPS no longer be used? SUB suggests NERC consider adopting the statutory definition of the Bulk Power System as the core definition of the Bulk Electric System. Clear definition of Radial - Because there still appears to be inconsistencies in both definition and application, SUB encourages NERC to develop a concise definition of a radial system. For example, if a system is normally operated as radial, but could be operated closed (by manually closing a breaker), would it be considered a radial or close-looped system? If the answer is "that a closed system", is this in all cases, or are there exceptions? Registration Status - SUB understands that one of the primary values of clearly defining the BES is for registration determinations, as well as determining which of the Standards apply to registered entities. SUB encourages NERC to support the use of the BES definition for entity registration, and to develop the exception procedure for registered entities that do not own or operate any BES Elements. Springfield Utility Board appreciates FERC and NERC's efforts to create a continent-wide definition of Bulk Electric System, and appreciates the opportunity to provide comment. Tracy Richardson Springfield Utility Board SUB requests NERC to consider the situation where an entity has multiple, but separate systems. The entity is required to become a Registered Entity because the sum of their individual systems meets the thresholds, but portions of their physically separated systems taken individually would otherwise not reach the threshold for registration. For example, an entity may be responsible for service over a third party's transmission for distribution service to a single end user with a load less than =<25MW that has a hard tap into the third parties' transmission. Because the load has a hard tap, it is technically served from more than

Organization	Yes or No	Question 13 Comment
		one transmission source. If there are no other loads served along the tap or along the third party's transmission segment, SUB believes that this type of situation warrants exclusion from the BES as it would otherwise be excluded - except for the fact that the combination of that service and other separate systems that the entity is responsible for triggers registration. SUB is concerned that devices such as shunt capacitor banks may be overlooked. For example, is a radial system serving only load with a shunt capacitor bank included or excluded from BES? It does raise the issue "what does "serving only load mean, exactly?" If a capacitor bank is used for purposes of managing reliability within an local network and the local network would otherwise be classified as an LDN, is the local network still classified as an LDN?
Springfield Utility Board		These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause an inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
Response: The SAR for Project 2010-17 identifies the scope of the SDTs responsibilities. The scope does not include revision or any level of assessment of the term Bulk Power System. Therefore any recommended revision to the definition of the BPS or recommendation on the usage or application of the term is not within the responsibilities of the SDT. No change made. The SDT has crafted language in Exclusion E1 that clearly identifies what constitutes a radial facility. The SDT is revising the definition of the BES and use or application of this definition for registration purposes solely resides under the responsibilities of the Certification and Registration department at NERC. The SDT is revising the definition of the BES to identify BES Elements without regard to the ownership of such facilities. Ownership is an issue better addressed by the registration process or the applicability of specific Reliability Standards. The SDT is not in a position to comment on specific situations without the opportunity		

Organization	Yes or No	Question 13 Comment
to review all available information pertaining to the facility in question. The SDT agrees with the commenter and has crafted revised Inclusion I5 language that specifically addresses Reactive Power resources. **I5** –Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1. The vast array of functional qualities of generation does not lend itself to a 'bright-line' concept of identifying BES Elements. Therefore the SDT has opted for the size threshold designation of generating facilities and allows for use of the Exception Process for further analysis of the facility and potential exclusion from or inclusion to the BES. No change made.		
City of St. George		What are proposed transition implementation plans for facilities that will now be included in the definition? The implementation plan indicates 24 months which may or may not be enough depending on the response time to exception process. How will a pending exception action affect compliance requirements and effective dates? It should be at least 24 months after it has been determined that a facility must be included.
Response: The SDT believes that the proposed 24 month period is sufficient time for entities to achieve the appropriate level of compliance with the Reliability Standards. Comments concerning the Exception Process will be directed to the Rules of Procedure team for review. The SDT did, however, extend the effective date by an additional quarter of a year based on stakeholder comments.		
CenterPoint Energy		CenterPoint Energy appreciates the opportunity to provide comments. In reviewing the draft definition, CenterPoint Energy believes the SDT may have unintentionally expanded the definition of the BES beyond the statutory definition in Section 215. Facilities included in the BES should be those facilities that are necessary for the reliable operation of the BES. Many interconnected facilities operated at 100kV and above, particularly those that are operated between 100kV and 200kV, are interconnected primarily to enhance the service provided to customers, rather than to maintain reliable operation of the BES.In addition; CenterPoint Energy is concerned with the addition of another exception process to the Rules of Procedure (ROP). In orders 743 and 743-A, the Commission allowed the ERO latitude to develop a definition that varied from the Commission's recommendation. CenterPoint Energy supports the inclusion/exclusion approach of the SDT and believes it should be possible to define what constitutes the BES without an exception process. Historically, exception processes within the ROP have been cumbersome, labor intensive, confusing, and require on-going maintenance and quarterly or annual updates. Indeed, in question 10 of this comment form the SDT recognizes the burden of administrating an exception process. While CenterPoint Energy understands the SDT may feel pressure to produce a product quickly, the Company does not believe the expedited nature justifies an inferior product. CenterPoint Energy recommends the SDT continue developing criteria that clearly defines BES facilities based on the Section 215 language. Once that is accomplished, an exception process will not be needed.

Organization	Yes or No	Question 13 Comment
Response: The primary goal of the SDT in the revision of the definition of the BES is to improve clarity in the current language and to provide as much certainty as possible in the identification of BES and non-BES Elements. The Commission provided guidance within Order Nos. 743 & 743a which identified the current application of the existing BES definition was essentially correct for the majority of the continent and directed clarification of the existing language to support consistent application across all regions. Additional guidance from the Commission spoke to significant changes in the scope of the definition with an expectation of the revision to the definition would not significantly expand or contract what is currently considered to be the BES. No change made. The SDT believes that establishing a 'bright-line' approach to identify BES Elements will inherently incorrectly identify a small number of facilities. The Exception Process is designed to clear up these discrepancies and render the proper classification of those questionable facilities. The SDT believes that with the draft core definition and the BES designations (Inclusions and Exclusions) the vast majority of facilities will be correctly identified as BES or non-BES Elements and therefore will produce the consistent application and results as desired by the Commission's language in Order Nos. 743 & 743a. The SDT made several changes to the definition, based on stakeholder comments that provide additional clarity to the definition. Please see the revised definition.		
Southern California Edison Company		As discussed during the May 19, 2011 NERC Webinar, SCE supports having one-line diagrams illustrating examples of the line and bus arrangements as they pertain to the BES Definition included as part of a set of support documents. A good start for these diagrams would be the ones developed by the WECC Bulk Electric System Definition Task Force (WECC BESDTF). These diagrams were developed by WECC to better illustrate the demarcation between BES and non-BES facilities and provide important information and insight into the WECC system.
Response: The SDT has taken into account the work product of several regional efforts in the development of the draft BES definition. The SDT also recognizes the value of a supporting reference document and will consider future development based on the project timeline and available resources.		
Midstate Electric Cooperative		Yes MSEC has these additional concerns: The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." MSEC is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BESDTF approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. For the reasons we have explained in our answer to Question 11, we believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and

Organization	Yes or No	Question 13 Comment
		to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process. Dear NERC Standards Drafting Team:Enclosed are MSEC's comments on NERC's Proposed Continent-wide Definition of Bulk Electric System. We believe that NERC's proposed Continent-wide Definition of Bulk Electric System is proceeding in the right direction on this important topic but that more work needs to the done. We would like to thank the Standards Drafting Team for their hard work. We support the detailed comments of the Snohomish County Public Utility District and Pacific Northwest Generating Cooperative with regard to the questions posed by the Comment Form for Project 2010-17 Definition of BES.We would like to emphasize these portions of Snohomish's and PNGC's comments: Question 1, both PNGC and Snohomish suggest that NERC start by adopting the statutory definition of the bulk power system as the core definition. We support that approach. That is, "(t) he term 'Bulk Electric System' means: (A) Facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and,(B) Electric energy from generation facilities needed to maintain transmission system reliability.The term does not include facilities used in the local distribution of electric energy". See 16 U.S.C. Â§ 824o(a)(1)." Question 7, we support the exclusion for radial lines as drafted. Question 9, we support the categorical exclusion of Local Distribution Networks from the BES as defined here, but with Snohomish's clarifications. Question 10, we support exclusion E4, for small utilities, but we are unclear how small utilities are defined in the exclusion language presented here. Question 11, we support the approach to exclusion of local distribution facilities discussed in the draft but repeat that more work should be done on the definition so that facilities used in local distribution are not swept up into the BES.The primary value of clearly defining the BES is for registration determinations. We realize that clearly defining the BES also has value in determining which standards apply to registered entities. If a registered entity does not own any Elements of the BES that that registered entity should be able to efficiently and effectively demonstrate an exception. We encourage NERC to support the use of the BES definition for registration-issues and to develop the exception procedure for registered entities that do not own or operate

Organization	Yes or No	Question 13 Comment
		any Elements of the BES.
Response: The SDT believes that the burden of proof issue should be resolved through the development RoP Exception Process. Your comments will be forwarded to the RoP DT for consideration. Upon initiation of the development project in response to Order Nos. 743 & 743a, NERC staff and the NERC Standards Committee determined the appropriate mechanisms for the development of each aspect of the project. The revision of the BES definition and the development of the Technical Principles associated with the Exception Process are currently being developed through the Standards Development Process. The RoP Exception Process is being developed through the RoP process for the revision of the Rules of Procedure. No change made. The SDT appreciates the industry support for this project. Please see the SDT responses in Questions 1, 7, 9, 10, and 11 of this document.		
Illinois Municipal Electric Agency		Being a Joint Action Agency and Joint Registration Organization representing small municipal utility interests, IMEA appreciates this initiative to better define electric systems that should and should not be considered part of the Bulk Electric System. In addition to those comments provided above, IMEA supports comments addressing other concerns as submitted by the Transmission Access Policy Study Group and the Small Entity Working Group.
Response: Please see the SDT responses to the Transmission Access Policy Study Group and the Small Entity Working Group comments.		
Long Island Power Authority		The SDT should clarify that Local Distribution Networks, including any facilities that are within the LDN, are not subject to Reliability Standard Requirements pursuant to Section 215 of the Federal Power Act.
Response: The Local Distribution Network concept was developed to allow facilities operated at 100 kV or higher, that serve a distribution function, to be eligible for exclusion if specific criteria are met. The use of the term 'Local Distribution Network' has resulted in some confusion by the industry in relation to the exclusion of local distribution facilities indentified in Section 215 of the Federal Power Act. The SDT has elected to revise the Exclusion to be termed 'Local Networks' to eliminate the confusion as to what type of facilities are being addressed by the Exclusion.		
Clark Public Utilities		The process for identifying facilities as part of an LDN needs to be stated. Clark has heard that this will be through a self-certification process, however, there is no written description how a utility classifies its transmission facilities as an LDN.
Response: The SDT envisions that the current practice of self-identification continues with the revised definition of the BES. No change made.		
Pepco Holdings Inc		1) It would be very helpful to include examples (with an explanation and diagram) of the various configurations that meet each of the inclusions and exclusions. Can the next draft include such examples to provide further clarity to the definitions? Consideration should be given to developing an attachment for this

Organization	Yes or No	Question 13 Comment
		material and a method to add appropriate examples in the future. 2) The proposal is silent on whether associated auxiliary and protection and control system equipment that could automatically trip a BES facility independent of the protection and control equipment's voltage level are included as part of the BES. The RFC BES definition specially addresses this issue as an example. Does IRO-005 cover those elements so it is not necessary to address these in this proposal? Consideration should be given to referencing the issue in the BES document.
Response: 1) The SDT has taken into account the work product of several regional efforts in the development of the draft BES definition. The SDT also recognizes the value of a supporting reference document and will consider future development based on the project timeline and available resources. 2) The SDT has determined that the draft BES definition should identify BES Elements which are operated at a voltage of 100 kV or above. The SDT also has recognized the existence of facilities (i.e., auxiliary equipment and Protection Systems) that support the reliable operation of the interconnected transmission network but do not necessarily operate at voltages of 100 kV or above and should not necessarily be classified as BES Elements. Reliability of the interconnected transmission network is established by the application of Reliability Standards and the development of Reliability Standards is not limited in applicability to BES Elements. Reliability Standards are written against facilities that support the reliable operation of the interconnected transmission network. Therefore the SDT believes that the clarification of the BES definition does not require identification of these types of facilities and that the specific facilities in question are better addressed by the applicability of individual Reliability Standards and not through the BES definition or the Exception Process. No change made.		
Vigilante Electric Cooperative		Dear NERC Standards Drafting Team:Enclosed are Vigilante Electric Cooperative, Inc's (VIEC) comments on NERC's Proposed Continent-wide Definition of the Bulk Electric System (BES).We believe that NERC's proposed definition of the Bulk Electric System is moving in the right direction and we thank the Standards Drafting Team for their hard work. We support the comments of the Snohomish County Public Utility Distric and Pacific Northwest Generating Cooperative with regard to questions posed by the comment form for Project 2010-17.We would like to add the following additional comments: With regard to exclusion E3, part e) - we do not believe that just because an element is on a list that it cannot be excluded. If an element meets all of the criteria to be excluded, then it should be excluded and removed from the list. Otherwise, we strongly agree that LDNs have no material impact on the BES.We also strongly encourage the continued development of a reasonable method for determination of inclusion/exclusion. We believe that there should be a clearer path that would ultimately allow a utility to pursue being included/excluded from registration with WECC. Many small utilities have an element that may actually have no material impact on the BES yet is required to comply with all WECC standards. We also would like to comment on the WECC compliance bulletin of April 15, 2011. While we greatly appreciate the recognition that radial T-Taps with transformer or distribution protection schemes have no material impact to the BES, we would encourage you to take this the additional logical step to actually remove these instances from WECC responibilities. This would help reduce the burden both on WECC and the

Organization	Yes or No	Question 13 Comment
		individual entities and save everyone involved a tremendous amount of time, effort and money.We again thank the Team for their efforts and appreciate the opportunity to be allowed to comment on these issues.
Response: The primary goal of the SDT in the revision of the definition of the BES is to improve clarity in the current language and to provide as much certainty as possible in the identification of BES and non-BES Elements. The Commission provided guidance within Order Nos. 743 & 743a which identified the current application of the existing BES definition was essentially correct for the majority of the continent and directed clarification of the existing language to support consistent application across all regions. Additional guidance from the Commission spoke to significant changes in the scope of the definition with an expectation of the revision to the definition would not significantly expand or contract what is currently considered to be the BES. No change made. The SDT is drafting a definition with the expectation of consistent application across the continent. The introduction or removal of specific language to address specific circumstances that may reside in the WECC footprint would not support this concept. No change made. The SDT is not in a position to comment on a WECC Compliance Bulletin.		
Central Lincoln		We believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process. We note also that the SAR still does not apply the definition to all registered entity types in violation of the FERC order to provide a continent-wide definition. Please include PSEs in the SAR also. We are concerned that the proposed 24-month delay in the effective date of the new definition will delay the potentially beneficial effects of the SDT's efforts, especially for utilities that have been inappropriately required to meet BES reliability standards, which is a common situation in WECC. We therefore urge the new BES definition to become effective immediately upon approval by FERC or other applicable regulatory agencies. Entities that have been improperly required to meet standards can then immediately redirect resources to where they are truly needed. For entities that have not previously been registered for BES-related functions but that would be required to register under the new definition, we agree that 24 months is an appropriate transition period to allow the newly-registered entity to attain compliance with newly-applicable reliability standards, many of which require new training for employees, new maintenance procedures, and complex new operational protocols. However, the transition period for newly-registered entities should be structured in

Organization	Yes or No	Question 13 Comment
		a way that does not prevent other entities from benefitting from the new definition at the earliest possible date.
Response: Upon initiation of the development project in response to Order Nos. 743 & 743a, NERC staff and the NERC Standards Committee determined the appropriate mechanisms for the development of each aspect of the project. The revision of the BES definition and the development of the Technical Principles associated with the Exception Process are currently being developed through the Standards Development Process. The RoP Exception Process is being developed through the RoP process for the revision of the Rules of Procedure. No change made. The draft BES definition identifies assets that meet specific criteria for classification as a BES Element. The NERC Functional Model defines the Purchase Selling Entity (PSE) as: The functional entity that purchases or sells, and takes title to, energy, capacity, and reliability related services. The ownership or responsibility of assets should trigger the registration of the functional entity in question in another area of registration. No change made. The SDT agrees with the commenter and has made revisions to the Implementation Plan to address these concerns surrounding the implementation dates.		
New England States Committee on Electricity		As a general matter, the definition should reference the Exception Process, which may cause assets and facilities to be further "included" or "excluded." In particular, once a facility has qualified for Exclusion it is not clear how that status is maintained.
Response: The phrase requested was inadvertently omitted from the first posting. Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process. The SDT believes that maintaining an approved Exclusion should be resolved through the RoP Exception Process. Your comments will be forwarded to the RoP DT for consideration.		
PPL Energy Plus and PPL Generation		The BES definition strives to draw a line between transmission customers (load and generation) and the "network" that makes up the bulk electric system. All transmission customers served by the network are not necessarily part of the network just like an on-ramp is not part of the Interstate highway, even though on-ramps deliver cars to the Interstate highway. FERC Order 743 paragraph 115 clearly gives guidance to the NERC BES Definition Team (BESDT) on developing fair exclusion criteria for facilities not necessary for the operation of the grid. PPL Generation and PPL Energy Plus (PPL) are concerned that the FERC order is being read overly expansively to include much more generation in the BES than FERC intended. In the NERC BESDT's latest proposed version of a BES definition, the definition appears to apply to small radial generators (Inclusions I2 and I3) but not to large radial loads (Exclusions E1 and E3). The BESDT has chosen to exclude or include LDNs based solely on the direction of power flow (see for example Exclusion E3-c) when the magnitude of the power flow is more critical than the direction. An example of the stark contrast between treatment of looped and radial facilities is exemplified by the exclusion of looped load and generation facilities of almost any size (Exclusion E3) from the BES, versus the seeming omission of any effort to

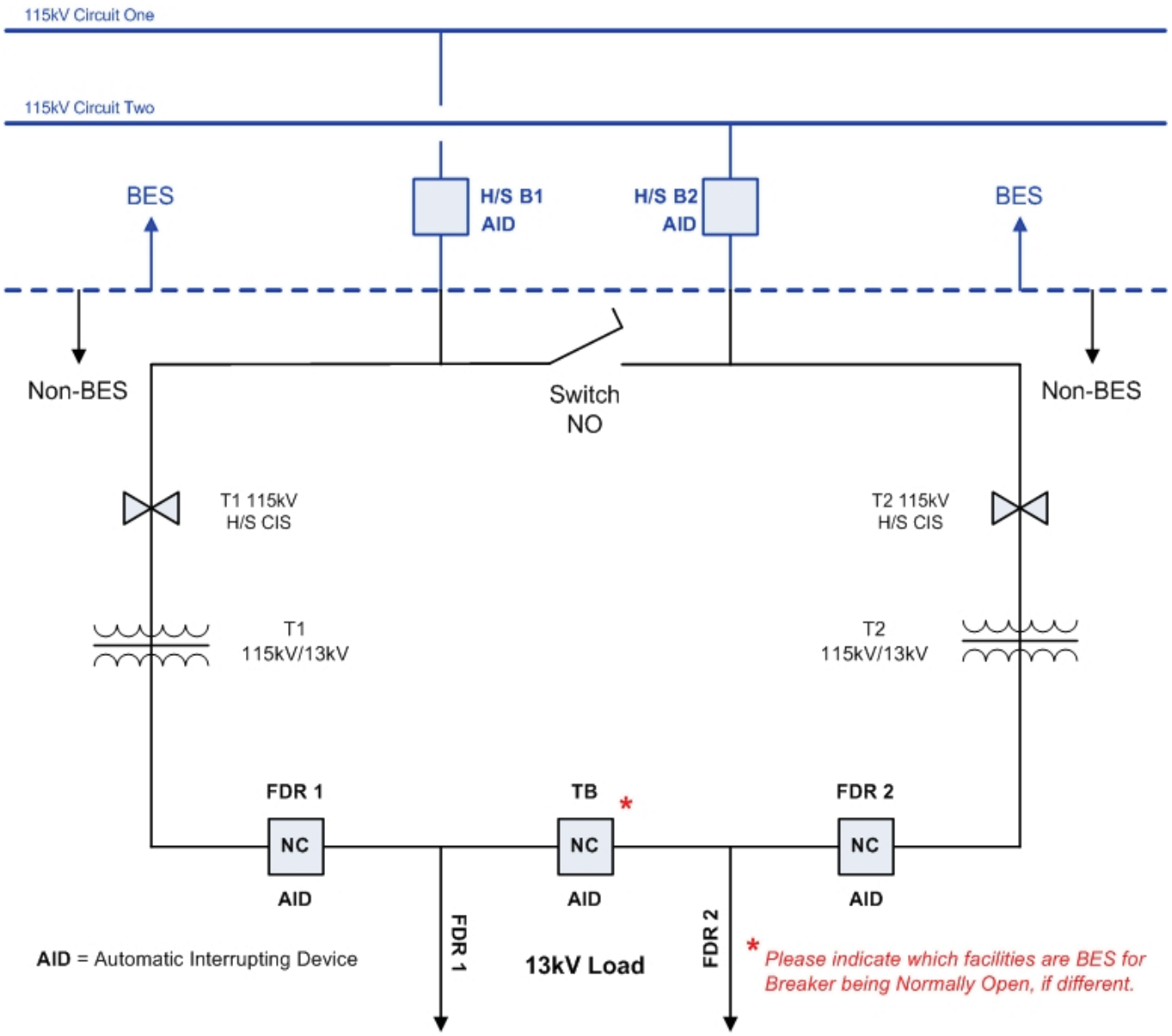
Organization	Yes or No	Question 13 Comment
		exclude radially connected generation facilities over 20 MVA. Clearly, FERC Order 743-A paragraph 55 instructs the BESDT to consider “additional facility characteristics” other than voltage to come up with a fair inclusion/exclusion process.The exclusion of looped facilities serving load and generation and the inclusion of radial facilities serving only generation does not appear consistent. Moreover, it ignores the physical reality that radial generator lead lines cannot be overloaded by outages on parallel paths because there are no parallel paths. Further, the MW flow on a radial line is well known and limited to a known maximum (limited to the larger of the generation or load on the end of the line): clearly reasons for exclusion. The BESDT should look carefully at FERC Order 743 paragraph 73 which describes the characteristics of the electrical network that the BES is trying to define. In that order, FERC justified its bright-line, 100 kV threshold, explaining that "many facilities operated at 100 kV and above have a significant effect on the overall functioning of the grid" because they share the following characteristics: 1. "operate in parallel with other high voltage and extra high voltage facilities"i. The “bright line” at 100 kV recognizes many 100 kV lines parallel other HV/EHV lines and can be significantly loaded by failure of the HV/EHV lines. This does not apply to radial lines, even at 100 kV and above.2. "interconnect significant amounts of generation sources"3. "operate as part of a defined flow gate"4. have a "parallel nature" and are capable of “caus[ing] or contribute[ing] to significant bulk system disturbances”.i. Radial lines cannot cause significant BES disturbances since the outage of a radial line is studied in all N-1 planning studies and if the TPL standards are followed, an N-1 should not cause such disturbances.To their credit, the BESDT recognizes part of paragraph 73 in Exclusion E3-d and E3-e (possibly exempting many hundreds of MVA load) but yet fails to exclude radial lines serving generators from the BES “network”. Generation should be excluded from the definition of the BES on the same basis as load. PPL requests the BESDT clearly exclude radial generators up to 200 MVA (1200 amps at 100 kV). This exclusion is clearly justified because it would recognize many (if not all) loads and generators served radially do NOT possess the Network Transmission Facilities characteristics described in FERC Order 743 paragraph 73. PPL hopes that the NERC BESDT will recognize (as FERC Order 743 in paragraph 120 recognizes) that radial facilities and distribution facilities can both be excluded.
Response: The SDT scope was determined by the language contained in Order Nos. 743 & 743a in which the Commission provided guidance to the ERO to clarify the definition for continent-wide application. The Commission did not propose significant changes to the current application of the existing definition over the majority of the continent. Therefore the SDT has developed a draft core definition, together with BES designations (Inclusions and Exclusions) that provide the specificity necessary to identify the vast majority of BES Elements by utilizing the existing definition and criteria previously approved for this purpose. Although load is a component that can impact the reliability of the BES, the development of the definition is bound by the limitations documented in Section 215 of the Federal Power Act. Expanding the definition to include load would exceed the jurisdictional boundaries into the area of local distribution facilities. No change made. The BES definition (core definition and Inclusions & Exclusions) will be applied to classify BES vs. non-BES Elements. The SDT believes that this will cover the vast majority of the facilities in question. The remaining facilities will be candidates for the Exception Process (RoP) where the Technical Principles will be utilized to determine if the facility is necessary for the reliable operation of the interconnected transmission network. Please see the revisions made to the revised definition.		

Organization	Yes or No	Question 13 Comment
Manitoba Hydro		Manitoba Hydro supports a 100kV bright line definition of the BES (excluding radial systems) that is consistent across all regions. We do not agree with the proposed impact based exception procedure and believe that the BES definition should be stand-alone. In addition, the complexity of the proposed BES definition and associated exception process may not provide the goal of uniform application of the BES definition and moves the burden of assessment and approval to the ERO.
Response: The SDT believes that establishing a 'bright-line' approach to identify BES Elements will inherently incorrectly identify a small number of facilities. The Exception Process, a Commission identified component of the project, is designed to clear up these discrepancies and render the proper classification of those questionable facilities. The SDT believes that with the draft core definition and the BES designations (Inclusions and Exclusions) the vast majority of facilities will be correctly identified as BES or non-BES Elements and therefore will produce the consistent application and results as desired by the Commission's language in Order Nos. 743 & 743a. The primary goal of the SDT in the revision of the definition of the BES is to improve clarity in the language and to provide as much certainty in the identification of BES and non-BES Elements. Although the clarifications added to the core definition and the inclusions and exclusions have lengthened and increased the complexity of the definition as a whole, the SDT feels that the improvements in clarity have increased the ability to apply the definition to achieve consistent results.		
Consolidated Edison Co. of NY, Inc.		The 'core' definition is not clear as to whether an Element would be included if it meets any one (or must meet more than one) of the 5 Inclusion criteria for inclusion?
Response: As inclusions speak to specific facilities and are not necessarily related other than for identification of BES Elements; if a facility meets the criteria of a single inclusion then the facility is classified as a BES Element. Therefore only one (1) inclusion must be met for a facility to be classified a BES Element.		
Independent Electricity System Operator		We have no other concerns with the definition but we believe a guide demonstrating the correct application of the definition under various transmission system configurations would be useful.
Response: The SDT also recognizes the value of a supporting reference document and will consider future development based on the project timeline and available resources.		
NB Power Transmission		Currently, the posted exception criterion is only a concept with many gaps and TBD, as posted details are later to follow. The exception criteria should be a menu of technical items (load flows, stability analysis etc). Entities should be required to assess and provide their own justification under each category with a conclusion that takes into account all of the relevant items for element(s) under exception, in a consistent

Organization	Yes or No	Question 13 Comment
		template and table of contents. Suggest the SDT to avoid specification of any parameters as they would differ under different design concepts, system configurations, system characteristics and regulatory requirements. An "all encompassing" comment is that the definition is too lengthy with an overly prescriptive exception process. The importance of the BES definition is recognized throughout the industry for its importance, and as such it should be simple, clear, and straightforward.
Response: Comments concerning the Technical Principles (Exception Criteria) associated with the RoP Exception Process will be addressed through the dedicated responses developed by the SDT and published in the specific Consideration of Comments document associated with that portion of the overall project.		
Orange and Rockland Utilities, Inc.		It was mentioned that Cranking Paths of Blackstart Resources are defined as BES. How about the path(s) of generation units that will be deemed as BES? Please clarify.
Response: The SDT has revised the Inclusion that identified Blackstart Cranking Paths as BES Elements. A significant number of comments identified that the Cranking Path could utilize local distribution facilities and could cross jurisdictional boundaries which should not be classified as BES Elements. Additionally the Inclusions related to generation facilities have been revised to eliminate the language which suggested paths between generation and the transmission are required to be contiguous Elements of the BES.		
AltaLink		We believe that the concepts of inclusions and exclusions as part of the bright-line definition are excellent. However, these exclusions do not address several directives in Order No. 743 and 743A, such as: differentiation between Transmission and Distribution, non-jurisdictional concerns, or distribution. We believe that the BES definition itself is not a venue to address these concerns but suggest that these issues should be explicitly addressed by the ERO's exception criteria and exception process. Currently, the posted exception criterion is only a concept with many gaps and TBD, as posted details are later to follow. We suggest that the exception criteria should be a menu of technical items (load flows, stability analysis etc) and non technical items (type of loads such as distribution companies vs. major city center, national security etc). Entities should be required to assess and provide their own justification under each category with a conclusion that takes into account all of the relevant items for element(s) under exception, in a consistent template and table of contents. We suggest the SDT to avoid specification of any parameters as they would differ under different design concepts, system configurations, system characteristics and regulatory requirements.
Response: The SDT agrees with the commenter that the Exception Process should be the primary mechanism for addressing the concerns surrounding issues such as: differentiation between Transmission and Distribution, non-jurisdictional concerns, or distribution. However the SDT has made modifications to the BES core definition to address the issues associated with the jurisdictional concerns related to local distribution facilities. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list~~		

Organization	Yes or No	Question 13 Comment
~~shown below~~. This does not include facilities used in the local distribution of electric energy. Comments concerning the Technical Principles (Exception Criteria) associated with the RoP Exception Process will be addressed through the dedicated responses developed by the SDT and published in the specific Consideration of Comments document associated with that portion of the overall project.		
Modern Electric Water Company		1) The SDT states that "one of the basic tenets that the SDT is following is to avoid changes in registration due the revised definition". We stress the implications of a missed opportunity and the importance of a usable BES definition, because if the revised definition does not allow the industry (both registered and non-registered entities) as well as the regional reliability organizations to focus on and conduct business in a fashion that promotes reliable and efficient system operation (not just ultra-conservative compliance monitoring), then NERC has failed to do its job in this particular instance. 2) The proposed implementation plan indicates that the effective date of this definition is not for at least 24 months after regulatory approval. We strongly disagree with this suggested approach as it does not provide for any benefit from this much-needed improvement. We believe the SDT intended to imply that entities not currently registered would have at least 24 months to become compliant with applicable standards if the improved BES definition suddenly swept them into the BES as it did for many small utilities on June 18, 2007. The definition should become effective immediately upon regulatory approval, and transition plans for newly-registered entities could specify longer timeframes. 3) As currently drafted, NERC's Statement of Compliance Registry Criteria (Revision 5.0) contains the text of NERC's approved BES definition. Upon approval of any other language, the SCRC will become inaccurate without review and modification.
Response: 1) The goals and assumptions established by the SDT are based on the documented Commission expectations in Orders Nos. 743 & 743a. Opportunity does exist to further revise the definition beyond the clarification identified by the Commission in the Orders, however, technical justification is required to deviate from the current application of the current BES definition. No change made. 2) The SDT agrees with the commenter and has made revisions to the Implementation Plan to address these concerns surrounding the implementation dates. 3) Review and potential revision of the NERC Statement of Compliance Registry is beyond the scope of the current SAR for this project. No change made.		

Diagram below refers to BGE comment for Q7:


115kV Circuit One
115kV Circuit Two
BES
H/S B1
AID
H/S B2
AID
BES
Non-BES
Switch
NO
Non-BES
T1 115kV
H/S CIS
T2 115kV
H/S CIS
T1
115kV/13kV
T2
115kV/13kV
FDR 1
TB
*
FDR 2
NC
NC
NC
AID
AID
AID
FDR 1
13kV Load
FDR 2
AID = Automatic Interrupting Device
* Please indicate which facilities are BES for Breaker being Normally Open, if different.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Consideration of Comments on Definition of the Bulk Electric System (BES) Technical Principles for Demonstrating BES Exceptions — Project 2010-17

The Bulk Electric System (BES) Drafting Team thanks all commenters who submitted comments on the first draft of the Project 2010-17: Definition of the Bulk Electric System (BES) Technical Principles for Demonstrating BES Exceptions. These standards were posted for a 30-day public comment period from May 11, 2011 through June 10, 2011. The stakeholders were asked to provide feedback on the standards through a special Electronic Comment Form. There were 91 sets of comments, including comments from approximately 182 different people from approximately 124 companies representing all 10 Industry Segments as shown in the table on the following pages.

http://www.nerc.com/filez/standards/Project2010-17_BES.html

Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.

The SDT is recommending that the project be moved to a parallel 45-day posting and ballot.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 404-443-2560 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

[1] The appeals process is in the Reliability Standards Development Procedures: http://www.nerc.com/standards/newstandardsprocess.html.

Index to Questions, Comments, and Responses

1. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. 14
2. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. 31
3. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. 44
4. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. 58
5. Exclusions - The SDT has set up one path for evidence that includes technical analysis. Do you agree with this requirement? 70
    - 5a. Comments on approach 76
    - 5b. Comments on distribution factor measurement 90
    - 5c. Comments on allowable transient voltage dip measurement 97
    - 5d. Comments on allowable transient frequency response 103
    - 5e. Comments on voltage deviation measurement 108
6. Exclusions – Do you have other methods that may be appropriate for proving an exclusion claim? Or, other variables/measurements that may be added to the requirements already shown in the posted Technical Principles for Demonstrating BES Exceptions? 114
7. Inclusions - The SDT has set up only one path for evidence that includes technical analysis. Do you agree with this requirement?. 126
    - 7a. Comments on approach 133
    - 7b. Comments on distribution factor measurement 142
    - 7c. Comments on allowable transient voltage dip measurement 147
    - 7d. Comments on allowable transient frequency response 151
    - 7e. Comments on voltage deviation measurement 155
8. Do you have concerns about an entity's ability to obtain the data they would need to do the indicated technical analyses?. 159
9. Are you aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? 167
10. Are there any other concerns with this approach that haven't been covered in previous questions and comments? Please be as specific as possible with your comments. 177

The Industry Segments are:

1 — Transmission Owners
2 — RTOs, ISOs
3 — Load-serving Entities
4 — Transmission-dependent Utilities
5 — Electric Generators
6 — Electricity Brokers, Aggregators, and Marketers
7 — Large Electricity End Users
8 — Small Electricity End Users
9 — Federal, State, Provincial Regulatory or other Government Entities
10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Connie Lowe	Electric Market Policy	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Mike Crowley		SERC	1, 3, 5
2.	Mike Garton		MRO	5
3.	Louis Slade		RFC	5, 6
4.	Michael Gildea		NPCC	5

2.	Group	Guy Zito	Northeast Power Coordinating Council										X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Alan Adamson	New York State Reliability Council, LLC	NPCC	10
2.	Gregory Campoli	New York Independent System Operator	NPCC	2
3.	Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC	3
4.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1
5.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC	1
6.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10
7.	Brian Evans-Mongeon	Utility Services	NPCC	8

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10

8.	Mike Garton	Dominion Resources Services, Inc.	NPCC	5
9.	Kathleen Goodman	ISO - New England	NPCC	2
10.	Chantel Haswell	FPL Group, Inc.	NPCC	5
11.	Brian Gooder	Ontario Power Generation Incorporated	NPCC	5
12.	David Kiguel	Hydro One Networks Inc.	NPCC	1
13.	Michael Lombardi	Northeast Utilities	NPCC	1
14.	Randy MacDonald	New Brunswick Power Transmission	NPCC	1
15.	Bruce Metruck	New York Power Authority	NPCC	6
16.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10
17.	Robert Pellegrini	The United Illuminating Company	NPCC	1
18.	Si Truc Phan	Hydro-Quebec TransEnergie	NPCC	1
19.	Saurabh Saksena	National Grid	NPCC	1
20.	Michael Schiavone	National Grid	NPCC	1
21.	Wayne Sipperly	New York Power Authority	NPCC	5
22.	Donald Weaver	New Brunswick System Operator	NPCC	1
23.	Ben Wu	Orange and Rockland Utilities	NPCC	1

3.	Group	Charles W. Long	SERC Planning Standards Subcommittee	X									X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Charles W. Long	Entergy Services, Inc.	SERC	1
2.	Darrin Church	Tennesee Valley Authority	SERC	1
3.	John Sullivan	Ameren Services Co.	SERC	1
4.	James Manning	North Carolina Electric Cooperatives	SERC	1
5.	Bob Jones	Southern Company Services	SERC	1
6.	Phil Kleckley	South Carolina Electric &Gas Co.	SERC	1
7.	Pat Huntley	SERC	SERC	NA

4.	Group	Robert Rhodes	SPP Standards Review Group		X								

	Additional Member	Additional Organization	Region	Segment Selection
1.	Clem Cassmeyer	Western Farmers Electric Cooperative	SPP	1, 3, 5

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
2. John Mason	Independence Power & Light	SPP	1, 3, 5									
3. John Kerr	Southwest Power Pool	SPP	2									
4. Matthew Bordelon	CLECO	SPP	1, 3, 5									
5. Michelle Corley	CLECO	SPP	1, 3, 5									
6. Ron Gunderson	Nebraska Public Power District	MRO	1, 3, 5									
7. Jonathan Hayes	SPP	SPP	2									
8. Sean Simpson	Board of Publlic Utilities, City of McPherson	SPP	1, 3, 5									
9. Tom Hestermann	Sunflower Electric	SPP	1, 3, 5									
10. Tony Eddleman	Nebraska Public Power District	MRO	1, 3, 5									
11. Valerie Pinamonti 12. Doug Callison	American Electric Power Grand River Dam Authority	SPP SPP	1, 3, 5 1, 3, 5									
13. Sean Simpson 14. Tom Hestermann	Board of Public Utilities, City of McPherson Sunflower Electric	SPP SPP	1, 3, 5 1, 3, 5									
5. Group	David Taylor	NERC Staff Technical Review										
No additional members listed.												
6. Group	Mark Gray	Edison Electric Institute										
http://www.eei.org/whoweare/ourmembers/USElectricCompanies/Pages/USMemberCoLinks.aspx												
7. Group	Frank Gaffney	Florida Municipal Power Agency	X		X	X	X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Tim Beyrle	City of New Smyrna Beach	FRCC	4
2.	Jim Howard	Lakeland Electric	FRCC	3
3.	Cairo Vanegas	Fort Pierce Utility Authority	FRCC	4
4.	Lynne Mila	City of Clewiston	FRCC	3
5.	Joe Stonecipher	Beaches Energy Services	FRCC	1

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
6. Randy Hahn	Ocala Electric Utility	FRCC	3									
7. Greg Woessner	Kissimmee Utility Authority	FRCC	3									
8. Group	Cynthia S. Bogorad	Transmission Access Policy Study Group	X		X	X	X	X				
No additional members listed.												
9. Group	Albert DiCaprio	ISO/RTO Standards Review Committee		X								

	Additional Member	Additional Organization	Region	Segment Selection
1.	Terry Bilke	MISO	RFC	2
2.	Patrick Brown	PJM	RFC	2
3.	Greg Campoli	NY ISO	NPCC	2
4.	Kurtis Chong	IESO	NPCC	2
5.	Ben Li	IESO	NPCC	2
6.	Steve Myers	ERCOT	ERCOT	2
7.	Bill Phillips	MISO	RFC	2
8.	Don Weaver	NBSO	NPCC	2
9.	Mark Westendorf	MISO	RFC	2
10.	Charles Yeung	SPP	SPP	2

10. Group	John Allen	Iberdrola USA	X									

	Additional Member	Additional Organization	Region	Segment Selection
1.	Raymond Kinney	New York State Electric & Gas	NPCC	1
2.	Kevin Howes	Central Maine Power	NPCC	1

11. Group	Mark Conner	Tri-State Generation and Transmission Association	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Bill Middaugh	Tri-State Generation and Transmission Association	WECC	1, 3, 5, 6

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
12.	Group	David Curtis	Hydro One	X		X						X	

	Additional Member	Additional Organization	Region	Segment Selection
1.	Ajay Garg	Transmission	NPCC	1
2.	David Kiguel	Distribution	NPCC	2
3.	Oded Hubert	Regulatory Affairs	NPCC	9

13.	Group	Carol Gerou	MRO's NERC Standards Review Forum										X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Mahmood Safi	Omaha Public Utility District	MRO	1, 3, 5, 6
2.	Chuck Lawrence	American Transmission Company	MRO	1
3.	Tom Webb	Wisconsin Public Service Corporation	MRO	3, 4, 5, 6
4.	Jodi Jenson	Western Area Power Administration	MRO	1, 6
5.	Ken Goldsmith	Alliant Energy	MRO	4
6.	Alice Ireland	Xcel Energy	MRO	1, 3, 5, 6
7.	Dave Rudolph	Basin Electric Power Cooperative	MRO	1, 3, 5, 6
8.	Eric Ruskamp	Lincoln Electric System	MRO	1, 3, 5, 6
9.	Joe DePoorter	Madison Gas & Electric	MRO	3, 4, 5, 6
10.	Scott Nickels	Rochester Public Utilties	MRO	4
11.	Terry Harbour	MidAmerican Energy Company	MRO	1, 3, 5, 6
12.	Marie Knox	Midwest ISO Inc.	MRO	2
13.	Lee Kittelson	Otter Tail Power Company	MRO	1, 3, 4, 5
14.	Scott Bos	Muscatine Power and Water	MRO	1, 3, 5, 6
15.	Tony Eddleman	Nebraska Public Power District	MRO	1, 3, 5
16.	Mike Brytowski	Great River Energy	MRO	1, 3, 5, 6
17.	Richard Burt	Minnkota Power Cooperative, Inc.	MRO	1, 3, 5, 6

14.	Group	Denise Koehn	Bonneville Power Administration	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Steve Larson	BPA, Legal Department	WECC	1, 3, 5, 6

Group/Individual		Commenter	Organization			Registered Ballot Body Segment									
						1	2	3	4	5	6	7	8	9	10
2.	Rebecca Berdahl	BPA, Power Services, Long Term Sales and Purchases		WECC	3										
3.	Erika Doot	BPA, Power Services, Generation Support		WECC	3, 5, 6										
4.	Sara Sundborg	BPA, Transmission Technical Operations		WECC	1										
5.	Lorissa Jones	BPA, Transmission Reliability Program		WECC	1										
6.	Fran Halpin	BPA, Power Services, Duty Scheduling		WECC	5										
15.	Individual	Sandra Shaffer	PacifiCorp			X		X		X	X				
16.	Individual	Jim Uhrin	ReliabilityFirst												X
17.	Individual	Richard Dearman	Tennessee Valley Authority			X		X		X	X				
18.	Individual	Richard Malloy	Idaho Falls Power												
19.	Individual	Michelle Mizumori	Western Electricity Coordinating Council												X
20.	Individual	John Cummings	PPL Supply							X	X				
21.	Individual	Roger Clayton	New York State Reliability Council												X
22.	Individual	John P. Hughes	Electricity Consumers Resource Council (ELCON)			X		X		X	X	X			
23.	Individual	Randy D. Crissman	New York Power Authority			X				X	X			X	
24.	Individual	John Free	Alabama Public Service Commission											X	
25.	Individual	Antonio Grayson	Southern Company			X									
26.	Individual	Michael Moltane	ITC			X									

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
27.	Individual	Michael Jones	National Grid	X		X							
28.	Individual	Scott Bos	Muscatine Power and Water	X		X		X	X				
29.	Individual	Bud Tracy	Blachly Lane Electric Cooperative			X							
30.	Individual	RoLynda Shumpert	South Carolina Electric and Gas	X		X		X	X				
31.	Individual	Josh Dellinger	Glacier Electric Cooperative										
32.	Individual	Diane Barney	New York State Department of Public Service									X	
33.	Individual	John Bee	Exelon	X		X		X					
34.	Individual	Bob Casey	Georgia Transmission Corporation	X									
35.	Individual	Chris de Graffenried	Consolidated Edison Co. of NY, Inc.	X		X		X	X				
36.	Individual	Tracy Richardson	Springfield Utility Board			X							
37.	Individual	John Pearson	ISO New England		X								
38.	Individual	Jonathan Appelbaum	The United Illuminating Company	X									
39.	Individual	Neil Phinney	Georgia System Operations Corporation			X							
40.	Individual	Michelle R DAntuono	Occidental Energy Ventures Corp.			X		X		X	X		
41.	Individual	Russ Schneider	Flathead Electric Cooperative, Inc.			X	X						

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
42.	Individual	Ed Davis	Entergy Services	X		X		X	X				
43.	Individual	Jack Stamper	Clark Public Utilities	X									
44.	Individual	Dave Markham	Central Electric Cooperative			X							
45.	Individual	Dave Hagen	Clearwater Power Electric Cooperative			X							
46.	Individual	Roman Gillen	Consumer's Power Inc.			X							
47.	Individual	Roger Meader	Coos-Curry Electric Cooperative			X							
48.	Individual	Dave Sabala	Douglas Electric Cooperative			X							
49.	Individual	Bryan Case	Fall River Electric Cooperative			X							
50.	Individual	Rick Crinklaw	Lane Electric Cooperative			X							
51.	Individual	Michael Henry	Lincoln Electric Cooperative			X							
52.	Individual	Richard Reynolds	Lost River Electric Cooperative			X							
53.	Individual	Annie Terracciano	Northern Lights Electric Cooperative			X							
54.	Individual	Doug Adams	Okanogan Electric Cooperative			X							
55.	Individual	Heber Carpenter	Raft River Rural Electric Cooperative			X							
56.	Individual	Ken Dizes	Salmon River Electric Cooperative			X							

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
57.	Individual	Steve Eldrige	Umatilla Electric Cooperative			X							
58.	Individual	Marc Farmer	West Oregon Electric Cooperative			X							
59.	Individual	Rick Paschall	Pacific Northwest Generating Cooperative			X							
60.	Individual	Aleka Scott	PNGC Power				X						
61.	Individual	Stuart Sloan	Consumer's Power Inc.	X									
62.	Individual	Bill Keagle	BGE	X									
63.	Individual	Rick	Spyker	X									
64.	Individual	Clint Gerkensmeyer	Benton Rural Electric Association			X							
65.	Individual	Robert Ganley	Long Island Power Authority	X									
66.	Individual	Thad Ness	American Electric Power	X		X		X	X				
67.	Individual	David Burke	Orange and Rockland Utilities, Inc.	X		X							
68.	Individual	David Thorne	Pepco Holdings Inc	X		X							
69.	Individual	Paul Titus	Northern Wasco County PUD	X		X							
70.	Individual	Alice Ireland	Xcel Energy	X		X		X	X				
71.	Individual	Jianmei Chai	Consumers Energy Company			X	X	X					

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
72.	Individual	Jo Elg	United Electric Co-op Inc.			X							
73.	Individual	Ned Ratterman	Oregon Trail Electric Cooperative, Inc.	X		X							
74.	Individual	Steve Alexanderson	Central Lincoln			X	X					X	
75.	Individual	Darryl Curtis	Oncor Electric Delivery	X									
76.	Individual	Jerome Murray	Oregon Public Utility Commission Staff									X	
77.	Individual	Anthony Schacher	Salem Electric			X							
78.	Individual	Laura Lee	Duke Energy	X		X		X	X				
79.	Individual	Bill Dearing	Grant County PUD No. 2 (Grant)	X		X	X	X					
80.	Individual	Si Truc PHAN	Hydro-Quebec TransEnergie	X									
81.	Individual	Eric Lee Christensen	for Snohomish County PUD	X		X	X	X					
82.	Individual	Bill Dearing	Northwest Public Power Association (NWPPA)	X		X	X						
83.	Individual	Ben Friederichs	Big Bend Electric Cooperative, Inc.			X							
84.	Individual	Andrew Z Pusztai	American Transmission Company, LLC	X									
85.	Individual	Joe Petaski	Manitoba Hydro	X		X		X	X				
86.	Individual	Heather Hunt	NESCOE									X	

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
87.	Individual	Michael Falvo	Independent Electricity System Operator		X								
88.	Individual	Shane Sweet	Harney Electric Cooperative, Inc.			X							
89.	Individual	David Kahly	Kootenai Electric Cooperative			X							
90.	Individual	Keith Morisette	Tacoma Power	X		X	X	X	X				
91.	Individual	Terry Harbour	MidAmerican Energy	X									

1. **Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. The first item involves proximity to Load and requests industry feedback on how to measure this variable. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. In addition, in the comment field, please provide your thoughts on the appropriate impedance value to replace 'TBD,' including technical rationale for your argument.**

Summary Consideration: A vast majority of the commenters disagreed with, or had significant questions about the validity of using electrical proximity as a metric to reflect the importance of an element or group of elements to the operation of an interconnected transmission network. Commenters pointed out that the proximity, electrical or otherwise, of an element to Load is not a reliable basis to determine functionality of an element, nor its impact upon the interconnected network.

Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 1 Comment
Northeast Power Coordinating Council	No	1.a.i. Electrical Proximity - If impedance is to be used as a measure of electrical proximity, which in turn is a replacement for geographical proximity, then how would the presence of parallel lines, capacitors, phase-angle regulators (PARs), tap-changing transformers, generation and reactors be treated in determining electrical proximity? How does this approach effectively differentiate between transmission and distribution lines of the same voltage and length?

Organization	Yes or No	Question 1 Comment
		When using impedance, how is “greater than” determined? Sum of the Impedances - Would the filing entity simply add up the in-series impedances for each radial Element to demonstrate its electrical proximity? For example, would the sum of the impedances from this radial path example be equal to the sum of the two feeder and transformer impedances, i.e., measured from a 230 kV bus along a 230 kV feeder, through a 230/138 kV step-down transformer, and an in-series 138 kV feeder to a 138/13.8 kV step-down distribution transformer? What impedance would the SDT apply to a PAR (or tap-changing transformer) and to the overall path if a PAR (or tap-changing transformer) were located in-series with the measured Elements? 1.a.ii. Power Flows - What is the meaning of “power flow data” as the term is used here and how is the meaning different from the term when used under 1.c. Power flows into the system, but rarely flows out? Should this sentence use the phrase “impedance data extracted from a load flow study” instead? Entities should be required to identify the significance of the element’s physical characteristics. Such identification can be done through a simple checklist along with any relevant comments. The SDT should revise the exception criteria to seek an alternative language and/or revise exclusion criteria (a), which will require entities to provide the previously stated information for their element.
SERC Planning Standards Subcommittee	No	The PSS disagrees with the assumption that the proximity of a BES facility to Load is indicative of it's importance to BES reliability. Some lower voltage facilities can be quite short and thus have lower impedance but be important to BES reliability. Furthermore, the term "Load centers" is not defined leaving it subject to interpretation. Assuming a load center has many busses, where would the measurement be made - From the most distant load bus in the load center or the nearest? Similarly - does a single facility get measured from it's terminal to the load center or does the presence or lack of breakers need to be considered when selecting the measurement point?
SPP Standards Review Group	No	Physical characteristics as described in 1.a.i. do not capture the true picture of the functionality of an Element. Rather than use impedance perhaps the SDT should use ‘radial’ or ‘having one source’ as the descriptive term.
City of Redding		This could serve as one characteristic of a distribution system and is generally a good indicator that the facilities have been installed and are operating to serve a distinct geographical area (the end user). The intent should be changed to indicate it is geographical and not electrical. The electrical reference should be removed from this section and moved to the engineering section.

Organization	Yes or No	Question 1 Comment
NERC Staff Technical Review	No	Electrical proximity to load is not an informative measure of whether Element(s) are necessary for reliable operation or the potential reliability impact of excluding Element(s) from the BES. Establishing a maximum impedance threshold as proposed would assure only that the excluded Element(s) do not span a large electrical distance. While minimizing impedance may be beneficial for some aspects of reliability, other aspects of BES reliability are improved with higher impedance. For example, higher impedance minimizes through-flow of power and minimizes impacts to BES reliability associated with faults and switching errors.
ISO/RTO Standards Review Committee	No	The SRC fails to see how electrical proximity to load qualifies an element for exclusion from the BES. Such elements may indeed be involved in serving electricity to those loads. If those loads are critical loads, then why should the element be excluded from the BES?
Iberdrola USA	No	We do not agree with this requirement. These exclusion exception criteria should be deleted in their entirety and replaced with criteria that are objective, specific, and repeatable, or preferably not replaced at all. Specific problems with the criteria as stated are: 1. A facility is not BES if all of “a” through “d” below apply: a. “System elements” are in “close electrical proximity to load” - this is vague, and a lower impedance between systems is higher likelihood of interaction between systems. Proximity measured in ohms should be related to the load level itself. A pair of values (ohms, load) is necessary for this purpose. Transient stability is affected by this value-pair. For a load pocket, an equivalent impedance (e.g., a sort of Thevenin impedance) between the network source and the load location could be defined. The impedances within the network source can also affect the assessment. Re-evaluation over time would be necessary if this path were adopted. This path of evidence (i.e., the path of engineering judgment) which does not include extensive technical analysis is an attempt to provide a definitive criteria for exception without going through the other path of evidence (i.e., the analytical path) which includes extensive technical analysis. Unless the analytical path has been clearly defined and sufficient data obtained from/on it, the path of engineering judgment could become difficult to establish. System parameters such as proximity to load, radial (or non-radial) configuration, power flow direction over time (either unintended or intended) will directly influence results of technical analysis evaluated for distribution factors, transient voltage dip and frequency excursions, voltage deviations, transient and steady-state stability, and sequence of events following a disturbance (i.e., either a cascading outage or a controlled outage). The two paths of evidence cannot be in conflict with each other.
Tri-State Generation and Transmission Association	No	A long radial line with a small transformer could have a relatively high impedance. Proximity to load has no real bearing on this procedure. Requirement 1.(a) should be deleted.

Organization	Yes or No	Question 1 Comment
Hydro One	No	We agree with this concept to allow entities to submit an exception application that does not include extensive technical analysis. Such an option will make the process efficient for all stakeholders, such as entities, Regions, NERC and relevant regulatory authority. However, our opinion is that there is no real relationship between reliability and the proximity of load. If impedance is to be used as a measure of electrical proximity, which in turn is a replacement for geographical proximity, then how would the presence of parallel lines, capacitors, phase-angle regulators (PARs), tap-changing transformers, generation and reactors be treated in determining electrical proximity? Consistent with references in the FERC Order, we feel that it is much more important to identify and ensure if the BES element(s) are serving load pockets associated with large metropolitan load centers, loads of significance to national security and/or as identified by relevant Federal, State or Provincial Regulatory Authority. We urge the SDT to clarify the exception criteria for exclusions, based on the following questions: oHow does the proximity impedance approach effectively differentiate between transmission and distribution lines of the same voltage and length? oWhen using impedance, how is “greater than” determined? oWhat impedance would the SDT apply to a PAR (or tap-changing transformer) and to the overall path if a PAR (or tap-changing transformer) were located in-series with the measured Elements? oWhat is the meaning of “power flow data” used here and how is the meaning different from the term when used under “1c) Power flows into the system, but rarely flows out”? Should this sentence use the phrase “impedance data extracted from a load flow study” instead? Finally we suggest that entities should be required to identify the significance of the element’s physical characteristics. Such identification can be done through a simple checklist along with any relevant comments.
MRO's NERC Standards Review Forum MidAmerican Energy Muscatine Power and Water	No	NSRF believes the relevance and rationale for this criterion is unknown. If this criterion is intended to exempt elements, like circuit switchers, that are part of the distribution transformer circuits operated above 100 kV, and located within a mile of the BES interconnection point, then NSRF would expect the wording to be “in close electric proximity to the BES” rather than in “close electric proximity to Load”. Otherwise, NSRF requests the SDT explain the relevance and rationale for this criterion before agreeing on its inclusion.
ReliabilityFirst	No	it is far too complicated for the smaller entities
New York State Reliability	No	NERC’s Glossary definition of Load is “An end-use device or customer that receives power from the electric

Organization	Yes or No	Question 1 Comment
Council		system." which is not specific enough to permit the definition of an appropriate impedance value. It is not clear from the proposed wording whether the exception applies to the Loads or the electrically close System Elements or both. In any case, the concept of a single impedance value as a metric is flawed because it could be a low impedance breaker or a relatively high impedance transformer connecting the BES to a "radial" Load center. This exclusion is superfluous given the radial test in item 2. Suggest dropping this exclusion test. N.B. The proposed criteria in items 1 - 4 must all be met in order for an element to qualify for an exclusion.
New York Power Authority	No	NYPA does not see a need for this requirement. A radial element that specifically serves a load center will perform that task regardless of the electrical distance from the source to the load. Similarly, any loss of load in the load center will result in a corresponding need to reduce generation in the source system, regardless of the proximity of the load.
ITC	No	Please explain the rationale to require electrical proximity. Is it to limit fault exposure? Perhaps 2 miles of line could be shown to typically have few faults, thus limiting the number of voltage sags to nearby buses. At approximately 0.7 ohms per mile 1.5 ohms (for overhead) might be a reasonable number. Does it make a difference if the load is connected via underground cable?
South Carolina Electric and Gas Georgia Transmission Corporation	No	SCE&G disagrees with the assumption that the proximity of a BES facility to Load is indicative of it's importance to BES reliability. Some lower voltage facilities can be quite short and thus have lower impedance but be important to BES reliability. Furthermore, the term "Load centers" is not defined leaving it subject to interpretation. Assuming a load center has many busses, where would the measurement be made - From the most distant load bus in the load center or the nearest? Similarly - does a single facility get measured from it's terminal to the load center or does the presence or lack of breakers need to be considered when selecting the measurement point?
Glacier Electric Cooperative	No	I do not think that the proximity to load should be a factor in determining whether or not an element should be included in the BES. Rather, the purpose of the element should be the important factor. If an element only serves load, then that should be the most important factor and the proximity (electrical or physical) to that load should not matter.
Consolidated Edison Co. of NY, Inc.	No	We generally support this exclusion option concept, to the extent that it is fashioned after the FERC Seven Factor test. However, we have a number of questions as to how it might work in practice.1.a.i. Electrical Proximity - If impedance is to be used as a measure of electrical proximity, which in turn is a replacement for

Organization	Yes or No	Question 1 Comment
		geographical proximity, then how would the presence of parallel lines, capacitors, phase-angle regulators (PARs), tap-changing transformers, generation and reactors be treated in determining electrical proximity? How does this approach effectively differentiate between transmission and distribution lines of the same voltage and length? When using impedance, how is "greater than" determined? Sum of the Impedances - Would the filing entity simply add up the in-series impedances for each radial Element to demonstrate its electrical proximity? For example, would the sum of the impedances from this example radial path be equal to the sum of the two feeder and transformer impedances, i.e., measured from a 230 kV bus along a 230 kV feeder, through a 230/138 kV step-down transformer, and an in-series 138 kV feeder to a 138/13.8 kV step-down distribution transformer? What impedance would the SDT apply to a PAR (or tap-changing transformer) and to the overall path if a PAR (or tap-changing transformer) were located in-series with the measured Elements? 1.a.ii. Power Flows - What is the meaning of "power flow data" as the term is used here and how is the meaning different from the term when used under 1.c. Power flows into the system, but rarely flows out? Should this sentence use the phrase "impedance data extracted from a load flow study" instead?
ISO New England	No	We disagree with this exception and believe that Section 1.a. should be deleted in it's entirety and replaced with a definition that excludes remote areas of a generally lesser overall value to reliability and includes areas that are heavily networked serving large loads. The premise of the existing section 1.a. seems at odds with overall system reliability and possibly removes large metropolitan areas from the BES definition. How is close electrical proximity to load defined? A maximum number of Ohms? Heavily networked areas will have lower impedance and are more likely to serve larger amounts of demand and are therefore more likely to be impactful on the overall integrity of the BES.
Flathead Electric Cooperative, Inc.	No	agree in principle that one characteristic of local distribution systems is that they are usually confined to a relatively limited geographic area, as opposed to transmission systems, which (especially in the West) tend to cover very large distances. We also believe the proximity test may be a sensible way to identify local distribution facilities. However, we believe that the proximity test may be unnecessary, and if an Element or group of Elements meets other tests proposed by the SDT, it should be excluded from the BES, even if it does not meet the proximity test.
Entergy Services	No	Entergy does not agree with the assumption that the proximity of a BES facility to Load is indicative of it's importance to BES reliability. Some lower voltage facilities can be quite short and thus have lower impedance but be important to BES reliability. Likewise some facilites remote from load centers may have virtually no

Organization	Yes or No	Question 1 Comment
		impact on BES reliability. There is also insufficient information as to how the impedance would be measured (locations of measurements within and outside of the "Load pockets". This Exemption Criteria should be removed. The term "Load centers" is not defined leaving it subject to interpretation. "Loads" are not BES Elements and therefore can not be exempted from being considered BES Elements. Item 1.a.i - "Loads within the system seeking exception are in close electrical proximity if they are separated by an impedance of no greater than TBD." This sentence needs to be deleted.
BGE	No	BGE is not clear as to why “close electrical proximity to load” is appropriate to use as a factor in determining exclusion.
Spyker	No	We agree with this concept to allow entities to submit an exception application that does not include extensive technical analysis. Such an option will make the process efficient for all stakeholders, such as entities, Regions, NERC and relevant regulatory authority. However, our opinion is that there is no real relation between reliability and the proximity of load. Consistent with references in the FERC Order, we feel that it is much more important to identify and ensure if the element(s) are serving load pockets associated with large metropolitan load centers (e.g. New York City, Washington DC, Toronto), loads of significance to national security and/or as identified by relevant Federal, State or Provincial Regulatory Authority. We believe that entities should be required to identify the significance of the elements’ physical characteristics, such as the proximity of element or, being served or impacted by the element to a load of significant interest. Such identification can be done through a simple checklist along with any relevant comments. Therefore, we suggest the SDT to revise the exception criteria to seek an alternative language and/or re-craft exclusion criteria (a), which will require entities to provide the previously stated information for their element.
Benton Rural Electric Association Northern Wasco County PUD United Electric Co-op Inc Oregon Trail Electric Cooperative, Inc.	No	We believe that the proximity test may be unnecessary, and if an Element or group of Elements meets the other three tests proposed by the SDT, it should be excluded from the BES, even if it does not meet the proximity test. Secondly, using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Organization	Yes or No	Question 1 Comment
Salem Electric Grant County PUD No. 2 (Grant) Big Bend Electric Cooperative, Inc. Big Bend Electric Cooperative, Inc. Kootenai Electric Cooperative		
Orange and Rockland Utilities, Inc.	No	The approach does not differentiate between transmission and distribution. There is no direct relation between impedance and load. A study of the particular system should be performed to assess impact on BES.
Pepco Holdings Inc	No	A specific impedance value would not be appropriate for all regions and all configurations.
Consumers Energy Company	No	Consumers Energy Company (CECo) proposes that this criterion be eliminated, as it is not a definitive BES criterion. There is no correlation between the proximity of Elements that are 100kV and above to load.
Central Lincoln	No	Central Lincoln agrees in principle that one characteristic of local distribution systems is that they are usually confined to a relatively limited geographic area, as opposed to transmission systems, which (especially in the West) tend to cover very large distances. We also believe the proximity test may be a sensible way to identify local distribution facilities. However, as explained in more detail in our response to Question 10, we believe that the proximity test may be unnecessary, and if an Element or group of Elements meets the other three tests proposed by the SDT, it should be excluded from the BES, even if it does not meet the proximity test. Secondly, using impedance to benchmark system load proximity would likely not yield consistent demarcations. High voltage relative or per-unit impedances are typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance. Central Lincoln proposes that “proximity” be determined in the dictionary manner with units of distance.
Duke Energy	No	Duke Energy does not agree that this characteristic materially demonstrates that an Element is not necessary for operating an interconnected electric transmission network. There is no correlation between the electrical proximity of an element to load and its necessity for operating an interconnected transmission network. In general, the path that does not include extensive technical analysis is not adequate to distinguish between the

Organization	Yes or No	Question 1 Comment
		Elements that are and that are not necessary for said operation.
Hydro-Quebec TransEnergie	No	Close electrical proximity to load does not appear to be an appropriate criteria. There is no reason that this criteria would prevent exclusion of a radial system with long lines feeding far away loads. Instead of considering proximity to load, it would be better to consider the way the Element is connected to the BES and the function of the excluded part of the system, mainly to deserve loads or integrate some generation, but not to transfer power to another Balancing Authority. Those are covered by criteria b., c. and d., so we believe that criteria a. should not be maintained.
American Transmission Company, LLC	No	ATC believes the relevance and rationale for this criterion is unknown. If this criterion is intended to exempt elements, like circuit switchers, that are part of the distribution transformer circuits operated above 100 kV, and located within a mile of the BES interconnection point, then ATC would expect the wording to be "in close electric proximity to the BES" rather than in "close electric proximity to Load". Otherwise, ATC requests the SDT explain the relevance and rationale for this criterion before agreeing on its inclusion.
Manitoba Hydro	No	The purpose of this exception is unclear. It would be possible that a large transmission station with many network connections, which is close to a load (irrespective of size), would be excluded from the BES definition. Similarly, a reduction of system impedance, by transmission line re-conductoring for example, could remove assets out of the scope of the BES definition. The listed proposed criteria suggest values yet to be determined. It is unclear how this exception would support BES reliability.
NESCOE	No	The New England States Committee on Electricity ("NESCOE") appreciates the work of NERC's standard drafting team as well as the opportunity to provide comments on this matter. NESCOE is New England's Regional State Committee and the comments provided herein reflect the collective views of the six New England states. NESCOE's comments below reflect its general perspective that any new costs imposed as a result of the BES and its implementation, which costs ultimately fall on consumers, should provide meaningful reliability benefits. NESCOE questions the concept as presented and seeks further clarification. As a general matter, NESCOE believes the requirement that a proposed exception must meet all four criteria is overly restrictive and will result in only a narrow category of elements qualifying for exclusion from the BES. NESCOE suggests that a better approach would allow exclusions to be based on one or more criteria, depending on the nature of the element that is the subject of the application. With respect to the proposal, NESCOE does not believe it is possible to obtain agreement on the "proximity to load" criterion for additional exclusions from the BES when the underlying impedance value has not been determined and may be the subject of significant debate.

Organization	Yes or No	Question 1 Comment
		While it is possible that NESCOE could support a single impedance value that would govern exclusion determinations, it notes that a uniform value may not adequately address varying system configurations throughout ISO-New England and neighboring control areas. NESCOE suggests that the standards setting process allow for further deliberation on possible proposed values. Other terms, such as "load center," also need definition.
Independent Electricity System Operator	No	We agree with this concept to allow entities to submit an exception application that does not include extensive technical analysis. Such an option will make the process efficient for all stakeholders, such as entities, Regions, NERC and relevant regulatory authority. However, we believe that an Element's electrical proximity to load is not necessarily a relevant consideration for determining whether the Element is required for reliable operations.
Tacoma Power	No	Tacoma Power does not believe that a proximity to Load criteria is useful in BES designation when the other 3 exclusion criteria of this path are applied. However, if the SDT retains this item, we suggest an impedance value of < 0.3 ohms on a 100 MVA base.
Georgia System Operations Corporation		The concept of "Load centers" is vague and needs more specificity for this to be clear.
ACES	Yes	This seems like a reasonable approach although we have no recommendations for impedance thresholds. Some analysis of various load pockets might provide data to consider for the threshold.
Clark Public Utilities	Yes	Clark believes the proximity test should be considered be a valid factor in determining whether a facility is part of the BES or not. Just as this factor is used in the consideration on whether a facility is part of a Local Distribution Network. Clark is not convinced that "proximity" and "impedance" are interchangeable. While impedance will be lower for shorter distances it will also be affected by other factors that are not indicative of close proximity. Distance seems more appropriate to use since it would complement a literal interpretation of the term proximity.
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Electric	Yes	First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage

Organization	Yes or No	Question 1 Comment
Cooperative Consumer's Power Inc. Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Pacific Northwest Generating Cooperative		lines, which offer the lowest impedance.
Long Island Power Authority	Yes	Agree with close proximity to load concept but further direction (define suggested methodology) is required for how to calculate impedance value. In addition to impedance value suggest consideration of adding mileage or relative phase angle differences between locations be also an allowable criteria.
American Electric Power	Yes	Using “proximity to load” is a reasonable metric, but would require further consideration given the impedance value eventually chosen to replace “TBD”.

Organization	Yes or No	Question 1 Comment
Oregon Public Utility Commission Staff	Yes	Use of the 100 kV brightline and the core BES definition as proposed is an overreach into local distribution systems and an overreach of FERC's authority as set out in the FPA 215. A full engineering technical analysis - required every 2 years - is too onerous and not necessary for identifying most local distribution elements miss-identified as BES Elements. A simple screening methodology consistent with the 7-Factor Test (from FERC Order 888) is needed as the first stage of the exception process.
Harney Electric Cooperative, Inc.	Yes	I don't have a suggestion for an appropriate impedance.
Bonneville Power Administration	Yes	BPA suggests that correlation between the size of the Load and the size of an element is needed. BPA would like the word "close" in the description "close electric proximity to load" to be better defined. For example, a line that carries 600 MWs in close electrical proximity to a 20-MW Load may not meet the intent of this characteristic. In planning models, loads are often aggregated to a higher voltage while, in a distribution system model, the loads are explicitly represented along the distribution feeder. Because of this, the criteria should define where the load is located/represented for the measure of electrical proximity.
Western Electricity Coordinating Council	Yes	As long as this remains an "AND" statement, WECC supports this concept. It helps to support the concept that the element is used as distribution to serve Load, rather than to transfer bulk power. However, some correlation between the size of the Load and the size of an element may be needed. For example, a line that can carry 600 MW in close electrical proximity a 20-MW Load may not meet the intent of this characteristic. Furthermore, the criteria must define where the load is located for the measure of electrical proximity. In planning models, loads are often aggregated to a higher voltage substation bus, while in a distribution system model they are typically modeled along a distribution feeder. The SDT should clarify how it intends for the load to be modeled for this analysis of close proximity.
Electricity Consumers Resource Council (ELCON)	Yes	We recommend that this item be added to the BES definition.
Occidental Energy Ventures Corp.	Yes	
Xcel Energy	Yes	
Oncor Electric Delivery	Yes	Oncor Electric Delivery agrees with the proposed language as it is stated, related to load proximity.

Organization	Yes or No	Question 1 Comment
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language for the characteristic associated with the system Element being located in close electrical proximity of Load and the use of impedance as qualifying criteria. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		
Edison Electric Institute	No	We do not believe that a meaningful "not to exceed" impedance value can be proffered which would be appropriately useful across all regions. EEI recommends that Exclusion benchmarks should directly correlate to the BES definition exclusions as written. Although the "4 Item" approach was obviously intended to provide a simple approach, the outcome suggested in the draft was less than satisfactory and we submit it does not hold true to the exclusions provided by the Drafting Committee in their proposed BES Definition. (see additional comments provided at the end of the Comment form)
PacifiCorp	No	All of PacifiCorp's responses are based on the application of these items to a given interconnection and not on a continental basis. See comments on question 10. Setting a standard for close electrical proximity using an impedance measurement does not address a proper measurement in all interconnections. A better, more accurate measurement would be to utilize fault duty. Low fault duties provide a good measurement of impact on the BES. Fault Duty at adjacent BES substations should not exceed 5,000 MVA.
for Snohomish County PUD	No	Snohomish agrees in principle that one characteristic of local distribution systems is that they are usually confined to a relatively limited geographic area, as opposed to transmission systems, which (especially in the West) tend to cover very large distances. We also believe the proximity test may be a sensible way to identify local distribution facilities. However, as explained in more detail in our response to Question 10, we believe that the proximity test may be unnecessary, and if an Element or group of Elements meets the other three tests proposed by the SDT, it should be excluded from the BES, even if it does not meet the proximity test. Further, using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language for the characteristic associated with the		

Organization	Yes or No	Question 1 Comment
system Element being located in close electrical proximity of Load and the use of impedance as qualifying criteria. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure. Also see response to Question 10.		
Florida Municipal Power Agency Transmission Access Policy Study Group	No	Impedance is a function of a line's length; it does not measure whether a line serves a BES function. A very long line can exist only to serve load, and a short line in an urban area (where the load is physically close to the grid) could be needed for transmission but would have low impedance. This proposed metric is thus both over- and under-inclusive, and should be discarded. Transfer distribution factor is a more appropriate metric, as described in FMPA' response to Question 4. FMPA supports having two paths for exclusions, one that includes extensive technical analysis and another that does not. The path with less technical analysis is appropriate for Elements that a relatively high-level examination shows to be not relevant to the reliability of the grid. This opportunity should be available in the context of exclusions to reduce the burden on small entities. Reliability will not be impaired by this option; all exception requests will be reviewed by NERC, and in any case where NERC is less than certain that an exception is appropriate, NERC can perform any or all of the analyses that would be required for a more technical exclusion or inclusion, and a positive result on any one of the analyses would be sufficient justification to deny the exclusion request.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language for the characteristic associated with the system Element being located in close electrical proximity of Load and the use of impedance as qualifying criteria. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		

Organization	Yes or No	Question 1 Comment
Also see response to Question 4. In regards to a two-path approach, the SDT has broadened the exception methodology to allow an entity to submit the characteristics of the Facilities in question without supplying engineering evidence if they feel there is ample supporting documentation for the exception being sought.		
Idaho Falls Power	No	We do not agree that all four criteria under exclusion #1 need be applied in combination to an element to determine its material impact. Assets satisfying all four defining criteria would seem exceedingly small and likely already excluded by the BES definition. This exception criteria appears redundant to, and shadows the NERC BES definition draft's language excluding radial elements and local distribution networks, and as such add little value to the exclusions built into the BES definitions. Further, the language of the exception criteria addresses transmission elements and doesn't provide exclusion criteria for generation assets. We would hope that NERC could develop criteria to exempt certain generation, especially those small resources on local distribution networks wherein the generation is completely allocated to local load. Language in section 215 of the FPA excludes distribution "elements." We assert that generation on a distribution network serving only load on that network is an "element" of the network and deserves exclusionary defining criteria.
Response: The SDT appreciates the comments associated with the Element characteristics and the suggestions for language or clarifications to the proposed language for technical exception criterion associated with generation. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure. The SDT has responded to comments on the BES definition in the Consideration of Comments form for the BES definition posting.		
PPL Supply	No	See comments in Questions 9 and 10
Response: See response to Q9 & 10.		
Southern Company	No	

Organization	Yes or No	Question 1 Comment
The United Illuminating Company	No	
Response: Thank you for your response but without specific comments there is nothing that the SDT can do to address your opinion. However, based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES.. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		
National Grid	No	We feel that there is no relation between the proximity to load and system reliability. The impedance is technically irrelevant, and we suggest that this criteria be dropped. If the criteria is not dropped, there should be clarification on what is meant by "Load". For instance are you really referring to "major load centers"? In many areas of the country Load is connected all along a 100kV line and hence much of a line is in close proximity to Load - but it could be small industrial loads and not significant load centers. If significant Load Centers is what the drafting team was driving at then, we believe it should be explicit. We also believe that if the drafting team is defining some technical criteria, then it should not be in the exception process. It should be included as part of the core definition. The exception process should be strictly limited to the procedures for application and approval and should not include substantive elements.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language for the characteristic associated with the system Element being located in close electrical proximity of Load and the use of impedance as qualifying criteria. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure. The technical criteria are being developed through the Standards Development Process, consistent with the directives in Order 743 and 743A. The scope of the		

Organization	Yes or No	Question 1 Comment
Rules of Procedure is strictly focused on the process that entities shall use to seek and be granted or denied exceptions.		
Exelon	No	The term “close proximity” is ambiguous and open ended. Exelon believes that all facilities used in local distribution of electric energy that are presently under state jurisdiction should be excluded from the BES regardless of system impedance.
Response: The SDT appreciates your comments. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity’s characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure. In regards to the facilities used in local distribution that are presently under state jurisdiction the SDT has added language to the core BES definition that addresses the exclusion of distribution facilities.		

2. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. The second item involves Element(s) treated as radial. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: A significant portion of the comments disagreed with, or had significant concerns about using various undefined terms such as "regional dispatch", "disconnection procedures", and "radial in character". Comments also indicated that the example was not clear and many comments indicated that the entire wording of this exception should be abandoned. Several comments indicated that assessments, studies, and drawings/diagrams should be allowed as evidence to provide the validity of the exception.

Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	The term "regional dispatch" is not defined. Provide a definition or reference to a definition to be used in making this determination. Recommend adoption of the alternate term "operational control." 1.b.ii, Operational Control - The SDT should consider using the terms "under the operational control of a Balancing Authority." It is instructive that the overarching requirement for a finding of transmission system integration in Mansfield was that the facilities be under operational control of the Independent System Operator (ISO).** Southern Cal. Edison Co., 92 FERC Â¶ 61,070 at 61,255 (2000), reh'g denied 108 FERC Â¶ 61,085 (2004). Replace the example in 1.b.i. with a clearer example. Entities should be allowed to demonstrate the radial characteristics to determine if they are permitted for an exception, and demonstrate compliance with radial defining criteria.

Organization	Yes or No	Question 2 Comment
SPP Standards Review Group	No	Could the SDT clarify what is meant by 'disconnection procedures' in 1.b.ii? It appears that the SDT is okay with excluding an element that can be switched out of service without removing another element. How are automatic breaker operations or manual switching factored into disconnection procedures? We need clarification on this. More and better examples, including the type of connectivity to the grid, would be helpful.
Transmission Access Policy Study Group	No	We believe that this criterion is intended, like those in 1(a) and (d), to determine whether an Element is planned and operated to function as part of the interconnected grid. It is, however, too vague to be useful and should be discarded.
Florida Municipal Power Agency		We believe that this criterion is intended, like those in 1(a) and (d), to determine whether an Element is planned and operated to function as part of the interconnected grid. It is, however, too vague to be useful and should be discarded.
ISO/RTO Standards Review Committee	No	The SRC generally agrees that radial elements likely may be excluded from the BES. However, there is insufficient information given as to what it means to be "not operated as part of the BES with disconnection procedures for when a Disturbance occurs". Further, is it possible that such radial elements are serving a remote "critical" load? One would think that, normally, critical loads would have arrangements for multiple sources, but could those multiple sources be individually considered to be radial?
Iberdrola USA	No	We do not agree with this requirement. These exclusion exception criteria should be deleted in their entirety and replaced with criteria that are objective, specific, and repeatable, or preferably not replaced at all. Specific problems with the criteria as stated are: 1. A facility is not BES if all of "a" through "d" below apply: b. "System elements" are "treated as" radial "in character" - this is also vague, and based on operating procedures... what does "treated" involve? What is "character" in the context of system elements?
Tri-State Generation and Transmission Association	No	While we generally agree, 1.(b) should be changed to "normally radial." "Radial" should not be defined differently in the Rule of Procedure than in the BES Definition.
Hydro One	No	Entities should be allowed to demonstrate the radial characteristics to determine if they are permitted for an exception, and demonstrate compliance with radial defining criteria.

Organization	Yes or No	Question 2 Comment
		The term “regional dispatch” is not defined. Therefore we suggest the SDT to provide a definition or reference to clarify regional dispatch in 1 b) II. We recommend adoption of the alternate term “operational control” and suggest that the SDT consider using the terms “under the operational control of a Balancing Authority” (It is instructive that the overarching requirement for a finding of transmission system integration in Mansfield was that the facilities be under operational control of the Independent System Operator.*)* Southern Cal. Edison Co., 92 FERC Â¶ 61,070 at 61,255 (2000), reh'g denied 108 FERC Â¶ 61,085 (2004).
MRO's NERC Standards Review Forum	No	Radial in Character - NSRF proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E1 of the bright-line BES definition.
MidAmerican Energy	No	MidAmerican supports the NSRF comments. The NSRF proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E1 of the bright-line BES definition. If not eliminated, the IEEE definition of a radial system should be used.
Bonneville Power Administration	No	BPA requests clarification on what the SDT considers radial through additional examples of i “the way the connections to the BES are operated” and ii “the way the Element(s) are treated in operations.” BPA emphasizes that this assessment should be conducted using normal system operations.
Muscatine Power and Water	No	Radial in Character -propose that this criterion be removed for the reason that it does not illustrate any materially different characteristics beyond Exclusion E1 of the bright-line BES definition.
Exelon	No	The term “rarely” is ambiguous and should be removed or quantified. Furthermore, the requirement for power flow analysis will be viewed by many entities as extensive technical analysis.
Consolidated Edison Co. of NY, Inc.	No	We generally support this exclusion option concept, to the extent that it is fashioned after the FERC Seven Factor test. However, we have a number of questions as to how it might work in practice. For example, the term “regional dispatch” is not defined. Please provide a definition or reference to a definition to be used in making this determination. Below we recommend adoption of the alternate term “operational control.”1.b.ii, Operational Control - The SDT should consider using the terms “under the operational control of a Balancing Authority.” It is instructive that the overarching requirement for a finding of transmission system integration in Mansfield was that the

Organization	Yes or No	Question 2 Comment
		facilities be under operational control of the Independent System Operator (ISO).** Southern Cal. Edison Co., 92 FERC Â¶ 61,070 at 61,255 (2000), reh'g denied 108 FERC Â¶ 61,085 (2004). Replace the example in 1.b.i. with a clearer example.
ISO New England	No	This three part definition of radial presented in section 1.b. appears cumbersome and requires more definition. With regard to b.i - Where is the disturbance? Is sending a person to the field to perform manual disconnection a requirement of this exception? This item is so vague that we have difficulty providing replacement language as we do not understand its intent. With regard to b.ii - Elements (Excluding generators) are not dispatched in operations. If this approach were to be taken, what would be the criteria for the way the Element is treated in Operations? Again, this item is so vague that we have difficulty providing replacement language. The existing definition appears to require a good deal of technical scrutiny and be at odds with the goal of having a path for evidence that does not include extensive technical analysis. Overall it seems simpler to replace section b with a simpler definition of radial such as - all load served from a single substation at a single voltage level.
The United Illuminating Company	No	
Pepco Holdings Inc	No	Radial system is already an explicit Exclusion by definition (E1). Does this imply that ALL radial systems require a request to be submitted for the RE and NERC approval that the elements are in fact radial? There may not be internal written procedures describing the radial system operation. The evidence that an entity can provide should include a description or justification of the radial operation and non impact to the BES.
Duke Energy	No	This second characteristic does not add clarity to the E1 Exclusion in the proposed BES definition. And in general, the path that does not include extensive technical analysis is not adequate to distinguish between the Elements that are and that are not necessary for operating an interconnected electric transmission network.
American Transmission Company, LLC	No	Radial in Character - ATC proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E1 of the bright-line BES definition.

Organization	Yes or No	Question 2 Comment
Manitoba Hydro	No	The proposed criteria to substantiate a request for an exception should be removed as it does not introduce anything different than what is already proposed under the exclusions in the bright line BES definition. Specifically, radial systems are already excluded in the bright line definition E1.
NESCOE	No	As noted in Response 1, NESCOE believes exclusion determinations should not require a finding that all four proposed criteria are met. In addition, NESCOE believes that the criterion proposed here is overly complex and that developing the evidence may be overly burdensome to the applicant. Radial paths should have a simple definition related to how the path is connected from a topological perspective. NESCOE suggests that a radial path be defined simply as a path having only one connection point to the BES, thereby presenting no opportunity for power flows parallel to the BES network. Under fault situations, these excluded paths can be isolated from the BES with suitable NERC compliant protection systems. Note the radial path may be comprised of parallel lines that terminate at the BES connection point. In addition, NESCOE believes that a radial path should qualify for exclusion as long as the power flowing into the BES is less than a threshold MVA. NESCOE does not at this point have a recommendation as to this specific threshold but believes it should be developed through the standards-setting process. NESCOE suggests this approach to avoid burdening the development of generation including renewable generation. As New England is working on facilitating the development of renewable resources located in and around the region to serve customers most cost-effectively, this process should take specific care not to impose undue burdens on renewable resources.
Idaho Falls Power		Using these criteria assumes that every asset must be radial in nature in order to receive consideration that it may not be material to the BES. This then implies that the BES is a contiguous connected system as only radial off-shoots could receive exemption consideration. We disagree. Our assertion is that the BES is comprised of assets that due to their size or location are vital to a sound BES but may or may not necessarily be connected to each other. This defining criteria in the exception could be a stand-alone criteria or stricken.
Blachly Lane Electric Cooperative Flathead Electric Cooperative, Inc. Central Electric Cooperative Clearwater Power Electric	Yes	We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term “radial in character” should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent

Organization	Yes or No	Question 2 Comment
Cooperative Consumer's Power Inc. Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Pacific Northwest Generating Cooperative Consumer's Power Inc.		the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.
South Carolina Electric and Gas Georgia Transmission Corporation	Yes	SCE&G agrees with the requirement of an element being radial in character as being a qualifier for exclusion thru the non-technical analysis. However, we recommend that the term "radial in character" be better defined. In addition, the language is confusing and we would like to recommend the following: i.: suggest replacing

Organization	Yes or No	Question 2 Comment
		"disconnection procedures" with "automatic disconnection devices" ii.: The intent of this item is not clear, and the term "regional dispatch" is not defined. Recommend the item be clarified or deleted.
Springfield Utility Board	Yes	SUB agrees with providing an exclusion exception for System Elements that are treated as "radial in character", but feels this should be part of the core definition in NERC's Proposed Continent-wide Definition of Bulk Electric System rather than requiring an exclusion/exemption application process. In SUB's May 27, 2011 BES definition comments SUB expressed concern that there still appears to be inconsistencies in both definition and application of "radial." SUB encourages NERC to develop a concise definition. For example, if a system is normally operated as radial, but could be operated closed (for example, by manually closing a breaker), would it be considered a radial or close-looped system?
Entergy Services	Yes	Entergy agrees that radial facilities should be excluded directly. However, the "radial in character" language is nebulous. A simpler approach could be to allow exceptions for facilities which become radial as a consequence of a normal system response to a disturbance (breakers opening during normal clearing of a fault).
Clark Public Utilities Benton Rural Electric Association Northern Wasco County PUD United Electric Co-op Inc Oregon Trail Electric Cooperative, Inc. Central Lincoln Salem Electric Grant County PUD No. 2 (Grant) for Snohomish County PUD Northwest Public Power Association (NWPPA) Big Bend Electric Cooperative,	Yes	Clark agrees conceptually that systems operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. That is because local distribution systems typically operate adjacent to, or at the end of transmission lines, and function operationally to move power from the Transmission Service Provider's point of delivery of bulk power that has moved across the integrated bulk transmission system to end-users located within the local distribution utility's service territory. To be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as a system that may include one or more lines into a load area or referenced as a local distribution network. In addition, Clark agrees that the manner in which a system is operated during BES disturbances may be an indication of whether that system is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution systems and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution system interconnected with those relays should not.

Organization	Yes or No	Question 2 Comment
Inc. Kootenai Electric Cooperative		
Oregon Public Utility Commission Staff	Yes	Use of the 100 kV brightline and the core BES definition as proposed is an overreach into local distribution systems and an overreach of FERC's authority as set out in the FPA 215. A full engineering technical analysis - required every 2 years - is too onerous and not necessary for identifying most local distribution elements miss-identified as BES Elements. A simple screening methodology consistent with the 7-Factor Test (from FERC Order 888) is needed as the first stage of the exception process.
Hydro-Quebec TransEnergie	Yes	However, the point B.i. is hard to understand and would need clarification. Here is a proposal: "For an Element to be excluded from BES, its should be demonstrated that there are a proper disconnection procedure when facing a disturbance that would prevent this Element to impact the BES" ?. The point should be to make sure a fault on the Element will be isolated effectively without adverse impact on the BES, even when we have a second transmission source for the syb system seeking exclusion. Also, for point B. ii., it should be explained what is meant by the expression "regional dispatch". Is it an alternate way of transfer of power outside the Balancing Authority ?
PacifiCorp	Yes	All of PacifiCorp's responses are based on the application of these items to a given interconnection and not on a continental basis. See comments on question 10. If this requirement is added to the four requirements to capture local distribution networks, which are often operated in a looped configuration, which may still be included in the BES by the proposed BES bright-line due to generator inclusions, then this requirement has merit. Otherwise, exclusion E1 in the proposed BES bright-line definition already covers this item and it becomes redundant.
Independent Electricity System Operator	Yes	We agree with this concept. Entities should be allowed to demonstrate the radial characteristics to determine if they are permitted for an exception. However, we believe some further clarification of the meaning of "radial in character" is needed. The example given in (b)I does not clarify the matter. Would a transmission line operated with a normally open point to form two radial lines be considered "radial in character"? Please clarify. The location of the Disturbance needs to be clarified. For example, if the Disturbance (e.g. a fault) occurs at the radial part of the Element, then it is necessary for the Element to have the capability to disconnect itself from the Disturbance to preserve BES reliability but the Element can be by itself a legitimate radial facility that

Organization	Yes or No	Question 2 Comment
		is used solely for supplying load. The phrase “are not included in a regional dispatch” is unclear. We do not understand what this means.
Tacoma Power	Yes	Tacoma Power generally agrees that radial elements should be an item in this path and we suggest that radial element operated at below 300 kV should be excluded from the BES. The 300 kV level is linked with NERC CIP’s proposed version 4 definition of critical asset and should be applied here with the BES definition.
SERC Planning Standards Subcommittee	Yes	The PSS agrees with the requirement of an element being radial in character as being a qualifier for exclusion thru the non-technical analysis. However, the PSS recommends that the term "radial in character" needs to be better defined. In addition, the language is confusing and the PSS would like to recommend the following:i.: suggest replacing “disconnection procedures” with “automatic disconnection devices”ii.: The intent of this item is not clear, and the term "regional dispatch" is not defined. Recommend the item be clarified or deleted.
Tennessee Valley Authority	Yes	We agree with the requirement of an element being radial in character as being a qualifier for exclusion thru the non-technical analysis. However, we recommend that the term "radial in character" needs to be better defined. In addition, the language is confusing and we recommend the following:i.: suggest replacing “disconnection procedures” with “automatic disconnection devices” ii.: The intent of this item is not clear, and the term "regional dispatch" is not defined. Recommend the item be clarified or deleted.
New York State Reliability Council	Yes	It should be clarified that radial Element(s) include all system elements in load pockets.
Electricity Consumers Resource Council (ELCON)	Yes	We recommend that that the item be added to the BES definition.
New York Power Authority	Yes	The definition of radial systems needs to be modified to include radials that are connected to a single transmission source by more than one automatic interruption devices, such as occurs with a “breaker and a half” arrangement.
Southern Company	Yes	We agree with the requirement of an element being radial in character as being a qualifier for exclusion thru

Organization	Yes or No	Question 2 Comment
		the non-technical analysis. However, we recommend tha the term "radial in character" be better defined. Item ii.: The intent of this item is not clear, and the term "regional dispatch" is not defined. Recommend the item be clarified.
ITC	Yes	ITC is in agreement if we are correct in assuming that any one of the three ways (i, ii, or iii) can be used to satisfy the exclusion. We would also like to request additional clarification as to what "disconnection procedures" would be valid for consideration in this requirement.
National Grid	Yes	We agree that elements that are treated as radial should be allowed to request an exception. We would like more clarification about what is meant by “regional dispatch”. To the extent definitions of terms such as “regional dispatch” are necessary; they should be addressed in the core definition development process. The exception process should be strictly limited to the procedures for application and approval and should not include substantive elements. We would also like clarification on whether all three criteria under bullet b are required to show if the element is treated as radial, or if meeting one is enough.
Harney Electric Cooperative, Inc.	Yes	
Oncor Electric Delivery	Yes	Oncor Electric Delivery agrees with the proposed language that describes the exclusion criteria for system Elements that are radial in character.
Xcel Energy	Yes	
Consumers Energy Company	Yes	
Long Island Power Authority	Yes	Elements could be included in a regional dispatch such as a large regional ISO, but still serve only local load and therefore should still be treated as radial.
American Electric Power	Yes	Considering whether or not the element is treated as radial is a reasonable approach.
Orange and Rockland Utilities, Inc.	Yes	

Organization	Yes or No	Question 2 Comment
BGE	Yes	No comment.
Spyker	Yes	We agree with this concept. Entities should be allowed to demonstrate the radial characteristics to determine if they are permitted for an exception.
Occidental Energy Ventures Corp.	Yes	
ReliabilityFirst	Yes	yes only true radial without any impact should be excluded otherwise include it
Electric Market Policy	Yes	
ACES	Yes	We agree with this path.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language for the characteristic associated with the system Element being treated as radial in character as qualifying criteria. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		
NERC Staff Technical Review	No	We believe that restating this measure as "System performance impacts are similar to radial systems" would be more in-line with the SDT intent and a better measure of whether Element(s) are necessary for reliable operation. We also believe that the best measure of whether Element(s) affect system performance in a manner similar to radial systems is through distribution factor analysis. Such analysis, when limited to this purpose, does not require extensive technical analysis. Analysis for a limited number of stressed transfer conditions, and contingencies involving the Element(s) under consideration and in the area of the Element(s) under consideration, is sufficient to demonstrate whether the system performance impacts are similar to radial systems.

Organization	Yes or No	Question 2 Comment
Western Electricity Coordinating Council	No	This characteristic is vague and subjective. It is unclear what "radial in character" means, and the methods for demonstration do not appropriately clarify the meaning. WECC recommends that the SDT determine what it is looking for to show "radial in character" and clearly identify that concept in the methods for demonstration. It is not clear how Operating Procedures can demonstrate that an element is "radial in character" nor is it clear how a re-evaluation might be processed if such Operating Procedures, ownership, or operations change. WECC believes that BES inclusion or exclusion should be based on physical, technical characteristics of the element, and requests a justification for use of procedural or contractual documentation as evidence of a technical principle.
Edison Electric Institute	Yes	The verbiage used in the BES Principles document does not closely match the verbiage used in the NERC Bright-line Exclusion. For that reason, we submit the following alternative language. System Elements and Facilities treated in total as a radial system shall have the following characteristics:1. Shall be separated from the BES with an Automatic Interrupting Device, AND2. Only load serving and must be isolated from other radial systems through a normally open switching device, OR3. Only include generation resources but cannot include any of the Inclusions (i.e., I2, I3, I4 and I5) identified in the BES Definition, OR4. Is a combination of Load and Generation but cannot include any of the Inclusions (i.e., I2, I3, I4 and I5) identified in the BES DefinitionEvidences to be supplied shall include: o One-line Diagram clearly showing all demarcations between BES Facilities and the Radial System (including the Automatic Interrupting Device, AND o Operating procedures or interconnection agreements that indicate Generating Units contained within the Radial System are not dispatchable (if applicable), AND/OR o Operating procedures that show that the Radial System is not operated as part of the BES

Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language for the characteristic associated with the system Element being treated as radial in character as qualifying criteria.

The new proposed process allows an entity to submit a specified and consistent list of studies that should support the entity's request and that can then be utilized by the ERO panel judging the request in making their decision.

Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support

Organization	Yes or No	Question 2 Comment
the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		
PPL Supply	No	See comments in Questions 9 and 10
Response: See response to Q9 & Q10.		
Glacier Electric Cooperative	No	I do agree that radial elements should definitely be excluded. However, I believe that non-radial elements should be able to be excluded by Path 1 as well. If a small local distribution system is operated non-radially for the purpose of improving reliability for its loads, then that system should be eligible for exclusion from the BES. I also believe that language needs to be included that makes the provision for radial elements that can be temporarily and briefly looped together during switching to prevent an outage (e.g. for transformer maintenance) to also be excluded from the BES.
City of Redding	Yes	The term Radial could cause confusion. Clarification needs to be added to indicate that the system can have more than one connection to the BES.
Response: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted. Exclusion E1 of the definition allows normally open switches and Exclusion E3 can be used for systems that support load with multiple connections to the BES.		

3. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. The third item involves power flow. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. In addition, in the comment field, please provide your thoughts on the appropriate MWh value to replace 'TBD,' including technical rationale for your argument.

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.

Organization	Yes or No	Question 3 Comment
Northeast Power Coordinating Council	No	If an entity provides hourly MWh power flow data on a radial for a 12-month period (under v.) showing no power flow reversals, would transaction data (under i. through iv.) still be required? Could the entity just say "no transactional records?" If there were power flow reversals, wouldn't the power flow data (provided under v.) also show those, e.g., the amount and duration? Isn't this request redundant? If reversing power flows on a feeder caused it to fail one of the criteria, could the radial still be excluded, or is it necessary for the Element to pass all requirements? Alternatively, could the entity choose to file for Exclusion of that Element under the technical analysis option? What happens and what are the implications when the two approaches produce different outcomes?

Organization	Yes or No	Question 3 Comment
		Recommend that "iv. The maximum amount of energy flowing out" limit be set to no more than 24 hours of reverse power flows within any rolling 12-month period. Consider avoiding prescribing values and eliminate bullet (iv). The intended performance outcome should be described, but without setting values. This should not have any impact on the reliability of the transmission network if items 1, 2 and 3 are satisfied.
SPP Standards Review Group	No	Rather than combining two conflicting criterion - 'rarely' and the number of MHh of backflow allowed annually - we would suggest the following. 1) That the maximum outflow doesn't create an issue on the BES. This would be determined by study of the system and conditions. Or 2) when the condition exists, be able to mitigate the condition within a prescribed time relevant to the prevailing system conditions.
NERC Staff Technical Review	No	Requiring that power flows into, and rarely out of, the Element(s) considered for exclusion is an appropriate measure, as is requiring an entity to define the conditions under which power will flow out. In addition to information such as specified contingencies in item (ii), details on the conditions should include other relevant information such as the system load level, generation dispatch, system transfer levels, etc., and the number of hours per year these conditions are expected. An exception request also should include the maximum flow expected. E.g., the following information would be useful in evaluating a request for exception: "Power will flow out only when line A is out of service, system load is at or below X percent of peak load, and generator B is on-line; based on the load duration curve for this area and the number of hours generator B is dispatched at these load levels, the exposure to power flow out for this contingency is limited to N hours per year and the maximum flow if the contingency occurred during these hours would be Y MW." This type of information will be far more informative than a pass/fail test as to whether a MWh threshold is expected to be exceeded. While a MWh threshold may be useful for evaluating requests, it is unlikely that a one-size-fits-all threshold could be established for evaluating exception requests.
ISO/RTO Standards Review Committee	No	The SRC believes that, if power EVER flows out, then the area is either not radial or it includes generation resources. There is insufficient information to determine whether this "limited quantity of energy" is indeed small. There could be very large amounts of load and generation resources within that area. Such large quantities could represent a significant potential for sudden increases in load or unexpected energy injections.
Iberdrola USA	No	We do not agree with this requirement. These exclusion exception criteria should be deleted in their entirety and replaced with criteria that are objective, specific, and repeatable, or preferably not replaced at all.

Organization	Yes or No	Question 3 Comment
		Specific problems with the criteria as stated are: 1. A facility is not BES if all of "a" through "d" below apply: c. Power flows into "the system" most of the time - this is vague and covers much of the 115 kV system.
Hydro One	No	We agree with the criteria set out in 1(c), but suggest the SDT to avoid prescribing values and eliminate bullet (IV). The SDT should also consider allowing: a) Power flow-out up to 20% of the minimum forecasted load for the element(s) over a 12 month period; or b) Maximum amount of energy flowing out be set to no more than 24 hours of reverse power flows within any rolling 12-month period. The intended performance outcome should be described, but without setting values. This should not have any impact on the reliability of the transmission network if items 1, 2 and 3 are satisfied.
MRO's NERC Standards Review Forum	No	NSRF proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the bright-line BES definition.
MidAmerican Energy	No	MidAmerican supports the NSRF comments. The NSRF proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the bright-line BES definition.
ReliabilityFirst	No	All power flow studies can be don eto show a small impact, this is how the system is planned. This will only cause more confusion and debate between the FERC, NERC the Regions and registered entities
Idaho Falls Power	No	We agree in general, however believe there is little distinction between the defining criteria in this exception and the local distribution network exclusion already provided for in the BES definition. We would like to see added language that provides an exclusion for all elements on such a system, to include generation regardless of MVA rating, wherein the power flows are generally into the system. We would agree that a number of MWh of annual outflow needs to be established as a limitation to the size and amount of generation under consideration. This exclusion should be geared towards smaller municipal or like sized systems having no material impact upon a BA much less the region.
Muscatine Power and Water	No	Proposing that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the bright-line BES definition.
Glacier Electric Cooperative	No	Regarding using power flow into and out of a system as a criterion fro BES exclusion, I do not think that

Organization	Yes or No	Question 3 Comment
		establishing a hard MWh per year is the proper approach to take. Once again, I believe that the purpose of the system should be the most important factor. If the purpose of a system is to serve load or transport non-essential generation (i.e. wind power), then that system should be able to be exluded.
Consolidated Edison Co. of NY, Inc.	No	We generally support this exclusion option concept, to the extent that it is fashioned after the FERC Seven Factor test. However, we have a number of questions as to how it might work in practice. For example: o If an entity provides hourly MWh power flow data on a radial for a 12-month period (under v.) showing no power flow reversals, would transaction data (under i. through iv.) still be required? Couldn't the entity just say "no operating records?" o If there were power flow reversals, wouldn't the power flow data (provided under v.) also show those, e.g., the amount and duration? Isn't this request redundant? If not, why not? Please explain. o If reversing power flows on a feeder caused it to fail one of the criteria, could the radial still be excluded, or is it necessary for the Element to pass all requirements? Alternatively, could the entity choose to file for Exclusion of that Element under the technical analysis option? What happens and what are the implications when the two approaches produce different outcomes? We recommend that "iv. The maximum amount of energy flowing out" limit be set to no more than 24 hours of reverse power flows within any rolling 12-month period.Replace "transactional records" with "operating records."
ISO New England	No	Section 1.c again appears to allow the exclusion of large portions of the system in metropolitan areas. How does this differ from the LDN exclusion already presented in the definition? Section c should simply be deleted.
The United Illuminating Company	No	What does rarely mean? How is maintenance conditions considered? This is simply worded but conceptually extremely complicated.
Entergy Services	No	Power flows into or out of a portion of the BES may characterize BES facilities less important to BES reliability but without limits to the size of the area, it would be difficult to show compliance. An entire state could be excluded from the BES. Additionally, there is no process specified to review the characteristics as transmission topology and resources change over time.
BGE	No	BGE is generally opposed to this requirement because the MWh factor is too variable and/or may be utilized

Organization	Yes or No	Question 3 Comment
		in a way contrary to reliable system operation.
Pepco Holdings Inc	No	The characteristic statement should be reworded to say: "Power flow is generally load serving."The criteria as written have very burdensome MWh record requirements. Yearly totals for flows in and out and an overall description or justification for this exception should be allowable.
Duke Energy	No	This third characteristic does not add clarity to the E3 Exclusion in the proposed BES definition. And in general, the path that does not include extensive technical analysis is not adequate to distinguish between the Elements that are and that are not necessary for operating an interconnected electric transmission network.
American Transmission Company, LLC	No	ATC proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the bright-line BES definition.
Manitoba Hydro	No	Vague language such as "rarely" or "not intentionally" does not support a "bright line" approach, and is not measureable or auditable. Also, the sample evidence should not be included as part of the criteria.In addition, the proposed criteria to substantiate a request for an exception should be removed as it does not introduce anything different than what is already proposed under the exclusions in the bright line BES definition. Specifically, this item is already excluded in the bright line definition E3.
NESCOE	No	As noted in Response 1, NESCOE believes exclusion determinations should not require a finding that all four proposed criteria are met. Generally, NESCOE is in agreement with an exception criteria for additional exclusions that takes into account power flows into the system that rarely flows out. However, additional clarity is necessary for criteria 1(c)(i),(ii) and (iv). Specifically, what is meant by "very limited set of conditions" under 1(c)(i) and (ii) and "limited quantity of energy" under 1(c)(i)? Further, is it appropriate to establish a fixed value of X megawatt hours for the maximum amount of energy flowing out of the system? While it is possible that NESCOE could agree upon a uniform value, NESCOE is not in a position to provide specific comment or support when the MWh value is unspecified. In addition, a fixed value may not adequately address varying system configurations throughout ISO-New England and neighboring control areas.
Independent Electricity System Operator	No	There is an inconsistency between the language used in bullet (c) - "rarely flows out", and that used in Exclusion E3(c) of the BES definition - "Power flows only into the LDN". We have commented during the BES Definition comment period that Exclusion E3 needs to be modified to match the Exception Principles.

Organization	Yes or No	Question 3 Comment
		We agree with the criteria set out in 1(c) except for bullets (iv) and (v). We do not believe it is possible to establish a limit on the energy flow out of a system for which an exception has been requested. Further, we suggest that the SDT avoid prescribing set values in the exception criteria since these would only serve to limit the flexibility of the process. As an alternative to the proposed bullet (iv), we suggest that power flow study results could be used to support the exception request. We therefore propose the following wording to replace bullets (iv) and (v).iv. Power flow simulation results to demonstrate that BES reliability is not dependent upon the power flows through the Element(s) for which an exception has been submitted, for the conditions specified in (ii).
Georgia System Operations Corporation		If the BES Definition itself is clarified to allow for some de minimis amount of power flow out of a customarily radial line that is excluded by definition, this justification for an exclusion may not be necessary. We encourage the Drafting Team to pursue that approach because we believe it is technically justified and could significantly reduce the need for exceptions.
Florida Municipal Power Agency Transmission Access Policy Study Group		The third item is “power flows into the system, but rarely flows out.” This criterion is vague. FMPA suggests instead the following language, which is consistent with FMPA’ comments on Exclusion E3 of the BES definition: “Neither the Element, nor any Elements that it connects to the grid (in aggregate), includes more than 75 MVA of generation used to meet the resource-adequacy requirements of electric utilities.”
ACES	Yes	We agree with this path although iii and v may be in conflict. One requires 24 months data and the other requires 12 months of data.
National Grid	Yes	We agree with this requirement, but feel that assigning a specific value to the energy flowing out of the system in MWh is unnecessary. The energy flowing out of a system depends on the size of the area, and thus could vary widely. Another concern is about non-wires alternatives (NWA). One type of non-wires alternative that is considered during planning studies is to reduce the amount of load on our system by paying customers to not operate during peak hours. One scenario to consider is a generator connected on a radial line that qualifies as BES, and will need upgrades if the generator runs frequently. If this generator produces power close to the MWh threshold in the specified time frame per NERC criteria, does it mean the utility company will have to consider paying the *generator* owner money to shut down in order to keep total MWh generation below the threshold and avoid BES criteria required radial line upgrades? This is another reason assigning a specific value to the energy flowing out of the system is unnecessary. We would like clarification on whether all criteria (i,ii,iii,iv,v) need to be met, or if just meeting one criteria is

Organization	Yes or No	Question 3 Comment
		sufficient. We feel that meeting criteria 1.c.1, 1.c.ii OR 1.c.iii is sufficient in showing that power rarely flows out of the system. Criteria 1.c.iv and 1.c.v should be removed. The exception process should be strictly limited to the procedures for application and approval and should not include substantive elements.
Blachly Lane Electric Cooperative Flathead Electric Cooperative, Inc Central Electric Cooperative Clearwater Power Electric Cooperative Consumer's Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric	Yes	We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify facilities that are not necessary for the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal (“N-0” or All Lines in Service) operating conditions should be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT’s view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were constructed on certain facilities to cause power to flow out of those facilities more than ten percent of the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.

Organization	Yes or No	Question 3 Comment
Cooperative Pacific Northwest Generating Cooperative		
Clark Public Utilities Benton Rural Electric Association Northern Wasco County PUD United Electric Co-op Inc Oregon Trail Electric Cooperative, Inc. Salem Electric Grant County PUD No. 2 (Grant) Northwest Public Power Association (NWPPA) Big Bend Electric Cooperative, Inc Kootenai Electric Cooperative	Yes	Clark agrees conceptually that one critical characteristic distinguishing local distribution facilities that must be excluded from the BES from transmission facilities that should be included is the manner in which power flows on those facilities. Power on local distribution systems generally flows only from the interconnected transmission source and across the distribution system for delivery to end-use customers. By contrast, power on transmission systems generally flows in two (or multiple, in networked systems) directions and is delivered in bulk to distribution utilities rather than to end-users. Hence, the SDT has properly identified power flows as one important characteristic that distinguishes BES transmission systems from local distribution systems. In order to identify systems that are not necessary for the operation of the BES under this text, we propose that any system where real power flows into the local distribution system 90 percent of the time or more under normal operating conditions.
Spyker	Yes	We agree with the criteria set out in 1(c), but suggest the SDT to avoid prescribing values and eliminate bullet (iv). The SDT should describe the intended performance outcome but avoid setting values. This should have little, if any impact on reliability of the transmission network if the items 1, 2 and 3 are satisfied.
American Electric Power	Yes	Requiring that “power flows into the system, but rarely flows out” is a reasonable approach, but would require further consideration given the MWh value eventually chosen to replace “TBD”.
Orange and Rockland Utilities, Inc.	Yes	The “TBD” value should be reasonable and well justified.

Organization	Yes or No	Question 3 Comment
Central Lincoln	Yes	Central Lincoln agrees that one critical characteristic distinguishing local distribution facilities that must be excluded from the BES from transmission facilities that should be included is the manner in which power flows on those facilities. Power on local distribution systems generally flows only from the interconnected transmission source and across the distribution system for delivery to end-use customers. By contrast, power on transmission systems generally flows in two (or multiple, in networked systems) directions and is delivered in bulk to distribution utilities rather than to end-users. Hence, the SDT has properly identified power flows as one important characteristic that distinguishes BES transmission systems from local distribution systems. Central Lincoln also agrees that the fact that power may flow out of a local distribution system onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the system as local distribution. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude local distribution facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a local distribution system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify systems that are not necessary for the operation of the BES under this test, we propose that any system where real power flows into the local distribution system 90 percent of the time or more under normal (“N-0” or All Lines in Service) operating conditions should be held to meet this test. That a system meets this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course of two years. In addition, the presence of generation within a local distribution system that only modifies the level of the load served by the bulk system, but does not result in power being injection into the bulk system, does not change the reliability effect of the local network and therefore should not require the local network to be classified as BES.
Oregon Public Utility Commission Staff	Yes	Use of the 100 kV brightline and the core BES definition as proposed is an overreach into local distribution systems and an overreach of FERC’s authority as set out in the FPA 215. A full engineering technical analysis - required every 2 years - is too onerous and not necessary for identifying most local distribution elements miss-identified as BES Elements. A simple screening methodology consistent with the 7-Factor Test (from FERC Order 888) is needed as the first stage of the exception process.
Hydro-Quebec TransEnergie	Yes	However, this is only part of an exclusion. The point c. iv and v, MWh is not relevant for real-time operation. It would be more simple to put a time reference, such as a total number of days or a % of the time.

Organization	Yes or No	Question 3 Comment
		In number iii, do you mean the first self certification ? In fact, the evidence for exclusion will be done once, but ROP suppose that the self certification will be done many times (every two years).
for Snohomish County PUD	Yes	Snohomish agrees conceptually that one critical characteristic distinguishing local distribution facilities that must be excluded from the BES from transmission facilities that should be included is the manner in which power flows on those facilities. Power on local distribution systems generally flows only from the interconnected transmission source and across the distribution system for delivery to end-use customers. By contrast, power on transmission systems generally flows in two (or multiple, in networked systems) directions and is delivered in bulk to distribution utilities rather than to end-users. Hence, the SDT has properly identified power flows as one important characteristic that distinguishes BES transmission systems from local distribution systems. Snohomish also agrees conceptually that the fact that power may flow out of a local distribution system onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the system as local distribution. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude local distribution facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a local distribution system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify systems that are not necessary for the operation of the BES under this test, we propose that any system where real power flows into the local distribution system 90 percent of the time or more under normal (“N-0” or All Lines in Service) operating conditions should be held to meet this test. That a system meets this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. In addition, the presence of generation within a local distribution system that only modifies the level of the load served by the bulk system, but does not result in power being injection into the bulk system, does not change the reliability effect of the local network and therefore should not require the local network to be classified as BES.
New York Power Authority	Yes	NYPA generally agrees with this item. However, the term “system” needs to be better defined. It is not clear how power could flow out of a load only system. If reversing power flows on a feeder caused it to fail one of the criteria, could the radial still be excluded, or is it necessary for the Element to pass all requirements? Alternatively, could the entity choose to file for Exclusion of that Element under the technical

Organization	Yes or No	Question 3 Comment
		analysis option? What happens and what are the implications when the two approaches produce different outcomes? An example of revised wording for "iv. The maximum amount of energy flowing out" would be no more than 24 hours of reverse power flows within any rolling 12-month period. Consider avoiding prescribing values and eliminate bullet (iv). The intended performance outcome should be described, but without setting values. This should not have any impact on the reliability of the transmission network if items 1, 2 and 3 are satisfied.
New York State Reliability Council	Yes	It should be clarified that this exclusion should not apply to inter-regional transfers, which clearly are candidates for inclusion as BES.
Western Electricity Coordinating Council	Yes	WECC agrees in concept with this characteristic, but it needs to be clarified whether the items i-v are "AND" statements WECC also suggests that i and ii be switched and re-worded. Suggested language for ii would be "A limited set of conditions where power flows out must be identified; for example, only under specified Contingency events." Then i can become a sub-bullet of ii. It must also be clarified that the specified conditions must have a technical justification to show that the element is not "necessary for reliable operation." Otherwise it is not clear that the "limited conditions" are truly a justification for exclusion. Any non-zero MWh limit must have a technical justification, otherwise zero should be used. In addition to the imports/exports from the system, the size of the system (in MW) should also be defined.
Bonneville Power Administration	Yes	BPA generally agrees with the power flow concept, but suggests including language that the assessment should be "based on normal system operating conditions." A MWh value to replace 'TBD' for maximum energy flowing out per year could be determined based on on an annual average MW load level of 25 MW average and below with distribution service of 50MVA and below, because 25MW loads can be served by lines under 100kv. The energy flowing out per year would be limited by the size of the load and the ability to import power to the load area (i.e. the export would never be larger than the initial distribution service minus the local area losses and load). BPA requests that the drafting team perform a cross-walk analysis on each of the 4 items to ensure the consistent application of an existing industry process, practice, or standard.
Tri-State Generation and	Yes	It may be more appropriate to use a threshold based on maximum power rather than on an annual energy

Organization	Yes or No	Question 3 Comment
Transmission Association		threshold.
Electric Market Policy	Yes	The word rarely should be struck from this item. It is meaningless in the context for which it is used and offers little to characterize an element or connection since it does not contain a measure.
Harney Electric Cooperative, Inc.	Yes	
Oncor Electric Delivery	Yes	Oncor Electric Delivery agrees with the proposed language that describes the exclusion criteria based upon power flows.
Southern Company	Yes	
Occidental Energy Ventures Corp.	Yes	
Consumers Energy Company	Yes	
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language for the characteristic associated with the magnitude, direction and time duration of power flow on a system Element as qualifying criterion. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		
Edison Electric Institute	Yes	Although EEI agrees in principle to the exclusion, we feel the current language has some problems which need to be addresses. Note the following:The word "rarely should be struck. It is meaningless in the context for which it is used and offers little to characterize an element or connection since it does not contain a measure. A more appropriate statement to broadly characterize a Non-BES element or connection would be the following:"Power flows are broadly characterized as Load Serving." Items i. and iii. are excessive requirements which do not aide in defining what is "necessary for operating an interconnected electric transmission network". What might be more a more useful measure is a comparison of total MW hours of load consumed vs. MW hours fed back into the BES as measured on an annual

Organization	Yes or No	Question 3 Comment
		basis.Item v. - Hourly energy data (MWh) for the most recent 12 month period for every excluded BES element is an excessive requirement. Annual records indicating that MW hours consumed annually verses MW hours that flow through the non-BES element would be a better indicator in line with the definition.
SERC Planning Standards Subcommittee Tennessee Valley Authority	Yes	One possible starting point for selecting a MWh threshold: Generators of 20 MVA or less are typically exempt from detailed modeling requirements. Suggest that reverse flows of this level or less, for a period of 24 hours or less would be an acceptable threshold. Therefore, this would provide a basis for selecting a threshold MWh level for reverse flows into the system under part iv. of 20 MW x 24 hours = 480 MWh per year.
Response: The SDT appreciates your comments and your suggestions for the amount of power flow allowed to still be eligible for an exclusion. However, based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		
PPL Supply	No	See comments in Questions 9 and 10
Response: See responses to Q9 & Q10.		
City of Redding	Yes	To be consistent with E2 of the proposed BES Definition a distribution system should be allowed to export at least 75 mw. This would be the same as a commercial retail customer can export into the distribution system.
Electricity Consumers Resource Council (ELCON)	Yes	The thresholds for power flows out of the system should be made consistent with Exclusion E2 in the definition.We recommend that this item be added to the BES definition.
Response: The SDT has responded to comments on the BES definition in the Consideration of Comments form for the BES definition posting.		
South Carolina Electric and Gas Georgia Transmission Corporation	Yes	One possible starting point for selecting a MWh threshold: Generators of 20 MVA or less are typically exempt from detailed modeling requirements. Suggest that reverse flows of this level or less, for a period of 24 hours or less would be an acceptable threshold. Therefore, this would provide a basis for selecting a threshold MWh level for reverse flows into the

Organization	Yes or No	Question 3 Comment
		system under part iv. of 20 MW x 24 hours = 480 MWh per year
Long Island Power Authority	Yes	Item iv. The maximum amount of energy flowing out is (TBD-1,752,000) MWh per year. Another measure that may be more appropriate is a percent % of total energy requirements in the area.
Xcel Energy	Yes	Regarding the question on MWH, one possible approach is to use 175,000 MWH/ year which would be just under the annual hourly output from the smallest generator (not at a plant) that must be registered under the registry criteria.
Tacoma Power	Yes	Tacoma Power generally agrees that elements primarily serving load, allowing a limited flow out of the local distribution network, should be excluded from the BES. We support an annual limitation of 219,000 MWhs, equivalent to 25 aMW, since a system of elements that primarily serve load under this limit are insignificant to the BES.
PacifiCorp	Yes	All of PacifiCorp's responses are based on the application of these items to a given interconnection and not on a continental basis. See comments on question 10. This criterion is very similar to a part of exclusion 3 of the proposed bright-line, which requires that power flows into the system. If the intent of this requirement is to capture local distribution networks that may be included under the proposed bright-line definition, then this requirement has merit. PacifiCorp proposes that instead of using a measure of energy, that the SDT utilize a measure of time and recommends that flow out of the system be limited to 15% on an annual basis. PacifiCorp does not have a technical justification for 15%, nor does it believe that a technical justification can be provided for any reasonable percent of time used, or MWh used to be applied equally to all interconnections.
Response: The SDT appreciates your comments and your suggestions to fill in some of the gaps in the first posting. However, based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		

4. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. The fourth item involves power transport. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.

Organization	Yes or No	Question 4 Comment
SERC Planning Standards Subcommittee Tennessee Valley Authority	No	There is not sufficient evidence provided by the SDT to distinguish between this fourth item for exclusion and the third item for exclusion. They both seem to fall in line with what is excluded per the bright line exclusion E3 (or Local Distribution Networks), but as written, it would be difficult to measure what is meant by "is not intentionally transported through" in this fourth item just as it would be difficult to measure what's meant by "flows into the system, but rarely flows out" for the third item. Such an exclusion should be required to include some technical analysis, but not extensive technical analysis (at least the inclusion of power flow base case as a minimum).
SPP Standards Review Group	No	It may be better to focus on the purpose, or need, of a facility, the functionality of the facility, rather than how electric flows impacted the facility during a given situation. Therefore, we would suggest moving away from the term 'intent'.
NERC Staff Technical Review	No	Limitations on through-flow of power is an appropriate consideration; however, whether the power flow is intentional should not be a primary consideration. Intent is not measurable and most major disturbances are the result of unintentionally placing the system in an unreliable operating condition. The main clause in item

Organization	Yes or No	Question 4 Comment
		(d) should be modified to reflect that transporting power to another system through the Element(s) to be excluded is prevented (such as by system configuration and/or impedance) or restricted (such as by Operating Procedures). Sub-items (i) and (ii) already are consistent with this revision to the main clause.
ISO/RTO Standards Review Committee	No	Hasn't the reliability concern associated with "loop flows" been related to the unintentional flow of power through parts of the system?
Iberdrola USA	No	We do not agree with this requirement. These exclusion exception criteria should be deleted in their entirety and replaced with criteria that are objective, specific, and repeatable, or preferably not replaced at all. Specific problems with the criteria as stated are: 1. A facility is not BES if all of "a" through "d" below apply: d. Power "entering" "the system" does not "intentionally" flow into another "system" - what does intentionally versus unintentionally mean?
MRO's NERC Standards Review Forum Muscatine Power and Water	No	NSRF proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the BES definition.
MidAmerican Energy	No	MidAmerican support the NSRF comments. The NSRF proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the BES definition.
ReliabilityFirst	No	no one knows when some event will occur, putting this limitation will only cause debate. Any impact is an impact and should be included
Idaho Falls Power	No	We generally agree with this requirement. If a system has redundant transmission to move power that is normally wheeled through, the question of materiality could be addressed by technical analysis.
Southern Company	No	
National Grid	No	We feel that this requirement is not specific enough. "System" is too general. It should be clear what is intended by "system". Also, we would like more clarification about what is meant by "intentionally transport". Is the intent to mean there is a contract between a generator and load? The exception process should be strictly limited to the procedures for application and approval and should not include substantive elements.

Organization	Yes or No	Question 4 Comment
South Carolina Electric and Gas	No	There is not sufficient evidence provided by the SDT to distinguish between this fourth item for exclusion and the third item for exclusion. They both seem to fall in line with what is excluded per the bright line exclusion E3 (or Local Distribution Networks), but as written, it would be difficult to measure what is meant by "is not intentionally transported through" in this fourth item just as it would be difficult to measure what's meant by "flows into the system, but rarely flows out" for the third item. Such an exclusion should be required to include some technical analysis, but not extensive technical analysis (at least the inclusion of power flow base case as a minimum).
Glacier Electric Cooperative	No	I believe that there should be a provision for systems that intentionally transport variable, non-essential generation (such as systems that transport wind power) to be excluded from the BES. By nature, these types of systems cannot be essential to the BES due to the variability of the generation, and, therefore, should be able to be excluded from the BES.
Springfield Utility Board	No	NERC's Proposed Continent-wide Definition of Bulk Electric System contains Exclusion E3 (LDNs) as part of the BES core definition. Why would this fourth item be necessary in demonstrating BES Exceptions if LDNs are already excluded as part of NERC's core BES definition?
ISO New England	No	This appears to be the same as section 1.c and again possibly allows for the exclusion of large portions of the system in metropolitan areas. Section 1.d. should simply be deleted.
The United Illuminating Company	No	The wording is ambiguous. What is meant by system? Different voltage levels, Owners?
Entergy Services	No	There is not sufficient evidence provided by the SDT to distinguish between this fourth item for exclusion and the third item for exclusion. They both seem to fall in line with what is excluded per the bright line exclusion E3 (or Local Distribution Networks), but as written, it would be difficult to measure what is meant by "is not intentionally transported through" in this fourth item just as it would be difficult to measure what's meant by "flows into the system, but rarely flows out" for the third item. Such an exclusion should be required to include some technical analysis, but not extensive technical analysis (at least the inclusion of power flow base case as a minimum).
Pepco Holdings Inc	No	This criterion is very similar to the third item. Written operating procedures may not exist. The entity should be allowed to summit a description and justification.

Organization	Yes or No	Question 4 Comment
Central Lincoln	No	Central Lincoln agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. In fact, we believe this may be the most important and readily identifiable distinction. As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Local distribution systems do not share any of these operational characteristics. Accordingly, Central Lincoln agrees that if power is not intentionally transported through a particular system, that system is not used for transmission and should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to a particular system will provide a ready guide to whether power is intentionally scheduled across that system. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test.
Duke Energy	No	This fourth characteristic does not add clarity to the E3 Exclusion in the proposed BES definition. And in general, the path that does not include extensive technical analysis is not adequate to distinguish between the Elements that are and that are not necessary for operating an interconnected electric transmission network.
American Transmission Company, LLC	No	ATC proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the BES definition.
Manitoba Hydro	No	Vague language such as "rarely" or "not intentionally" does not support a "bright line" approach, and is not measureable or auditable. Also, the sample evidence should not be included as part of the criteria. In addition, the proposed criteria to substantiate a request for an exception should be removed as it does not introduce anything different than what is already proposed under the exclusions in the bright line BES definition. Specifically, this item is already excluded in the bright line definition E3.
NESCOE	No	As noted in Response 1, NESCOE believes exclusion determinations should not require a finding that all four proposed criteria are met. NESCOE further notes that New England's network has numerous parallel paths operated at voltages less than 200 kV which may parallel 230 kV and 345 kV BES network paths. If flows on

Organization	Yes or No	Question 4 Comment
		a given <200 kV path only exceed 200 MVA under contingency conditions and if these paths are connected to the higher voltage BES elements with suitable NERC compliant protection systems, these paths may be EXCLUDED from the BES. NESCOE suggests the value of 200 MVA based on typical thermal ratings of 115 kV transmission lines but is open to other values that the drafting team may suggest. NESCOE also suggests that the phrase "to some other system" be broadened to include any other higher voltage BES element.
City of Redding	Yes	The SDT needs to address renewable energy and customer owned generation. If an aggregator adds up one thousand roof top PV units or the power from plugged in electric cars and sells them to an entity outside of this system it should not affect the ability of the distribution system to qualify for this exclusion, especially if the power is consumed inside of the distribution system.
Blachly Lane Electric Cooperative Flathead Electric Cooperative, Inc. Central Electric Cooperative Clearwater Power Electric Cooperative Consumer's Power Inc. Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric	Yes	As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to particular facilities will provide a ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.

Organization	Yes or No	Question 4 Comment
Cooperative Salmon River Electric Umatilla Electric Cooperative West Oregon Electric Cooperative Pacific Northwest Generating Cooperative Consumer's Power Inc		
Clark Public Utilities	Yes	Clark agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. Clark believes this may be the most important and readily identifiable distinction. Accordingly, Clark agrees that if power is not intentionally transported through a particular system, that system is not used for transmission and should not be considered part of the BES.
BGE	Yes	BGE generally agrees with this requirement, but believes that the term "system" should be clarified.
Benton Rural Electric Association Northern Wasco County PUD United Electric Co-op Inc. Oregon Trail Electric Salem Electric Grant County PUD No. 2 (Grant) Northwest Public Power Association (NWPPA) Big Bend Electric Cooperative, Inc Kootenai Electric Cooperative	Yes	Benton REA agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. In fact, we believe this may be the most important and readily identifiable distinction. Accordingly, Benton REA agrees that if power is not intentionally transported through a particular system, that system is not used for transmission and should not be considered part of the BES. One exception may be for a small embedded generation unit owned by a different party that may be "scheduled" out of an area, but in reality, does not produce any physical flow. These circumstances should not trigger inclusion.

Organization	Yes or No	Question 4 Comment
Long Island Power Authority	Yes	In addition to Operating Procedures, electrical elements that restrict or control flow over the line should be allowed to be used as evidence.
Xcel Energy	Yes	It is not clear what 'some other system' would be. Is this another point on the BES in general?
for Snohomish County PUD	Yes	Snohomish agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. In fact, we believe this may be the most important and readily identifiable distinction. As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Local distribution systems do not share any of these operational characteristics. Accordingly, Snohomish agrees that if power is not intentionally transported through a particular system, that system is not used for transmission and should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to a particular system will provide a ready guide to whether power is intentionally scheduled across that system. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test.
Independent Electricity System Operator	Yes	There is an inconsistency between the language used in bullet (c) - "rarely flows out", and that used in Exclusion E3(c) of the BES definition - "Power flows only into the LDN". We have commented during the BES Definition comment period that Exclusion E3 needs to be modified to match the Exception Principles. We agree with the criteria set out in 1(c) except for bullets (iv) and (v). We do not believe it is possible to establish a limit on the energy flow out of a system for which an exception has been requested. Further, we suggest that the SDT avoid prescribing set values in the exception criteria since these would only serve to limit the flexibility of the process. As an alternative to the proposed bullet (iv), we suggest that power flow study results could be used to support the exception request. We therefore propose the following wording to replace bullets (iv) and (v).iv. Power flow simulation results to demonstrate that BES reliability is not dependent upon the power flows

Organization	Yes or No	Question 4 Comment
		through the Element(s) for which an exception has been submitted, for the conditions specified in (ii).
Tacoma Power	Yes	Tacoma Power generally agrees with fourth item (power transport) when not intentionally transporting power through a system. In development of the supporting evidence for this item, we suggest a demonstration by operating studies or the option to demonstrate the criteria by the use of operational procedures.
Tri-State Generation and Transmission Association	Yes	While we generally agree, "system" needs to be clarified, and should be changed to "transmission system." It may also need to be qualified by indicating a change in ownership of transmission systems. We also wonder if the concept of scheduling should be addressed rather than using the word "intentionally?"
Florida Municipal Power Agency	Yes	FMPA supports the criterion in concept, but “intention[]” is a vague term and not relevant to an Element’s impact on the grid. We suggest instead that to obtain an exclusion for such a quasi-radial Element, the owner be required to demonstrate that the Element has no more than a 5% transfer distribution factor on any BES Element for transfers that could be curtailed through the NAESB TLR procedure (e.g., interchange transactions, or generator to load distribution factors (GLDF) for BES generators). Transfer distribution factor (or GLDF) is a good measure of an Element’s impact on the grid and is not subject to varying interpretations. In addition, NAESB standards are also approved by FERC and mandatory to jurisdictional entities. Hence, the 5% TDF “Curtailment Threshold” has already been approved by FERC as indicating an insufficient impact on the BES to be considered for TLR. And, it shows consistency between NERC and NEASB standards.
Transmission Access Policy Study Group	Yes	TAPS supports the criterion in concept, but “intention[]” is a vague term and not relevant to an Element’s impact on the grid. We suggest instead that to obtain an exclusion for such a quasi-radial Element, the owner be required to demonstrate that energy transfers subject to NAESB TLR procedures (Interchange Transactions or BES generator to load) have no more than a 5% transfer distribution factor (TDF) on the Element that is a candidate for exception. Transfer distribution factor is a good measure of an Element’s impact on the grid and is not subject to varying interpretations.
Edison Electric Institute	Yes	A radial system by definition transports power from the BES System to a Distribution System, similarly an LDN operates in a like manner. A strict reading of the above criteria would exclude both from consideration yet the definition allows both. We believe that in an attempt to develop a set of criteria useful for all situations, the outcome has weakened the original intent as set in the Definition. Although much of the criteria used is largely appropriate, a stricter adherence to the BES definition criteria would substantially help to avoid confusion between what was developed as principles and what was developed as the BES Definition.
Bonneville Power Administration	Yes	BPA suggests that the SDT provide a method for assessing power transport based on intake to serve load

Organization	Yes or No	Question 4 Comment
		versus outflow. BPA requests that the SDT clarify that the qualifying statements i-v for the fourth item are "or" statements.
PacifiCorp	Yes	All of PacifiCorp's responses are based on the application of these items to a given interconnection and not on a continental basis. See comments on question 10. This criterion is very similar to parts of exclusion 3 of the proposed bright-line, which states "d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL)."If the intent of this requirement is to capture local distribution networks that may be included under the proposed bright-line definition, then this requirement has merit.
Western Electricity Coordinating Council	Yes	WECC agrees in concept with this characteristic, but believes that there needs to be more clarity of what constitutes the evidence. Since flow data is used for characteristic c, it seems that the same sort of data (but separated into hourly flow in and hourly flow out) could be used to demonstrate this. Otherwise, a simple procedure that claims "power entering this system is not intentionally transported through the system to some other system" would meet the letter of the law, but gives no description of how this is achieved. If Operating Procedures are allowed, more clarity must be provided on what those procedures must entail.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language for the characteristic associated with the unintentional transporting of power through a system Element with delivery to another system Element as qualifying criterion. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		
Electricity Consumers Resource Council (ELCON)	Yes	This requirement should be further relaxed to allow for intentional flows that are provided as a courtesy to the local distribution company. In such cases, private, customer-owned facilities may be used to deliver power from a DP to a small number of the DP's retail customers who are unaffiliated with the owner/operator of the private network. These flows are generally de minimis.

Organization	Yes or No	Question 4 Comment
		We also recommend that this item (with our qualification) be added to the BES definition.
Oregon Public Utility Commission Staff	Yes	Use of the 100 kV brightline and the core BES definition as proposed is an overreach into local distribution systems and an overreach of FERC's authority as set out in the FPA 215. A full engineering technical analysis - required every 2 years - is too onerous and not necessary for identifying most local distribution elements miss-identified as BES Elements. A simple screening methodology consistent with the 7-Factor Test (from FERC Order 888) is needed as the first stage of the exception process.
Response: The SDT has responded to comments on the BES definition in the Consideration of Comments form for the BES definition posting. The SDT appreciates your comments. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		
Georgia System Operations Corporation		The concept of "intentional" transport of power is vague and needs more specificity for this to be clear. Also, it would help to have more information about the sort of "operational procedures" that would be acceptable as evidence.
Response: The SDT has responded to comments on the BES definition in the Consideration of Comments form for the BES definition posting.		
PPL Supply	No	See comments in Questions 9 and 10
Response: See response to Q9 & Q10.		
Harney Electric Cooperative, Inc.	Yes	
Hydro-Quebec TransEnergie	Yes	
Oncor Electric Delivery	Yes	Oncor Electric Delivery agrees with the proposed language that describes the exclusion criteria based upon the non - intentional flow of power through the system to some other system.

Organization	Yes or No	Question 4 Comment
Consumers Energy Company	Yes	
American Electric Power	Yes	Requiring that "power entering the system is not intentionally transported through the system to some other system" is a reasonable approach.
Orange and Rockland Utilities, Inc.	Yes	
Spyker	Yes	
Occidental Energy Ventures Corp.	Yes	
Consolidated Edison Co. of NY, Inc.	Yes	
New York Power Authority	Yes	NYPA agrees that power flow wheeled through a system indicates that the system potentially has more than one source. Therefore, the element in question is not radial.
New York State Reliability Council	Yes	
Hydro One	Yes	
Electric Market Policy	Yes	
Northeast Power Coordinating Council	Yes	
ACES	Yes	We agree with this path.
Response: Thank you for your support. However, based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or		

Organization	Yes or No	Question 4 Comment
limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		

5. Exclusions - The SDT has set up one path for evidence that includes technical analysis. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. In addition, in the comment field, please provide your thoughts on the proposed metrics for analysis and the appropriate values to replace 'TBD,' including technical rationale for your argument.

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 5 Comment
Northeast Power Coordinating Council	No	
SERC Planning Standards Subcommittee	No	
SPP Standards Review Group	No	
NERC Staff Technical Review	No	
Iberdrola USA	No	
Tri-State Generation and Transmission Association	No	

Organization	Yes or No	Question 5 Comment
Hydro One	No	
MRO's NERC Standards Review Forum	No	
PacifiCorp	No	
ReliabilityFirst	No	
Tennessee Valley Authority	No	
PPL Supply	No	
Southern Company	No	
Muscatine Power and Water	No	
South Carolina Electric and Gas	No	
Glacier Electric Cooperative	No	
Exelon	No	
Georgia Transmission Corporation	No	
Consolidated Edison Co. of NY, Inc.	No	
ISO New England	No	
The United Illuminating Company	No	

Organization	Yes or No	Question 5 Comment
Entergy Services	No	
Orange and Rockland Utilities, Inc.	No	
Pepco Holdings Inc	No	
American Transmission Company, LLC	No	
Consumers Energy Company	No	
Independent Electricity System Operator	No	
United Electric Co-op Inc.	Yes	
Oregon Trail Electric Cooperative, Inc.	Yes	
Central Lincoln	Yes	
Oncor Electric Delivery	Yes	
Salem Electric	Yes	
Duke Energy	Yes	
Grant County PUD No. 2 (Grant)	Yes	
Hydro-Quebec TransEnergie	Yes	
for Snohomish County PUD	Yes	

Organization	Yes or No	Question 5 Comment
Northwest Public Power Association (NWPPA)	Yes	
Big Bend Electric Cooperative, Inc.	Yes	
NESCOE	Yes	
Kootenai Electric Cooperative	Yes	
Tacoma Power	Yes	
MidAmerican Energy	Yes	
Edison Electric Institute	Yes	
Florida Municipal Power Agency	Yes	
Transmission Access Policy Study Group	Yes	
ISO/RTO Standards Review Committee	Yes	
Western Electricity Coordinating Council	Yes	
New York State Reliability Council	Yes	
Electricity Consumers Resource Council (ELCON)	Yes	
New York Power Authority	Yes	

Organization	Yes or No	Question 5 Comment
Blachly Lane Electric Cooperative	Yes	
Springfield Utility Board	Yes	
Flathead Electric Cooperative, Inc.	Yes	
Clark Public Utilities	Yes	
Central Electric Cooperative	Yes	
Clearwater Power Electric Cooperative	Yes	
Consumer's Power Inc.	Yes	
Coos-Curry Electric Cooperative	Yes	
Douglas Electric Cooperative	Yes	
Fall River Electric Cooperative	Yes	
Lane Electric Cooperative	Yes	
Lincoln Electric Cooperative	Yes	
Lost River Electric Cooperative	Yes	
Northern Lights Electric Cooperative	Yes	
Okanogan Electric Cooperative	Yes	

Organization	Yes or No	Question 5 Comment
Raft River Rural Electric Cooperative	Yes	
Salmon River Electric Cooperative	Yes	
West Oregon Electric Cooperative	Yes	
Pacific Northwest Generating Cooperative	Yes	
Umatilla Electric Cooperative	Yes	
Consumer's Power Inc.	Yes	
BGE	Yes	
Spyker	Yes	
Benton Rural Electric Association	Yes	
American Electric Power	Yes	
Northern Wasco County PUD	Yes	
Xcel Energy	Yes	
Response: Thank you for your response.		

5a. Comments on approach:

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 5a Comment
Northeast Power Coordinating Council		This method may allow an entity to exclude Elements which perform a transmission function, but that are not the most limiting Element. " Not being necessary for reliability operation" needs definition. The SDT should consider developing a Guidance Document to provide examples and insights to guide prospective filing entities. The TPL Reliability Standards already describe the full set of requirements for a reliable system. Why are added requirements necessary? Why would any such added criteria not conflict with the TPL Reliability Standards to the extent that they were either more or less restrictive? Entities should be given an option to conduct an analysis to demonstrate if an element is necessary for the operation of a transmission network. NERC should specify all the relevant criteria categories to be listed as under 2 (a). NERC should avoid prescribing numerical values, but instead establish a range of values (or reference industry standards) that would be consistent with industry/ regional standards or practices without compromising the reliability of the transmission network.
SERC Planning Standards Subcommittee Tennessee Valley Authority Southern Company		As written, most of this approach makes no sense. The words imply that if you have planned the system properly, you can exclude it from the BES! In TPL studies you make sure that voltage dips, frequency excursions, voltage deviations are acceptable, oscillations are damped, and no cascading outages occur. So if you meet the performance requirements of TPL studies, you can exclude the element from the BES. What good is this?

Organization	Yes or No	Question 5a Comment
Georgia Transmission Corporation		
City of Redding		It appears the industry experts have a very difficult time identifying any set of measurement factors that can be applied on a consistant basis to any system and produce similar results, therefore there needs to be geographical variation where the experts in the local systems can make a determination.
NERC Staff Technical Review		NERC staff is not opposed to development of evidence based on technical analysis; however, the type of analysis included in this exception criterion requires extensive resources and lacks sufficient detail to allow for consistent and repeatable application. Concerns with this approach include (1) the ability to provide sufficient guidance on the system conditions and contingencies necessary to support an exception request, (2) difficulty with identifying thresholds for items iv-1 through iv-4, and (3) the ability to address interdependencies among exception requests. These concerns can be addressed by deleting this second path for evidence and including technical analysis on a limited basis to assess performance as described in our response to Question 2. If the SDT elects to retain this second path for evidence, then our three concerns must be addressed. In particular with regard to our third concern, the ERO must be able to deny requests for exception based on the cumulative impact of all previously approved exceptions.
ACES		Overall, the approach is reasonable. However, we disgree with 2.b which states that the ERO can override the criteria. Once criteria is established, the ERO should not be able to override the determination. The ability of the ERO to override implies the criteria is not sufficient and needs to be modified. Rather than override, the ERO should seek to modify the criteria if it is not sufficient.
Edison Electric Institute		In general, we agree that an alternative path allowing a technical analysis to demonstrate that a Facility (or Element) should not be considered part of the BES is appropriate. However, we disagree with the measures offered and suggest an alignment with efforts already being developed within NERC's Event Analysis Working Group.EEI proposes that the technical analysis criterion which has been proposed is too complicated, inconsistent with what is currently being done across the regions and submits that a better approach would be to align reliability impacts with the Event Analysis Criteria being developed by NERC's EAWG. These criteria would be a better benchmark as to whether a Facility or Element should be excluded from the BES. The proposed alternate criteria are as follows:(1) The loss of the Facility (or Element) would not interfere or negatively impact the BES from staying within acceptable limits (i.e., frequency, voltage and

Organization	Yes or No	Question 5a Comment
		System Operating limits) following a fault on or loss of that Facility (or Element); (2) The loss of the Facility (or Element) would not interfere or negatively impact the BES from performing acceptably after credible contingences; (3) Facility (or Element) faults, failures, or trips do not push the system to a point of Instability or otherwise initiate cascading outages; (4) BES facilities are protected from unacceptable damage by operating the Facility (or Element) within its ratings; and (5) The unexpected loss of the Facility (or Element) does not negatively impact the BES from achieving its mission of to supply the aggregate electric power and energy requirements of its customers.
Florida Municipal Power Agency		FMPA supports including specific technical criteria that Elements must meet to obtain an exclusion through the exception process. This approach will facilitate uniform application of the exception process. FMPA responds to the first five proposed criteria in response to 5b-5e below. In the sixth proposed criterion, "steady state stability" is ambiguous, does the SDT mean voltage stability, power angle curve stability, or small signal stability? The seventh proposed criterion, "No cascading outages," is insufficiently granular and should be discarded. The criteria are intended to measure whether, among other things, a particular Element can cause a cascading outage. They need to set out how decision-makers will determine whether an Element can cause a cascading outage, not simply state that an Element that can cause a cascading outage cannot be excluded from the BES.
Transmission Access Policy Study Group		TAPS supports including specific technical criteria that Elements must meet to obtain an exclusion through the exception process. This approach will facilitate uniform application of the exception process. TAPS responds to the first five proposed criteria in response to 5b-5e below. The seventh proposed criterion, "No cascading outages," is insufficiently granular and should be discarded. The criteria are intended to measure whether, among other things, a particular Element can cause a cascading outage. They need to set out how decision-makers will determine whether an Element can cause a cascading outage, not simply state that an Element that can cause a cascading outage cannot be excluded from the BES.
ISO/RTO Standards Review Committee		Predictive analysis of an accurate model is useful in determining the importance of various elements of the system.
Iberdrola USA		A facility is not BES if it is not necessary for reliable system operation, based on a TPL-type analysis similar to

Organization	Yes or No	Question 5a Comment
		NPCC Document A-10 “Classification of Bulk Power System Elements” - this type of analysis was rejected by FERC. Besides, at 115kV, calculated distribution factors for interfaces between areas (where higher voltage lines, e.g., at 230kV and 345kV, are included as part of the interface definition) tend to be small and inaccurate. The method used to calculate distribution factors is an approximate method which must be re-evaluated for small values of distribution factors.
Tri-State Generation and Transmission Association		This appears very similar to the “material impact” proposal that FERC has previously disallowed, so we recommend removing 2. If retained, remove 2.(b) because allowing the ERO to override the technical justification and analysis devalues such analysis to the point of it being meaningless.
Hydro One		We agree that entities should be given an option to conduct an analysis to demonstrate whether or not an element is necessary for the operation of the transmission network. We also support that NERC should specify the entire relevant criteria category to be listed under exclusion criteria 2 (a). However, we suggest that NERC should avoid prescribing numerical values but establish a range of value (or reference industry standard) that would be consistent with industry/ regional standards or practices without compromising the reliability of the transmission network.
MRO's NERC Standards Review Forum		NSRF proposes that this technical analysis criterion be replaced by criteria that are more closely tied to the Adequate Level of Reliability (ALR) characteristics. The following alternate criteria are offered as possible examples, “(1) the BES can be controlled to stay within acceptable limits following a fault on or loss of the Element; (2) the BES performs acceptably after credible contingences of the Element; (3) the Element does not limit the impact and scope of instability and cascading outages when they occur; (4) BES facilities are protected from unacceptable damage by operating the Element within its ratings; (5) the integrity of the BES can be restored promptly following a fault on or loss of the Element; and (6) the BES has the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times, taking into account scheduled or reasonably expected unscheduled outages of the Element. In addition, NSRF is not aware of any continent-wide appropriate BES performance measures for voltage dip, frequency excursion, voltage deviation, stability, etc. and NSRF speculates that different values are likely for different regions and system characteristics across the continent. As a result, NSRF believes it is not advisable to try to adopt unproven values without reasonable industry investigation and development.

Organization	Yes or No	Question 5a Comment
Bonneville Power Administration		BPA comments on the technical analysis are as follows:1. Who is responsible for running these studies (the BA, individual utilities....?) .2. The analysis and criteria need to be better defined for the technical analysis. 3. What did SDT mean by "having a distribution factor of TBD% for any other Element"? This should probably reference a specific PTDF for a path or source/sink group. 4. What contingencies are studied to show the elements meet the transient voltage dip, frequency excursion, etc. (i.e. are they 3 phase delayed cleared faults, single phase faults, etc.)? Furthermore, the exclusion criteria needs to be much more specific about how the study is to be conducted in general - i.e.: Regional Entities have established study guidelines and procedures to determine voltage and frequency criteria. Specifically, is it the intent that the element being proposed for exclusion be opened in the study and then the standard contingency list applied to the rest of the system? Presumably, if there is no difference in system performance with the element in or out, then it could be excluded. Alternatively, is it intended that the contingency to be tested is simply the loss of the element proposed for exclusion? 5. What elements and/or flow gates should be monitored for these analyses? 6. In "Other", the SDT should add "The limiting element for a flow-gate cannot be excluded from the BES". 7. How will the criteria be set? Will they follow current standards? (i.e. TPL-001)? The technical principles must identify what category(ies) of TPL studies must be run. BPA requests clarification on what the values for the threshold criteria and/or disturbances would be?
PacifiCorp		5a. Comments on approach: All of PacifiCorp's responses are based on a given interconnection and not on a continental basis. See comments on question 10. Using any technical criteria will allow many elements to be excluded from the BES regardless of the element's criticality to the interconnected system. Whatever technical criteria is established should only be applied to elements under 200 kV and any radial elements above 200 kV
ReliabilityFirst		to complicated and will only raise debate between FERC, NERC, the Regions and the Registered Entities
Western Electricity Coordinating Council		WECC agrees in concept that a technical analysis can be used and should be allowed to show that an element is not necessary for reliable operation. However, the technical analysis must be based on sound reasoning and a justification must be given as to why the analysis makes a showing that the element is not necessary for reliable operation. Furthermore, the technical principles must identify what category(ies) of TPL

Organization	Yes or No	Question 5a Comment
		studies must be run. Finally, the values used for the threshold criteria and/or disturbances must be more stringent than the applicable TPL criteria/disturbances. Otherwise the argument becomes circular because all BES elements must meet the TPL criteria, so by meeting them all elements could be excluded.
New York State Reliability Council		A single threshold value for performance based testing does not recognize differences in regional system characteristics. Therefore, regional approaches for at least generation exclusions should be used, like NPCC's A-10 criterion.
National Grid		We do not agree with all the criteria listed in point 2.a.iv. For example we believe that the term in 2.a.vi.6 “Steady-state Stability - positively damped” does not relate to the concept of steady-state stability. We believe an acceptable measure of steady-state stability would be an angle difference across the transmission line. That difference can vary depending on the line; however, a rule of thumb is typically 45 degrees which provides a 30% steady state stability margin. As mentioned previously, the exception process should be strictly limited to the procedures for application and approval and should not include substantive elements.
Muscatine Power and Water		Would like to propose that this technical analysis criterion be changed to criteria that are more closely tied to the Adequate Level of Reliability (ALR) characteristics. Would like to offer the following alternate criteria as possible examples, “(1) the BES can be controlled to stay within acceptable limits following a fault on or loss of the Element; (2) the BES performs acceptably subsequent to credible contingences of the Element; (3) the Element does not limit the impact and scope of instability and cascading outages once they occur; (4) BES Facilities are protected from undesirable damage by operating the Element within its ratings; (5) the reliability of the BES can be restored promptly subsequent to a fault on or loss of the Element; and (6) the BES has the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times, taking into account scheduled or reasonably expected unscheduled outages of the Element. Currently not aware of any continent-wide appropriate BES performance metrics for voltage dip, frequency excursion, voltage deviation, stability, etc. and would speculate that different values are likely for the different regions and system characteristics across the continent. Thus, it is not advisable to try to adopt unproven values without reasonable industry investigation and development.

Organization	Yes or No	Question 5a Comment
Blachly Lane Electric Cooperative Flathead Electric Cooperative, Inc United Electric Co-op Inc. Oregon Trail Electric Cooperative, Inc. Central Lincoln Salem Electric Grant County PUD No. 2 (Grant) for Snohomish County PUD Northwest Public Power Association (NWPPA) Big Bend Electric Cooperative, Inc. Kootenai Electric Cooperative		We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task Force.
South Carolina Electric and Gas		As written, most of this approach makes no sense. The words imply that if you have planned the system properly, you can exclude it from the BES! In TPL studies you make sure that voltage dips, frequency excursions, voltage deviations are acceptable, oscillations are damped, and no cascading outages occur. So if you meet the performance requirements of TPL studies, you can exclude the element from the BES. This does not seem to be what was intended.
Glacier Electric Cooperative		I strongly agree that there should be a way for elements to be excluded from the BES based on a technical analysis. However, the current approach only provides one technical avenue for exclusion and that is through a transmission planning study. Performing and analyzing such a study could be very, very difficult for a small entity to do. If this is the approach that NERC continues with, then I believe there needs to be some extra language outlining who is responsible for performing and analyzing these transmission planning studies. The question is should the RRO (WECC, etc.) be responsible for performing the study and determining through the technical criteria what elements are included and excluded in the BES, or should that resposiblity fall on

Organization	Yes or No	Question 5a Comment
		control area operators within an RRO, or should that responsibility fall on individual entities? I believe it should fall on either the RROs or the control area operators within the RROs. Perhaps an alternative approach could be to establish a few techincal checks that could be evaluated first before a transmission planning study is required. For example, a max fault MVA value could be established and if the available fault MVA at an element is less than the established value, then that element and could be excluded without having to go through a transmission planning study. If the available fault MVA at the element is above the established value, then the study would have to be done for determination.
Exelon		This item calls for the use of criteria in order to prove that a facility should be excluded the BES. First of all, the items 5b - 5e do indeed require extensive technical analysis which will be outside of the capabilities of many users of the BES. Furthermore, it is not clear who's criteria will be used? The user's? The Transmission Owner's? The Planning Authority's? This question of ownership needs to be resolved and in itself poses a problem for this process. If differing criteria levels are used across the continent, there remains the possibility that similarly-situated facilities in different Regions will not be treated consistently.
Consolidated Edison Co. of NY, Inc.		The technical analysis approach may have merit. However, we have a number of questions about how it would be implemented in practice. We are concerned that this method may allow an entity to exclude Elements simply because they are not the most limiting Element in a particular TPL analysis. What does "not being necessary for reliability operation" mean? Please define. The SDT should consider developing a Guidance Document to provide examples and insights to guide prospective filing entities. The TPL Reliability Standards already describe the full set of requirements for a reliable system. Why are added requirements necessary? Why would any such added criteria not conflict with the TPL Reliability Standards to the extent that they were either more or less restrictive?
ISO New England		The use of distribution factors is a significant concern. The term distribution factor is used a number of ways in the industry. Is this determined using the percentage pickup on the element in question following the loss of another element, or is this the percentage of a transfer that is picked up on the element in question, or a combination of both? Item 2.a.ii states that the TPL studies have to be run if the model is updated. The distribution factor is not required to be calculated as part of the TPLs and therefore will require additional analysis in all circumstances, not just when the model is updated.

Organization	Yes or No	Question 5a Comment
The United Illuminating Company		This is not very different from trying to demonstrate no adverse impact outide the local area.
Georgia System Operations Corporation		It would be helpful to specify which TPL Standard(s) the referenced studies are usually prescribed for.
Entergy Services		The entire approach seems overly complex and difficult to document.
Clark Public Utilities Central Electric Cooperative Clearwater Power Electric Cooperative Consumer's Power Inc. Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost Rive Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric		Clark agrees conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with local distribution and not BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Clark supports the technical arguments and the White Paper presented by Snohomish County PUD in their comments. Clark recommends that the SDT modify its approach to the technical exclusion process to match the approach advocated in the White Paper, which is based upon the approach recommended by the WECC BES Task Force.

Organization	Yes or No	Question 5a Comment
Cooperative Pacific Northwest Generating Cooperative Consumer's Power Inc Benton Rural Electric Association Northern Wasco County PUD		
BGE		BGE believes that there is value in allowing for exclusions through a technical analysis path. Because multiple entities may perform "planning assessments" using different models, the phrase, "*the* most recent *applicable* planning assessment" should be clarified to avoid ambiguity as to which model(s) are acceptable. It may be useful to designate the models used in the Planning Authority analyses as acceptable.
Spyker		We agree that entities should be given an option to conduct an analysis to demonstrate if an element is necessary or not for the operation of transmission network. We also support that NERC should specify all the relevant criteria category to be listed as under 2 (a). However, we suggest that NERC should avoid prescribing numerical values but establish a range of value (or reference industry standard) that would be consistent with industry/ regional standards or practices without compromising the reliability of transmission network.
Long Island Power Authority		Exclusion under this criteria would require that the analysis be performed by the registered TP. Criteria identified is based on interconnection to neighboring utilities.
Orange and Rockland Utilities, Inc.		This approach is not necessary since NERC TPL Reliability Standards already addressed how to maintain a reliable electric system.
Pepco Holdings Inc		Generally agree that a specific technical analysis approach (power flow studies) showing no impact on BES is appropriate, but don't know how to define specific criteria on which to base decision.
Duke Energy		Duke Energy agrees with the approach of using a technical analysis based on transmission system modeling but the specific criteria do not need to be specified here - they should be consistent with the latest revision of

Organization	Yes or No	Question 5a Comment
		the TPL-001. R5 of TPL-001-2, Transmission System Planning Performance Requirements states that each Transmission Planner and Planning Coordinator shall have criteria for acceptable System steady state voltage limits, post-Contingency voltage deviations, and the transient voltage response for its System. The technical analysis required for exclusion of an Element from the BES should evaluate the loss of the Element against a more conservative set of criteria than that specified by the Transmission Planner and Planning Coordinator responsible for that Element. There are currently no continent-wide performance levels defined for these evaluations, and there is no technical basis for developing performance levels that would be applicable continent wide.
American Transmission Company, LLC		ATC proposes that this technical analysis criterion be replaced by criteria that are more closely tied to the Adequate Level of Reliability (ALR) characteristics. The following alternate criteria are offered as possible examples, "(1) the BES can be controlled to stay within acceptable limits following a fault on or loss of the Element; (2) the BES performs acceptably after credible contingences of the Element; (3) the Element does not limit the impact and scope of instability and cascading outages when they occur; (4) BES facilities are protected from unacceptable damage by operating the Element within its ratings; and (5) the BES has the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times, taking into account scheduled or reasonably expected unscheduled outages of the Element. In addition, ATC is not aware of any continent-wide appropriate BES performance measures for voltage dip, frequency excursion, voltage deviation, stability, etc. and ATC speculates that different values are likely for different regions and system characteristics across the continent. As a result, ATC believes it is not advisable to try to adopt unproven values without reasonable industry investigation and development.
Manitoba Hydro		Manitoba Hydro does not agree with an impact based approach to establishing BES elements as we believe it will result in regional differences in the application of the BES definition. In addition, the resources required to verify the assumptions made in the models used to substantiate a BES exception would be substantial with no benefit to reliability. As well, this section appears to be an incomplete process. As currently worded, if the model was not updated in step ii, then there is no requirement to run the TPL studies indicated in the remainder of step ii.
NESCOE		NESCOE supports the concept of allowing an additional path to justifying an exclusion from the BES.

Organization	Yes or No	Question 5a Comment
		NESCOE could support development of technical criteria such as those proposed, but does not have specific recommendations at this time. As stated earlier, any excluded elements must be connected to the BES using fully NERC compliant protection systems.
Independent Electricity System Operator		The technical analysis path for exclusions and inclusions allows for override of the listed "criterion". It is not clear what will be the basis for overriding, and what process will be followed? Is the "criterion" meant to be all of (1) to (7) in (a), or is it any one of them? This needs to be clarified. We agree that entities should be given an option to conduct an analysis to demonstrate if an element is or is not necessary for the operation of transmission network. However, consistent with our earlier comments, we suggest that the exception criteria avoid prescribing numerical values. A transmission element is not necessary for the reliable operation of an interconnected electric transmission system, if it can be removed without effecting bulk transfer capabilities. In our view, testing in accordance with the TPL standards should be the basis for establishing this. One way of demonstrating that an element is not required for the transfer of bulk power is to show that with the element out of service (and with all elements that received exemptions in the past also out of service) and at the required power transfers:1. Pre-contingency and post-contingency loadings on all BES elements are within applicable ratings.2. Pre-contingency and post-contingency voltages on the BES are within established ratings.3. All units on the BES remain synchronized following contingencies.4. All voltage declines on the BES are within established limits (if any limits were defined).5. All steady-state oscillations and oscillations following a contingency are positively damped.6. Transient voltage dips do not exceed established limits anywhere on the BES (if any limits were defined).7. Frequency excursions do not exceed established limits anywhere on the BES (if any limits were defined). Our view is that the exception criteria should NOT specify the voltage decline limits, allowable frequency excursion or the allowable transient voltage dip because every region will have different limits depending on the characteristics of their power system. This would be consistent with Requirement R5 of the recently balloted standard TPL-001-2, which requires each Transmission Planner and Planning Coordinator to have criteria for acceptable System steady state voltage limits, post-Contingency voltage deviations, and the transient voltage response for its System. Required power transfers are the transfers required to meet the "one day in ten year" loss of load expectation criteria. Further, exception criteria for generators must also be defined. A power system is typically planned to be able to service the load under multiple dispatch scenarios and, therefore, multiple generators disconnected from the transmission system will unlikely reduce the ability of the power system to supply the load. In fact, market forces typically determine whether or not a generator is connected. However, transmission lines are built to achieve specific transfer capabilities and, therefore, directly affect the power system's ability to meet the

Organization	Yes or No	Question 5a Comment
		electricity demand. Since, generators and transmission elements contribute to reliability in a very different ways, the criteria exempting generators should be different from the criteria exempting transmission elements.
MidAmerican Energy		The concept of using TPL analyses and normalized Transmission Distribution Factors makes basic sense as a way to determine what elements react to system transfers and what elements react primarily to distribution load.In general all facilities below 100 kV should be exlcuded by default as distribution according to the 2005 Federal Power Act. Transmission Distribution Factors tend to show low bulk power system transfers (less than 2%) based on their inherent high impedance when normalized. Normalizing the transmission impedance means diving the ohmic value by a base impedance which is dominated by a (kV^2) term. Per Unit Impedance = (transmission line ohms / base impedance) where base impedance = (kV^2 / MVA). Using a common MVA base value of 100 MVA, a base impedance at 69kV = 47.6 ohms versus at 161 kV = 259.2 or at 345 kV = 1190.2 ohms. The rapid increase of the denominator as kV goes higher insures that a 69 kV system is high impedance compared to any high kV facilities and therefore nearly insure the 69 kV system is local in nature and reacts primarily to load. Therefore it is distribution. This all supports the conclusion that all facilites below 100 kV should be classified as distribution according to the 2005 FPA and exempted by default. Facilities below 100 kV could be brought into scope if TPL analyses show instability, uncontrolled separation, or cascading as defined in the 2005 FPA.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential exclusion from the BES. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		
PPL Supply		See comments in Questions 9 and 10
Response: See response to Q9 & Q10.		
Tacoma Power		Tacoma Power generally agrees with approach used on the technical analysis path for exclusions.

Organization	Yes or No	Question 5a Comment
Idaho Falls Power		We generally agree with having two paths towards exclusion.
New York Power Authority		In general, NYPA agrees with this approach except as noted below.
Springfield Utility Board		In general, SUB supports a technical analysis approach as a secondary/ alternative option for qualifying to apply for BES Element exclusions.
Consumers Energy Company		Generally, this approach seems sound.
Oncor Electric Delivery		Oncor Electric Delivery agrees with the proposed language that describes the exclusion criteria based technical analysis.

Response: The SDT appreciates your support. However, based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

5b. Comments on distribution factor measurement:

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 5b Comment
Northeast Power Coordinating Council		2.a. The term "Planning Assessment" is not a defined term in the NERC Glossary of Terms Used and should not be capitalized, or it should be defined. 2.a.iv.1. Distribution Factor - This is a judgment of what feeder power flow participation level is material and what is non-material. While TDF and OTDF analysis is an indication of contributions from the element, the SDT should avoid setting values and instead describe the intended performance outcome from a distribution factor measurement. Note that ultimately NERC as an ERO or relevant regulatory authority will approve the application and can assess the performance outcome in their decision making presented in an entity's application.
SERC Planning Standards Subcommittee Tennessee Valley Authority Southern Company South Carolina Electric and Gas Georgia Transmission Corporation		This is the only part of this technical analysis that may make sense. If the loss of any element of the BES results in a distribution factor of less than X% on the element being considered for exclusion, then exclude it. We suggest a value of 3% for this, since 3% is the threshold typically used in transfer studies.
SPP Standards Review Group		There are situations where setting a minimum TDF will not work due to the nature of the TDF. For example, a radial line connected to a bus with two networked lines. The radial line serves only load and would normally

Organization	Yes or No	Question 5b Comment
		be excluded from the BES. However, if we use the TDF as a factor the radial line would be included in the BES since the TDFs would be high.
Edison Electric Institute		In general, we do not agree this is a relevant factor for consideration and should be excluded.
Florida Municipal Power Agency		The first proposed criterion, "Having a distribution factor of 5% for any other Element," should instead be "Having a distribution factor of 5% for Interchange Transactions or BES generator to load curtailable in Transmission Loading Relief stages one through five."
Transmission Access Policy Study Group		The first proposed criterion, "Having a distribution factor of 5% for any other Element," should instead be "Having a distribution factor of 5% for curtailable Interchange Transactions or BES generator to load identified in Transmission Loading Relief stages one through five." An Element with a higher distribution factor only on a non-BES Element should not be considered part of the BES on that account.
ACES	Yes	The IDC uses 5% as a distribution factor cutoff so this might be a reasonable value. "Transmission Transfer Capability" which was published by NERC in 1995 recommends using 3% on page 18 for transfer capability studies.
ISO/RTO Standards Review Committee		Distribution factors by themselves are not sufficient evidence that elements are not important to the system. Multiple elements may have significant distribution factors related to various portions of the system, but that doesn't necessarily mean that loss of those elements will result in a reliability risk to the system.
Tri-State Generation and Transmission Association		If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.
Hydro One		Distribution Factor is an estimate of what feeder power flow participation level material is and what non-material is.While TDF and OTDF analysis is an indication of contributions from the element, hence the SDT should avoid setting values and instead describe the intended performance outcome from a distribution factor measurement. Note that ultimately NERC as an ERO or relevant regulatory authority will approve the application and can assess the performance outcome in their decision making presented in an entity's application.
MRO's NERC Standards Review		NSRF proposes replacing this factor with those cited above because a distribution factor measurement indicates how much system changes affect the element, not how much a fault or loss of the element would

Organization	Yes or No	Question 5b Comment
Forum		compromise the ALR of the BES. There is no clear correlation between this factor and any of the six characteristics of Adequate Level of Reliability (ALR) of the BES.
PacifiCorp		5b.Comments on distribution factor measurement: All of PacifiCorp's responses are based on a given interconnection and not on a continental basis. See comments on question 10. Distribution factor has little to no bearing on entities in the Western Interconnection.
ReliabilityFirst		any impact is an impact, even generation is re-dispatched at 0% in some cases.
New York Power Authority		NYPA does not agree with this measurement. Distribution factors are dependent on the number of radial transmission lines that connect a single source to a load. For example, if two lines connect a single source to a load, and one line trips, the distribution factor provides a 100% increase in flow on the remaining line. If three lines connect the source to the load, and one line trips, the distribution factor for the remaining lines would be 50%. The SDT should avoid setting values and instead describe the intended performance outcome from a distribution factor measurement. Note that ultimately NERC as an ERO or relevant regulatory authority will approve the application and can assess the performance outcome in their decision making presented in an entity's application.
National Grid		We don't think this measurement is necessarily relevant in determining whether an element is necessary to system reliability. This criterion can be removed from the list. The exception process should be strictly limited to the procedures for application and approval and should not include substantive elements.
Muscatine Power and Water		Suggest replacing this aspect with those cited above because a distribution factor measurement indicates how much system changes influence the element, not how much a loss of the element would compromise the ALR of the BES. Currently unable to establish a clear correlation between this factor and any of the six characteristics of Adequate Level of Reliability (ALR) of the BES.
Blachly Lane Electric Cooperative Flathead Electric Cooperative, Inc		The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the

Organization	Yes or No	Question 5b Comment
Central Electric Cooperative Clearwater Power Electric Cooperative Consumer's Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Pacific Northwest Generating Cooperative Consumer's Power Inc. Central Lincoln for Snohomish County PUD		Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a “hub and spoke system” where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.

Organization	Yes or No	Question 5b Comment
Consolidated Edison Co. of NY, Inc.		2.a. The term “Planning Assessment” is not a defined term in the NERC Glossary of Terms Used and should not be capitalized, or alternatively it should be defined. 2.a.iv.1. Distribution Factor - The issue comes down to a judgment call concerning what feeder power flow participation level is material and what is non-material. In New York, the NYISO has traditionally used a 1% power transfer distribution factor (power TDF) cut-off. Feeders showing less than a 1% power transfer in a study are not materially participating in transmission.
ISO New England		The use of distribution factors is a significant concern. The term distribution factor is used a number of ways in the industry. Is this determined using the percentage pickup on the element in question following the loss of another element, or is this the percentage of a transfer that is picked up on the element in question, or a combination of both? Item 2.a.ii states that the TPL studies have to be run if the model is updated. The distribution factor is not required to be calculated as part of the TPLs and therefore will require additional analysis in all circumstances, not just when the model is updated.
The United Illuminating Company		Distribution factor requires a definition.
Clark Public Utilities Benton Rural Electric Association Northern Wasco County PUD United Electric Co-op Inc. Oregon Trail Electric Cooperative, Inc. Salem Electric Grant County PUD No. 2 (Grant) Northwest Public Power Association (NWPPA) Big Bend Electric Cooperative, Inc.		The use of distribution factors, such as Power Transfer Distribution Factors (“PTDF”) and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection.

Organization	Yes or No	Question 5b Comment
Kootenai Electric Cooperative		
BGE		BGE requests that it be made clear that the 2(a) iv.1 criteria refers to the of the distribution factor for the loss of any other facility on the subject Element, whereas criteria 2 through 7 refer to the performance following the loss of the subject Element.
Spyker		The SDT should avoid setting values and instead describe the intended performance outcomes from the measurement
Consumers Energy Company		This criterion raises concerns. If based on transfer distribution factor it may have some merit, depending on the TBD value. However, the criteria should not be based on outage transfer distribution factor, as Draft 1 implies, since loss of certain local distribution facilities can result in local distribution load being transferred to other local distribution facilities. Distribution facilities should not be prevented from exclusion from BES.
Duke Energy		This should be removed - there is no correlation between distribution factor and whether or not an element is necessary for reliable operation of the interconnected transmission network.
Hydro-Quebec TransEnergie		Comments on distribution factor measurement: The choice of the maximum distribution factor could be difficult to establish. For this point, the comparison of the distribution factor prior and after the events could be considered.
American Transmission Company, LLC		ATC proposes replacing this factor with those cited above in 5a because a distribution factor measurement indicates how much system changes affect the element, not how much a fault or loss of the element would compromise the ALR of the BES. There is no clear correlation between this factor and any of the six characteristics of Adequate Level of Reliability (ALR) of the BES.
Independent Electricity System Operator		We do not agree with setting values for this criterion. This should be left to the relevant Transmission Planner and Planning Coordinator. See our comments in response to Q5a.
Tacoma Power		Tacoma Power generally agrees with the distribution factor measurement in the technical analysis path for exclusions. We suggest adopting a distribution factor not exceeding 30% on an adjacent system.
MidAmerican Energy		The Distribution Factor measurement is acceptable and should exclude facilities that show a low distribution factor for bulk power system transfers. An arbitrary low value could be those facilities that show less than a 2% distribution factor.

Organization	Yes or No	Question 5b Comment
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential exclusion from the BES. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		
Iberdrola USA		See 5a.
Response: See response to Q5a.		

5c. Comments on allowable transient voltage dip measurement:

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 5c Comment
Northeast Power Coordinating Council		Voltage dip is specified in terms of duration and retained voltage, usually expressed in percentage. Suggest that either the SDT avoid using voltage dip as a criteria, or clearly specify that the transient voltage not exceed the X limit of Y cycles (time). References to relevant industry standards such as IEEE standard 1346-1998 should be made.
SERC Planning Standards Subcommittee Tennessee Valley Authority Southern Company South Carolina Electric and Gas Georgia Transmission Corporation		As stated above, it does not make sense to use this category.
Edison Electric Institute		Presently no regional standards exist for allowable transient voltage dip beyond WECC. It is also doubtful a useful standard could be developed for all regions or interconnections.
Florida Municipal Power Agency Transmission Access Policy		The second criterion, “Allowable transient voltage dip - criteria TBD,” should specify where the transient voltage dip is, i.e. “Allowable transient voltage dip on another BES Element for events on the Element that is a candidate of the Exception Request-criteria TBD.”

Organization	Yes or No	Question 5c Comment
Study Group		
ISO/RTO Standards Review Committee		These “transient” and “voltage deviation” analyses are highly dependent upon sound and accurate dynamic system models. Much has been said in recent days about the suspicions that many such models are not truly accurate enough to predict system response that is close to what actually occurs.
Tri-State Generation and Transmission Association		If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.
Hydro One		Voltage dip is specified in terms of duration and retained voltage, usually expressed in percentage. We advise against prescribing limits by the SDT, and instead suggest that either the SDT avoid relating voltage dip altogether or clearly specify that the transient voltage not exceed the X limit of Y cycles (time). We suggest SDT to make references to relevant industry standard such as IEEE standard 1346-1998.For example, a document effective in 2007 titled Ontario Resource and Transmission Assessment Criteria Issue 5.0 mentions that: “The minimum post-fault positive sequence voltage sag must remain above 70% of nominal voltage and must not remain below 80% of nominal voltage for more than 250 milliseconds within 10 seconds following a fault. Specific locations or grandfathered agreements may stipulate minimum post-fault positive sequence voltage sag criteria higher than 80%. IEEE standard 1346-1998 supports these limits.”
MRO's NERC Standards Review Forum		NSRF proposes replacing this factor with those cited above because there is presently no established, continent-wide, acceptable transient voltage dip performance level for evaluating whether a fault or loss of the element would not compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
ReliabilityFirst		any impact is an impact, planning criteria between 3 & 5 % is often used and not allowed, why inject this into what define the BES. the criteria is applied it should be included
New York Power Authority		Suggest that either the SDT avoid using voltage dip as a criteria, or clearly specify that the transient voltage not exceed the X limit of Y cycles (time). References to relevant industry standards such as IEEE standard 1346-1998 should be made.
Muscatine Power and Water		Suggest replacing this factor with those cited above because there is presently no established, continent-wide, acceptable transient voltage dip performance level for evaluating whether a fault or loss of the element

Organization	Yes or No	Question 5c Comment
		would not compromise the ALR of the BES. In addition, the appropriate performance level for this factor may be different in other areas and system characteristics across the continent.
Blachly Lane Electric Cooperative Flathead Electric Cooperative, Inc. Clark Public Utilities Central Electric Cooperative Clearwater Power Electric Cooperative Consumer's Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric		Specific transient voltage dip thresholds are proposed on page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided on pages 12-16 of Snohomish's White Paper.

Organization	Yes or No	Question 5c Comment
Cooperative Pacific Northwest Generating Cooperative Consumer's Power Inc Benton Rural Electric Association Northern Wasco County PUD United Electric Co-op Inc Oregon Trail Electric Cooperative, Inc. Salem Electric Grant County PUD No. 2 (Grant) for Snohomish County PUD Northwest Public Power Association (NWPPA) Big Bend Electric Cooperative, Inc. Kootenai Electric Cooperative		
ISO New England		Is the requirement to evaluate the voltage dip on the element or is the test to evaluate the voltage dip on the BES due to a contingency on the element? Under the draft TPL standards, this will have to be tested and investigated anyway, so it is unclear as to what is being added or evaluated here.
The United Illuminating Company		Measured where on the BES?
BGE		For PJM members, this figure is set at 5%. BGE suggests a lower figure such as 2-3%.
Spyker		We suggest SDT to make references to relevant industry standard such as IEEE standards

Organization	Yes or No	Question 5c Comment
Consumers Energy Company		The criterion related to Transient Voltage Deviations should be removed. This criterion, regardless of value TBD, would be impossible to achieve, and would render this process meaningless.A fault on non-BES elements will cause significant transient voltage dips on nearby BES elements until the fault is cleared. If the non-BES element is at the same voltage level, the dip will result in near-zero voltages; if at different voltage levels, the dip magnitude will be determined by the ratio of the system ThÃ©vinen impedance at the BES to the intervening transformer impedance - if the system ThÃ©vinen impedance is 2% and the transformer impedance is 18%, the voltage on the BES will dip to 10%.
Central Lincoln		Fault induced transient voltage measurements will always be low if taken at a point electrically close to the fault during the fault. The question should be about voltage recovery following the clearing of the fault as in the TPL standards. The Technical Principles do not make this distinction, and the resulting effect would be the exclusion of elements that should be included and the inclusion of elements that should be excluded.
Duke Energy		See general comment on approach.
Hydro-Quebec TransEnergie		Comments on allowable transient voltage dip measurement: The TPL-001 to 004 do not specify any reference measurement for stability (such as Allowable transient voltage, frequency excursion, voltage deviation, etc.). Instead, it request that the system shall remain stable, without cascading or uncontrolled islanding. Also, it is requested that the Planning Entities shall define and document the criteria or methodology used in the analysis to identify System instability for conditions such as Cascading, voltage instability, or uncontrolled islanding. This is exactly what should be requested in the analysis and demonstration of Element seeking exclusion from BES. The analysis and burden of proof should be left to the Entity as is done in the TPL, considering that there are no common values with the different interconnection.
American Transmission Company, LLC		ATC proposes replacing this factor with those cited above in 5a because there is presently no established, continent-wide, acceptable transient voltage dip performance level for evaluating whether a fault or loss of the element would not compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
Independent Electricity System Operator		We do not agree with setting values for this criterion. This should be left to the relevant Transmission Planner and Planning Coordinator. See our comments in response to Q5a.
Tacoma Power		Tacoma Power generally agrees with allowable transient voltage dip measurement in the technical analysis

Organization	Yes or No	Question 5c Comment
		path for exclusions. We suggest adopting an allowable transient voltage dip not exceeding 20% for more than 20 cycles on an adjacent system's bus.
MidAmerican Energy		There isn't a nation wide transient voltage dip measurement.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential exclusion from the BES. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		
Iberdrola USA		See 5a.
Response: See response to Q5a.		

5d. Comments on allowable transient frequency response:

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 5d Comment
ISO/RTO Standards Review Committee		See 5c
Response: see response to 5c.		
Iberdrola USA		See 5a.
Response: see response to 5a.		
Northeast Power Coordinating Council		Suggest that for assigning a value for transient frequency response, entities conduct and submit to the SDT their quantitative and qualitative technical assessment based on the conditions of the element(s) under the application. Do not establish a fixed binary value within the exception criteria but rather focus on the performance outcome. See 5 (a) above.
SERC Planning Standards Subcommittee Tennessee Valley Authority Southern Company South Carolina Electric and Gas		As stated above, it does not make sense to use this category.

Organization	Yes or No	Question 5d Comment
Georgia Transmission Corporation		
Edison Electric Institute		Presently no regional standards exist for allowable transient frequency response beyond WECC. It is also doubtful a useful standard could be developed for all regions or interconnections.
Florida Municipal Power Agency Transmission Access Policy Study Group		The third proposed criterion, "Allowable transient frequency excursion - criteria TBD," should be rephrased like the second: "Allowable transient frequency excursion on another BES Element for events on the Element that is a candidate of the Exception Request - criteria TBD."
Tri-State Generation and Transmission Association		If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.
Hydro One		We suggest that, in terms of assigning a value for transient frequency response, entities conduct and submit to the SDT their quantitative and qualitative technical assessment based on the conditions of the element(s) under the application. We suggest not to establish a fixed binary value within the exception criteria but rather focus on the performance outcome. See 5 (a)
MRO's NERC Standards Review Forum		NSRF proposes replacing this factor with those cited above because there are established, continent-wide transient frequency performance levels in the PRC-006-1 standard, but the elements that are applicable to the standard do not have to be BES elements and the transient frequency response requirements are not intended to be a criterion for BES classification.
ReliabilityFirst		any impact is an impact, planning criteria between 5 & 10 % is often used and restricted to guard against these changes, why inject this into what define the BES. the criteria is applied it should be included
New York Power Authority		Suggest that for assigning a value for transient frequency response, entities conduct and submit to the SDT their quantitative and qualitative technical assessment based on the conditions of the element(s) under the application. Do not establish a fixed binary value within the exception criteria but rather focus on the performance outcome.

Organization	Yes or No	Question 5d Comment
Muscatine Power and Water		Suggest replacing this factor with those cited above. There are recognized, continent-wide transient frequency performance levels in the PRC-006-1 standard; however, the elements that are applicable to this standard are not necessarily BES elements and the transient frequency response requirements are not intended to be a criterion for BES classification.
Blachly Lane Electric Cooperative Flathead Electric Cooperative, Inc Clark Public Utilities Central Electric Cooperative Clearwater Power Electric Cooperative Consumer's Power Inc. Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative		Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.

Organization	Yes or No	Question 5d Comment
West Oregon Electric Cooperative Pacific Northwest Generating Cooperative Consumer's Power Inc. Benton Rural Electric Association Northern Wasco County PUD United Electric Co-op Inc Oregon Trail Electric Cooperative, Inc. Central Lincoln Salem Electric Grant County PUD No. 2 (Grant) for Snohomish County PUD Northwest Public Power Association (NWPPA) Big Bend Electric Cooperative, Inc Kootenai Electric Cooperative		
Spyker		The SDT should avoid setting values and instead describe the intended performance outcomes from the measurement
Consumers Energy Company		The criterion relative to frequency response should be removed. Frequency deviations can result from large changes in distribution load. Distribution facilities should not be prevented from being excluded from BES.
Duke Energy		See general comment on approach.

Organization	Yes or No	Question 5d Comment
American Transmission Company, LLC		ATC proposes replacing this factor with those cited above in 5a because there are established, continent-wide transient frequency performance levels in the PRC-006-1 standard, but the elements that are applicable to the standard do not have to be BES elements and the transient frequency response requirements are not intended to be a criterion for BES classification.
Independent Electricity System Operator		We do not agree with setting values for this criterion. This should be left to the relevant Transmission Planner and Planning Coordinator. See our comments in response to Q5a.
Tacoma Power		Tacoma Power generally agrees with the allowable transient frequency response in the technical analysis path for exclusions. We suggest adopting an allowable transient frequency response of not below 59.6 Hz for up to 6 cycles on an adjacent system's bus.
MidAmerican Energy		There isn't a nation wide transient frequency response

Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential exclusion from the BES.. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

5e. Comments on voltage deviation measurement:

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 5e Comment
ISO/RTO Standards Review Committee		See 5c
Response: See response to 5c.		
Iberdrola USA		See 5a.
Response: See response to 5a.		
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Electric Cooperative Consumer's Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative		Please see our response to Question 5d.

Organization	Yes or No	Question 5e Comment
Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Pacific Northwest Generating Cooperative Consumer's Power Inc Benton Rural Electric Association United Electric Co-op Inc Oregon Trail Electric Cooperative, Inc Central Lincoln Salem Electric Grant County PUD No. 2 (Grant) for Snohomish County PUD Northwest Public Power Association (NWPPA)		

Organization	Yes or No	Question 5e Comment
Big Bend Electric Cooperative, Inc. Kootenai Electric Cooperative		
Response: See response to 5d.		
Clark Public Utilities		See Clark's comments on 5c and 5d.
Response: See responses to 5c and 5d.		
Northeast Power Coordinating Council Hydro One		Voltage deviation is generally expressed as a percentage, between the voltage at a given instant at a point in the system. Do not establish a fixed binary value within the exception criteria but rather focus on the performance outcome. Adequate voltage performance does not guarantee system voltage stability. Steady state stability is the ability of the grid to remain in synchronism during relatively slow or normal load or generation changes, and to damp out oscillations caused by such changes. The requirement should suggest that following checks are carried out to ensure system voltage stability for both the pre-contingency period and the steady state post-contingency period: o Properly converged pre- and post-contingency power flows are to be obtained with the critical parameter increased up to 10% with typical generation as applicable; o All of the properly converged cases obtained must represent stable operating points. This is to be determined for each case by carrying out P-V analysis at all critical buses to verify that for each bus the operating point demonstrates acceptable margin on the power transfer; and o The damping factor must be acceptable (the real part of the eigen values of the reduced Jacobian matrix are positive).
SERC Planning Standards Subcommittee Tennessee Valley Authority Southern Company South Carolina Electric and Gas Georgia Transmission		As stated above, it does not make sense to use this category.

Organization	Yes or No	Question 5e Comment
Corporation		
Edison Electric Institute		Presently no regional standards exist for allowable voltage deviation beyond WECC. It is also doubtful a useful standard could be developed for all regions or interconnections.
Florida Municipal Power Agency Transmission Access Policy Study Group		The fourth proposed criterion should be revised in the same way as the second and third: "Voltage deviation on another BES Element for events on the Element that is a candidate of the Exception Request - criteria TBD."The fifth proposed criterion should be similarly revised: "Transient Stability on another BES Element for events on the Element that is a candidate of the Exception Request - positively damped."
Tri-State Generation and Transmission Association		If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.
MRO's NERC Standards Review Forum		NSRF proposes replacing this factor with those cited above because there is presently no established, continent-wide, acceptable (steady state) voltage deviation performance level for evaluating whether a fault or loss of the element would not compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
ReliabilityFirst		any impact is an impact, planning criteria is often used and restricted to guard against these changes, why inject this into what define the BES. If the criteria is applied to the facility as a BES element it should be included
New York Power Authority		Voltage deviation is generally expressed as a percentage, between the voltage at a given instant at a point in the system. Do not establish a fixed binary value within the exception criteria but rather focus on the performance outcome.
Muscatine Power and Water		Requesting the STD replace this factor with those cited above. At this time there is no established, continent-wide, acceptable (steady state) voltage deviation performance level for evaluating whether a fault or loss of the element would not compromise the ALR of the BES. Moreover, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
Consolidated Edison Co. of NY,		The NYISO uses a 0.95 to 1.05 p.u. as the acceptable range for post-transient system conditions.

Organization	Yes or No	Question 5e Comment
Inc.		
ISO New England		Is the requirement to evaluate the voltage dip on the element or is the test to evaluate the voltage dip on the BES due to a contingency on the element? Under the draft TPL standards, this will have to be tested and investigated anyway, so it is unclear as to what is being added or evaluated here.
The United Illuminating Company		Measured where on BES?
BGE		BGE believe the loss of the facility in question should cause only a small voltage deviation to the BES (on the order of 1%).
Spyker		The SDT should avoid setting values and instead describe the intended performance outcomes from the measurement
Northern Wasco County PUD		Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Flathead Electric Cooperative, Inc.		we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more.
Consumers Energy Company		This criterion may be reasonable, depending on the TBD value. The TBD value may need to vary for different voltage levels or system configurations. The criteriona needs to recognize that loss of multiple capacitors at the distribution level could result in significant voltage deviation at the BES and this must not prevent distribution facilities from being excluded from BES.
Duke Energy		See general comment on approach.
American Transmission Company, LLC		ATC proposes replacing this factor with those cited above in 5a because there is presently no established, continent-wide, acceptable (steady state) voltage deviation performance level for evaluating whether a fault or loss of the element would not compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.

Organization	Yes or No	Question 5e Comment
Independent Electricity System Operator		We do not agree with setting values for this criterion. This should be left to the relevant Transmission Planner and Planning Coordinator. See our comments in response to Q5a. We suggest that the exception criteria could include the following checks to be carried out in the course of the TPL analysis referred to above to ensure system voltage stability for both the pre-contingency period and the steady state post-contingency period: o Properly converged pre- and post-contingency power flows are to be obtained with the critical parameter increased up to 10% with typical generation as applicable; o All of the properly converged cases obtained must represent stable operating points. This is to be determined for each case by carrying out P-V analysis at all critical buses to verify that for each bus the operating point demonstrates acceptable margin on the power transfer as shown in the following section; and o The damping factor must be acceptable (the real part of the eigen values of the reduced Jacobian matrix are positive)."
Tacoma Power		Tacoma Power generally agrees with the voltage deviation measurement in the technical analysis path for exclusions. We suggest adopting a voltage deviation not exceeding 10% on an adjacent system's bus.
MidAmerican Energy		Determining a nation wide voltage deviation would be difficult.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential exclusion from the BES. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		

6. Exclusions – Do you have other methods that may be appropriate for proving an exclusion claim? Or, other variables/measurements that may be added to the requirements already shown in the posted Technical Principles for Demonstrating BES Exceptions? If so, please provide your comments here with technical rationale for why they should be considered.

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.

Organization	Yes or No	Question 6 Comment
NERC Staff Technical Review	No	
Edison Electric Institute	No	None beyond what was offered under question 5
Iberdrola USA	No	
Tri-State Generation and Transmission Association	No	
ReliabilityFirst	No	
Idaho Falls Power	No	No comments
New York Power Authority	No	

Organization	Yes or No	Question 6 Comment
Blachly Lane Electric Cooperative	No	
Clark Public Utilities	No	
Central Electric Cooperative	No	
Clearwater Power Electric Cooperative	No	
Consumer's Power Inc.	No	
Coos-Curry Electric Cooperative	No	
Douglas Electric Cooperative	No	
Fall River Electric Cooperative	No	
Lane Electric Cooperative	No	
Lincoln Electric Cooperative	No	
Lost River Electric Cooperative	No	
Northern Lights Electric Cooperative	No	
Okanogan Electric Cooperative	No	
Raft River Rural Electric Cooperative	No	
Salmon River Electric Cooperative	No	

Organization	Yes or No	Question 6 Comment
Umatilla Electric Cooperative	No	
West Oregon Electric Cooperative	No	
Pacific Northwest Generating Cooperative	No	
Long Island Power Authority	No	
American Electric Power	No	
PNGC Power	No	
Consumer's Power Inc.	No	
BGE	No	No comment.
Pepco Holdings Inc	No	
Northern Wasco County PUD	No	
United Electric Co-op Inc.	No	
Oregon Trail Electric Cooperative, Inc.	No	
Central Lincoln	No	
Oncor Electric Delivery	No	
Salem Electric	No	

Organization	Yes or No	Question 6 Comment
Duke Energy	No	
Grant County PUD No. 2 (Grant)	No	No comments
Northwest Public Power Association (NWPPA)	No	None
Big Bend Electric Cooperative, Inc.	No	
Manitoba Hydro	No	
Independent Electricity System Operator	No	
Harney Electric Cooperative, Inc.	No	
Kootenai Electric Cooperative	No	
Tacoma Power	No	Tacoma Power is not suggesting any other methods at this time.
ISO New England	No	
Southern Company	Yes	
Response: Thank you for your response.		
Flathead Electric Cooperative, Inc. for Snohomish County PUD	No	supports the exemption of generation interconnected to local distribution networks if the generation is less than 300 MW capacity and where the power generated is consumed within the LDN and rarely flows out of the LDN consistent with the section III.c.4 [Exclusion] of the NERC Statement of Compliance Registry Criteria as well as the Load modifiers used in the Eastern Interconnection. "Load Modifiers" (small generators that only affect load at the distribution level).”
Response: The SDT has responded to comments on the BES definition in the Consideration of Comments form for the BES definition posting.		

Organization	Yes or No	Question 6 Comment
The United Illuminating Company	No	Procees is complicated and fraught with interpretations.
Bonneville Power Administration	No	BPA emphasizes that exclusion criteria and analysis should be based on normal operations. An exclusion should not be unavailable based on temporary system configuration such as load service by a different transmission segment temporarily used to mitigate system operations due to planned maintenance outages, i.e. a system that is operated radially over 90% of the time and closed for maintenance outages for safety and/or reliability purposes, etc. BPA recommends that the SDT consider not only the single-phase faults, also the effect of more severe events such as two- or three-phase faults, with delayed clearing and evaluate the necessity of the element in those cases.
ISO/RTO Standards Review Committee		Very small elements may be candidates for exclusion because such a small loss cannot cause reliability risk. An exception to this statement may be that, though small, the element is important to the service of a critical load.
SERC Planning Standards Subcommittee Tennessee Valley Authority South Carolina Electric and Gas Georgia Transmission Corporation Entergy Services	Yes	Revise second paragraph to read “Due to the importance of designated Blackstart Resources and their Cranking Paths to restore efforts, no exceptions will be allowed for those items that are included in a system restoration plan.”Technical rationale: Multiple Blackstart Resources and Cranking Paths are frequently available but are not included in a system restoration plan. System restoration plans describe the Blackstart resources and cranking paths thar are deemed to be necessary for system restoration. Section “Exception Criteria - Exclusions”:Add 1.e. “Generation that is inoperable and not planned to be placed back into service but not yet officially decommissioned.”Technical rationale: These facilities are not relied on to insure the reliability of the BES.
Florida Municipal Power Agency Transmission Access Policy Study Group	Yes	TAPS proposes a simpler set of exclusion exception criteria:1. Having a distribution factor of 5% for curtailable Interchange Transactions or BES generator - load identified in Transmission Loading Relief stages one through five, and 2. Category B and C contingencies on the Element that is the subject of the Exception Request meet the TPL-002 criteria for other BES Elements. (With the new TPL-001-3 standard recently approved by ballot, Category P0 through P7 contingencies on the Element that is subject of the Exception Request meets the criteria of P0 through P3 for other BES Elements) 3. The Element that is the subject of the Exception Request is not: (1) part of an IROL, (ii) part of a blackstart or cranking path used in a TOP’s restoration plan, and (iii) is not used in NUC-001 to provide service to a

Organization	Yes or No	Question 6 Comment
		nuclear plant.TAPS believes these three criteria meet the intent of all of the criteria presented by the SDT.
Hydro One	Yes	Technical Analysis must fundamentally use NERC - TPL methodology and testing requirements. We believe that an element may “not be necessary for the operation of the interconnected transmission system” if the remaining system can be operated without the element(s) for over 30 days and during peak load conditions. This assumption considers that loss of element(s) may result in outage to the connected load or generation during this period but will not have any adverse impact on the operation of the interconnected transmission network. Following are technical assessment categories that entities could be required when filing for exception:1.Power flow oPrimarily unidirectional (less than 20% of min load)2.TPL Assessment oLoad Flows Analysis oThermal and Voltage Stability oTransient Stability3.TDF and OTDF assessment For entities filing an exception:[Step 1]Entities should undertake relevant and detailed technical assessment/analysis and describe their findings under each of the technical categories. Finally, the findings and conclusions should be listed in the form of maximum 6 bullets. [Step 2]Findings and conclusions from each of the technical categories should be presented in a spreadsheet including the categories that may not be relevant to the element(s). If a category is not relevant, it should be explained why. [Step 3]The final conclusion should be presented by taking the overall assessment in Step 2 by assessing contributions of each item and demonstrating that the element(s) is or is not necessary for the operation of interconnected transmission network. We suggest the above method and request entities to complete the table below, as this will allow entities to present their assessment of the element(s) that are under the consideration of exception. Measured Value========== Load || Critical Load Affected? [yes][No]---------- oRadial oLocal supply, e.g. distribution in nature oLarge load center, critical load, national security Generation Characteristics || Critical Load Affected? [yes][No]---------- oLocal load modifier, peak shaver oBehind meter or industrial load displacement oMust Run

Organization	Yes or No	Question 6 Comment
		oFlow contribution outside of the elements under exception Cascading Outage || Critical Load Affected? [yes][No]---------- Measured Value ==========Max Dip [Voltage] Applicable Industry Practice (IEEE/CSA,Market Rules,etc.)Acceptable Level [in cycles] Assessment Results [in cycles]Does the assessment confirm successful recovery? [Yes] [No] Transient Voltage Dip [voltage] Transient Frequency Excursion [Hertz]Voltage deviation [Voltage] Transient Stability Steady State Stability
MRO's NERC Standards Review Forum	Yes	A. NSRF recommends this process address the six characteristics of the Definition of Adequate Level of Reliability (ALR) as listed in the comments above in Question #5. B. Recommend municipalities and other small entities having transmission systems designed to serve local load, operated below 200 kV and not having any IROL's or SOL's be excluded from the BES definition. Rational: The standards, especially those for Transmission Operators (TO) aren't written for the smaller utilities. A utility may have over 75 MWs of generation and have installed a 115 kV loop around their city that is used primarily to serve load and get forced into significant compliance requirements that don't enhance the reliability of the BES.
PacifiCorp	Yes	All of PacifiCorp's responses are based on a given interconnection and not on a continental basis. Fault duty may be appropriate for certain interconnections only.
Western Electricity Coordinating Council	Yes	WECC recommends that the SDT consider not only the single-phase faults used in the TPL standards, but also the effect of more severe events such as two- or three-phase faults, with delayed clearing and the necessity of the element in those cases.
Electricity Consumers Resource Council (ELCON)	Yes	We recommend an additional method (or alternatively this be added to the BES Definition Exception E1): System Elements are part of facilities, generally radial in nature, supplying a retail customers from the point of delivery to the load regardless of voltage. Evidence to support this position could be an interconnection agreement indicating the point of delivery, a one-line diagram showing the point of delivery and load etc. The technical rationale is that protection of the BES for facilities serving load is the responsibility of the service

Organization	Yes or No	Question 6 Comment
		provider (e.g., TO/TOP). These facilities are distribution facilities and are not now part of the BPS.
National Grid	Yes	The NERC process could potentially by very lengthy and could interfere with the timely completion of our studies. In the technical paths for exclusions, bullet v states "If within the criteria in all cases, then the Elements can be excluded." This could lead to a very high number of studies that need to be done to prove an element should be excluded. For this reason, National Grid endorses a more streamlined process. We propose a process where entities would only need to submit a short form that briefly describes what they would like to exempt and the reason why, along with a one-line diagram. The entity who is requesting the exception would have to maintain records that show why the elements can be exempted until NERC performs an audit. At the audit, the entity can show the proof of why the element should be granted an exception. This process also allows for the application to remain public and reduces documentation burdens, because the non-public, CEII, or NERC CIP protected supporting documentation is maintained by the applicant.In this process, the entity first submits the application to their RE, and if approved by the RE, the application is submitted to NERC. The entity should be able to appeal if either the RE or NERC denies the application; however, it should be clear that for the second appeal to NERC, the decision is made by a different group than whoever decided on the first appeal. The appeal process in this exception procedure could be similar to the appeal process set by CMEP (compliance, monitoring and enforcement program).For entities that don't wish to wait until the next audit, there can be an optional process by which the proposed exception can be reviewed to provide an immediate ruling. Also, there should be a grace period after the audit is performed if audit staff concludes that an exception or inclusion granted by the initial application is not supported by adequate evidence. NERC's approval of an exception during this initial application process should stand until an Entity is audited and a final audit report is issued. There should also be an implementation period included in the audit report for the entity to come into compliance if the audit report disagrees with the initial exception approval. Absent evidence of fraud or intentional misrepresentation by the entity, there should be no non-compliance assessed for the period from initial exception approval to the final audit report. This process would need to allow participation or comments by Regional Entities, Reliability Coordinators, and/or Balancing Authorities in the application process, but should not allow participation by other third parties.
Muscatine Power and Water	Yes	Recommending that this process address the six characteristics of the Definition of Adequate Level of Reliability (ALR) as listed in the comments above in Question #5. Also recommend that municipalities and other small entities having transmission systems designed to serve local load only, operated below 200 kV and not having any IROL's or SOL's be excluded from the BES definition. Rationale: this could affect smaller registered entities within a BA. The standards, especially those for Transmission Operators, aren't written for the smaller utilities. A small, municipal utility could have 75 MW of generation and operate a 115 kV looped system around their service area that is used primarily to serve their own load. Subsequently, they get forced into significant compliance requirements that does not enhance

Organization	Yes or No	Question 6 Comment
		the reliability of the BES whatsoever.
Glacier Electric Cooperative	Yes	Perhaps using an element's available fault MVA as a "quick screening" method to quickly determine if an element should be included or excluded. If an element's available fault MVA exceeds a properly established value, then a more detailed technical analysis can be done to determine whether or not the element truly should be included in the BES. But if the elemet's available fault MVA is less than the established value, then that element could quickly be excluded.
Orange and Rockland Utilities, Inc.	Yes	FERC Order No. 888 - Seven Factor Test.
Xcel Energy	Yes	Xcel Energy would like the SDT to consider a Capacity Factor exclusion for generating resources that are rarely used. For example, at least two standards that are currently being drafted exempt generators that have an average Capacity Factor of 5% or less over a three year period.
American Transmission Company, LLC	Yes	ATC recommends this process address the five characteristics of the Definition of Adequate Level of Reliability (ALR) as listed in the comments above in Question #5a.
NESCOE	Yes	Please refer to comments under item 4., above. If the parallel power flow in a given < 200 kV path only exceed 200 MVA under contingency conditions and if the applicable BES points have fully NERC compliant protection systems, disturbances on this lower voltage path will not adversely affect the reliability of the BES. The exclusion determination process should be flexible enough to recognize that any requirement that may impose substantial new costs on New England transmission owners, and ultimately on consumers, should also provide meaningful reliability benefits
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language for the technical exception criterion. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		
Northeast Power Coordinating	Yes	An impact-based method should be available for entities seeking Exclusions and Inclusions. The method

Organization	Yes or No	Question 6 Comment
Council		should not allow excess regional discretion and unintended continent-wide variation. Recommend the power Transfer Distribution Factor (power TDF) approach mentioned in the reply to Question 5 above. If the Transmission Planner (TP) or Planning Authority (PA), were tasked with performing such analyses using standardized assumptions, then regional discretion could be minimized. Technical Analysis must fundamentally use NERC - TPL methodology and testing requirements.
Consolidated Edison Co. of NY, Inc.	Yes	An impact-based method should be available for entities seeking Exclusions and Inclusions. The method should not allow excess regional discretion and unintended continent-wide variation. We recommend the power Transfer Distribution Factor (power TDF) approach mentioned in the reply to Question 6 above. If the Transmission Planner (TP) or Planning Authority (PA), e.g., the NYISO, were tasked with performing such analyses, using standardized assumptions, then regional discretion could be minimized.
Spyker	Yes	Technical Analysis must fundamentally use NERC - TPL methodology and testing requirements.
Hydro-Quebec TransEnergie	Yes	Technical demonstration should not be limited to technical principles stated in the "Technical Principles for Demonstrating BES Exceptions". Entities should be allowed to do their own demonstration with their own technical arguments. As an example, an Entity could consider a few level of application for the standards. As an example, the level #1 being the most important level, all standards would apply to this level, including more stringent criteria than the TPL standards. This would bring BES level #1 very robust and reliable, ensuring the reliability of the main system. A second BES level #2 could be define for local transmission to which would be applied most standards but excluding some of the C section of TPL. Attention would be given to proper reliable operation of the BES level #2, but with smaller level of investment on the design aspect, those regional transmission part of the system being able to face higher risk for loss of continuity of service. Finally, for generation or Load Facility that would be excluded from both level of BES, minimum standards would still apply such as in protection or for generation. Through its own technical principles, the Entity could demonstrate that the highest level of BES is more reliable than what is expected by NERC's standard, but that in regional transmission part of the system, the C TPL standard would not apply with the only risk of lower continuity of service.
Response: The SDT appreciates your comments. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the		

Organization	Yes or No	Question 6 Comment
submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted. Your specific concerns will be accommodated under the revised process.		
SPP Standards Review Group	Yes	We would suggest that the SDT consider an exclusion for networked municipal systems operating below 200kV which have more than 75 MVA of generation and whose systems do not include flowgates or IROLs.
Response: The SDT has responded to comments on the BES definition in the Consideration of Comments form for the BES definition posting.		
PPL Supply	Yes	See comments in Questions 9 and 10
Response: See response to Q9 & Q10.		
New York State Reliability Council	Yes	See answer to 5a.
Response: See response to 5a.		
Occidental Energy Ventures Corp.	Yes	Suggested additional method. The Element(s) meet all the following characteristics: 1) generally radial in nature, and 2) used to supply a retail customer from the point of delivery to the load regardless of voltage. Evidence to support this position could be an interconnection agreement indicating the point of delivery, a one-line diagram showing the point of delivery and load, etc. The technical rationale is that protection of the BES for facilities serving a retail customer is the responsibility of the service provider (e.g., transmission owner/operator). These facilities are distribution facilities and are not now part of the BPS. Alternatively, this could be an Exclusion in the BES Definition as it is in the current definition.
MidAmerican Energy	Yes	In general all facilities below 100 kV should be exlcuded by default as distribution according to the 2005 Federal Power Act. Transmission Distribution Factors tend to show low bulk power system transfers (less than 2%) based on their inherent high impedance when normalized. Normalizing the transmission impedance means diving the ohmic value by a base impedance which is dominated by a (kV^2) term. Per Unit Impedance = (transmission line ohms / base impedance) where base impedance = (kV^2 / MVA). Using a common MVA base value of 100 MVA, a base impedance at 69kV = 47.6 ohms versus at 161 kV = 259.2 or at 345 kV = 1190.2 ohms. The rapid increase of the denominator as kV goes higher insures that a 69 kV

Organization	Yes or No	Question 6 Comment
		system is high impedance compared to any high kV facilities and therefore nearly insure the 69 kV system is local in nature and reacts primarily to load. Therefore it is distribution. This all supports the conclusion that all facilites below 100 kV should be classified as distribution according to the 2005 FPA and exempted by default. Facilities below 100 kV could be brought into scope if TPL analyses show instability, uncontrolled separation, or cascading as defined in the 2005 FPA.

Response: The SDT appreciates your comments. Your specific concerns will be accommodated under the revised process.

Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.

The SDT has responded to comments on the BES definition in the Consideration of Comments form for the BES definition posting.

7. Inclusions - The SDT has set up only one path for evidence that includes technical analysis. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. In addition, in the comment field, please provide your thoughts on the proposed metrics for analysis and the appropriate values to replace 'TBD,' including technical rationale for your argument.

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 7 Comment
Northeast Power Coordinating Council	No	
SERC Planning Standards Subcommittee	No	
SPP Standards Review Group	No	
NERC Staff Technical Review	No	
Iberdrola USA	No	
Tri-State Generation and Transmission Association	No	
Hydro One	No	

Organization	Yes or No	Question 7 Comment
MRO's NERC Standards Review Forum	No	
Bonneville Power Administration	No	
ReliabilityFirst	No	
Tennessee Valley Authority	No	
PPL Supply	No	
Southern Company	No	
Muscatine Power and Water	No	
South Carolina Electric and Gas	No	
Exelon	No	
Georgia Transmission Corporation	No	
Consolidated Edison Co. of NY, Inc.	No	
Springfield Utility Board	No	
ISO New England	No	
The United Illuminating Company	No	
Entergy Services	No	

Organization	Yes or No	Question 7 Comment
American Electric Power	No	
Orange and Rockland Utilities, Inc.	No	
Pepco Holdings Inc	No	
Consumers Energy Company	No	
American Transmission Company, LLC	No	
Manitoba Hydro	No	
Independent Electricity System Operator	No	
MidAmerican Energy	No	
New York Power Authority	Yes	
Blachly Lane Electric Cooperative	Yes	
Glacier Electric Cooperative	Yes	
Flathead Electric Cooperative, Inc.	Yes	
Clark Public Utilities	Yes	
Central Electric Cooperative	Yes	
Consumer's Power Inc.	Yes	

Organization	Yes or No	Question 7 Comment
Coos-Curry Electric Cooperative	Yes	
Douglas Electric Cooperative	Yes	
Fall River Electric Cooperative	Yes	
Lane Electric Cooperative	Yes	
Lincoln Electric Cooperative	Yes	
Lost River Electric Cooperative	Yes	
Northern Lights Electric Cooperative	Yes	
Okanogan Electric Cooperative	Yes	
Raft River Rural Electric Cooperative	Yes	
Salmon River Electric Cooperative	Yes	
Umatilla Electric Cooperative	Yes	
West Oregon Electric Cooperative	Yes	
Pacific Northwest Generating Cooperative	Yes	
PNGC Power	Yes	

Organization	Yes or No	Question 7 Comment
Consumer's Power Inc.	Yes	
BGE	Yes	
Spyker	Yes	
Benton Rural Electric Association	Yes	
Clearwater Power Electric Cooperative	Yes	
Long Island Power Authority	Yes	
Northern Wasco County PUD	Yes	
Xcel Energy	Yes	
United Electric Co-op Inc.	Yes	
Oregon Trail Electric Cooperative, Inc.	Yes	
Central Lincoln	Yes	
Oncor Electric Delivery	Yes	
Salem Electric	Yes	
Duke Energy	Yes	
Grant County PUD No. 2 (Grant)	Yes	
Hydro-Quebec TransEnergie	Yes	

Organization	Yes or No	Question 7 Comment
for Snohomish County PUD	Yes	
Northwest Public Power Association (NWPPA)	Yes	
Big Bend Electric Cooperative, Inc.	Yes	
Kootenai Electric Cooperative	Yes	
Tacoma Power	Yes	
Edison Electric Institute	Yes	
ISO/RTO Standards Review Committee	Yes	
PacifiCorp	Yes	
Idaho Falls Power	Yes	
Western Electricity Coordinating Council	Yes	
New York State Reliability Council	Yes	
Electric Market Policy	Yes	
Response: Thank you for your response. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or		

Organization	Yes or No	Question 7 Comment
inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		

7a. Comments on approach:

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 7a Comment
Northeast Power Coordinating Council		Inclusions criteria should mirror the Exclusion criteria, and that consistent values should be employed for Inclusions here and for Exclusions above. That is, for example, if 0.95 to 1.05 (+/- 5%) p.u. is adopted as an acceptable voltage deviation range for Exclusions, then Elements resulting in post-transient system voltage deviations outside that range should be candidates for Inclusion. Further, all assumptions should also be fully documented for any proposed Inclusions. Also refer to comments on exclusions.
SERC Planning Standards Subcommittee Tennessee Valley Authority Southern Company South Carolina Electric and Gas Georgia Transmission Corporation		The PSS recommends that applications for inclusion of facilities into the BES should include justification for doing so. However, there should not necessarily be specific criteria that must be met, but the importance of the facility to the BES should be clearly demonstrated.
NERC Staff Technical Review		NERC staff is not opposed to development of evidence based on technical analysis; however, we have the same concerns with the exception criterion for including Element(s) as with exception criterion 1 for excluding Element(s). The type of analysis included in this exception criterion requires extensive resources and lacks sufficient detail to allow for consistent and repeatable application. Additional concerns with this approach include (1) the ability to provide sufficient guidance on the system

Organization	Yes or No	Question 7a Comment
		conditions and contingencies necessary to support an exception request, (2) difficulty with identifying thresholds for items iv-1 through iv-4, and (3) the ability to address interdependencies among exception requests.
Independent Electricity System Operator		We support the concept of technical analysis in support of Inclusions but disagree with the approach that involves setting specific values for criteria. Please refer to our comments on exclusions.
Florida Municipal Power Agency		FMPA supports using a uniform set of technical criteria to decide inclusion exceptions. Such an approach will facilitate uniform application of the criteria. In addition to having clear and uniform criteria, the technical analysis for inclusions and exclusions should use the same criteria (though one should of course be the inverse of the other). We note that the steps laid out for Inclusions do not quite track those in Exclusions 2(a). For example, Inclusions 1(b) states, confusingly, "Monitor the contribution of the disputed Element(s)," but there is no corresponding step in Exclusions 2(a). FMPA suggests that Inclusions 1 be revised to mirror Exclusions 2.
Transmission Access Policy Study Group		TAPS supports using a uniform set of technical criteria to decide inclusion exceptions. Such an approach will facilitate uniform application of the criteria. It is appropriate for there to be only one path, using technical analysis, for inclusions, because the analysis for inclusions should be performed by Regional Entities and NERC (see TAPS comments on the BES Exception Process, also submitted today), which have more resources available than do the small entities that TAPS believes are likely to request exclusions based on the path for exclusions that does not include extensive technical analysis.In addition to having clear and uniform criteria, the technical analysis for inclusions and exclusions should use the same criteria (though one should of course be the inverse of the other). We note that the steps laid out for Inclusions do not quite track those in Exclusions 2(a). For example, Inclusions 1(b) states, confusingly, "Monitor the contribution of the disputed Element(s)," but there is no corresponding step in Exclusions 2(a). TAPS suggests that Inclusions 1 be revised to mirror Exclusions 2.
ISO/RTO Standards Review Committee		The SRC generally agrees with the technical analysis approach to determining whether an element should be included in the BES. However, consideration should also be given to valid and supported evidence given by RCs and PCs, and, possibly TOPs and BAs to actual historical events that indicate significant importance of elements which, when lost, have resulted in reliability risk to the system.
Iberdrola USA		A facility is BES if it is necessary for reliable system operation, based on a TPL-type analysis similar to NPCC Document A-10 "Classification of Bulk Power System Elements" - this type of analysis was rejected by FERC. In addition, applicable threshold values for these parameters could differ from one system to another, and

Organization	Yes or No	Question 7a Comment
		would require extensive analysis.
Tri-State Generation and Transmission Association		This appears very similar to the "material impact" proposal that FERC has previously disallowed, so we recommend removing it, but allowing elements that are included in Regional Entity defined bulk transfer paths that are not already included in the BES definition. If retained, remove 1.(f) because allowing the ERO to override the technical justification and analysis devalues such analysis to the point of it being meaningless.
Hydro One		Inclusions criteria should mirror the Exclusion criteria, and that consistent values should be employed for Inclusions here and for Exclusions above. [See our comments on exclusions]
MRO's NERC Standards Review Forum		NSRF proposes that the technical analysis criterion be replaced by criteria that are more closely tied to the Adequate Level of Reliability (ALR) characteristics. The following alternate criteria are offered as possible examples, "(1) the BES cannot be controlled to stay within acceptable limits following a fault on or loss of the Element; (2) the BES does not perform acceptably after credible contingences of the Element; (3) the Element limits the impact and scope of instability and cascading outages when they occur; (4) BES facilities are not protected from unacceptable damage by operating the Element within its ratings; (5) the integrity of the BES cannot be restored promptly following a fault on or loss of the Element; and (6) the BES does not have the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times, taking into account scheduled or reasonably expected unscheduled outages of the Element. In addition, NSRF is not aware of any continent-wide appropriate BES performance measures for voltage dip, frequency excursion, voltage deviation, stability, etc. and NSRF speculates that different values are likely for different regions and system characteristics across the continent. As a result, NSRF believes it is not advisable to try to adopt unproven values without reasonable industry investigation and development.
ReliabilityFirst		to complicated and will only raise debate between FERC, NERC, the Regions and the Registered Entities
New York Power Authority		In general, NYPA agrees with this approach except as noted below. Inclusions criteria should mirror the Exclusion criteria, and that consistent values should be employed for Inclusions here and for Exclusions

Organization	Yes or No	Question 7a Comment
		above.
National Grid		There should be a non-technical process for inclusions similar to the exclusions process.
Muscatine Power and Water		Would like to propose that the technical analysis criterion be replaced by criteria that are more closely tied to the Adequate Level of Reliability (ALR) characteristics. The following alternate criteria are offered as possible examples, "(1) the BES cannot be controlled to stay within acceptable limits following a fault on or loss of the Element; (2) the BES does not perform acceptably after credible contingences of the Element; (3) the Element limits the impact and scope of instability and cascading outages when they occur; (4) BES facilities are not protected from unacceptable damage by operating the Element within its ratings; (5) the integrity of the BES cannot be restored promptly following a fault on or loss of the Element; and (6) the BES does not have the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times, taking into account scheduled or reasonably expected unscheduled outages of the Element. Currently not aware of any continent-wide appropriate BES performance measures for voltage dip, frequency excursion, voltage deviation, stability, etc. and would speculate that different values are likely for different regions and system characteristics across the continent. Therefore, would like to state that it is not advisable to try to adopt unproven values without reasonable industry investigation and development.
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Electric Cooperative Consumer's Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative		As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish's White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk

Organization	Yes or No	Question 7a Comment
Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Pacific Northwest Generating Cooperative Consumer's Power Inc. Central Lincoln for Snohomish County PUD		interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.
Glacier Electric Cooperative		I do strongly agree that there should be an avenue for elements to be included or excluded from the BES based on technical analysis. I do believe who's responsibility it will be to perform and analyze the transmission planning studies needs to be clarified.
Exelon		: Exelon points out that most of the Regions don't have Region-wide criteria for distribution factor measurement, voltage excursions, or transient frequency response for use in this proposed Inclusion Process. In addition, most of the Regions do not have region-wide criteria developed for these attributes. If differing criteria levels are used across the continent, there remains the possibility that similarly-situated facilities in different Regions will not be treated consistently.

Organization	Yes or No	Question 7a Comment
Consolidated Edison Co. of NY, Inc.		We believe that Inclusions criteria should mirror the Exclusion criteria, and that consistent values should be employed for Inclusions here and for Exclusions above. That is, for example, if 0.95 to 1.05 (+/- 5%) p.u. is adopted as an acceptable voltage deviation range for Exclusions, then Elements resulting in post-transient system voltage deviations outside that range should be candidates for Inclusion. Further, all assumptions should also be fully documented for any proposed Inclusions.
Springfield Utility Board		NERC's Exception Criteria for Inclusions states that, "Entities can submit an application to see an exception for an inclusion in the BES...", but SUB would ask NERC to clarify whether an entity can 1) seek an inclusion exception for them only, or 2) can an entity seek an inclusion exception for another entity? SUB would not support another entity having the ability to file for another entity.
Flathead Electric Cooperative, Inc.		Elements otherwise excluded from the BES should be included only upon a technically valid showing that the Elements contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system.
Entergy Services		It is unclear why an inclusion process should be necessary. Including facilities not otherwise included in the basic definition should be at the discretion of the TO.
Clark Public Utilities Benton Rural Electric Association Northern Wasco County PUD United Electric Co-op Inc Oregon Trail Electric Cooperative, Inc Salem Electric Grant County PUD No. 2 (Grant) Northwest Public Power Association (NWPPA) Big Bend Electric Cooperative,		As a general matter, Clark agrees with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid showing that the Elements contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. Clark also agrees that the SDT has, in general, identified the correct technical approach, although Clark recommends that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in the Snohomish PUD White Paper, in the WECC BES Task Force Proposal 6, and in Clark's answer to Question 5.

Organization	Yes or No	Question 7a Comment
Inc Kootenai Electric Cooperative		
BGE		BGE believes that there is a value in allowing for inclusions through a technical analysis path; however, it is critical that such a path does not allow for unreasonable inclusion of facilities that do not warrant BES status.
Spyker		We agree that entities should be allowed to conduct an analysis to demonstrate if an element is necessary or not for the operation of transmission network. We also support that NERC should specify all the relevant criteria category to be listed as under 2 (a). However, we suggest that NERC should avoid prescribing numerical values but establish a range of value (or reference industry standard) that would be consistent with industry/ regional standards or practices without compromising the reliability of transmission network.
Consumers Energy Company		We believe all of the Inclusion criteria should be replaced by a single criterion, which would include any element that could cause cascading outages of greater than 1,000 MW.
Oncor Electric Delivery		Oncor Electric Delivery agrees with the proposed language that describes the inclusion criteria based technical analysis.
Tacoma Power		Tacoma Power generally agrees with approach used on the technical analysis path for inclusions.
Duke Energy		The approach and evaluation values should be consistent with those for the Exclusions.
American Transmission Company, LLC		ATC proposes that the technical analysis criterion be replaced by criteria that are more closely tied to the Adequate Level of Reliability (ALR) characteristics. The following alternate criteria are offered as possible examples, “(1) the BES cannot be controlled to stay within acceptable limits following a fault on or loss of the Element; (2) the BES does not perform acceptably after credible contingences of the Element; (3) the Element limits the impact and scope of instability and cascading outages when they occur; (4) BES facilities are not protected from unacceptable damage by operating the Element within its ratings; and (5) the BES does not have the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times, taking into account scheduled or reasonably expected unscheduled outages of the Element.

Organization	Yes or No	Question 7a Comment
		In addition, ATC is not aware of any continent-wide appropriate BES performance measures for voltage dip, frequency excursion, voltage deviation, stability, etc. and ATC speculates that different values are likely for different regions and system characteristics across the continent. As a result, ATC believes it is not advisable to try to adopt unproven values without reasonable industry investigation and development.
Manitoba Hydro		Manitoba Hydro does not agree with an impact based approach to establishing BES elements as we believe it will result in regional differences in the application of the BES definition. In addition, the resources required to verify the assumptions made in the models used to substantiate a BES exception would be substantial with no benefit to reliability.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential inclusion in the BES. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		
New York State Reliability Council		See answer to 5a.
Response: See response to Q5a.		
PPL Supply		See comments in Questions 9 and 10
Response: See response to Q9 & Q10.		
PacifiCorp		Please refer to additional comments in question 13 regarding a contiguous BES.
Response: See response to Q13.		
Edison Electric Institute		See comments for Question 5 above

Organization	Yes or No	Question 7a Comment
Bonneville Power Administration		Please refer to BPA's comments on Question #5.
Orange and Rockland Utilities, Inc.		The Inclusion criteria should mirror Exclusion criteria. See comments 5.
Pepco Holdings Inc		Same comments as question #5
Response: See response to Q5.		

7b. Comments on distribution factor measurement:

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 7b Comment
Northeast Power Coordinating Council		See reply to Questions 5b and 6 above.
Response: See response to Q5b and Q6.		
Consolidated Edison Co. of NY, Inc.		See reply to Question 6.
Response: See response to Q6.		
SPP Standards Review Group		Please see our comment in 5b above.
Hydro One		[See Comment 5b]
Central Lincoln		Please see 5b.
for Snohomish County PUD		Please see our response to Question 5b.
Response: See response to Q5b.		
Edison Electric Institute		See comments for Question 5 above

Organization	Yes or No	Question 7b Comment
Florida Municipal Power Agency		See FMPA comments in response to Question 5.
Transmission Access Policy Study Group		See TAPS comments in response to Question 5.
Blachly Lane Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Clark Public Utilities		See comments in 5.
Central Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Clearwater Power Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Consumer's Power Inc.		Please see our corresponding answers to Question 5 for 7b-7e.
Coos-Curry Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Douglas Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Fall River Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Lane Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Lincoln Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Lost River Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Northern Lights Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Okanogan Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.

Organization	Yes or No	Question 7b Comment
Raft River Rural Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Salmon River Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Umatilla Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
West Oregon Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Pacific Northwest Generating Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Consumer's Power Inc.		Please see our corresponding answers to Question 5 for 7b-7e.
Spyker		See comments in section 5
Benton Rural Electric Association		See exclusion comments Question 5
United Electric Co-op Inc.		See exclusion comment.
Oregon Trail Electric Cooperative, Inc.		See exclusion comment
Salem Electric		See exclusion comment
Grant County PUD No. 2 (Grant)		See exclusion comment
Northwest Public Power Association (NWPPA)		See exclusion comment
Big Bend Electric Cooperative, Inc.		See exclusion comment

Organization	Yes or No	Question 7b Comment
Kootenai Electric Cooperative		See Exclusion comment.
Response: See response to Q5.		
Iberdrola USA		See 7a.
Independent Electricity System Operator		[See Comment 7a]
Response: See response to Q7a.		
Tri-State Generation and Transmission Association		If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.
MRO's NERC Standards Review Forum		NSRF proposes replacing this factor with those cited above because a distribution factor measurement indicates how much system changes affect the element, not how a fault or loss of the element would compromise the ALR of the BES. There is no clear correlation between this factor and any of the six characteristics of Adequate Level of Reliability (ALR) of the BES.
ReliabilityFirst		any impact is an impact, even generation is re-dispatched at 0% in some cases
New York Power Authority		NYPA does not agree with this measurement. Distribution factors are dependent on the number of radial transmission lines that connect a single source to a load. For example, if two lines connect a single source to a load, and one line trips, the distribution factor provides a 100% increase in flow on the remaining line. If three lines connect the source to the load, and one line trips, the distribution factor for the remaining lines would be 50%.
Muscatine Power and Water		Proposing to replace this factor with those cited above because a distribution factor measurement indicates how much system changes affect the element, not how a fault or loss of the element would compromise the ALR of the BES. There is no clear correlation between this factor and any of the six characteristics of Adequate Level of Reliability (ALR) of the BES.
Consumers Energy Company		If our suggestion in 7a is not adopted, we propose the following: If based on transfer distribution factor this criterion may have some merit, depending on the TBD value. However, the criterion should not be based on

Organization	Yes or No	Question 7b Comment
		outage transfer distribution factor, as Draft 1 implies since loss of certain distribution facilities can result in distribution load being transferred to other interconnection points. Distribution facilities should not be classified as BES.
American Transmission Company, LLC		ATC proposes replacing this factor with those cited above in 7a because a distribution factor measurement indicates how much system changes affect the element, not how a fault or loss of the element would compromise the ALR of the BES. There is no clear correlation between this factor and any of the six characteristics of Adequate Level of Reliability (ALR) of the BES.
Tacoma Power		Tacoma Power generally agrees with the distribution factor measurement in the technical analysis path for inclusions. We suggest adopting a distribution factor of 30%, or more, on an adjacent system.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential inclusion in the BES. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		

7c. Comments on allowable transient voltage dip measurement:

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 7c Comment
Northeast Power Coordinating Council		Refer to the response to Question 5c
Hydro One		[See Comment 5c]
New York Power Authority		Refer to the response to Question 5c.
Central Lincoln		Please see 5c.
for Snohomish County PUD		Please see our response to Question 5c.
Response: See response to Q5c.		
Edison Electric Institute		See comments for Question 5 above
Florida Municipal Power Agency		See FMPA comments in response to Question 5.
Transmission Access Policy Study Group		See TAPS comments in response to Question 5.
Clark Public Utilities		See comments in 5.

Organization	Yes or No	Question 7c Comment
Spyker		See comments in section 5
Benton Rural Electric Association		See exclusion comments Question 5
United Electric Co-op Inc.		See exclusion comment.
Oregon Trail Electric Cooperative, Inc.		See exclusion comment
Salem Electric		See exclusion comment
Grant County PUD No. 2 (Grant)		See exclusion comment
Northwest Public Power Association (NWPPA)		See exclusion comment
Big Bend Electric Cooperative, Inc.		See exclusion comment
Kootenai Electric Cooperative		See Exclusion comment.
Response: See response to Q5.		
Iberdrola USA		See 7a.
Independent Electricity System Operator		[See Comment 7a]
Response: See response to Q7a.		
Tri-State Generation and Transmission Association		If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.

Organization	Yes or No	Question 7c Comment
MRO's NERC Standards Review Forum		NSRF proposes replacing this factor with those cited above because there is presently no established, continent-wide, acceptable transient voltage dip performance level for evaluating whether a fault or loss of the element would compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential inclusion in the BES. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		
ReliabilityFirst		any impact is an impact, planning criteria between 3 & 5 % is often used and not allowed, why inject this into what define the BES. the criteria is applied it should be included
Muscatine Power and Water		Propose replacing this factor with those cited above because there is presently no established, continent-wide, acceptable transient voltage dip performance level for evaluating whether a fault or loss of the element would compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
Consumers Energy Company		If our suggestion in 7a is not adopted, we propose the following: The criterion related to Transient Voltage Deviations should be removed from the Inclusion Process. This criterion, regardless of value TBD, would cause any element, perhaps even including radial Primary Distribution Facilities (8.2 kV, etc.) to be sequentially included as BES.A fault on non-BES elements will cause significant transient voltage dips on nearby BES elements until the fault is cleared. If the non-BES element is at the same voltage level, the dip will result in near-zero voltages; if at different voltage levels, the dip magnitude will be determined by the ratio of the system ThÃ©vinen impedance at the BES to the intervening transformer impedance - if the system ThÃ©vinen impedance is 2% and the transformer impedance is 18%, the voltage on the BES will dip to 10%.
American Transmission Company, LLC		ATC proposes replacing this factor with those cited above in 7a because there is presently no established, continent-wide, acceptable transient voltage dip performance level for evaluating whether a fault or loss of the element would compromise the ALR of the BES. In addition, the appropriate performance level for this factor

Organization	Yes or No	Question 7c Comment
		may vary for different areas and system characteristics across the continent.
Tacoma Power		Tacoma Power generally agrees with allowable transient voltage dip measurement in the technical analysis path for inclusions. We suggest adopting the criteria that includes a transient voltage dip exceeding 20% for more than 20 cycles on an adjacent system's bus.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential inclusion in the BES. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		

7d. Comments on allowable transient frequency response:

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 7d Comment
Northeast Power Coordinating Council		Refer to the response to Question 5d
Hydro One		[See comment 5d]
New York Power Authority		Refer to the response to Question 5d.
Central Lincoln		Please see 5d.
for Snohomish County PUD		Please see our response to Question 5d.
Response: See response to Q5d.		
Edison Electric Institute		See comments for Question 5 above
Florida Municipal Power Agency		See FMPA comments in response to Question 5.
Transmission Access Policy Study Group		See TAPS comments in response to Question 5.

Organization	Yes or No	Question 7d Comment
Clark Public Utilities		See comments in 5.
Spyker		See comments in section 5
Benton Rural Electric Association		See exclusion comments Question 5
United Electric Co-op Inc.		See exclusion comment.
Oregon Trail Electric Cooperative, Inc.		See exclusion comment
Salem Electric		See exclusion comment
Grant County PUD No. 2 (Grant)		See exclusion comment
Northwest Public Power Association (NWPPA)		See exclusion comment
Big Bend Electric Cooperative, Inc.		See exclusion comment
Kootenai Electric Cooperative		See Exclusion comment.
Response: See response to Q5.		
Iberdrola USA		See 7a.
Independent Electricity System Operator		[See Comment 7a]
Response: See response to Q7a.		
Tri-State Generation and		If this approach is used, then there needs to be a clear technical rationale for defining the metric and for

Organization	Yes or No	Question 7d Comment
Transmission Association		determining the threshold value.
MRO's NERC Standards Review Forum		NSRF proposes replacing this factor with those cited above because there are established, continent-wide transient frequency performance levels in the PRC-006-1 standard, but the elements that are applicable to the standard do not have to be BES elements and the transient frequency response requirements are not intended to be a criterion for BES classification.
ReliabilityFirst		any impact is an impact, stability and planning criteria are often used and restricted and guard against these changes, why inject this into what define the BES. if the criteria is applied it should be included
Muscatine Power and Water		Propose replacing this factor with those cited above because there are established, continent-wide transient frequency performance levels in the PRC-006-1 standard, but the elements that are applicable to the standard do not have to be BES elements and the transient frequency response requirements are not intended to be a criterion for BES classification.
Consumers Energy Company		If our suggestion in 7a is not adopted, we propose the following: The criterion relative to frequency response should be removed. Frequency deviations can result from large changes in distribution load. Distribution facilities should not be classified as BES.
American Transmission Company, LLC		ATC proposes replacing this factor with those cited above in 7a because there are established, continent-wide transient frequency performance levels in the PRC-006-1 standard, but the elements that are applicable to the standard do not have to be BES elements and the transient frequency response requirements are not intended to be a criterion for BES classification.
Tacoma Power		Tacoma Power generally agrees with the allowable transient frequency response in the technical analysis path for inclusions. We suggest adopting the criteria that includes a transient frequency response that goes below 59.6 Hz for up to 6 cycles on an adjacent system's bus.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential inclusion in the BES. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft		

Organization	Yes or No	Question 7d Comment
Rules of Procedure.		

7e. Comments on voltage deviation measurement:

Summary Consideration: The SDT appreciates your comments. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 7e Comment
Northeast Power Coordinating Council		See reply to Questions 5e and 6 above.
Response: See response to Q5e and Q6.		
Consolidated Edison Co. of NY, Inc.		See reply to Question 6.
Response: See response to Q6.		
Hydro One		[See comment 5e]
New York Power Authority		Refer to the response to Question 5e.
Central Lincoln		Please see 5e.
Response: See response to Q5e.		
Edison Electric Institute		See comments for Question 5 above

Organization	Yes or No	Question 7e Comment
Florida Municipal Power Agency		See FMPA comments in response to Question 5.
Transmission Access Policy Study Group		See TAPS comments in response to Question 5.
Clark Public Utilities		See comments in 5.
Spyker		See comments in section 5
Benton Rural Electric Association		See exclusion comments Question 5
United Electric Co-op Inc.		See exclusion comment.
Oregon Trail Electric Cooperative, Inc.		See exclusion comment
Salem Electric		See exclusion comment
Grant County PUD No. 2 (Grant)		See exclusion comment
Northwest Public Power Association (NWPPA)		See exclusion comment
Big Bend Electric Cooperative, Inc.		See exclusion comment
Kootenai Electric Cooperative		See Exclusion comment.
Response: See response to Q5.		
Iberdrola USA		See 7a.
Independent Electricity System		[See Comment 7a]

Organization	Yes or No	Question 7e Comment
Operator		
Response: See response to Q7a.		
Tri-State Generation and Transmission Association		If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.
MRO's NERC Standards Review Forum		NSRF proposes replacing this factor with those cited above because there is presently no established, continent-wide, acceptable (steady state) voltage deviation performance level for evaluating whether a fault or loss of the element would compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent
ReliabilityFirst		any impact is an impact, planning criteria is often used and restricted to guard against these changes, why inject this into what define the BES. the criteria is applied to the facility as a BES element it should be included
Muscatine Power and Water		Propose replacing this factor with those cited above because there is presently no established, continent-wide, acceptable (steady state) voltage deviation performance level for evaluating whether a fault or loss of the element would compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
Consumers Energy Company		If our suggestion in 7a is not adopted, we propose the following: This criterion may be reasonable, depending on the TBD value. The TBD value may need to vary for different voltage levels or system configurations. Loss of multiple capacitors at the distribution level could result in significant voltage deviation at the BES and the criterion should be developed so as not to result in Distribution facilities being classified as BES.
for Snohomish County PUD		Please see our response to Question 5d.
Response: See response to Q5d.		
American Transmission Company, LLC		ATC proposes replacing this factor with those cited above in 7a because there is presently no established, continent-wide, acceptable (steady state) voltage deviation performance level for evaluating whether a fault or loss of the element would compromise the ALR of the BES.

Organization	Yes or No	Question 7e Comment
		In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent
Tacoma Power		Tacoma Power generally agrees with the voltage deviation measurement in the technical analysis path for inclusions. We suggest adopting a voltage deviation that exceeds 10% on an adjacent system's bus. We have an additional concern with how the language is constructed on items d. and e. The inclusion criteria may work for simply inverting the exclusion language but in this initial draft, it does not appear to work as intended. Our suggestions above are describing criteria for defining elements that can be included in the BES. If that is the result to be adopted by the SDT, items d. and e. must be rewritten to state that elements within such criteria can be included in the BES.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential inclusion in the BES. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		

8. Do you have concerns about an entity's ability to obtain the data they would need to do the indicated technical analyses? If so, please be specific with your concerns so that the SDT can fully understand the problem and address it in future drafts.

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.

Organization	Yes or No	Question 8 Comment
Northeast Power Coordinating Council	No	
SERC Planning Standards Subcommittee	No	
NERC Staff Technical Review	No	
Iberdrola USA	No	
Hydro One	No	
MRO's NERC Standards Review Forum	No	

Organization	Yes or No	Question 8 Comment
Bonneville Power Administration	No	The owner of the asset should have all the data necessary to perform the analysis for an Exclusion. The Exclusion analysis should use the same data request and sharing requirements of other NERC standards and the owner conducting the Exclusion analysis should consult with other entities as necessary.
PacifiCorp	No	
Tennessee Valley Authority	No	
Idaho Falls Power	No	No comments
New York State Reliability Council	No	NPCC A-10 criteria data is freely available.
New York Power Authority	No	
Southern Company	No	
National Grid	No	
Muscatine Power and Water	No	
South Carolina Electric and Gas	No	
Georgia Transmission Corporation	No	
ISO New England	No	
The United Illuminating Company	No	NERC modeling Standards should be sufficient
Entergy Services	No	
BGE	No	No comment.

Organization	Yes or No	Question 8 Comment
Spyker	No	
Orange and Rockland Utilities, Inc.	No	
Xcel Energy	No	
Oncor Electric Delivery	No	
Duke Energy	No	
Hydro-Quebec TransEnergie	No	
American Transmission Company, LLC	No	
Tacoma Power	No	Tacoma Power has no comment at this time.
MidAmerican Energy	No	
American Electric Power	Yes	Each criterion specified would not be able to be provided, or even applicable, for each exclusion requested. If the criteria provided may be selected from as necessary for each request, then we have no concerns on our ability to provide the data. Our only concern would be if the intent is that each and every criterion specified must be provided for each request made.
Pepco Holdings Inc	Yes	The entity may not have the tools, model or resources to do a full transmission planning study
Flathead Electric Cooperative, Inc.	Yes	Obtaining data creates a cost and should be minimized as possible.
Exelon	Yes	As mentioned above, this process will require extensive technical analysis from users, owners, operators and the Regions. In many cases, the Principles anticipate the use of criteria that is not in existence today. Rather than reinforcing the bright line approach, these Principles have the potential to create processes that will result in high costs with little to no corresponding benefits to reliability.

Organization	Yes or No	Question 8 Comment
Glacier Electric Cooperative	Yes	It could be very, very difficult and costly for small utilities to perform the necessary transmission planning studies described in the proposal. I think there needs to be language clarifying how smaller utilities should be able to obtain this data.
Electricity Consumers Resource Council (ELCON)	Yes	NERC (and the BES SDT) should not assume that data pursuant to Large Generator Interconnection Agreements (LGIA) or the Large Generator Interconnection Procedures (LGIP) will be forthcoming on a timely basis for the purpose of demonstrating BES exceptions. While such information is generally available from ISOs and RTOs, it is not so forthcoming from vertically-integrated utilities in regions of the country not served by ISOs or RTOs because such utilities are generally hostile to third-party generation in their service territory. They are capable of delaying or otherwise obstructing requests for data and information. We recommend that NERC or the SDT identify mechanisms for requesting and getting the necessary data and information. This process should be included in the NERC Rules of Procedure.
Western Electricity Coordinating Council	Yes	The Owner should have all of the data to perform this analysis for an Exclusion; however, an Inclusion would likely be sought by an entity other than the Owner (i.e., Regional Entity, RC, BA, TOP) that may not have sufficient data. It should be clarified in the Rules of Procedure that such an entity has the right to request such data and that the Owner must provide such data.
ReliabilityFirst	Yes	many smaller entities would require assistance and or consultants to perform this analysis and some data many not be available or be shared etc.
Edison Electric Institute	Yes	Method 2 is largely based on System Planning Criteria developed by WECC. At the present time, we do not believe that any of the other regions have similar planning criteria for which they could use or could easily integrate similar criteria into useable Planning Standards which could be applied in useful manner across all regions. For this reason, it is recommended that a separate Design Committee be created which would include representatives from all regions. It is expected that this effort may be substantial but is necessary before Method 2 or the Inclusion Process as written could be used. We would further caution the use or imposition of such a process since some transmission owners may not have the necessary skills or tools required to conduct studies of this type (in-house) and imposing this level of evidence will likely cause many who cannot meet this requirement to include unnecessary elements diluting the BES as defined and negating the value of the exclusion process.
Electric Market Policy	Yes	Generation Owners and Generation Operators are typically not given access to non-public transmission information, especially that where a NDA or CEII signature is required. It would be virtually impossible for a GO to refute proposed inclusion of an Element owned by the GO unless they procure the services of a

Organization	Yes or No	Question 8 Comment
		consulting firm with access to the data. And, even then, the consultant couldn't provide specifics of the evaluation only their findings.
Tri-State Generation and Transmission Association	Yes	
Response: The SDT appreciates the comments concerning an entity's ability to obtain the required information and technical analysis to meet the requirements of the technical exception criterion. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Electric Cooperative Consumer's Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative	No	As discussed on page 12 of Snohomish's White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.

Organization	Yes or No	Question 8 Comment
Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Pacific Northwest Generating Cooperative Consumer's Power Inc Central Lincoln		
Clark Public Utilities Benton Rural Electric Association Northern Wasco County PUD United Electric Co-op Inc. Oregon Trail Electric Cooperative, Inc Salem Electric Grant County PUD No. 2 (Grant) for Snohomish County PUD Northwest Public Power Association (NWPPA) Big Bend Electric Cooperative, Inc. Kootenai Electric Cooperative	No	As discussed on page 12 of the Snohomish White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis Clark recommends is the current base case operated by the relevant Regional Entity, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data.
Response: The SDT believes that the technical criteria represent a base line of information to be presented for justification of the exception. If the applicant		

Organization	Yes or No	Question 8 Comment
believes that additional information is needed to justify their request, the SDT agrees that the entity should be able to provide any additional information it believes necessary. The SDT disagrees that the Regional Entity should assess the adequacy of the application. In order to ensure consistency and uniformity across the continent, the ERO, not the Regional Entity, can be the only institution to conduct this analysis. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		
Manitoba Hydro	No	We are concerned however that assumptions could be made to complete the technical analysis to support an exclusion that may not be appropriate.
Response: The SDT believes that unwarranted assumptions will be identified in the process and such information will be made available to the industry to prevent others from utilizing similar assumptions.		
Independent Electricity System Operator	No	We anticipate that entities would be granted access to any required historical operations records and modeling data after signing of non-disclosure agreements as necessary.
Response: Thank you for your comment.		
Consumers Energy Company	Yes	CECo is not able to formulate detailed comments at this time, as the criteria have not been finalized. There are a number of items that are somewhat open ended, i.e. TBD and Other. Once those gray areas are filled in, we will have a better idea of our ability to obtain the necessary data.
Response: The SDT looks forward to your future comments.		
Long Island Power Authority	Yes	The Reliability Coordinator would be required to provide much of the data needed to perform the technical analyses.
Response: The SDT believes that the burden of proof for the exception is on the applying entity. The applying entity can utilize any resource including other Registered Entities in presenting their case to the ERO.		

Organization	Yes or No	Question 8 Comment
PPL Supply	Yes	See comments in Questions 9 and 10
Response: See response to Q9 & Q10.		

9. Are you aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? If so, please identify them here and provide suggested language changes that may clarify the issue.

Summary Consideration: Most of the commenters expressed that they were not aware of specific conflicts associated with the BES exception technical principles and regulatory/jurisdictional matters. However, a substantial number of commenters answering "no" and "yes" raised concerns that the BES Definition and the Exception Technical Principles should respect FPA Section 215 authority limitations. Commenters to this question did not provide suggestions for addressing this concern.

Based on the extensive comments received by entities about FPA Section 215 authority excluding local distribution systems, the SDT modified the BES definition to provide additional clarity in this regard. Specifically, the SDT inserted language into the core of the revised BES definition.

WECC and another commenter brought up concerns associated with the applicability of a specific NERC reliability standard (i.e., IRO-010). ReliabilityFirst expressed concerns about the proposed BES definition changing the NERC Statement of Compliance Registry Criteria (SCRC). It should be emphasized that the goal of the SDT is to provide clarity to the BES definition and the technical principles for the NERC Rules of Procedure (RoP) exception process. The SDT's scope of work does not include potential changes to the SCRC. The SDT has debated this matter extensively and believes that NERC reliability standards may be applied to non-BES Elements.

A few commenters brought up concerns about specific unique situations (e.g., black start Cranking Paths in local distribution systems). The SDT cannot address each and every unique regulatory situation in the BES definition and technical principles for the Rules of Procedure (RoP) exception process. Entities would need to submit relevant regulatory evidence on a case by case basis using the RoP exception process. However, the SDT did delete the reference to Cranking Paths.

Bulk Electric System (BES): Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. This does not include facilities used in the local distribution of electric energy.

I3 - Blackstart Resources identified in the Transmission Operator's restoration plan.

Organization	Yes or No	Question 9 Comment
Bonneville Power Administration	No	Under NERC Standard IRO-010, the Transmission Operators are required to obtain information relating to the operation of the bulk power system within their respective areas. Transmission Operators may still need information relating to network facilities that ultimately are determined not to be BES facilities. BPA is concerned that an exclusion could eliminate a requirement that such information be provided.
ReliabilityFirst	Yes	FERC stated that entities registered were not to be taken off the registry without sound reasons and the definition sole intent was not to restrict or remove entities, but put in place a sound definition that everyone

Organization	Yes or No	Question 9 Comment
		can use. I do not think this is a help, it is very detailed and allot of entities will be confused and lost
Western Electricity Coordinating Council	Yes	It must be clear that under NERC Standard IRO-010, the Reliability Coordinators are required to obtain information relating to the operation of the bulk power system within their respective areas. In light of this requirement, Reliability Coordinators may request the submittal of information for network facilities that ultimately are not determined to be BES facilities. It would be reasonable to also include a requirement that Reliability Coordination staff will explain why they require the requested information from non-BES facilities when seeking such information.
Response: The goal of the SDT is to provide clarity to the BES Definition and the technical principles for the Rules of Procedure exception process not to address the NERC Statement of Compliance Criteria Registry (SCRC) and the applicability of specific reliability standards. NERC reliability standards may be applied to non-BES Elements that are necessary for operating the interconnected transmission network.		
City of Redding	Yes	State and court rulings that have defined Transmission and Distribution. One possible solution is to state that the determination made via this methodology is for reliability purposes only and is not intended to redefine established market and rate determinations.
Northeast Power Coordinating Council Hydro One Spyker	Yes	It is imperative to understand that the NERC's revised definition will have a direct impact on entities across North America and may conflict with regulatory requirements, Codes, and Licenses. FERC in its Orders 743 and 743A has directed NERC to address these concerns. For Ontario, the BES exception criteria shall meet the expectations of Ontario's regulator (Ontario Energy Board) which has the sole authority and responsibility for the reliability of customer connections and loads within Ontario. Therefore, it will be necessary to accommodate NERC's proposed definition of BES or the exception process with the Ontario situation. The SDT and RoP teams should: o Modify the exception criteria and procedure to provide regulatory flexibility with requirements to conduct basic technical analysis , to allow entities to consistently present their case to the ERO and/or the regulator for a step by step expedited evaluation. o Include provisions in both the NERC exception criteria and exception process for federal, state and provincial jurisdictions. These provisions should provide clear guidance so that, if and when there are deviations from the exception criteria, they are identified with technical and regulatory justifications ensuring there is no adverse impact on the interconnected transmission network. o Understand that the path to generating facilities need not be always BES contiguous. Generating units can/should be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not always require contiguous paths.

Organization	Yes or No	Question 9 Comment
Edison Electric Institute	Yes	EEI is concerned that under the technical principles, some facilities that are local distribution facilities may be included the BES. This is in conflict with the definition of the Bulk Power System in Section 215 which excludes facilities used in local distribution. In particular, EEI is concerned that the provision of the technical principles prohibiting the seeking an Exclusion for a cranking path will include local distribution within the definition of BES.
Consolidated Edison Co. of NY, Inc.	Yes	See the EEI reply to BES Definition and Designations Question 11.
PacifiCorp	Yes	The SDT proposal combined with the ROP proposal may be in conflict with Section 215 of the Federal Power Act, which requires "facilities used in the local distribution of electric energy" be excluded. The processes proposed may be over inclusive and by default require several elements which are not required for the reliable operation of the BES to in fact be included in the definition of "BES."
Flathead Electric Cooperative, Inc.	No	the proposed BES Definition could conflict with Section 215 of the Federal Power Act if the Definition, the Exception Process, and the Technical Criteria do not effectively exclude facilities used in local distribution from the BES or if the BES definition does not focus on cascading outages, separation events, and instability on the interconnected bulk system. These statutory limits on the scope of the BES and reliability standards are a minimum that must be met.
Electricity Consumers Resource Council (ELCON)	Yes	The proposed technical principles violate the exemption in FPA section 215 against the inclusion in the BES of facilities used in the local distribution of electric energy, given that the BES is a subset of the BPS.
Exelon	Yes	To the extent facilities used in local distribution of electric energy may be included in the BES, the proposed principles are in conflict with the Federal Power Act.
Occidental Energy Ventures Corp.	Yes	The proposed technical principles seem to be in contradiction to the exemption in FPA Section 215 against the inclusion in the BES of facilities used in the local distribution of electric energy.
Central Lincoln for Snohomish County PUD	No	As we explained in our response to Question 1 of the Comment Form on the 1st Draft of Definition of BES, filed on May 27, Central Lincoln believes that the proposed BES Definition could conflict with Section 215 of the Federal Power Act if the Definition, the Exception Process, and the Technical Criteria do not effectively exclude facilities used in local distribution from the BES or if the BES definition does not focus on cascading outages, separation events, and instability on the interconnected bulk system. These statutory limits on the

Organization	Yes or No	Question 9 Comment
		scope of the BES and reliability standards are a minimum that must be met.
The United Illuminating Company	Yes	under the technical principles, some facilities that are local distribution facilities may be included the BES. This is in conflict with the definition of the Bulk Power System in Section 215 which excludes facilities used in local distribution. In particular, Local distribution facilities can not be included in the BES even if they are part of a cranking path.
Pepco Holdings Inc	Yes	Facilities defined as local distribution facilities should not be forced into BES classification due to this new bright line definition.
Consumers Energy Company	Yes	The Technical Principles for Demonstrating BES Exceptions should not conflict with the seven-factor test provisions of FERC Order 888. In particular, provisions should not be established by the Standard Drafting Team that contradict prior Commission rulings associated with seven-factor test provisions.
Hydro-Quebec TransEnergie	Yes	However, there is a conflict between the proposed approach and the regulatory framework applicable in the Quebec's Interconnexion or at least there are some important differences between both. Paragraph 95 of FERC Order 743 acknowledged the situation of non-FERC juridiction. As for the Quebec's Interconnexion, the BES definition and exclusion approach shall meet the expectations of Quebec's regulator, the RÃ©gie de l'Ã‰nergie du QuÃ©bec, (Quebec Energy Board) which has the responsibility to ensure that electric power transmission in Quebec is carried out according to the reliability standards it adopts. In a recent order (D-2011-068), the RÃ©gie de l'Ã‰nergie du QuÃ©bec has recognized several level of application for the Reliability Standards in QuÃ©bec. It stated specifically that most reliability standards in QuÃ©bec shall be applied to the Main Transmission System (MTS). One other level of application recognised by this decision is the NPCC Bulk Power System (BPS) to which the standards related to the protection system (PRC-004-1 and PRC-005-1) and those related to the design of the transmission system (TPL 001-0 to TPL-004-0) will be applicable (including the rest of the standards). The Main Transmission System definition is somewhat different than the Bulk Electric System definition. The Main Transmission System includes elements that impact the reliability of the grid, supply-demand balance and interchanges. It can be described as follows :The transmission system comprised of equipments and lines generally carrying large quantities of energy and of generating facilities of 50 MVA or more controlling reliability parameters: o Generation/load balancing o Frequency control o Level of operating reserves o Voltage control of the system and tie lines o Power flows within operating limits o Coordination and monitoring of interchange transactions o Monitoring of special protection systems o System restoration Therefore, it will be necessary to accommodate NERC's proposed definition of BES or the exception process with the Quebec situation where Entities are under a different jurisdiction. These differences include more

Organization	Yes or No	Question 9 Comment
		than one level of application for the reliability standards, the Main Transmission System definition being the main one to which most reliability standards apply.
Manitoba Hydro	Yes	Canadian Entities are not under FERC jurisdiction, so the revised BES Definition may not apply. A number of Canadian Entities have the BES defined within their provincial legislation. This may introduce differences and even contradictions between elements that are included in the BES according to provincial legislation and the NERC definition.
Independent Electricity System Operator	Yes	Similar to the BES Exception Procedure, the document "Technical Principles for Demonstrating BES Exceptions" must explicitly recognize the authority of Canadian and Mexican Governmental Entities to adopt the Technical Principles for Demonstrating BES Exceptions in its entirety or in part with their own deviations, while ensuring there will be no adverse impact on the interconnected transmission system. Footnote 2 of the "Procedure for Requesting and Receiving an Exception from the Application of the NERC Definition of Bulk Electric System" should be repeated in the "Technical Principles" document.
Response: The SDT has clarified this position. **Bulk Electric System (BES):** Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. This does not include facilities used in the local distribution of electric energy.		
Electric Market Policy	Yes	Dominion is concerned that the provision of the proposed technical principles prohibiting the seeking of an exclusion for a cranking path for blackstart resources will include local distribution facilities within the definition of the BES. This conflicts with the definition of "Bulk Power System" in Section 215 of the Federal Power Act, which excludes facilities used in local distribution.
Response: The SDT has deleted the reference to Cranking Paths. **I3** - Blackstart Resources identified in the Transmission Operator's restoration plan.		
PPL Supply	Yes	Based on FERC Order 743 paragraph 120, radial and local distribution facilities should be excluded from the definition of the Bulk Electric System (BES). The exclusion of non-networked facilities such as radial lines is further re-enforced with Order 743 paragraph 73 which describes the characteristics of a network and does not include most generator interconnection facilities. In that order, FERC justified its bright-line, 100 kV threshold, explaining that "many facilities operated at 100 kV and above have a significant effect on the overall functioning of the grid" because they share the following characteristics: 1. "operate in parallel with other high voltage and extra high voltage facilities"i. The "bright line" at 100 kV recognizes many 100 kV lines

Organization	Yes or No	Question 9 Comment
		parallel other HV/EHV lines and can be significantly loaded by failure of the HV/EHV lines. This does not apply to radial lines, even at 100 kV and above.2. "interconnect significant amounts of generation sources" (emphasis added)3. "operate as part of a defined flow gate"4. have a "parallel nature" and are capable of "caus[ing] or contribute[ing] to significant bulk system disturbances".i. Radial lines cannot cause significant BES disturbances since the outage of a radial line is studied in all N-1 planning studies and if the TPL standards are followed, an N-1 should not cause such disturbances.Excluding generator lead lines is very practical because the physical reality of a radial generator lead line is that it cannot be overloaded by outages on parallel paths because there are no parallel paths. Further, the MW flow on a radial line is well known and limited to a known maximum (limited to the larger of the generation or load on the end of the line); clearly these are reasons for excluding radial lines. When and if a generator lead line is tapped by another generator or load, it is possible that the line between the tap point and the original point of interconnection might need to be rolled into the electrical network. However, at that time, it might also be possible for the transmission owner to purchase the line and make the tap point the new point of interconnection.
Response: The SDT cannot address each and every unique situation in the technical principles for the Rules of Procedure (RoP) exception process. Entities would need to bring relevant evidence on a case by case basis using the RoP exception process.		
Springfield Utility Board	Yes	o The four characteristics defined in the "Exception Criteria - Exclusions" portion of Technical Principles for Demonstrating BES Exceptions appears to be in conflict with, rather than in parallel to, the exceptions which are part of the proposed "core definition" in the Proposed Continent-wide Definition of Bulk Electric System. SUB proposes that NERC postpone work related to Technical Principles for Demonstrating BES Exceptions until a continent-wide BES definition is approved. o FERC Order No. 743 states, "We believe that it would be worthwhile for NERC to consider formalizing the criteria for inclusion of critical facilities operated below 100 kV in developing the exemption process". However, there is no mention of critical facilities operated below 100 kV in NERC's Exception Criteria. SUB would encourage NERC to include critical facilities consideration in their exception criteria.
Response: The SDT is responsible for completing NERC Project 2010-17 (related to the BES Definition process and the exception technical principles process) before year-end. The SDT does not have sufficient time to bifurcate the two processes. The technical principles for the Rules of Procedure exception process as proposed by the SDT allows for presenting exception evidence for including critical Elements energized below 100 kV into the Bulk Electric System.		
SERC Planning Standards Subcommittee	No	

Organization	Yes or No	Question 9 Comment
SPP Standards Review Group	No	
NERC Staff Technical Review	No	
Iberdrola USA	No	
Tri-State Generation and Transmission Association	No	
MRO's NERC Standards Review Forum	No	
Idaho Falls Power	No	We believe that the final drafts of the definition and exemptions should comport to the legal requirements of Section 215.
New York Power Authority	No	
Southern Company	No	
ITC	No	
National Grid	No	Insufficient time was provided to fully undertake this inquiry.
Muscatine Power and Water	No	
Blachly Lane Electric Cooperative	No	
South Carolina Electric and Gas	No	
Glacier Electric Cooperative	No	
Georgia Transmission Corporation	No	

Organization	Yes or No	Question 9 Comment
Entergy Services	No	
Clark Public Utilities	No	
Central Electric Cooperative	No	
Clearwater Power Electric Cooperative	No	
Consumer's Power Inc.	No	
Coos-Curry Electric Cooperative	No	
Douglas Electric Cooperative	No	
Fall River Electric Cooperative	No	
Lane Electric Cooperative	No	
Lincoln Electric Cooperative	No	
Lost River Electric Cooperative	No	
Northern Lights Electric Cooperative	No	
Okanogan Electric Cooperative	No	
Raft River Rural Electric Cooperative	No	
Salmon River Electric Cooperative	No	

Organization	Yes or No	Question 9 Comment
Umatilla Electric Cooperative	No	
West Oregon Electric Cooperative	No	
Pacific Northwest Generating Cooperative	No	
PNGC Power	No	
Consumer's Power Inc.	No	
Benton Rural Electric Association	No	As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
American Electric Power	No	AEP is not aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue.
Orange and Rockland Utilities, Inc.	No	
BGE	No	No comment.
Northern Wasco County PUD	No	As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
Xcel Energy	No	
United Electric Co-op Inc.	No	As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
Oregon Trail Electric Cooperative, Inc.	No	As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.

Organization	Yes or No	Question 9 Comment
Oncor Electric Delivery	No	
Salem Electric	No	As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
Duke Energy	No	
Grant County PUD No. 2 (Grant)	No	As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
Northwest Public Power Association (NWPPA)	No	As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
Big Bend Electric Cooperative, Inc.	No	As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215
American Transmission Company, LLC	No	
Kootenai Electric Cooperative	No	As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
Tacoma Power	No	Tacoma Power is not aware of any conflicts at this time.
MidAmerican Energy	No	
ACES	No	
Response: Thank you for your response.		

10. Are there any other concerns with this approach that haven't been covered in previous questions and comments? Please be as specific as possible with your comments.

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.

Organization	Yes or No	Question 10 Comment
SERC Planning Standards Subcommittee	No	The comments expressed herein represent a consensus of the views of the above-named members of the SERC EC Planning Standards Subcommittee only and should not be construed as the position of SERC Reliability Corporation, its board, or its officers.
Iberdrola USA	No	
Bonneville Power Administration	No	
ReliabilityFirst	No	
Tennessee Valley Authority	No	
Idaho Falls Power	No	No comments
New York State Reliability Council	No	

Organization	Yes or No	Question 10 Comment
South Carolina Electric and Gas	No	
Glacier Electric Cooperative	No	
Exelon	No	
Georgia Transmission Corporation	No	
Consolidated Edison Co. of NY, Inc.	No	
Entergy Services	No	
Clark Public Utilities	No	
Orange and Rockland Utilities, Inc.	No	
Xcel Energy	No	
Duke Energy	No	
Hydro-Quebec TransEnergie	No	
New York Power Authority	No	

Response: Thank you for your response. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO

Organization	Yes or No	Question 10 Comment
as established in the Rules of Procedure as presently being drafted.		
BGE	No	It is important to consider that the Technical Principles for Demonstrating BES Exceptions is only one part of the BES definition project. The Technical Principles and the Rule of Procedure Process must be evaluated together with the BES Definition to sufficiently understand the revisions. In the end, the Technical Principles and the BES Definition must coalesce and be clearly coordinated and understood. The BES Definition language must include reference to the role of the associated defining documents. One unambiguous document must not be made ambiguous by an associated document or process. We appreciate the work of the drafting team and support the goal to produce clear definition language so that upwards of 95% of the assets are clearly distinguished as either included or excluded from the BES. We are particularly sensitive to the potential for burdensome processes (e.g. TFEs) to be added to reliability compliance. We appeal to the team for continued, vigilant consideration of the arduousness of the BES determination process.
Response: The upcoming posting of the BES definition and the technical principals will be posted simultaneously in order for industry to adequately evaluate the two documents and their relationship to each other.		
Oncor Electric Delivery	No	Although Oncor Electric Delivery understands the need for the ERO to be in a position to override the inclusion criterion, Oncor desires more clarity on what factors contribute to an overriding action.
ACES	Yes	The term interconnected transmission network is used throughout this document. Bulk Electric System should be used in its place. The purpose of the technical principles is to determine if an Element is needed to support the operation of the Bulk Electric System. Using interconnected transmission network adds more uncertainty to the document.
Northeast Power Coordinating Council	Yes	Exception criteria should be crafted at a high-level with key menu items of assessment that can be followed continent-wide by entities to put forward their exception(s) for element(s) that are not necessary for the interconnected transmission network based on technical assessment, evidence and justification for unique characteristics, configuration, and utilization. (Also see suggestions/ comments in Question 6)
SPP Standards Review Group	Yes	In Question 5 regarding the Transient and Steady State Stability criteria, we would suggest establishing criteria for the damping such that the time required to return to normal is limited. Damping in 1-5% range may be sufficient to accomplish this.

Organization	Yes or No	Question 10 Comment
		Also, delete 2.a.iv.8. in the Exclusion Criteria and 1.c.8. in the Inclusion Criteria.
NERC Staff Technical Review	Yes	A criterion should be added for supporting a request for inclusion of an Element. If an Element has been identified as causal or contributory to a Category 2 or higher event as defined in the ERO Event Analysis Process, that should be sufficient evidence that it is necessary for the Element to be planned, designed, maintained, and operated in accordance with NERC Reliability Standards. An assessment of the Element should include consideration of any corrective actions that have been implemented to prevent a reoccurrence. The Exception criteria also should include a list of characteristics of Elements that will not be considered for exclusion, on the basis that this list of characteristics already identifies the importance of such Elements to reliable operation of the interconnected transmission network. Characteristics should include: (1) Elements that are relied on in the determination of an Interconnection Reliability Operating Limit (IROL); (2) Blackstart resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage, (3) Elements subject to Nuclear Plant Interface Requirements (NPIRs) as agreed to by a Nuclear Plant Generator Operator and a Transmission Entity defined in NUC-001, and (4) Elements identified as required to comply with a NERC Reliability Standard by application of criteria defined within the standard (e.g., the test defined in PRC-023 to identify sub-200 kV Elements to which the standard is applicable.)
Florida Municipal Power Agency Transmission Access Policy Study Group	Yes	The third paragraph of the introduction to the Technical Principles is awkwardly worded and might be misconstrued. FMPA suggests the following rewording: "Entities are not required to seek exceptions under the Exception Procedure to exclude from the BES Element(s) that are already excluded under the BES definition and designations."For the sake of consistency, Exclusions (1) should contain a provision analogous to Exclusions (2)(b) and Inclusions (1)(f) addressing the circumstances under which the ERO can override a demonstration based on these criteria. As noted above, one of those circumstances would be a demonstration by NERC that the Element in question meets the criteria for inclusion in the BES.
Tri-State Generation and Transmission Association	Yes	The proposed principles seem preliminary and immature. In addition as noted in earlier comments they are not fully consistent with the proposed BES definition, particularly with respect to radial elements and local distribution networks. Such consistency should be incorporated before the next posting. We further feel that it is very unlikely that the technical evidence path can be placed on a sound technical foundation and matured by the end of this year as directed by the FERC. Key definitions are lacking and should be added to the document. For instance "distribution factor" is not carefully defined even though such factors can be calculated in a variety of ways.

Organization	Yes or No	Question 10 Comment
Hydro One	Yes	Exception criteria should be crafted at a high-level with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) that are not necessary for the interconnected transmission network and based on technical assessment, evidence and justification for its unique characteristics, configuration, and utilization. (Also see suggestions/ comments on Question 6)
MRO's NERC Standards Review Forum	Yes	1. NSRF proposes replacing the wording in the Exclusion preface, Exclusion 2 preface, and Inclusion 1 preface of “not necessary to reliably operate the interconnected transmission network” with “necessary to maintain an Adequate Level of Reliability (ALR) of the Bulk Electric System”. 2. NSRF has reservations on the following statement made in the introduction of this document:” Due to the importance of Blackstart Resources and their designated blackstart Cranking Paths to restoration efforts, no exceptions will be allowed for those items.” This does not allow for a provision to exclude any designated Blackstart Cranking Path (at any voltage) even though there may be technical justification for it. 3. The first page states that “Specific content of this application is spelled out elsewhere in this appendix.” NSRF requests the SDT describe where this appendix will be published. Furthermore, is it a compliance document or just technical “guidance”? 4. Having the following statement included for both exclusions and inclusions will create disagreement:”The ERO can override this criterion but would need to provide additional justification to support their finding.” NSRF believes any override should have adequate technical justification and not interfere with other statutory requirements. Also, it does not clarify or identify who would make the determination whether NERC has made adequate justification to override the criterion. 5. NSRF believes that the “Inclusion” process should be completely removed from BES Definition. We recommend using bright-line criteria indentifying everything 100 kV and above to be BES and then allow for the “Exception” process to take out facilities that do not impact the reliability of the BES. Selecting BES facilities based on a right-line criteria is what FERC requested in its Order regarding BES Definition. This would streamline the process and remove some unnecessary paperwork.
MidAmerican Energy	Yes	MidAmerican supports the NSRF comments.
PacifiCorp	Yes	The SDT has proposed several technical criteria to be used to determine if an element has an impact on the reliability of the BES. PacifiCorp believes that the majority of non-BES elements can be excluded using a modified proposed bright-line and/or using the non-technical approach. However, in the event an entity requires additional justification to remove non-BES elements from the BES, then PacifiCorp feels the technical criteria should be established on an interconnection basis, not on a continent-wide basis. Because

Organization	Yes or No	Question 10 Comment
		of the number of operating and geographic differences among the interconnections, to try to establish technical criteria on a continental basis would introduce confusion. PacifiCorp believes it is impossible to establish technical criteria that will allow unique interconnections to be treated in a comparable manner.
Western Electricity Coordinating Council	Yes	The biggest concern is that the Technical Principles and the reasoning behind them need to be fully explained. The SDT has mentioned on calls the possibility of a white paper or resource document, and WECC fully supports the creation of such a document. This white paper should describe the rationale for the criteria as well as how that indicates that the element is necessary for reliable operation. Also, the justification for the ERO to override these criteria should be clarified. It should be clear that the ERO's ability to override these criteria is on a case-by-case basis.
Electricity Consumers Resource Council (ELCON)	Yes	The bright-line tests used in the revised BES definition and technical principles may capture the facilities of hundreds of entities that may not know that NERC exists or the enforceability of NERC Reliability Standards. The technical principles should be supplemented with a technical guide or appendix that provides examples of the steps that may be necessary to demonstrate BES exceptions.
Alabama Public Service Commission	Yes	The second paragraph of the proposed Technical Principles states that "[d]ue to the importance of Blackstart Resources and their designated blackstart Cranking Paths to restoration efforts, no exceptions will be allowed for those items." This sentence should be deleted from the technical principles. An unintended consequence of subjecting all blackstart cranking pathways to inclusion in the BES by default would be to cause a Registered Entity, in order to minimize costs, to not declare every possible cranking path but instead limit to the minimum required cranking paths in order to comply with the standards, as opposed to designating multiple pathways. This consequence could be avoided by allowing blackstart cranking pathways to be evaluated for exceptions just like any other element.
Southern Company	Yes	The Technical Principles document suggests that no exceptions be allowed for Blackstart Resources and designated Cranking Paths. Southern Company is concerned with the treatment of these facilities and recommends that certain statements be removed. In Project 2010-17 Definition of the BES, Southern Company commented that the proposed inclusion, Inclusion I4, be removed from the BES Definition because an existing NERC Reliability Standard, EOP-005-2 System Restoration from Blackstart Resources, already addresses these facilities regardless of voltage. Further, the proposed inclusion will expand the applicability of some NERC Reliability Standards to facilities below 100 kV. Southern Company believes this position will unnecessarily cause more facilities to become applicable to reliability standards without any benefit to reliability. Therefore, we recommend the following statement be deleted: "Due to the importance of Blackstart Resources and their designated blackstart

Organization	Yes or No	Question 10 Comment
		Cranking Paths to restoration efforts, no exceptions will be allowed for those items."
National Grid	Yes	The exception process should be strictly limited to the procedures for application and approval and should not include substantive elements.
Muscatine Power and Water	Yes	1. Propose replacing the wording in the Exclusion preface, Exclusion 2 preface, and Inclusion 1 preface of "not necessary to reliably operate the interconnected transmission network" with "necessary to maintain an Adequate Level of Reliability (ALR) of the Bulk Electric System". 2. Currently having reservations concerning the following statement made in the introduction of this document:" Due to the importance of Blackstart Resources and their designated blackstart Cranking Paths to restoration efforts, no exceptions will be allowed for those items." This does not allow for a provision to exclude any designated Blackstart Cranking Path (at any voltage) even though there may be technical justification for it. 3. The first page states that "Specific content of this application is spelled out elsewhere in this appendix." Request the SDT describe where this appendix will be published and indicate if this is a compliance document or just technical "guidance"? 4. By having the following statement included for both exclusions and inclusions will lead to disagreement:"The ERO can override this criterion but would need to provide additional justification to support their finding." Suggesting that any override should include adequate technical justification and not interfere with other statutory requirements. Also, it does not clarify or identify who would make the determination whether NERC has made adequate justification to override the criterion. 5. Do not believe that the "Inclusion" process should be completely removed from BES Definition. Would like to recommend using bright-line criteria indentifying everything 100 kV and above to be considered BES and then allow for the "Exception" process to take out Facilities that do not have an impact on the reliability of the BES. Selecting BES Facilities based on bright-line criteria is what FERC requested in its Order regarding BES Definition. This would streamline and simplify the process by removing a large quantity of exceedingly unnecessary paperwork.
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Electric	Yes	In general, , as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of

Organization	Yes or No	Question 10 Comment
Cooperative Consumer's Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Pacific Northwest Generating Cooperative Consumer's Power Inc		developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." 16 U.S.C. Â§ 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.
New York State Department of Public Service		The core BES definition based on a 100 kV brightline is an overreach of bulk system designation under the provisions of the Federal Power Act; a properly specified BES core definition would avoid the extensive analysis required under the exceptions procedure. That said, the proposed principles for use in the exceptions process are consistent with previous FERC efforts to distinguish between transmission and local distribution. The upfront exclusion of applying the proposed principles to blackstart cranking path facilities is a potential

Organization	Yes or No	Question 10 Comment
		overreach into the local distribution system and can be counter productive reliability. Mandating compliance of NERC standards to cranking paths will result in the specification of only one cranking path by host utilities to minimize costs, where designating multiple paths in restoration paths would provide the flexibility needed to minimize customer outage duration.
Springfield Utility Board	Yes	SUB has the following concerns regarding NERC's Technical Principles for Demonstrating BES Exceptions: o Clear Definition of Radial - As previously addressed in our BES Definition comments, SUB would encourage a more clear definition of a "radial" versus "closed-loop" system. Because there still appears to be inconsistencies in both definition and application, SUB encourages NERC to develop a concise definition of a radial system. For example, if a system is normally operated as radial, but could be operated as closed (by manually closing a breaker), would it be considered a radial or close-looped system? If the answer is close-looped, then is this in all cases, or are there exceptions? o Approval of Exceptions - SUB would like for NERC to clarify the process for receiving, reviewing, and accepting or rejecting exception applications. The Technical Principles for Demonstrating BES Exceptions states that, "...will be subject to review and remand by the ERO itself, or by any agency having regulatory or statutory oversight of NERC as the ERO." During NERC's presentation at APPA's BES Definition webinar, it was explained that the exception process would look like the following:1. Entity applies for expemption,2. Region receives application, verifies received, and forward to NERC with recommendation(s), and 3. NERC makes final determination (decision is appealable by entity).For consistent application of the expemption procedure, SUB would encourage NERC to adopt the process as it was communicated during the APPA webinar, with regions making recommendations, but NERC making the final decision. o Duration of Approved Exclusions/Inclusions - The Technical Principles for Demonstrating BES Exceptions does not indicate the duration for approved exclusions or inclusions. How long are granted exclusions/inclusions? Permanent? Annual? Other? o Publication of Exceptions - For consistent application, as well as transparency and accountability, SUB would request that all exceptions be published ; those applied for, as well as whether they were rejected or accepted, as well as decision rationale.
ISO New England	Yes	Any generator that is studied individually will not be shown as material since the electric system is designed to allow the outage of any individual generator. Generators must be studied within the context of the electric system to assess materiality. The generator and its interconnecting transmission facilities would likely be able to be excluded based on this process although they meet the Registry Criteria thresholds requiring inclusion.
The United Illuminating	Yes	UI is concerned that the method used to characterize exclusions in Method 1 did not follow the proposed BES

Organization	Yes or No	Question 10 Comment
Company		Definition and believe the process developed for Method 2 (and reused for Sub-100kV Inclusions) is overly complicated, lacks necessary regional standards to support the process and may prove too difficult for some companies to fully comply with thereby discouraging a consistent and uniform application of the definition across all regions and affected BES element owners. These Principles are not technical Principles. Further the use of these Planning criteria and impact assessments is not very different from the NPCC functional test that drew the ire of FERC. The Drafting Team is attempting to develop definitions and identifiers for the fringes of the bulk power system, but they are replacing one set of ambiguities with a set of technical ambiguity. This product is poor because given the very first term, that is the first principle to be met, is those facilities necessary for the reliable operation of an interconnected transmission system, is full of undefined concepts such that anything attempting to define it in a subtle manner is immediately lost in the ether. Recognizing that these technical principles will be permanent, UI suggests excluding them and sticking with the bright line exclusions and inclusions in the proposed definition.
Occidental Energy Ventures Corp.	Yes	The Technical Principles and the new BES Definition seem to include a significant number of retail customers as proposed. Surely this is not the intent of these changes. There should be an exclusion along the lines of Comment 6.
Flathead Electric Cooperative, Inc. Benton Rural Electric Association Northern Wasco County PUD United Electric Co-op Inc Oregon Trail Electric Cooperative, Inc Central Lincoln Salem Electric Grant County PUD No. 2 (Grant) Big Bend Electric Cooperative,	Yes	supports the approach to the exclusion process proposed by the SDT, which provides two different paths to exclusion, one based on readily-identifiable operational characteristics of a system, and one based on technical reliability analysis. We believe it is important to provide for the first path, based on operational characteristics, so that systems that are marginally disqualified under the BES Definition (because, for example, generation within the system exceeds demand for a few hours a year) can obtain an exclusion without the large investment of resources that otherwise might be required for a full-scale technical analysis. we question whether the first subsection of the characteristic test, relating to system proximity, is necessary, and we are concerned that the requirement that a system meet all four requirements of the characteristics test may be overly restrictive. For example, it is easy to imagine a distribution system in a rural area that covers a widely dispersed area, so that load is many miles from the relevant generation/transmission source, and that the system therefore does not meet the electrical proximity element, but meets the other three elements of the characteristics test. Such a system should be excluded because it clearly serves a local distribution function, and not a transmission function, as demonstrated by the fact that the system meets subsections (c) (power flows into the system but rarely flows out) and (d) (power is not intentionally transported over the system). Accordingly, we recommend that the SDT consider eliminating the first test. In the alternative, the SDT should consider allowing exempting a system from the BES if it, for example,

Organization	Yes or No	Question 10 Comment
Inc Northwest Public Power Association (NWPPA) Kootenai Electric Cooperative		meets three of the four criteria rather than all four.
Spyker	Yes	Exception criteria should be crafted at a high-level with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) that are not necessary for the interconnected transmission network and based on technical assessment, evidence and justification for its unique characteristics, configuration, and utilization.
American Electric Power	Yes	AEP appreciates the work that the drafting teams have done within the various deliverables related to the BES definition, technical principles for demonstrating BES exceptions, and the BES definition exception process. AEP acknowledges the benefits of agreeing to a BES definition and exception process, and appreciates the drafting teams' requests for industry involvement. Due to the interrelated nature of the deliverables currently out for review regarding the BES definition and exception processes, it is difficult if not impossible, to comment "in isolation" on any individual facet of the project. For example, there needs to be a defined relationship between an approved definition of BES, the technical principles for demonstrating BES exception, and the exception process itself. When closely related projects such as these are done simultaneously, no individual deliverable can rely on the completed work of another. As a result, we risk having conflicting decision making across these projects. As a result, AEP is not in the position to make further comments at this time beyond those recently and concurrently made regarding the BES definition and technical principles for demonstrating BES exceptions. We suggest that further work on these efforts, when appropriate, become more consolidated and that care be taken to not undertake concurrent efforts before sufficient progress has been made on important aspects of the project. AEP appreciates the drafting teams' requests for industry input, and looks forward to its future involvement after additional progress has been made on these issues.
Consumers Energy Company	Yes	In addition to the owner, only those with jurisdictional authority, such as the ERO and RRO, should be permitted to register Exception Requests. A third party may have a business reason for wishing to encumber another entity with regulatory compliance risk and responsibility. In addition, this could create an additional strain on the Exception Request process due to an excessive number of requests from third parties. We do want to ensure that the term "Other", used in Exclusion Section 2.a.iv.8., and Inclusion Section 1.c.8., not remain in the final Technical Principles document.

Organization	Yes or No	Question 10 Comment
for Snohomish County PUD	Yes	Snohomish County PUD generally supports the approach to the exclusion process proposed by the SDT, which provides two different paths to exclusion, one based on readily-identifiable operational characteristics of a system, and one based on technical reliability analysis. We believe it is important to provide for the first path, based on operational characteristics, so that systems that are marginally disqualified under the BES Definition (because, for example, generation within the system exceeds demand for a few hours a year) can obtain an exclusion without the large investment of resources that otherwise might be required for a full-scale technical analysis. That being said, we question whether the first subsection of the characteristic test, relating to system proximity, is necessary, and we are concerned that the requirement that a system meet all four requirements of the characteristics test may be overly restrictive. For example, it is easy to imagine a distribution system in a rural area that covers a widely dispersed area, so that load is many miles from the relevant generation/transmission source, and that the system therefore does not meet the electrical proximity element, but meets the other three elements of the characteristics test. Such a system should be excluded because it clearly serves a local distribution function, and not a transmission function, as demonstrated by the fact that the system meets subsections (c) (power flows into the system but rarely flows out) and (d) (power is not intentionally transported over the system). Accordingly, we recommend that the SDT consider eliminating the first test. In the alternative, the SDT should consider allowing exempting a system from the BES if it, for example, meets three of the four criteria rather than all four.We have pasted in the text of our White Paper below. Please contact us for a more readable version of the White Paper.White PaperA Performance-Based Exemption Process to Exclude Local Distribution Facilities from the Bulk Electric System April 2011 This White Paper proposes a transmission planning ("TPL") "performance-based" process to determine the local distribution facilities the North American Electric Reliability Corporation ("NERC") must exclude from the Bulk Electric System ("BES") pursuant to Section 215(a)(1) of the Federal Power Act ("FPA"). This process would apply to those local distribution facilities that are not automatically excluded under a bright-line BES definition. Consistent with Federal Energy Regulatory Commission ("FERC") Order Nos. 743 and 743-A, a performance-based exemption process would be objective, consistent, and transparent, and would adequately differentiate between local distribution and transmission, i.e., BES, facilities. I. What Is Reliability? FPA Section 215 authorizes NERC to promulgate "reliability standards," subject to FERC approval. Section 215 defines "reliability standard" to mean a properly-approved requirement "to provide for the reliable operation of the bulk-power system." The statute, in turn, defines "reliable operation" to mean "operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will

Organization	Yes or No	Question 10 Comment
		not occur as a result of sudden disturbances, including . . . unanticipated failure of system elements." II. What Is "Customer Service" or "Level of Service" ("LOS")? Local customer service or LOS relates to service failures on local utility systems that are wholly internalized rather than spilling onto the interconnected regional grid. These types of service failures relate to local customer service and LOS standards. The customers of those utilities will bear the full cost of complying with internal LOS standards and will obtain the full benefit of compliance to the extent that service levels on those systems improve. Accordingly, state public utility commissions (for regulated utilities) and independent boards (for non-regulated utilities) can fully and accurately weigh whether the benefits of compliance with such standards are justified by the costs they will pay. Intervention by NERC and a Regional Entity is not needed because a utility's actions related to level of service on its own system will neither unduly burden the customers of other systems, threaten the reliable delivery of power to those customers, nor create incidental benefits to those remote customers. In the absence of the need to protect customers of systems remote from the consequences of decisions made by an individual utility, there is no warrant for NERC or a Regional Entity to interfere with a utility's internal decision-making about the appropriate LOS to its own customers, and the costs that will be borne by those customers to achieve any particular level of service. In fact, in the "Savings Provisions" of Section 215, Congress specifically included language prohibiting NERC and Regional Entities from enforcing "compliance with standards for adequacy" of electric service. By law, these remain the exclusive province of local decision-makers. III. The Need for a Material Impact Test In Order No. 743-A, FERC clarified that a material impact test is appropriate in the reliability context if the test can be shown to identify facilities needed for reliable operation. The following example of an outage demonstrates the need for an impact test to distinguish between LOS and Reliability, i.e., local distribution facilities and BES facilities. A. Pre-Event Facts Local Utility Administration ("LUA") owns a 115 kV system that moves power from two points of delivery ("POD") and serves 1000 MW of load. A DC battery rack had an unexpected failure a few days after it was routinely inspected and LUA has not implemented Supervisory Control and Data Acquisition ("SCADA") so the DC battery voltage is not continuously monitored. The LUA system interconnects with BES Company's system which consists of 230 kV and 500 kV lines. B. Event Facts A fault occurs and the breakers in substation 2 fail to operate due to a battery failure (Figure 1). This results in an outage for customers served by substations 1, 2, and 3 on the LUA system. Figure 1 C. Post-Event Facts Immediately after the outage, LUA customer service receives numerous customer calls followed by a call from its Public Utility Commission/Local Utility Board ("/PUC/LUB"). LUA dispatches crews immediately after being informed of the outage to identify and resolve the problem. Within 45 minutes, the fault is sectionalized and the all load is restored. The PUC/LUB receives complaints from LUA customers who identify economic and other adverse impacts of the outage. The PUC/LUB demands a report from the

Organization	Yes or No	Question 10 Comment
		LUA that describes the event and restoration, as well as potential solutions. LUA submits a report which finds that the main solution to this problem involves the implementation of a SCADA system. The SCADA system scope of work includes battery voltage telemetry and would have identified the DC system issue and prevented the protection system failure, resulting in only the loss of substation 3. The SCADA plan cost estimate is $30 million and was presented three years earlier. The PUC/LUB evaluated the costs and benefits of the new SCADA system, but did not approve the project in order to reduce the budget and/or provide rate stability for the struggling local economy. LUA, the PUC/LUB, and customers will re-evaluate the merits of adding SCADA as well as other solutions such as increasing substation inspection runs, updating the batter fleet, and further investigating battery manufacture reliability records. Based on the LUA report, the battery bank failure rate immediately after routine inspections is expected to occur once every 3,500 years. Seventy battery banks are used on the LUA system, so a bank failure should be expected every 50 years. BES Company's neighboring 230kV and 500kV system does not experience an adverse system impact. Subsequently, BES Company identifies that one of its breakers operated at the LUA South POD. BES Company and LUA coordinate a review of the system protection scheme and BES Company determines that it operated correctly. BES Company verifies that the LUA outage did not create any thermal, voltage, or transient stability limit violations on the BES Company system. The Regional Entity, NERC, and FERC treat the outage as a Reliability Standards issue. The LUA System (highlighted in yellow) is considered part of the BES because it meets the "bright line" 20 MVA and 100 kV thresholds under the current BES definition and the NERC Statement of Compliance Registry Criteria ("SCRC"). The event would most likely be considered a TPL-003 category C event specifically C8 SLG Fault, with delayed clearing that may include a stuck breaker or protection system failure. The LUA Substation Department reviews its inspection records and has adequate documentation for the battery banks involved in the outage. As a result, LUA avoids substantial fines. However, during the inspection review, LUA notices that the battery bank in a similar distribution substation inspection schedule was completed three days late. Upon following further internal procedures, LUA finds that the battery bank was inspected three days late due to restorations efforts after a major wind storm. Although there were no LOS impacts, and the inspection schedule was unrelated to the outage, the Reliability Standards triggered a LUA self report to its Regional Entity which ultimately resulted in a $50,000 penalty. D. Summary This example identifies that in addition to a "bright line" BES exclusion process a more refined process such as a "performance based" reliability assessment is needed to distinguish BES facilities from distribution facilities if the NERC Statement of Compliance Registry Criteria ("SCRC") continues to be the benchmark for assessing BES facilities. It is clear from this example that the current 100 kV and 20 MVA thresholds cannot accurately classify what is and is not considered part of the BES. Defining BES facilities is important from the "Reliability Standard" and "LOS" perspectives as well as from a local and regional jurisdictional standpoint. There are multiple agencies identifying and approving what facilities should and should not be built, what programs should and should not be implemented, and if a fine should be paid by

Organization	Yes or No	Question 10 Comment
		customers experiencing an outage without determining if it could have had an adverse impact on neighboring electric systems. Without a performance-based process, many small and medium electric utilities would be unnecessarily burdened. â€ƒ IV. Neighboring System Rule It is important but not always easy to distinguish the difference between "reliability" and "LOS" impacts. One way to resolve this is to use the "neighboring system rule." Simplistically, if events on the host system's facilities can create an "adverse" or "material" impact on a neighboring electric (TO, TOP, BA) system, those facilities should be considered part of the BES as they are creating a reliability impact. If not, these facilities should not be considered part of the BES. V. "Adverse" or "Material" Impact A key question in applying the "neighboring system rule" is what is an "adverse" or "material" impact, and what "performance based" assessment should be used to benchmark adverse or material. Because the electric system within an interconnection is frequency interdependent, theoretically every system change impacts the interconnected system to some degree. Turning on a light-switch that is connected to an operational 20 watt CFL (light bulb) theoretically impacts frequency, although to an undetectable degree. Therefore the term "material" or "adverse" impacts must be defined to distinguish observable impacts that affect reliability from minutia. A number of performance based exclusion examples have been proposed that use, Power Transfer Distribution Factors ("PTDF"), Line Outage Distribution Factors ("LODF"), fault duty or short circuit levels, reactive margin studies (P-V and Q-V), abbreviated or focused powerflow and transient stability analysis, as well as complete TPL assessment using multiple seasonal base cases, loading conditions, transfer levels. These methods demonstrate various metrics, they rank system strength (both real and reactive), the ability of power to flow through system under normal and outage conditions, and they determine steady state, voltage stability and transient (angular) stability performance. Although there may be advantages to a multi-step "performance based" approach that includes the exclusion examples above, this paper proposes a TPL-based assessment that is consistent with BES performance benchmarks used in assessing transmission system performance in North America. The Western Electricity Coordinating Council ("WECC") BES Exclusion/Inclusion Assessment - 2-16-11 version provides a sound metrics in assessing the performance of a system as well as determining if a system can materially impact a neighboring system (Figure 2). It would be envisioned that each interconnection would develop a "Disturbance Performance Table of Allocable Effects on Other System". This table is necessary because the NERC TPL Performance Table does not provide actual performance details on acceptable transient and post transient voltage perturbations or minimum transient voltage frequencies. Figure 2 show the approved TPL-001 through TPL-004 performance tables.Figure 3 - Table 1 from the NERC TPL Reliability Standardsâ€ƒ VI. Performance Based Assessment Process The "performance based" methodology below is based on the "neighboring system rule" and the WECC BES Exclusion/Inclusion Assessment - 2-16-11 that was developed by the WECC Bulk Electric System Definition Task Force ("BESDTF"). The process focuses on exclusions rather than inclusion and specific response times, schedules, and process details have been removed as this

Organization	Yes or No	Question 10 Comment
		will likely need to be determined by each, Regional Entity Representing the Interconnection ("RERI") A. Purpose The purpose of this document is to set forth a "performance based" technical process for assessing whether elements with a nominal operating voltage greater than 100 kV and outside the NERC SCRC based excursion process should be excluded from the Bulk Electric System. An element is necessary to reliably operate an interconnected transmission system if it significantly affects neighboring Transmission Owners, Operators, and Balancing Authorities as described in Table 1 below. This paper proposes a method for assessing whether an element is necessary to support the reliability of an interconnected transmission system or if the element is limited to supporting local customer service levels. B. TermsExclusion Assessment (EA) An assessment of whether a Subject Element or System has a material impact on neighboring Transmission Owners, Operators, and Balancing Authorities as described in Table 1 below and conducted in accordance with the process set forth in this document.EA Base Case The interconnection approved, Base Case as modified to include the Subject Element, used to perform the assessment described in this document.Regional Entity Representing the Interconnection The regional entity representing the interconnectionRegistered Entity The entity registered to comply with mandatory reliability standards for a Registered Function.Responsible Entity The entity responsible for performing the EA and verifying the results of the EA to the interconnection.Subject System or Element of a System The System or Element of a System that is being examined by the EA. C. Applicabilitya. An EA may be performed:i. By a registered entity, or by a third party on behalf of a registered entity, to assess whether a Subject Element or system has a material impact on neighboring Transmission Owners, Operators, and Balancing Authorities as described in Table 1 may be excluded from the BES as set forth by the RERI. ii. The RERI, or by a third party on behalf of the RERI, to assess whether a Subject Element or system has a material impact on neighboring Transmission Owners, Operators, and Balancing Authorities as described in Table 1 should be included as part of the BES as set by the RERI.b. Frequency of analysis. The confirmed findings of an EA are valid until reversed by a subsequent EA. A new EA is required if:i. Significant changes are made to the network topology in the vicinity of the Subject Element; orii. RERI staff requests a new EA. Such request shall be provided in writing and shall include reasonable justification for the request. D. Notifying the RERI of the Responsible Entity's intent to submit an EA finding or to perform an EA.The Responsible Entity shall notify the RERI in writing of its intent to submit such a finding. Such notice shall include:a. A general description of the Subject Element(s);b. One-line diagrams representing the Subject Element and applicable neighboring Elements; andc. A description of the base case that will be used in performing the EA and how that case will be stressed for the analysis. E. Performing the Analysis Base Case The base case(s) used for the studies shall be developed from current interconnection Operating Cases and shall simulate stressed conditions in the area of the element to be

Organization	Yes or No	Question 10 Comment
		analyzed which (1) are reasonably expected to be achieved, consistent with the study period selected (e.g., hydro generation shall reflect seasonal water availability patterns) and (2) are expected to provide "worst-case" results (i.e., the greatest impact on voltage, flow, or transfer capability) during the upcoming operating year. The base case(s) shall be "stressed" by committing or de-committing generating units and adjusting generating unit output to increase the flow on the candidate element and the electrically nearest rated interconnection transfer path to the greatest extent possible, but not beyond their continuous ratings, for the initial set of conditions. To help minimize the possibility of dispute as to whether the base case(s) are suitably stressed, entities are encouraged to solicit input from subregional planning groups or other planning entities as the suitability of the base case(s) before undertaking the analyses described below.i. Non-represented Elements. If the Subject Element is not represented in the EA Base case:1. The Responsible Entity shall provide to the RERI a written request to add the Responsible Entities data to the cases:o all data reasonably necessary to accurately and completely model the Subject Element in the EA Base case; ando A one-line diagram showing this element and other nearby Elements. If the nearest connected Element is not found to be necessary for the operation of an interconnected transmission system, the RERI shall notify the Responsible Entity to take no further action. F. Performance Based Methodology The impact an System or Element has on neighboring Transmission Owners, Operators, and Balancing Authorities as described in Table 1 shall be determined by assessing the performance of key measures of BES reliability through power flow, post-transient, and transient stability analysis with (1) the system, and the Subject Element, operating at reasonably stressed conditions that replicate expected system conditions under which the loss of the Subject Element would have the greatest impact on the key measures of reliability, and (2) the Subject Element removed from service, but without allowing for system readjustment. For the purposes of this analysis, "Elements" may be: (1) lines; (2) transformers; (3) buses or bus sections; (4) generating units; (5) shunt devices . i. Simulation 1: Requirement: Meet applicable NERC Reliability Standard (TPL-002 and TPL-003) and the RERI Disturbance Performance Table of Allocable Effects on Other System" Criteria performance for NERC TPL-002 and TPL-003 disturbances.Step 1: Run appropriate TPL-002 (N-1 contingency) studies of elements in the electrical vicinity of and including the Candidate Element (i.e., simulate primary protection operates as intended)Step 2: Run appropriate TPL-003 (N-2 contingency) studies of elements in the electrical vicinity of and including the Candidate Element. This would include both N-2 contingencies in which the Candidate Element would simultaneously be lost as part of a common mode failure, as well as contingencies in which the Candidate Element's primary protection fails.Automatic Remedial Action Schemes ("RAS") or Special Protection Schemes ("SPS") that are fully redundant (i.e., their failure is not credible) may be triggered during this simulation. If the failure of the RAS/SPS is a credible event, it should be considered as part of the N-2 analysis. ii. Simulation 2:Requirement: Remove the Candidate Element. Do not allow for system adjustment, and re-solve the base case. Then conduct applicable NERC Reliability Standard (TPL-002 and TPL-003) contingencies. Step 1: Remove Candidate Element (i.e., simulate unplanned opening of

Organization	Yes or No	Question 10 Comment
		facility).Step 2: Assume no system adjustment. At this point, elements may be loaded above their continuous ratings but may not be loaded above their emergency ratings. Step 3: Perform NERC TPL-002 and TPL-003 (N-1 and N-2 contingency) studies.Step 4: If the analysis demonstrates performance that meets or exceeds that called for in the NERC Reliability Standards and RERI System Performance Criteria, the Candidate Element would be determined to not be necessary for the operation of an interconnected transmission system. Note: Consequential load tripping is allowed, and consequential and out-of-step generation tripping is allowed.CriteriaTable 1: RERI Disturbance-Performance Table of Allowable Effects on Other SystemsNERC and WECC Categories Outage Frequency Associated with the Performance Category (outage/year) Transient Voltage Dip Standard Minimum Transient Frequency Standard Post Transient Voltage Deviation StandardASystem normal Not Applicable Nothing in addition to NERCBOne elementout-of-service ï‚³ 0.33 Not to exceed 25% at load busses or 30% at non-load busses.Not to exceed 20% for more than 20 cycles at load busses. Not below 59.6Hz for 6 cycles or more at a load bus. Not to exceed 5% at any bus.CTwo or more elementsout-of-service 0.033 - 0.33 Not to exceed 30% at any bus.Not to exceed 20% for more than 40 cycles at load busses. Not below 59.0Hz for 6 cycles or more at a load bus. Not to exceed 10% at any bus.DExtreme multiple-element outages < 0.033 Nothing in addition to NERC Figure 1. Voltage Performance Parameters RERI TPL criteria related to reactive power resources:1. For transfer paths, voltage stability is required with the pre-contingency path flow modeled at a minimum of 105% of the path rating for system normal conditions (Category A) and for single contingencies (Category B). For multiple contingencies (Category C), post-transient voltage stability is required with the pre-contingency transfer path flow modeled at a minimum of 102.5% of the path rating.2. For load areas, voltage stability is required for the area modeled at a minimum of 105% of the reference load level for system normal conditions (Category A) and for single contingencies (Category B). For multiple contingencies (Category C), post-transient voltage stability is required with the area modeled at a minimum of 102.5% of the reference load level. For this criterion, the reference load level is the maximum established planned load limit for the area under study.3. Specific requirements that exceed the minimums specified in 1 and 2 may be established, to be adhered to by others, provided that technical justification has been approved by the RERI.4. Item 3 applies to internal interconnection Systems.Submitting a Proposed Finding of Exclusion to the Regional EntityInformation required. Once the analysis has been performed and the Subject Element/System has been determined to not have a material impact on neighboring Transmission Owners, Operators, and Balancing Authorities as described in Table 1, and is unnecessary for the operation of an interconnected transmission system, the Responsible Entity shall submit the findings to the RERI.RERI Review of Proposed Findings The RERI operational/planning staff with technical expertise in powerflow studies shall review Proposed Findings of Exclusion submittals and shall determine if the assessment is deficient or agrees with the finding of exclusion. The RERI shall exempt the system elements from the BES, if the elements are approved for exclusion. If the exclusion of the BES elements change the Responsible Entities NERC functional registrations the Region shall support the Responsible Entity through the NERC deregistration process.

Organization	Yes or No	Question 10 Comment
		Dispute Resolution A Responsible Entity or Registered Entity or Owner may appeal a Disputed Finding of Exclusion with the RERI to NERC. Ongoing Responsibilitiesa. Logging. The RERI shall create and maintain a comprehensive list, available for public review, of:i. All Elements with nominal operating voltages at or above 100 KV that have Confirmed Findings of Exclusion, or, through other aspects of the BES definition, have been excluded from the BES including an explanation of how the element was excluded through the definition;ii. All Elements with nominal operating voltages below 100 kV that have Findings of Inclusion; andiii. The status of all EAs in dispute.iv. The Responsible Entity would continue to provide system data to the neighboring Balancing Authorities and Transmission Owners and Operators and if applicable continue to coordinate underfrequency load shed and under voltage load shed scheme information.VII. Conclusion NERC should adopt the TPL-based assessment as proposed herein. A bright-line BES test will not exclude all load distribution facilities as required by the FPA. Further, a performance-based exemption process would be objective, consistent, and transparent, and would adequately differentiate between local distribution and transmission, i.e., BES, facilities.
American Transmission Company, LLC	Yes	1. ATC proposes replacing the wording in the Exclusion preface, Exclusion 2 preface, and Inclusion 1 preface of “not necessary to reliably operate the interconnected transmission network” with “necessary to maintain an Adequate Level of Reliability (ALR) of the Bulk Electric System”. 2. ATC has reservations on the following statement made in the introduction of this document:” Due to the importance of Blackstart Resources and their designated blackstart Cranking Paths to restoration efforts, no exceptions will be allowed for those items.” This does not allow for a provision to exclude any designated Blackstart Cranking Path (at any voltage) even though there may be technical justification for it. 3. The first page states that “Specific content of this application is spelled out elsewhere in this appendix.” ATC requests the SDT describe where this appendix will be published. Furthermore, is it a compliance document or just technical “guidance”? 4. Having the following statement included for both exclusions and inclusions will create disagreement:”The ERO can override this criterion but would need to provide additional justification to support their finding.” ATC believes any override should have adequate technical justification and not interfere with other statutory requirements. Also, it does not clarify or identify who would make the determination whether NERC has made adequate justification to override the criterion.
Manitoba Hydro	Yes	The exception procedure is a complicated and resource intensive process. To be most effective, the BES definition should be a stand-alone 100kV bright line with any exception criteria being specified within the definition. Additionally:-FERC Order 743 directed the revision of the Bulk Electric System (BES) definition to improve clarity, to reduce ambiguity, and to establish consistency across all Regions. The proposed impact

Organization	Yes or No	Question 10 Comment
		based exception procedure undermines all three of these targets. -The Technical Exceptions eliminate the 100kV 'bright-line' definition and introduce regional differences, both of which are contradictory to the goals of the BES revision project. -The commitment for NERC to review and continuously monitor BES exceptions made through this process would be extremely onerous and resource intensive with little benefit to reliability. -To obtain industry consensus on the precise limits to determine if an element has sufficient impact on the BES to be included in the BES is not a reasonable or attainable endeavor.
NESCOE	Yes	NESCOE believes that exclusion determinations should be based on clear but flexible criteria that do not result in the unnecessary inclusion of elements into the BES that do not adversely impact the reliability of the BES. The process described here is too limiting in its requirement that an application meet all of those four listed criteria not requiring technical analysis. Applicants and reviewers should have a broader menu of decision criteria available to them. Regarding those criteria related to exclusions based on technical analysis, NESCOE suggests that ranges of values, in recognition of regional differences in network characteristics, be suggested by the drafting team for further consideration. Finally, as discussed above in response to questions 1 through 4, NESCOE believes that additional exclusion determinations should not require a finding that all four proposed criteria are met. Rather, the various criteria set forth under 1(a) through 1(d) should be treated as alternative criteria to qualify for an additional exclusion, and entities seeking additional exclusions to the BES should be allowed to demonstrate that one or more criteria is met, depending on the nature of the element that is the subject of the application.
Response: The SDT appreciates your comments. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		
Edison Electric Institute	Yes	We are concerned that the method used to characterize exclusions in Method 1 did not follow the proposed BES Definition and believe the process developed for Method 2 (and reused for Sub-100kV Inclusions) is overly complicated, lacks necessary regional standards to support the process and may prove too difficult for some companies to fully comply with thereby discouraging a consistent and uniform application of the

Organization	Yes or No	Question 10 Comment
		definition across all regions and affected BES element owners. In the proposed (BES) definition and accompanying Inclusions and Exclusions, the Drafting Committee went to some effort to clearly and methodically define what was included and what was permissible to exclude. Unfortunately the NERC proposed "Technical Principles for Demonstrating BES Exceptions" did not follow that same clear and concise manner adding some confusion which could lead to inconsistent application of the Exclusion (and Inclusion) Criteria. For example, at no point did the "Principles" ever identify Inclusions I2 through I5 which were liberally used in the exclusion criteria within the BES definition. Additionally within the body of the Proposed BES definition, there are three (3) approved Exclusions (E1 - Radial System; E2 - Small Customer Generator/Generation System and E3 - Local Distribution Networks). Each of the Exclusions have its own set of criteria used to define and characterize the methodology necessary to meet each exclusion, however, the "Principles" contained in this document only loosely follow the criteria provided and in some cases miss that criteria all together. We refer the SDT to the EEI comments previously submitted on the BES Definition regarding the relationship of the BES definition to the statutory exclusion of local distribution facilites.
PPL Supply	Yes	General PPL Supply concerns with draft Technical Principles for exclusion/inclusion:1. It may be premature to work on an exclusion/exemption/inclusion process since the BES definition is not established yet. A lot of work could be done on the Exclusion/Inclusion that is meaningless because there is some chance the exclusion/inclusion process will not complement or might duplicate the BES definition. 2. The proposal will result in inclusion of generation facilities that are not significant to BES reliability. 3. The exclusion/inclusion drafting team does not appear to have considered the FERC assessment in Order 743-A (17-Mar-11) that "material impact assessments" cannot be unduly subjective and must be technically based as stated in paragraph 47. a. For the material impact tests in the Exclusion/Inclusion Technical Principles to be technically based, it is important that the tests actually measure what FERC states are the characteristics of the BES (see Order 743 paragraph 73), namely 1) operate in parallel, 2) carry significant amounts of generation, 3) operate as part of a defined flowgate, 4) are parallel in nature and 5) are capable of causing or contributing to significant disturbances. The proposed tests do not make these measurements. b. Further, since all facilities already meet the technically based NERC planning and operating standards, any additional measure beyond these standards such as those created by the BES Exclusion/Inclusion drafting team will be unduly subjective, as these new measures go beyond the technical basis of the NERC standards.

Organization	Yes or No	Question 10 Comment
		4. It is unclear how the exclusion/inclusion drafting team considered FERC's concerns with the use of "material impact assessments," as described in Order 743, paragraph 85 ("no grounds on which to reasonably assume that the results of the material impact assessment are accurate, consistent, and comprehensive"). Specific comments on Technical Principles paper from NERC DT 20110510A. Please add wording to make complete sentences as needed in order to clarify whether facilities meeting these criteria are included or excluded. For example, the clarifying words are added to the following Exclusion 1 to help the reader better understand the meaning. 1. "The elements that meet all of the following characteristics are not necessary for the reliable operation of the grid and are thus excluded:"a. System elements that are located in close electrical proximity to Load are exempt from inclusion in the BES.B. Notwithstanding the need for complete sentences to assure proper interpretation, the following comments should be considered by the drafting team: o Exclusion 1 a) uses an unduly subjective, non-technically based material impact test. o Exclusion 1 b) i and ii attempts to introduce disconnect procedures in the classification as "radial" which may hurt reliability by disconnecting radial equipment that could provide voltage support. The exclusion also introduces commercial (dispatch) considerations which may not be appropriate in a reliability-based document. o Exclusion 1 c) assuming "system" is short for "system elements", this requirement for exclusion is overly discriminatory to generators which flow power out. o Exclusion 1 d) is too vague to be useful because "system" seems to have more than one meaning in this requirement. o Exclusion 2 and Inclusion 1 in their entirety are unduly subjective, non-technically based material impact tests.We are concerned that the proposed inclusion and exclusion procedures could result in not only significant generation interconnection facilities being included in the BES - but also less significant generation interconnection facilities. Such a result would be inconsistent with FERC Order 743. Accordingly, PPL Supply respectfully requests NERC to:o Exclude radial facilities less than 100 kV and not black start (these facilities are excluded in the latest definition of the BES). o Exclude radial facilities greater than 100 kV but less than 200 MVA (proposed BES now includes generators over 20 MVA)o Exclude local distribution networks (LDNs) with flow into network up to 200 MVA o Currently, LDNs are excluded if they only absorb (not produce) net power (Technical Principles Exclusion 1-c). It is also appropriate to exclude LDNs with less than net 200 MVA flow into the BES electrical network. o Inclusion efforts should not consider such issues as proximity to markets, proximity to load or nuclear facilities, or length of generator lead line.

Organization	Yes or No	Question 10 Comment
Independent Electricity System Operator	Yes	We hold the view that the path to generating facilities need not be always BES contiguous. Generating units should be required to meet a subset of NERC Standards, but should not always require contiguous BES paths. Finally, we reiterate that exception criteria should be crafted at a high-level with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) that are not necessary for the interconnected transmission network and based on technical assessment, evidence and justification for its unique characteristics, configuration, and utilization.
Response: The SDT has responded to comments on the BES definition in the Consideration of Comments form for the BES definition posting. The SDT appreciates the comments and suggestions for the technical exception criterion. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		
Electric Market Policy	Yes	Although Dominion didn't see a specific form to address comments on Appendix 5B to the NERC ROP, Dominion would like to point out a particular area of concern with that Appendix. Dominion requests that NERC include explicit language stating that exclusion or inclusion of an element (for compliance purposes) begins only after approval/disapproval and any associated appeal has been reviewed and a final decision reached. Dominion would also like to point out that it assisted in the preparation of the Edison Electric Institute's comments and therefore agrees with the comments raised by EEI.
Response: The SDT has forwarded your comments to the RoP team for their consideration.		
Pepco Holdings Inc	Yes	Concern that as this proposal is written such that each exclusion in the BES definition (E1, E2 and E3) will require a submittal to approve that is an exclusion.
City of Redding	Yes	The SDT is encouraged to address generators installed as load modifiers to distribution load.>>>> As additional evidence of distribution line, if there is not an OATT filed on a line then it is not transmission per FERC rules.

Organization	Yes or No	Question 10 Comment
Tacoma Power	Yes	Tacoma Power supports the SDT's efforts to create an acceptable BES definition directly linked to an exception process. We do have a concerned about the application of the standards to Elements that change status due to the Exception process. Any Elements that are determined to be newly included in the BES should have a 24-month period before the standards will apply as a BES Elements. Conversely, a determination that removes an Element from the BES should apply as soon as practicable. Please be aware that the WECC has a task force, the Bulk Electric System Definition Task Force(BESDTF), which has done some notable work on this task. See WECC BESDTF Proposal 6, Appendix C (http://www.wecc.biz/Standards/Development/BES/default.aspx). The BES definition is very complex and the BESDTF has already addressed many of the tough issues that have yet to be addressed in this process, such as: o Local Distribution Network definition for automatic exemption o Determination of radial facilities o Demarcation of BES and non-BES Elements o Alternate dispute resolution process o Assignment of the burden of proof for the exemption process o Technical approach for the inclusion/exclusion determination Thank you for consideration of our comments.
Response: The SDT has addressed comments on the BES definition under the Consideration of Comments form for the BES definition posting.		

END OF REPORT

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Consideration of Comments

Definition of the Bulk Electric System Exception Criteria (Project 2010-17)

The Bulk Electric System Drafting Team thanks all commenters who submitted comments on the second draft of the Project 2010-17: Definition of the Bulk Electric System (BES) Exception Criteria. These standards were posted for a 45-day public comment period from August 26, 2011 through October 10, 2011. Stakeholders were asked to provide feedback on the standards and associated documents through a special electronic comment form. There were 72 sets of comments, including comments from approximately 137 different people from approximately 83 companies representing all 10 Industry Segments as shown in the table on the following pages.

The SDT made the following changes to the request form due to industry comments received:

- **General** – Clarified the use of facility versus Element(s).
- **Page 1** – Corrected typo: List any attached supporting documents and any additional information that is included to support~~s~~ the request:
- **Generation - Q1**. Replaced 'generator's or generator facility's' with 'generation resource's': What is the MW value of the host Balancing Authority's most severe single Contingency and what is the ~~generator's, or generator facility's~~ generation resource's, percent of this value?
- **Generation - Q2**. Replaced 'generator's or generator facility's' with 'generation resource's': Is the ~~generator or generator facility~~ generation resource used to provide reliability-~~-~~related Ancillary Services?
- **Generation - Q3**. Replace 'generator' with 'generation resource': Is the ~~generator~~ generation resource designated as a must run unit for reliability?

The SDT feels that it is important to remind the industry that Phase II of this project will begin immediately after the conclusion of Phase I as SDT resources clear up. The same SDT will follow through with Phase II.

The SDT is recommending that this project be moved forward to the recirculation ballot stage.

There were two comments that were repeated multiple times throughout the various documents. The first topic was about how to sort through the definition inclusions and exclusions, i.e., which takes precedence. The SDT offers this guidance on that issue:

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.

Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.

In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.

The second item is about providing specific guidance on how the information on the exception request form will be used in making decisions on inclusions/exclusions in the exception process. The SDT provides the following information on this item:

The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by

being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication.

Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved."

The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

All comments submitted may be reviewed in their original format on the standard's project page:

http://www.nerc.com/filez/standards/Project2010-17_BES.html

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 404-446-2560 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

[1] The appeals process is in the Standards Processes Manual: http://www.nerc.com/docs/standards/sc/Standard_Processes_Manual_Approved_May_2010.pdf.

Index to Questions, Comments, and Responses

1. **Page one of the 'Detailed Information to Support an Exception Request' contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one that is missing? Please be as specific as possible with your comments.** 13
2. **Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there information that you believe needs to be on page two or three that is missing? Please be as specific as possible with your comments.** 49
3. **Page four of the 'Detailed Information to Support an Exception Request' contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four that is missing? Please be as specific as possible with your comments.** 88
4. **Do you have concerns about an entity's ability to obtain the data they would need to file the 'Detailed Information to Support an Exception Request'? If so, please be specific with your concerns so that the SDT can fully understand the problem.**108
5. **Are there other specific characteristics that you feel would be important for presenting a case and which are generic enough that they belong in the request? If so, please identify them here and provide suggested language that could be added to the document.**.....120
6. **Are you aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? If so, please identify them here and provide suggested language changes that may clarify the issue.**.....133
7. **Are there any other concerns with the proposed approach for demonstrating BES Exceptions that haven't been covered in previous questions and comments (bearing in mind that the definition itself and the proposed Rules of Procedure changes are posted separately for comments)? Please be as specific as possible with your comments.** 142

END OF REPORT 167

The Industry Segments are:

1 — Transmission Owners
2 — RTOs, ISOs
3 — Load-serving Entities
4 — Transmission-dependent Utilities
5 — Electric Generators
6 — Electricity Brokers, Aggregators, and Marketers
7 — Large Electricity End Users
8 — Small Electricity End Users
9 — Federal, State, Provincial Regulatory or other Government Entities
10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Guy Zito	Northeast Power Coordinating Council										X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Alan Adamson	New York State Reliability Council, LLC	NPCC	10
2.	Gregory Campoli	New York Independent System Operator	NPCC	2
3.	Kurtis Chong	Independent Electricity System Operator	NPCC	2
4.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1
5.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC	1
6.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10
7.	Brian Evans-Mongeon	Utility Services	NPCC	8
8.	Mike Garton	Dominion Resources Services, Inc.	NPCC	5
9.	Kathleen Goodman	ISO - New England	NPCC	2
10.	Chantel Haswell	FPL Group, Inc.	NPCC	5

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
11. David Kiguel	Hydro One Networks Inc.	NPCC 1										
12. Michael Lombardi	Northeast Utilities	NPCC 1										
13. Randy MacDonald	New Brunswick Power Transmission	NPCC 9										
14. Bruce Metruck	New York Power Authority	NPCC 6										
15. Lee Pedowicz	Northeast Power Coordinating Council	NPCC 10										
16. Robert Pellegrini	The United Illuminating Company	NPCC 1										
17. Si Truc Phan	Hydro-Quebec TransEnergie	NPCC 1										
18. David Ramkalawan	Ontario Power Generation, Inc.	NPCC 5										
19. Saurabh Saksena	National Grid	NPCC 1										
20. Michael Schiavone	National Grid	NPCC 1										
21. Wayne Sipperly	New York Power Authority	NPCC 5										
22. Donald Weaver	New Brunswick System Operator	NPCC 2										
23. Ben Wu	Orange and Rockland Utilities	NPCC 1										
24. Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC 3										
2. Group	Charles Long	SERC Planning Standards Subcommittee	X									X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Pat Huntley	SERC	SERC	10
2.	John Sullivan	Ameren Services Co.	SERC	1
3.	James Manning	NC Electric Membership Corp.	SERC	1
4.	Philip Kleckley	SC Electric & Gas Co.	SERC	1
5.	Bob Jones	Southern Company Services	SERC	1
6.	Jim Kelley	PowerSouth Energy Cooperative	SERC	1

3. Group	Brent Ingebrigtson	LG&E and KU Energy	X		X		X	X				
No additional members listed.												
4. Group	Jean Nitz	ACES Power Marketing Standards Collaborators						X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Mohan Sachdeva	Buckeye Power, Inc.	RFC	3, 4
2.	Susan Sosbe	Wabash Valley Power Association	SERC	3

5. Group	Jonathan Hayes	Southwest Power Pool Standards Review		X								

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
			Team										

	Additional Member	Additional Organization	Region	Segment Selection
1.	Mark Wurm	Board of Public Utilities City of McPherson	SPP	1, 3, 5
2.	John Allen	City Utilities of Springfield	SPP	1, 4
3.	Sean Simpson	Board of Public Utilities City of McPherson	SPP	1, 3, 5
4.	Stephen McGie	Coffeyville	SPP	
5.	Robert Rhodes	Southwest Power Pool	SPP	2
6.	Jonathan Hayes	Southwest Power Pool	SPP	2

6.	Group	Steve Rueckert	WECC Staff										X

No additional members listed.

7.	Group	Chris Higgins	Bonneville Power Administration	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Lorissa Jones	Transmission Internal Ops	WECC	1
2.	Chuck Matthews	Transmission Planning	WECC	1
3.	Steve Larson	General Counsel	WECC	1, 3, 5, 6
4.	Rebecca Berdahl	Long Term Sales and Purchases	WECC	3
5.	John Anasis	Technical Operations	WECC	1
6.	Erika Doot	Generation Support	WECC	1, 3, 5
7.	Don Watkins	System Operations	WECC	1
8.	Fran Halpin	Duty Scheduling	WECC	5
9.	Joe Rogers	Transfer Services	WECC	3

8.	Group	Louis Slade	Dominion	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Connie Lowe		RFC	5, 6
2.	Mike Garton		MRO	5, 6
3.	Michael Gildea		NPCC	5, 6
4.	Michael Crowley	Electric Transmission	SERC	1, 3
5.	Sean Iseminger	Fossil & Hydro	SERC	5

9.	Group	Bill Middaugh	TSGT G&T	X									

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
No additional members listed.													
10.	Group	David Thorne	Pepco Holdings Inc	X		X							
	Additional Member	**Additional Organization**	**Region**	**Segment Selection**									
1.	Carl Kinsley	Delmarva Power & Light Co	RFC	1, 3									
11.	Group	Cynthia S. Bogorad	Transmission Access Policy Study Group	X		X	X	X	X				
No additional members listed.													
12.	Group	John P. Hughes	Electricity Consumers Resource Council (ELCON)	X		X		X	X	X			
No additional members listed.													
13.	Group	William D Shultz	Southern Company Generation					X					
	Additional Member	**Additional Organization**	**Region**	**Segment Selection**									
1.	Tom Higgins	Southern Company Generation	SERC	5									
2.	Terry Crawley	Southern Company Generation	SERC	5									
3.	Therron Wingard	Southern Company Generation	SERC	5									
4.	Ed Goodwin	Southern Company Generation	SERC	5									
14.	Group	John Bussman	AECI and member G&Ts	X		X		X	X				
No additional members listed.													
15.	Group	Janelle Marriott Gill	Tri-State Generation and Transmission Assn., Inc. Energy Mangement			X		X					
No additional members listed.													
16.	Group	David Taylor	NERC Staff Technical Review										
No additional members listed.													
17.	Group	Al DiCaprio	IRC Standards Review Committee		X								
	Additional Member	**Additional Organization**	**Region**	**Segment Selection**									
1.	Steve Myers	ERCOT	ERCOT	2									
2.	Mark Thompson	AESO	WECC	2									
3.	Don Weaver	NBSO	NPCC	2									
4.	Charles Yeung	SPP	SPP	2									
5.	Ben Li	IESO	NPCC	2									
6.	Greg Campoli	NYISO	NPCC	2									

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
7. Katherine Goodman		ISO-NE	NPCC 2										
8. Terry Bilke		MISO	MRO 2										
18.	Individual	William Bush	Holland Board of Public Works			X							
19.	Individual	Silvia Parada Mitchell	Transmission	X		X		X	X				
20.	Individual	Sandra Shaffer	PacifiCorp	X		X		X	X				
21.	Individual	Janet Smith	Arizona Public Service Company	X		X		X	X				
22.	Individual	David Kiguel	Hydro One Networks Inc.	X		X							
23.	Individual	John Bee	Exelon	X		X		X					
24.	Individual	Eric Lee Christensen	Snohomish County PUD	X		X	X	X					
25.	Individual	Greg Rowland	Duke Energy	X		X		X	X				
26.	Individual	Richard Salgo	NV Energy	X									
27.	Individual	Thomas C. Duffy	Central Hudson Gas & Electric Corporation			X							
28.	Individual	Chris de Graffenried	Consolidated Edison Co. of NY, Inc.	X		X		X	X				
29.	Individual	Thad Ness	American Electric Power	X		X		X	X				
30.	Individual	Anthony Jablonski	ReliabilityFirst										X
31.	Individual	Joe Petaski	Manitoba Hydro	X		X		X	X				
32.	Individual	Robert Ganley	Long Island Power Authority	X									
33.	Individual	Eric Salsbury	Consumers Energy			X	X	X					
34.	Individual	David Burke	Orange and Rockland Utilities, Inc.	X		X							
35.	Individual	Kathleen Goodman	ISO New England Inc		X								
36.	Individual	Diane Barney	New York State Dept. of Public Service									X	
37.	Individual	John Seelke	PSEg Services Corp	X		X		X	X				
38.	Individual	Sylvain Clermont	Hydro-Quebec TransEnergie	X									
39.	Individual	Rick Hansen	City of St. George			X		X				X	
40.	Individual	Bud Tracy	Blachly-Lane Electric Cooperative			X							
41.	Individual	Dave Markham	Central Electric Cooperative (CEC)			X							

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
42.	Individual	Dave Hagen	Clearwater Power Company (CPC)			X							
43.	Individual	Roman Gillen	Consumer's Power Inc. (CPI)	X		X							
44.	Individual	Dave Sabala	Douglas Electric Cooperative (DEC)								X		
45.	Individual	Bryan Case	Fall River Electric Cooperative (FALL)			X							
46.	Individual	Rick Crinklaw	Lane Electric Cooperative (LEC)			X							
47.	Individual	Michael Falvo	Independent Electricity System Operator		X								
48.	Individual	Michael Henry	Lincoln Electric Cooperative (Lincoln)								X		
49.	Individual	Jon Shelby	Northern Lights Inc. (NLI)			X							
50.	Individual	Ray Ellis	Okanogan County Electric Cooperative (OCEC)			X							
51.	Individual	Rick Paschall	Pacific Northwest Generating Cooperative (PNGC)			X	X				X		
52.	Individual	Heber Carpenter	Raft River Rural Electric Cooperative (RAFT)			X							
53.	Individual	Steve Eldrige	Umatilla Electric Cooperative	X		X							
54.	Individual	Marc Farmer	West Oregon Electric Cooperative (WOEC)			X							
55.	Individual	Steve Alexanderson	Central Lincoln			X	X					X	
56.	Individual	Saurabh Saksena	National Grid	X		X							
57.	Individual	Darryl Curtis	Oncor Electric Delivery Company LLC	X									
58.	Individual	Roger Meader	Coos-Curry Electric Coooperative			X							
59.	Individual	Kirit Shah	Ameren	X		X		X	X				
60.	Individual	Guy Andrews	Georgia System Operations Corporation			X	X						
61.	Individual	Andrew Gallo	City of Austin dba Austin Energy	X		X	X	X	X				
62.	Individual	Andy Pusztai	ATC LLC	X									
63.	Individual	David Kahly	Kootenai Electric Cooperative			X							
64.	Individual	Linda Jacobson-Quinn	Farmington Electric Utility System			X							
65.	Individual	Mary Downey	City of Redding Electric Utility			X	X	X	X				

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
66.	Individual	Paul Cummings	City of Redding					X					
67.	Individual	Edwin Tso	Metropolitan Water District of Southern California	X									
68.	Individual	Rex Roehl	Indeck Energy Services					X					
69.	Individual	Keith Morisette	Tacoma Power	X		X	X	X	X				
70.	Individual	Tracy Richardson	Springfield Utility Board			X							
71.	Individual	Frank Cumpton	BGE	X									
72.	Individual	Gary Carlson	Michigan Public Power Agency					X					

1. **Page one of the 'Detailed Information to Support an Exception Request' contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one that is missing? Please be as specific as possible with your comments.**

Summary Consideration: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception application form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the application to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the application process. The SDT again points to the variations that will abound in the applications as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the application details, the SDT believes that both

sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO panel for adjudication.

Now, the commenters could point to lack of direction being supplied to the ERO panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the Bulk Electric System. The SDT firmly believes that the technical prowess of the ERO panel, the visibility of the process, and the experience gained by having this same panel review multiple applications will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception application form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved."

The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Finally, the SDT would point to the SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

The SDT clarified the point that an entity may submit any information that it feels will help support its request as follows:

Page 1 - List any attached supporting documents and any additional information that is included to supports the request:

Organization	Yes or No	Question 1 Comment
Northeast Power Coordinating Council	No	How an exception application will be assessed by the RE and NERC is not addressed in the document. Stakeholders need to know how the exception application will be evaluated and processed. Suggest that the SDT develop a reference or a guidance document as part of the RoP that will provide guidance to Registered Entities, Regional Entities and the ERO on how an exception application will be processed. Of particular concern is the lack of clarity and specificity with respect to what analyses and study results are required under the third bullet on page 1 and under question 4 on both pages 2 and 4. This lack of clarity and specificity will lead to inconsistent application of the Technical Principles by both Registered Entities and Regional Entities. We recommend the following: the impact and performance analyses required by the 3rd bullet on page 1 and by #4 on pages 2 and 4 should be stipulated to be all analyses, scenarios, and contingencies required under NERC Standard TPL-002-1 with the "exception element" removed from the base system model. Entities shall report on all key performance measures of BES reliability specified in the TPL-002-1 attributable to the removed "exception element". On page 1 under General Instructions, it is stated that:"A one-line breaker diagram identifying the facility for which the exception is requested must be supplied with every application. The diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested."What is meant by interface points?
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT		

Organization	Yes or No	Question 1 Comment
would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the		

Organization	Yes or No	Question 1 Comment
bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. As far as developing reference or guidance documents, the SDT will consider this recommendation in Phase II of the project. The recommendation to use "the impact and performance analyses required by the 3rd bullet on page 1 and by #4 on pages 2 and 4 should be stipulated to be all analyses, scenarios, and contingencies required under NERC Standard TPL-002-1 with the "exception element" removed from the base system model" could be viable as a form of evidence an entity may want to submit if the entity believes this test provides evidence for the exception of an Element(s). The SDT encourages the submitting entity to provide any additional information or explanation in the comments section of the questions that it believes will assist in the review of its Exception Request. The SDT has made a clarifying change to the page 1 instructions to make this point clearer. Also see the answer to question #4.		

Organization	Yes or No	Question 1 Comment
Page one: List any attached supporting documents and any additional information that is included to supports the request: As far as interface points, the SDT agrees with BPA's suggestion that the interface point is the point requested by the entity seeking the exception where the Element or Elements interconnect(s) to Bulk Electric System Elements.		
ACES Power Marketing Standards Collaborators	No	The first sentence only refers to element(s) designated as excluded. Element(s) designated as included under the BES definition, shouldn't have to go through the exception process either.
Response: The SDT agrees with this comment. This language was added to clarify that Elements that are excluded (or included) do not have to go through the Exception Process unless they are attempting to change to classification of their Elements.		
WECC Staff	No	WECC has several concerns with the instructions on the checklist regarding the studies: o Study Case - The instructions state the study case that should be used, "Be based on an Interconnection-wide base case that is suitably complete and detailed to reflect the facility's electrical characteristics and system topology." The phrase "suitably complete and detailed" is vague. WECC recommends clarification of this phrase and the addition of specific requirements for what will constitute an appropriate case. Allowing the entity requesting an exception to choose any Interconnection-wide case could allow an inappropriate choice of case and could lead to inconsistent study results. If there are no requirements for the chosen case, then it is possible that the most favorable case to an entity's argument will be chosen. In some instances that choice would likely be appropriate, but in others it would not necessarily be appropriate. At a minimum, there should be further description - and preferably, specific requirements - guiding the determination of which study case is most appropriate. Of particular importance in clarifying what case is an appropriate case, is the timeliness of the case. WECC recommends requiring that a recent case be used. In addition, if each entity is able to chose its own case, without further

Organization	Yes or No	Question 1 Comment
		requirements, there will be no way for the Regional Entity or NERC to ensure consistency of determinations with respect to the elements tested. o The entities are asked to address key performance measures of BES reliability through the studies. This instruction is vague concerning what the study must investigate and it leaves it up to the entity to determine the key performance measures. The "key performance" measures should be consistent with respect to similar elements and there is no way to ensure that if there are no specifications regarding such measures. The exceptions process must be objective and clear as to what performance measures need to be met for the process to be implemented consistently. WECC recommends further clarification and the addition of specific requirements beyond the guidance related to consistency with Transmission Planning (TPL) standards. o The background information on the comment form states: "The same checklist will be utilized for exceptions dealing with inclusions or exclusions." But there is no mention of this in the document. A note should be added to the checklist instruction to state that the same checklist will be used for exclusions and inclusions.

Response: In response to the comment about an appropriate base case, the SDT expects the entity seeking an exception to supply an appropriate base case that the Regional Entity will acknowledge as appropriate. Not indicating the explicit types of studies or base cases to be provided and how to interpret the information in the application process does not fail to provide a basis for the Regional Entity to determine what constitutes an acceptable submittal.

The SDT again points to the variations that will abound in the applications as negating any hard and fast rules in this regard. However, this is not something that hasn't been handled before and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the application details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to move upward to the ERO panel for a final determination.

The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would

Organization	Yes or No	Question 1 Comment
like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being		

Organization	Yes or No	Question 1 Comment
made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. As to the last comment, the SDT finds this wording redundant and not providing any additional clarity. No change made.		
Dominion	No	Given that the second sentence in the 1st paragraph of this comment form reads "This same process would be used by Registered Entities to justify including Elements in the BES that might otherwise be excluded according to the proposed definition and designations.", Dominion suggests that the 1st

Organization	Yes or No	Question 1 Comment
		sentence under General Instructions be revised to read "A one-line breaker diagram identifying the facility for which the exception (or inclusion) is requested must be supplied with every application. The diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception **(or inclusion)** is being requested."
Response: The SDT reviewed the suggestion to add the phrase "(or inclusion)"and has elected to keep the original language because the term Exception includes both Exclusions and Inclusions.		
Pepco Holdings Inc	No	1) Why must the one-line diagram supplied show the Protection Systems at the interface points associated with the elements for which the exception is being requested? Since Protection Systems are not part of the new bright-line BES definition why would their presence, or absence, on the one-line diagram influence the exception process? 2) The third bullet needs additional detail of what is being requested. The phrase "...key performance measures.." and use of methodologies described in TPS Standards does not provide sufficient direction needed. (see question #4)
Response: In response to the question about including Protection Systems, the SDT has used the term "should also show the Protection Systems". This is not mandatory; however the SDT has suggested this because the criterion for the evaluation of an exception is "the Elements are necessary for the reliable operation of the interconnected bulk power transmission system". As an example, the elements could be part of a Special Protection System or RAS thus they could help the ERO to identify the Elements "necessary for Reliable Operation…" No change made. The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and		

Organization	Yes or No	Question 1 Comment
received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled		

Organization	Yes or No	Question 1 Comment
separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. Also, see the answer to question #4.		
Electricity Consumers Resource Council (ELCON)	No	The exception request form should begin with a question asking if the inclusion was triggered by the entity responding to an emergency request by the applicable BA, RC or TOP. The entity's response to support recovery from an emergency may have resulted in (1) power flows through the entity's facility into the BES, and/or (2) power injections to the BES that exceed the 20/75-MVA thresholds. The entity should not be required to provide detailed data and studies (as described in the "General Instructions") if either of those conditions would not have occurred but for

Organization	Yes or No	Question 1 Comment
		an emergency situation.
Response: While the SDT seriously doubts that such a situation will occur, the entity can choose the amount of and type of evidence to present; if the entity feels that abnormal operation should be considered in the evaluation of the Element(s) then they should supply that information to help explain its position.		
AECI and member G&Ts	No	An opening statement of this form should make it clear that, prior to its determination, the Facilities within scope of this exemption request, remain included or excluded based upon the basic BES Definition Bright Line criteria Inclusions and Exclusions.
Response: This is a question that relates to the proposed ERO Rules of Procedure Appendix 5C. This question was forwarded to the RoP team.		
Hydro One Networks Inc.	No	On the posted document, we did not find how an exception application will be assessed by the RE and NERC. We believe that there is a huge gap and a lack of transparency for all stakeholders on how the exception application will be evaluated and processed. We strongly suggest that the SDT develop a reference or a guidance document as part of the RoP that will provide guidance to Registered Entities, Regional Entities and the ERO on how an exception application would/should be processed.
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say		

Organization	Yes or No	Question 1 Comment
		that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and

Organization	Yes or No	Question 1 Comment
consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. In response to the comment about developing reference or guidance documents, the SDT will consider this recommendation in Phase II.		
Duke Energy	No	Need to include identification of any System Protection Coordination considerations per PRC-001-1. Also, we believe that a system map showing the geographical location of the facility(s) should be supplied with the request.
Response: The detail of the diagrams and the type of diagrams suggested by Duke could be viable forms of evidence that an entity may want to submit if the entity believes they provide evidence to support the exception of an Element. Additionally, the SDT encourages the submitting entity to provide any additional information or explanation in the comments section of the questions that it believes will assist in the review of its Exception Request.		

Organization	Yes or No	Question 1 Comment
Consolidated Edison Co. of NY, Inc.	No	Con Edison's overall concern is the lack of clarity and specificity with respect to what analyses and study results are required under the 3rd bullet on page 1 and under #4 on pages 2 and 4. This lack of clarity and specificity will lead to inconsistent application of the Technical Principles by both Registered Entities and Regional Entities. We recommend the following: the impact and performance analyses required by the 3rd bullet on page 1 and by #4 on pages 2 and 4 should be stipulated to be all analyses, scenarios, and contingencies required under NERC Standard TPL-002-1 with the "exception element" removed from the base system model. Entities shall report on all key performance measures of BES reliability specified in the TPL-002-1 attributable to the removed "exception element". Note that references to NERC Standard TPL-001-2 should not be made in the Technical Principles document as TPL-001-2 has not yet been filed with (nor approved by) FERC. General Instructions One-Line Breaker Diagram questions and comments: Page 1, paragraph 2: Please explain the phrase "at the interface points." Where is this location? Please provide several examples, i.e., for a radial, a local network, a generator, a transformer, a substation buss, and for other Elements (PARs, reactors, UFLS panels, relays and switches).

Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a

Organization	Yes or No	Question 1 Comment
		single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

Organization	Yes or No	Question 1 Comment
Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. 2. TPL-001-2 has been approved by the NERC Board of Trustees. As per drafting team guidelines, this document is now to be used in all cases where the TPL standards are referenced in other standards projects. 3. In response to the comment about interface points, the SDT agrees with BPA's suggestion that the interface point is the point requested by the entity seeking the exception were the Element or Elements interconnect(s) to Bulk Electric System Elements.		
New York State Dept. of Public Service	No	Missing from the document are any indicators as to how much information is sufficient, how the information will be evaluated, what weight will be given to the individual pieces of information, etc.
ReliabilityFirst	No	These instructions are at a very high level and provide no clear guidance on what is required. ReliabilityFirst Staff believes each bulleted item needs to provide clear expectations. As an example in bullet #2 "Clearly document all assumptions used", the document and this bullet should include guidance such as what base case transfers were included, a list of facilities that were

Organization	Yes or No	Question 1 Comment
		assumed out of service, new facilities places in service and system load levels, etc.

Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for

Organization	Yes or No	Question 1 Comment
adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.		
Manitoba Hydro	No	

Organization	Yes or No	Question 1 Comment
Response: Without any specific comment the SDT is unable to respond.		
Orange and Rockland Utilities, Inc.	No	In the first paragraph "Entities that have Element(s) designated as excluded, under the BES definition and designations, do not have to seek exception for those Elements under the Exception Procedure.", before the "General Instruction" it should have had another sentence saying that "for those who do not clearly meet the Inclusions and Exclusions should use the following instructions". Otherwise, it's still not very clear.
Response: The SDT would like to point out that the "Detailed Information to Support an Exception Request" is only one section of the Exception Form. For clarity, please refer to the complete form contained as part of the proposed ERO Rules of Procedure Appendix 5C; also, see the RoP's flow chart that outlines the process.		
ISO New England Inc	No	It is unclear what the purpose of submitting diagrams showing the Protection Systems is and we do not feel that it should be a requirement at the onset of the exception process. In the first bullet, we do not feel that the term "Interconnection-wide base case" is required as the phrase "suitably complete and detailed" should provide enough guidance to the submitter that inappropriate equivalent representations would not be accepted. The concern is that one could interpret "Interconnection-wide base case" as the entire Eastern Interconnection model is a requirement.
Response: In response to the question about including Protection Systems, the SDT used the term "should also show the Protection Systems". This is not mandatory; however the SDT has suggested this because the criterion for the evaluation of an Exception is "the Elements are necessary for the Reliable Operation of the interconnected bulk power transmission system". As an example, the elements could be part of a special protection system or RAS thus they could help the ERO to identify the Elements "necessary for Reliable Operation…" No change made. In response to the comment about a base case, the SDT expects the entity seeking an exception to supply a Base Case that the Regional Entity will acknowledge as appropriate. The SDT points to the variations that will abound in the applications as negating		

Organization	Yes or No	Question 1 Comment
any hard and fast rules in this regard. However, this is not something that hasn't been handled before and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the application details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to move upward to the ERO panel for a final determination. No change made.		
PSEg Services Corp	No	What is meant by "key performance measures of BES reliability" in the third bullet? A descriptive list would be helpful.
Response: As to the lack of key performance measures, the SDT refers the commenters to Appendix 5C of the proposed ERO Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. No change made.		
Hydro-Quebec TransEnergie	No	We believe that the new Technical Principles are better than the previous ones, as they allow flexibility for an Entity to make their case with technical justifications. However, without any guide or specific criteria, it does not allow an Entity to identify the real possibility to obtain an exception. It is not clear at all what will guide the Region or ERO to make their decision to grant or not the exception. In order give confidence to the Industry in the procedure, it would be necessary to define the elements that will guide the decision. Will impact base study be accepted? Will the threshold differences with Quebec Interconnection be accepted?
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and		

Organization	Yes or No	Question 1 Comment
received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled		

Organization	Yes or No	Question 1 Comment
separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. The SDT refers Hydro-Quebec to Appendix 5C of the proposed ERO Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected bulk transmission system. Further, Reliable Operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. As far as a difference for the Quebec Interconnection, the SDT encourages the submitting entity to provide any additional information or explanation in the comments section of the questions that it believes will assist in the review of its Exception Request.		

Organization	Yes or No	Question 1 Comment
City of St. George	No	While the general instruction information outlined is applicable, it lacks sufficient detail to know exactly what is needed to be submitted. More importantly the general instructions and the overall document lacks criteria that if met (through study and other documentation methods) would allow for exclusion from or inclusion to the BES. Something similar to the criteria or concepts used in the Appendix 1 of the Local Network Exclusion justification document is needed. Clear criteria should allow an entity to determine with a reasonable degree of certainty that if the criteria are met as demonstrated by the associated study effort that an exemption can be obtained. Otherwise without that criteria, the process will be not far from where the exemption process is today, which will be costly, time consuming and frustrating for the registered entities as well as the regions and NERC. The process needs to be repeatable and consistent between all regions and entities. Entities need to know what is expected and where the finish line is. As presently written each region and NERC would have to develop their own criteria individually and will be open to opinions which could change as personnel changes occur in a given position or panel.

Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity

Organization	Yes or No	Question 1 Comment
plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or		

Organization	Yes or No	Question 1 Comment
response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. In response to clear criteria, the SDT refers the commenters to Appendix 5C of the proposed ERO Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements.		
Georgia System Operations Corporation	No	: The last half of the first sentence should be changed to "do not have to seek an Exclusion Exception under the Exception Procedure for the Element(s)." The use of "Element(s)" relates back to that term at the start of the sentence, and the reference to an "Exclusion Exception" is necessary because an entity (albeit probably not the Owner), still may choose to seek an Inclusion Exception for such an Element(s). In the 3rd bullet, the reference should be to TPL standards (plural).
Response: In response to the suggestion to change the first sentence, the SDT would like to point out that the "Detailed Information to Support an Exception Request" is only one section of the Exception Form. For further clarity, please refer to the complete Exception form contained as part of the proposed ERO Rules of Procedure Appendix 5C; also, see the RoP's flow chart that outlines		

Organization	Yes or No	Question 1 Comment
the process. No change made. The SDT notes that there is now only one TPL standard, TPL-001-2; TPL-001-2 has been approved by the NERC Board of Trustees. As per drafting team guidelines, this document is now to be used in all cases where the TPL standards are referenced in other standards projects. No change made.		
ATC LLC	No	Since an Exception Request may be for approval to designate identified Element(s) as either excluded from or included in the BES, the wording of the first sentence should be changed and the request should clearly indicate (e.g. exclusion/inclusion check boxes) whether the request regards exclusion or inclusion of the Element(s). Here is some draft wording for consideration: Entities that have Element(s) that are included under the BES definition and designations, but seek to have them designated as excluded from the BES or that that have Element(s) that are excluded under the BES definition and designations, but seek to have them designated as included in the BES should submit an Exception Request according to the NERC Exception Procedures and provide detailed information to support the Exception Request as indicated below. In addition, ATC suggests the following clarifying edit. Entities that have BES Element(s) considered as excluded under the BES definition and designations, do not have to seek exception for those Elements under the Exception Procedure.
Response: In response to the suggestion to change the first sentence, the SDT would like to point out that the "Detailed Information to Support an Exception Request" is only one section of the Exception Form. For further clarity, please refer to the complete form contained as part of the proposed ERO Rules of Procedure Appendix 5C; also, see the RoP's flow chart that outlines the process. The SDT would refer the commenter to the first line of page 1 which clearly states this fact. No change made.		
Farmington Electric Utility System	No	The general instructions presented are primarily components to substantiate an Exception Request. However, a cover sheet (template) should be created that includes overall identifying information of the Submitting Entity and the

Organization	Yes or No	Question 1 Comment
		and the Owner if the if they are not the same - the template should align with the draft Appendix 5C Section 4.5.1 of the NERC Rules of Procedure. An Exception Request can be submitted for Inclusion or Exclusion of the BES. The first sentence in the form, "Entities that have Element(s) designated as excluded, under the BES definition and designations, so not have to seek exception for those Element(s) under the Exception Procedure. This would not be true if a Submitting Entity is seeking an Inclusion Exception. FEUS recommends revising to include Inclusion Exception Requests.
Response: The SDT acknowledges that the "Detailed Information to Support an Exception Request" is only one section of the Exception Form and in itself lacks required information; the complete form contains the information suggested by the commenter. The full Exception form is part of the proposed ERO Rules of Procedure Appendix 5C; also, see the RoP's flow chart that outlines the process.		
Transmission Access Policy Study Group		Glossary terms should be capitalized throughout the document. Lowercase "facility," especially, should not be used. The document should use "Element" instead. The term "interface points," while common, may not have a sufficiently common understanding to be used in this context. "Boundaries of the Element(s) for which the exception is being requested" may express the SDT's meaning more clearly.
Response: The SDT agrees with the commenter and the form was edited to use the term Element instead of Facility where appropriate. In response to the comment about interface points, the SDT agrees with BPA's suggestion that the interface point is the point requested by the entity seeking the exception were the Element or Elements interconnect(s) to Bulk Electric System Elements.		
Tri-State Generation and Transmission Assn., Inc. Energy Mangement		This question is actually asking two questions; Tri-State's answers would be No & Yes. There needs to be a better introduction to what and why the exception is being requested.

Organization	Yes or No	Question 1 Comment
TSGT G&T		This question is actually asking two questions; Tri-State's answers would be No & Yes. There needs to be a better introduction to what and why the exception is being requested.
Response: This is a question that relates to the proposed ERO Rules of Procedure Appendix 5C. This question was forwarded to the RoP team.		
American Electric Power	Yes	Though we have no objections to the proposed content, this is contingent on the number and type of elements eventually found included or excluded as a result of the BES definition itself which is still being drafted. Any changes in that definition could in turn cause us concern regarding these general instructions. There needs to some provision for cases where specific elements which are not specifically contained within the studies. It needs to be clear what additional analysis needs to be provided under those circumstances. We recommend that the owner of the asset be identified as part of the general instructions. In the case of wind resources, how is individual gross nameplate information to be reported?
Response: In response to a provision for specific elements not contained in studies, the SDT encourages the submitting entity to provide any additional information or explanation in the comments section of the questions that it believes will assist in the review of its Exception Request. Additionally, the exception form has been clarified to bring home that point. **Page one**: List any attached supporting documents and any additional information that is included to supports the request: The owner of the asset is identified in the instructions that are being proposed as part of the ERO Rules of Procedures changes. This revised definition does not change the way that wind resources are reported.		

Organization	Yes or No	Question 1 Comment
Snohomish County PUD Blachly-Lane Electric Cooperative Central Electric Cooperative (CEC) Clearwater Power Company (CPC) Consumer's Power Inc. (CPI) Douglas Electric Cooperative (DEC) Fall River Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (Lincoln) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) Umatilla Electric Cooperative West Oregon Electric Cooperative (WOEC) Coos-Curry Electric Coooperative City of Austin dba Austin Energy Kootenai Electric Cooperative	Yes	SNPD agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. SNPD is concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. SNPD envisions that at least four different kinds of documents would be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details. SNPD suggests that a generic example of a completed form be provided to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts.
Response: The various diagrams suggested by SNPD could be viable as forms of evidence that an entity may want to submit if the		

Organization	Yes or No	Question 1 Comment
entity believes they provide evidence to support the exception of an Element. As far as developing generic examples, reference, or guidance documents, the SDT agrees with SNPD that this should be considered in Phase II of the project.		
Southern Company Generation	Yes	In the third bullet under the list of study attributes, it is very important to specifically list the "key performance indicators of BES reliability". This will assist in pointing the studies to focus on the issues relevant to determining the signifacance of the exception request.
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be		

Organization	Yes or No	Question 1 Comment
provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to		

Organization	Yes or No	Question 1 Comment
consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. Also, see the answer to question #4.		
Holland Board of Public Works	Yes	The requirement to base flow studies on an “interconnection-wide base case" is likely to include many more lines and buses than necessary to model the impact of a facility that is not material to the BES. Holland BPW request the words “or regional reduction of such a case” be added after “interconnection-wide base case” to avoid unnecessary expense and detail if a more limited study set is adequate to demonstrate the lack of material impact of the facility(ies) in question.
Michigan Public Power Agency	Yes	The requirement to base flow studies on an “interconnection-wide base case" is likely to include many more lines and buses than necessary to model the impact of a facility that is not material to the BES. MPPA and its members request the words “or regional reduction of such a case” be added after “interconnection-wide base case” to avoid unnecessary expense and detail if a more limited study set is adequate to demonstrate the lack of material impact of the facility(ies) in question.
Response: In response to the comment about a reduction base case, the SDT expects the entity seeking an exception to supply a Base Case that the Regional Entity will acknowledge as appropriate. The SDT points to the variations that will abound in the applications as negating any hard and fast rules in this regard. However, this is not something that hasn’t been handled before and there is a great deal of professional experience involved on both the submitter’s and the Regional Entity’s side of this equation. Having viewed the application details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to move upward to the ERO panel for a final determination. No change made.		
Bonneville Power Administration	Yes	BPA suggests clarifying that the interface point is the point where the entity seeking the exception’s facility or facilities interconnect(s) to the Bulk Electric System facility.

Organization	Yes or No	Question 1 Comment
		Page 1 states "Supporting statements for your position from other entities are encouraged." BPA believes coordination with affected systems should be required under the exemption process.
Response: In response to the comment about interface points, the SDT agrees with BPA's suggestion that the interface point is the point requested by the entity seeking the exception were the Element or Elements interconnect(s) to Bulk Electric System Elements. As for the comment about coordination, the SDT refers the commenter to Appendix 5C of the proposed NERC Rules of Procedure, Section 4.5.2. This section requires the submitting entity to submit a copy of the Exception Request Form Section II to each Planning Coordinator, Reliability Coordinator, Transmission Operator, Transmission Planner, and Balancing Authority that has (or will have upon inclusion of the Element(s) in the BES) the Elements covered by an Exception Request within its Scope of Responsibility.		
Independent Electricity System Operator	Yes	
Central Lincoln	Yes	
National Grid	Yes	
Oncor Electric Delivery Company LLC	Yes	
Ameren	Yes	
Long Island Power Authority	Yes	
Consumers Energy	Yes	
NV Energy	Yes	
Central Hudson Gas & Electric	Yes	

Organization	Yes or No	Question 1 Comment
Corporation		
Exelon	Yes	
Transmission	Yes	
PacifiCorp	Yes	
NERC Staff Technical Review	Yes	
IRC Standards Review Committee	Yes	
City of Redding Electric Utility	Yes	
City of Redding	Yes	
Tacoma Power	Yes	Tacoma Power supports the instructions as written.
Springfield Utility Board	Yes	SUB agrees with the instructions, finding them to be clear and reasonable.
BGE	Yes	No comment.
Southwest Power Pool Standards Review Team	Yes	
SERC Planning Standards Subcommittee	Yes	
Response: Thank you for your support.		

2. **Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there information that you believe needs to be on page two or three that is missing? Please be as specific as possible with your comments.**

Summary Consideration: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it had become obvious to the SDT that the simple answer that so many sought is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception application form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the Exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. The SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the application to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the Exception Request. Conversely, an argument could be raised that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information are not shown in the application process. The SDT again points to the variations that will abound in the applications as negating any hard and fast rules. However, this is not something that has not been handled before and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of the Exception process. Having viewed the application details, the SDT believes that both sides can quickly arrive at

a resolution as to what information needs to be supplied for the submittal to move upward to the ERO panel for a final determination.

While commenters point to lack of direction being supplied to the ERO panel as to specific guidelines for them to follow in making their decision, the SDT re-iterates the problem with providing such hard and fast rules. There are too many variables to consider. Providing concrete guidelines is going to tie the hands of the ERO panel and inevitably result in poor decisions. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical expertise of the ERO panel, the visibility of the process, and the experience gained by having the hindsight resulting from reviewing multiple applications will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception application form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2, which states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved."

The SDT has made several minor changes made to the specific items in the form in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Finally, the SDT would point to the SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

The SDT affirms the requirement to provide the most recent consecutive two calendar year period minimum and maximum magnitude of the power flow out of the Element(s) for which an Exception is sought. The SDT believes that a single year's data is

insufficient to determine a pattern of flow on the Element(s). Moreover, many of the NERC Standards already require longer data retention periods; typically for a full audit period which is either three or six years. See NERC Compliance Process Bulletin #2009-005, Current In-Force Document Data Retention Requirements for Registered Entities, Version 1.0, at 1 (Jun.29, 2009). It should be noted that retaining three second data from an Energy Management System (EMS) or a Supervisory Control And Data Acquisition (SCADA) system is not sought in this instance.

The SDT declines to further define the "maximum magnitude of the power flow." It is up to the submitting entity to determine how best to present the information supporting their request and any responses provided by the submitting entity can be further described or qualified under the comments section.

The SDT has determined that information on Flowgate impacts and whether Element(s) are included in an Interconnection Reliability Operating Limit (IROL) are necessary to the Regional Entity's determination of whether an Element(s) is used to provide bulk power transfers within the Interconnections or whether the Element(s) is distribution. A number of interchange coordination Reliability Standards apply to these transfer paths and Flowgates. Accordingly, the SDT believes such facilities are necessary for the reliable operation of an interconnected electric transmission network and would not be excluded from the definition of the BES. Furthermore, the SDT understands that each Flowgate list may be added to or subtracted from based on prevailing system conditions, however, a core set of Flowgates will remain the same. It is up to the submitting entity to determine how best to present the information supporting their request and the nature of the Element(s) impact on a permanent flowgate can be further described or qualified under the comments section.

Due to comments received, the SDT made the following clarifying changes to the request form:

Page 1 - List any attached supporting documents and any additional information that is included to supports the request:

Q3. Please provide the appropriate list for ~~your~~the operating area where the Element(s) is located:

Q6. Is/Are the ~~facility~~ Element(s) part of a Cranking Path ~~associated with a Blackstart Resource~~ identified in a Transmission Operator's restoration plan?

Q7. If yes, then using metered or SCADA data for the most recent consecutive two calendar year period, what is the minimum and maximum magnitude of the power flow out of the ~~facility~~ Element(s)? ~~and d~~Describe the conditions and the time duration when this ~~could~~ occurs?

Organization	Yes or No	Question 2 Comment

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	For question 2 on page 2 For Transmission Facilities: o What standards will define the "impact"? o What is a material impact and a non-material impact? o What kinds and types of impacts are acceptable/unacceptable? o How are impacts determined? Question 6 on page 3 reads "Is the facility part of a Cranking Path associated with a Blackstart Resource?", suggest removing the reference to "Cranking Path" because the Drafting Team does not require that the BES be contiguous, and black start resource Cranking Paths were deleted from Inclusion I3. Question 7 on page 3 asks, "Does power flow through this facility into the BES?" This can only apply to a Local Network with two or more connections to the BES. No power should normally flow through a Local Network (or Radial system) to another portion of the BES. There may be occasional, brief reverse power flows may be acceptable during short periods under abnormal operating conditions. Question 7 also requests "data for the most recent consecutive two calendar year period." Why is two years worth of data necessary? One year of data would be sufficient. From Question 7, "what is the minimum and maximum magnitude of the power flow out of the facility ..." What is intended by the use of magnitude? Suggest that the Drafting Team adopt the FERC Seven Factor test for question 7. Suggest deleting the "% of the calendar year" check boxes in favor of a statement either that power does not flow through the Local Network, or alternatively, a blank space for reporting the net peak MWs and MWHs transferred annually through the facility, and the percentage of these transferred amounts to the peak and annual MWH demands served by the Local Network. Suggest requesting only one year (8,760 hours) of data covering four seasons,

Organization	Yes or No	Question 2 Comment
		including Summer and Winter capability periods.
Consolidated Edison Co. of NY, Inc.	No	Application Form Page 2For Transmission Facilities:Impacts:Flowgates: The Application form at 2 states, "How does the facility impact permanent Flowgates in the Eastern Interconnection ..." o What standards for "impact" does the BES SDT envision? o What is a material impact and a non-material impact? o What kinds and types of impacts are acceptable and/or unacceptable? o How are impacts determined, e.g., Power TFD method, short circuit analysis, A-10 method?Impact-Based Studies: Note that the FERC Seven Factor test is a time-tested method and FERC has identified it as an acceptable method for reliability purposes; for gauging the expected impact of an Element on the interconnected transmission grid. The NPCC A-10 method has been used extensively in the Northeastern U.S. and Canada, and is an impact-based approach. The power TDF (transfer distribution factor) method is also used by some to assess the impact of changing power flows on individual Elements within a system. FERC has studied using the 'TIER' method for classifying system Elements based on LBMP impacts. WECC uses a short circuit test. Page 3Cranking Path Issue: The Application form at 6 asks, "Is the facility part of a Cranking Path associated with a Blackstart Resource?"We understand that:(i) The drafting team does not require that the BES be contiguous, and (ii) Blackstart resource Cranking Paths were deleted from Inclusion I3. Recommendation: Delete the reference to "Cranking Paths" in this Application form. Power Flow Issue: The Application form at 7 asks, "Does power flow through this facility into the BES?" We assume that this can only apply to a Local Network with two or more connections to the BES. We believe that no power should normally flow through a Local Network (or Radial system) to another portion of the BES. Occasional, brief reverse power flows may be acceptable during short periods under abnormal operating conditions, e.g., a switch

Organization	Yes or No	Question 2 Comment
		normally open is briefly closed during a forced maintenance outage. The Application form at 7 requests the following: "data for the most recent consecutive two calendar year period." o Please explain why the BES SDT felt that two years worth of data was necessary, as one year of data would appear sufficient? Our experience has been that one year (8,760 hours) of data covers four seasons, including Summer and Winter capability periods, and is therefore sufficient. Requiring an extra year is perhaps unnecessarily burdensome on filing Entities, whether asset owners or Regional Entities. The Application form at 7 asks, "[W]hat is the minimum and maximum magnitude of the power flow outflow of the facility ..." o Please explain why the BES SDT used the term "magnitude" when requesting power outflow data? Recommendations: 1) We strongly recommend that the BES SDT adopt the FERC Seven Factor test for these purposes. The FERC Seven Factor test states that, o "Power flows into local distribution systems, and rarely, if ever flows out," and o "When power enters a local distribution system, it is not reconsigned or transported on to some other market." 2) We recommend deleting the "% of the calendar year" check boxes in favor of a statement either that power does not flow through the Local Network, or alternatively, a blank space for reporting the net peak MWs and MWH's transferred annually, and the percentage of these transferred amounts to the peak and annual MWH demands served by with the Local Network.3) We recommend requesting only one year (8,760 hours) of data covering four seasons, including Summer and Winter capability periods.
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on the Exception criteria. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that a simple answer is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and		

Organization	Yes or No	Question 2 Comment
		received very little in the form of substantive comments. Not indicating the explicit types of studies to be provided and how to interpret the information in the application process does not fail to provide a basis for the Regional Entity to determine what constitutes an acceptable submittal. The SDT again points to the variations that will abound in the applications as negating any hard and fast rules in this regard. However, this is not something that hasn't been handled before and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the application details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to move upward to the ERO panel for a final determination. As to the lack of direction being supplied to the ERO panel in the form of specific guidelines to follow, the SDT refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical expertise of the ERO panel, the visibility of the process, and the experience gained by having the hindsight resulting from reviewing multiple applications will result in an equitable, transparent, and consistent approach to the problem. Finally, there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. The SDT disagrees with eliminating the question pertaining to Cranking Path. It is important to realize a distinction between the BES definition and the Exception process. While the BES definition established bright-line criteria for the determination between BES and non-BES Element(s), the Exception Process requires an evaluation of all the responses and supporting materials provided as part of the Exception Request Form. No single response or piece of supporting information will be solely dispositive in an Exception Request evaluation. It is not correct to assume that simply because an evaluation criterion was removed from the bright-line definition it should also be eliminated from consideration in the Exception Process. The SDT believes that consideration of Cranking Paths is among the factors to be given consideration in the evaluation for an Exception Request application. Any further discussion of this issue is within the scope of the Phase II SAR. No change made. With respect to concerns about including power flowing through a local network in the Exception Request Form, these concerns fail to recognize the distinction between the BES definition and the Exception Process. As stated above, while the BES definition

Organization	Yes or No	Question 2 Comment

established bright-line criteria for the determination between BES and non-BES Element(s), the Exception Process requires an evaluation of all the responses and supporting materials provided as part of the Exception Request Form. The SDT believes that power flow through an Element into the BES is among the factors to be given consideration in the evaluation of an Exception Request. In fact, the example identified by commenters identifies one situation that requires such consideration; where occasional, brief reverse power flows may be acceptable during short periods under abnormal operating conditions. Further discussion of this issue is within the scope of the Phase II SAR. No change made.

The SDT affirms the requirement to provide the most recent consecutive two calendar year period minimum and maximum magnitude of the power flow out of the Element(s) for which an Exception is sought. The SDT believes that a single year's data is insufficient to determine a pattern of flow on the Element(s). Moreover, many of the NERC Standards already require longer data retention periods; typically for a full audit period which is either three or six years. *See* NERC Compliance Process Bulletin #2009-005, Current In-Force Document Data Retention Requirements for Registered Entities, Version 1.0, at 1 (Jun.29, 2009). It should be noted that retaining three second data from an Energy Management System (EMS) or a Supervisory Control And Data Acquisition (SCADA) system is not sought in this instance. No change made.

The SDT declines to further define the "maximum magnitude of the power flow." It is up to the submitting entity to determine how best to present the information supporting their request and any responses provided by the submitting entity can be further described or qualified under the comments section. No change made.

The General Instruction area on page one has been modified to clarify that a submitting entity may provide documents and any additional information, including Seven Factor Test related information, which supports their request. It is up to the Submitting entity to determine how best to present the information supporting their request. If the submitting entity wishes to provide this additional information it may do so by listing this information in the area provided under General Instructions in the Exception Request Form.

> **Page one**: List any attached supporting documents and any additional information that is included to supports the request:

The SDT has deleted the checkboxes in Question 7. To replace the checkboxes, language has been added requesting the submitting entity to describe the conditions and the time duration when power flow through Element(s) into the BES. It is up to the submitting entity to determine how best to present the information supporting their request.

> **Q7**. If yes, then using metered or SCADA data for the most recent consecutive two calendar year period, what is the minimum and maximum magnitude of the power flow out of the facility Element(s)? and dDescribe the conditions and the time duration when this could occurs?

Organization	Yes or No	Question 2 Comment
ACES Power Marketing Standards Collaborators	No	Q1, Q5 and Q6 have a "Description/Comments" section. What type of information should be included under the Description for each of these questions? Providing more guidance here would help achieve the "standardization, clarity and continuity of process" that we seek. Regarding Q2: A permanent flowgate should not be part of the detailed information to support an exception. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the "permanent" adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First, flowgates are created to manage congestion. The IDC is more of a congestion management tool than a reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve IROLs that have been violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The

Organization	Yes or No	Question 2 Comment
		characteristics of the flowgate make it a good proxy for estimating how much contractual use has been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROLs, many simply are not. We are unclear about what "an appropriate list" in Q3 is supposed to be. Is it supposed to be a list of all IROLs or only those for which the answer is yes? Why is a list even necessary since the answer to the question answers Exclusion E3.c? If the answer is no, is this asking the submitter to prove the negative?
Response: The SDT believes the guidance provided on Page 1 of the Exception Request Form is sufficient. A submitting entity may provide any additional information or explanation in the comments section of the questions that it believes will assist in the review of its Exception Request. No single response or piece of supporting information will be solely dispositive in an Exception Request evaluation and all responses and supporting information provided will receive consideration. It is up to the submitting entity to determine how best to present the information supporting their request in the comment area provided for each question. No change made. The SDT has determined that information on Flowgate impacts and whether Element(s) are included in an Interconnection Reliability Operating Limit (IROL) are necessary to the Regional Entity's determination of whether an Element(s) is used to provide bulk power transfers within the Interconnections or whether the Element(s) is distribution. A number of interchange coordination Reliability Standards apply to these transfer paths and Flowgates. Accordingly, the SDT believes such facilities are necessary for the reliable operation of an interconnected electric transmission network and would not be excluded from the definition of the BES. Furthermore, the SDT understands that each Flowgate list may be added to or subtracted from based on prevailing system conditions, however, a core set of Flowgates will remain the same. It is up to the submitting entity to determine how best to present the information supporting their request and the nature of the Element(s) impact on a permanent flowgate can be further described or qualified under the comments section. No change made. The SDT has clarified that the submitting entity is to provide the appropriate list of IROLs for the operating area where the Element(s) is/are located. **Q3**. Please provide the appropriate list for ~~your~~the operating area where the Element(s) is located:		
Bonneville Power	No	Regarding #4 on page 2: BPA believes the impact to the over-all reliability of

Organization	Yes or No	Question 2 Comment
Administration		the BES needs to consider more than just an outage of the facility requesting exclusion. One example is a contingency outage of a parallel facility that could cause an overload. Item 4 needs to include impacts of either the outage of the facility, or with the facility in service.BPA believes that the entity requesting an exception may not have information on impacts of the facility on parallel higher-voltage facilities because the NERC requirements for data sharing for these types of facilities does not necessarily include owners and operators of lower voltage systems. The entity requesting an exemption would likely need to coordinate with affected systems, and this coordination should be required in the exemption process so that affected systems are aware of the possible exclusion.
Response: The SDT will continue to monitor the process over next 12 months and if it is determined additional information is needed, such as how outages of BES facilities impact the Element(s) for which an exception is sought, it will be addressed in Phase II. Nevertheless, submitting entities are free to include information in response to any question that best supports their request for an exception. No change made. Coordination of an exception request with affected systems is already addressed in the Exception Rules of Procedure, Appendix 5C Sections 4.1, 4.4, 4.5.1, and 4.5.2, requiring the submitting entity, if not the facility owner, to provide a copy of the request to the facility owner, all involved Regional Entities if it is a cross-border facility, and to the Planning Coordinator, Reliability Coordinator, Transmission Operator, Transmission Planner, and Balancing Authority that has (or will have upon inclusion in the BES) the Elements covered by an exception request within its scope of responsibility.		
Pepco Holdings Inc	No	1) Why is Item 5 (Question pertaining to whether the facility is used for off-site power to a nuclear plant) included, since this criteria is not part of the proposed bright-line BES definition. 2) Similarly, why is Item 6 (Question pertaining to whether the facility is part of a Cranking Path associated with a Black Start Resource) included, since Black Start Cranking Paths were removed from the latest BES definition. Both Items 5 and 6 should be removed from the Exception Request Form.

Organization	Yes or No	Question 2 Comment
Response: The SDT disagrees with eliminating Questions 5 and 6. It is important to realize a distinction between the BES definition and the Exception Procedure. While the BES definition established bright-line criteria for the determination between BES and non-BES Element(s), the Exception Process requires an evaluation of all the responses and supporting materials provided as part of the Exception Request Form. No single response or piece of supporting information will be solely dispositive in an Exception Request evaluation. It is not correct to assume that simply because an evaluation criterion was removed from the bright-line definition it should also be eliminated from consideration in the Exception Process. The SDT believes that Cranking Paths and off-site power supply to a nuclear power plants are among the factors to be given consideration in the evaluation for an Exception Request. Further discussion of this issue is within the scope of the Phase II SAR. No change made.		
Electricity Consumers Resource Council (ELCON)	No	A sub-question should be added to Question 1 asking: (1) Does the generation serve all or a part of retail customer Load, and (2) If so, the maximum net capacity of each unit injected to the BES during non-emergency conditions.
Response: The General Instruction area on page one has been modified to clarify that a submitting entity may provide documents and any additional information that supports their request. If the submitting entity wishes to provide this additional information it may do so by listing this information in the area provided under General Instructions. No change made.		
AECI and member G&Ts	No	There is no basis in this draft Standard for including Item 6). Item 7) does appear appropriate within the Standard, but the intent of the four check-boxes is ambiguous.
Response: The SDT disagrees with eliminating the question pertaining to Cranking Path. It is important to realize a distinction between the BES definition and the Exception Procedure. While the BES definition established bright-line criteria for the determination between BES and non-BES Element(s), the Exception Procedure requires an evaluation of all the responses and supporting materials provided as part of the Exception Request Application Form. No single response or piece of supporting information will be solely dispositive in an Exception Request evaluation. The SDT believes that the Cranking Path is among the factors to be given consideration in the evaluation for an Exception Request application. Further discussion of this issue is within the scope of the Phase II SAR. No change made. The SDT has deleted the checkboxes in Question 7. To replace the checkboxes, language has been added requesting the submitting entity to describe the conditions and the time duration when power flow through Element(s) into the BES. It is up to the submitting		

Organization	Yes or No	Question 2 Comment
entity to determine how best to present the information supporting their request. Q7. If yes, then using metered or SCADA data for the most recent consecutive two calendar year period, what is the minimum and maximum magnitude of the power flow out of the ~~facility~~ Element(s)? ~~and d~~Describe the conditions and the time duration when this ~~could~~ occurs?		
NERC Staff Technical Review	No	In addition to describing how an outage of the facility under consideration affects the rest of the BES, the Submitting entity also should be required to provide an assessment of how outages of BES facilities affect the facility under consideration. This could be achieved with powerflow studies or distribution factor analysis.
Response: The SDT will continue to monitor the process over next 12 months and if it is determined additional information is needed, such as how outages of BES facilities impact the Element(s) for which an Exception is sought, it will be addressed in Phase II. Nevertheless, the General Instruction area on page one has been modified to clarify that a submitting entity may provide documents and any additional information that supports their request. If the submitting entity wishes to provide this additional information it may do so by listing this information in the area provided under General Instructions. No change made.		
IRC Standards Review Committee	No	We agree with most parts on P.2 and P.3, but question the need for Q6, which asks:"Is the facility part of a Cranking Path associated with a Blackstart Resource?"I3 in the BES definition stipulates that Blackstart Resources identified in the Transmission Operator's restoration plan be included (which we disagree and commented in the BES Definition Comment Form). There is no inclusion of any transmission facilities that are part of the cranking path. We suggest this item (Q6) be removed.
Response: The SDT disagrees with eliminating the question pertaining to Cranking Path. It is important to realize a distinction between the BES definition and the Exception Procedure. While the BES definition established bright-line criteria for the determination between BES and non-BES Element(s), the Exception Procedure requires an evaluation of all the responses and supporting materials provided as part of the Exception Request Form. No single response or piece of supporting information will be solely dispositive in an Exception Request evaluation. It is not correct to assume that simply because an evaluation criterion was removed from the bright-line definition it should also be eliminated from consideration in the Exception Procedure. The SDT believes		

Organization	Yes or No	Question 2 Comment
that Cranking Path is among the factors to be given consideration in the evaluation for an Exception Request application. Further discussion of this issue is within the scope of the Phase II SAR. No change made.		
PacifiCorp	No	Question 6 implies that if the facility is part of a designated blackstart cranking path then an exception request would most likely be denied. To the extent that was the intent, such an assumption would only be reasonable if the blackstart cranking path is the only path available. However, PacifiCorp suggests modifying the current Question 6 to reflect a situation in which multiple cranking paths are available, as follows:"6A. Is the facility part of a Cranking Path associated with a Blackstart Resource? 6B. If yes, does the Blackstart Resource have other viable Cranking Paths?"
Response: Several commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed ERO Rules of Procedure, Section 3.2 that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT has adopted clarifying language to differentiate between multiple Cranking Paths by requiring the Cranking Path "identified in a Transmission Operator's restoration plan." **Q6**. Is/Are the ~~facility~~ Element(s) part of a Cranking Path ~~associated with a Blackstart Resource~~ identified in a Transmission Operator's restoration plan?		
Snohomish County PUD	No	SNPD agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest three modifications to the proposed language to ensure consistency with Section 215 of the Federal Power Act, with the BES Definition, and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) SNPD suggests that a new question should be added concerning the function of the facility, which would read: "Does the facility function as a local distribution facility rather than a Transmission facility? If yes, please provide a detailed explanation of your answer." Section 215(a)(1) of the

Organization	Yes or No	Question 2 Comment
		FPA makes clear that “facilities used in the local distribution of electric energy” are excluded from the BES, 16 U.S.C. Â§ 824o(a)(1), and the most recent draft of the BES definition incorporates the same language. SNPD believes a question to address the function of the Element or system subject to an Exception Request is necessary to determine whether the Element or system is “used” in local distribution and thereby to ensure that this statutory limit on the BES is observed in the Exceptions process. Further, we believe a variety of information may be relevant to determining whether a particular facility functions as local distribution rather than as part of the BES. For example, if power is not scheduled across the facility or if capacity on the system is not posted on the relevant OASIS, it is likely to function as local distribution, not transmission. Similarly, if power enters the system and is delivered to load within the system rather than moving to load located on another system, its function is local distribution rather than transmission. SNPD proposes the language above as an open-ended question so that the entity submitting the Exceptions Request can provide this and any other information it deems relevant to facility function. (2) SNPD suggests modifying question 6 to “Is the facility part a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator’s restoration plan.” This language reflects the most recent revision of the BES Definition, which removes the reference to “Cranking Paths,” and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator’s restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (3) A general “catch-all” question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language:"Is there additional information not covered in the questions above that supports the Exception Request? If yes, please

Organization	Yes or No	Question 2 Comment
		provide the information and explain why it is relevant to the Exception Request."While SNPD believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.
Response: The General Instruction area on page one has been modified to clarify that a submitting entity may provide documents and any additional information that supports their request. It is up to the submitting entity to determine how best to present the information supporting their request. If the submitting entity wishes to provide this additional information it may do so by listing this information in the area provided under General Instructions. **Page one**: List any attached supporting documents and any additional information that is included to supports the request: The SDT has adopted clarifying language to differentiate between multiple Cranking Paths by requiring the Cranking Path "identified in a Transmission Operator's restoration plan." **Q6**. Is/Are the facility Element(s) part of a Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan?		
Duke Energy	No	Modify wording on #3 as follows: "Please provide the appropriate list for the operating area where the facility is located." Modify the wording on #6 as follows: "Is the facility part of a Cranking Path identified in an entity's restoration plan for a Blackstart Resource as required by EOP-005-2?"
Response: The SDT has accepted the recommended wording change to Question 3. **Q3**. Please provide the appropriate list for yourthe operating area where the Element(s) is located: The SDT has adopted clarifying language to differentiate between multiple cranking paths by requiring the cranking path "identified		

Organization	Yes or No	Question 2 Comment
in a Transmission Operator's restoration plan." **Q6**. Is/Are the ~~facility~~ Element(s) part of a Cranking Path ~~associated with a Blackstart Resource~~ identified in a Transmission Operator's restoration plan?		
ReliabilityFirst	No	All generating units, to some degree, affect the transmission elements that make-up the BES. What role will this effect have on the determination? If the systems are planned properly and the day-ahead analysis is done for maintenance work, the outage of any one element is moot. What is the phrase "impact the over-all reliability" getting at? These studies and analysis will need to look at multiple outages and groups of elements being taken out and excluded. Will this be on a first come, first out process? As for the Nuclear Plant Interface Requirement (NPIR) question, ReliabilityFirst Staff believes these facilities should always be included as part of the BES and taken out of the Detailed Information to Support an Exception Request. For question 6 ReliabilityFirst Staff believes the Cranking Path should be included in the BES definition. . ReliabilityFirst Staff feels that without including the Cranking Paths, the reliability of the system could be jeopardized if a restoration is required and the Cranking Paths are unavailable due to non-adherence to Reliability Standards. Omit question 7, E3 (LN) of the definition already talks to power flow and even if there is a small percentage of flow, it makes that entity a user of the BES, which should be included.
Response: The SDT refers the commenter to the phrase consistent 'with TPL methodologies' which the SDT believes will cover the item in question. The SDT reminds the commenter that the evaluation in question is not for removing the Element from service but simply from inclusion or exclusion in the BES. Therefore, there should be no problem with evaluating multiple requests in the same area and no first in, first out scenario. The questions on nuclear interface facilities and Cranking Paths will be retained. They are just one piece of information in the process		

Organization	Yes or No	Question 2 Comment
and the SDT considers them as important considerations. No change made. Question 7 will be retained. It is important to realize a distinction between the BES definition and the Exception Procedure. While the BES definition established bright-line criteria for the determination between BES and non-BES Element(s), the Exception Procedure requires an evaluation of all the responses and supporting materials provided as part of the Exception Request Form. No single response or piece of supporting information will be solely dispositive in an Exception Request evaluation. The SDT believes that power flow through this Element(s) into the BES is among the factors to be given consideration in the evaluation for an Exception Request application.		
Hydro-Quebec TransEnergie	No	
Manitoba Hydro	No	
Response: Without additional information, the SDT is unable to respond.		
Consumers Energy	No	We believe that item 6, should read "Is the facility part of a Primary Cranking Path associated with a Blackstart Resource?" Currently, the word "Primary" is not included.
Response: The SDT has adopted clarifying language to differentiate between multiple cranking paths by requiring the cranking path "identified in a Transmission Operator's restoration plan." **Q6**. Is/Are the ~~facility~~ Element(s) part of a Cranking Path ~~associated with a Blackstart Resource~~ identified in a Transmission Operator's restoration plan?		
Orange and Rockland Utilities, Inc.	No	Please clarify "facility" and include "N-1" for power-flow studying.
Response: In order to maintain consistency with the nomenclature used in the Exception Process Document, draft Appendix 5C of the NERC Rules of Procedure, the SDT has replaced "facilities" with "Element(s)", where appropriate. The SDT has pointed to the TPL methodology in the document and that should address your comment. No change made.		

Organization	Yes or No	Question 2 Comment
ISO New England Inc	No	- Question 1o The use of the words “connected to” is unclear. Some may read this as generation “directly” connected to while others could interpret it more generically. o A generation cut-off should be included in the requirement to list all indiv
Response: The SDT acknowledges and appreciates the comments but has determined no additional clarity is needed to Question 1. It is up to the submitting entity to determine how best to present the information supporting their request and any responses can be further described or qualified under the comments section to Question 1. No change made. The SDT does not believe a generation threshold is appropriate for listing all connected units. The SAR for Phase II of this project calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. No change made.		
PSEg Services Corp	No	Questions #4 requires an analysis of the “most severe impact” associated an outage of the Element proposed for exception. a. Both the newly Board approved TPL-001-2 standard and the existing TPL-004-1 require that severe contingencies be evaluated, but there are no performance requirements for them. If the team intended the “most-severe impact” analysis to only evaluate TPL outages that incorporate performance requirements, it should make that clear. b. The most-severe-outage impact question does not ask key relevant information such as: i. What is the probability that the “most severe impact “will occur? ii. Could the impact be readily mitigated and service restored? This point is critical because the impact of an outage lasting several minutes before restoration versus several hours before restoration should affect the analysis. What does question #7 (“Does power flow through this facility into the BES?”) with check boxes for various % of a calendar year that power flows into the BES) imply with respect to a transmission facility’s exception request? Also, is the % of a calendar year data intended to be forecasted data or historic data? It would seem that forecasted data would need to be supplied that is consistent

Organization	Yes or No	Question 2 Comment
		with the TPL models. Finally, why are historic flows requested - they have no relevance except for perhaps explaining historic and forecasted differences?
Response: The document cites that the TPL methodology should be followed and that should address your concern. An entity does not have to duplicate TPL studies. No change made. The SDT has replaced the checkboxes and language has been added requesting the submitting entity to describe the conditions and the time duration when power flow through Element(s) into the BES. It is up to the submitting entity to determine how best to present the information supporting their request. **Q7**. If yes, then using metered or SCADA data for the most recent consecutive two calendar year period, what is the minimum and maximum magnitude of the power flow out of the ~~facility~~ Element(s)? ~~and d~~Describe the conditions and the time duration when this ~~could~~ occurs? Historic flows are requested because they are an indication of power flow patterns. It is up to the submitting entity to determine how best to present the information supporting their request and any responses can be further described or qualified under the comments section.		
City of St. George	No	The questions for transmission facilities seem to be appropriate; however, how the answers are to be used by the region or NERC is unclear. Will a given response to a question make exclusion impossible? If so this needs to be known upfront and clearly documented. For example question 4, on page 2 is open for interpretation and debate as to what the impact to the over-all reliability of the BES is. The definition of "impact" is really the key to the whole definition effort. Load flow, voltage, frequency change limits may all be pieces to the puzzle. Are these criteria to be met in normal, N-1, N-2, etc. system configurations?
Response: Several commenters have asked whether a single 'yes' or 'no' response to an item on the exception application form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an		

Organization	Yes or No	Question 2 Comment
Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The document cites that an entity should follow the TPL methodology.		
Blachly-Lane Electric Cooperative Central Electric Cooperative (CEC) Clearwater Power Company (CPC) Consumer's Power Inc. (CPI) Douglas Electric Cooperative (DEC) Fall River Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (Lincoln) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric	No	BLEC agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest two modifications to the proposed language to ensure consistency with the BES Definition and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) We suggest modifying question 6 to "Is the facility part of a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (2) A general "catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While we believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.

Organization	Yes or No	Question 2 Comment
Cooperative (RAFT) Umatilla Electric Cooperative West Oregon Electric Cooperative (WOEC) Coos-Curry Electric Coooperative City of Austin dba Austin Energy Kootenai Electric Cooperative		
Response: The SDT has clarified the language of question 6. > **Q6**. Is/Are the ~~facility~~ Element(s) part of a Cranking Path ~~associated with a Blackstart Resource~~ identified in a Transmission Operator's restoration plan? The General Instruction area on page one has been modified to clarify that a submitting entity may provide documents and any additional information that supports their request. It is up to the submitting entity to determine how best to present the information supporting their request. If the submitting entity wishes to provide this additional information it may do so by listing this information in the area provided under General Instructions on the Exception Request Form. > **Page one**: List any attached supporting documents and any additional information that is included to support~~s~~ the request:		
Central Lincoln	Yes	We note that if Q7 is yes, an entity is asked to provide meter or SCADA data. Evidently the team assumes the facility in question is existing. We propose that study data could be provided instead for facilities that are in the planning stage.
Response: The SDT recommends that each submitting entity work with its Regional Entity to resolve issues with information availability or access and, in the event such information is not available, whether suitable replacement data is acceptable. The SDT further recommends that where information is unavailable, the submitting entity state such in the comment area and provide the reason for this unavailability. This will signal the Regional Entity that an issue concerning information availability will need to be		

Organization	Yes or No	Question 2 Comment
resolved as part of the review process. No change made.		
National Grid	No	We agree with the information requested on pages 2 and 3, however we would like more clarification regarding Item 7. When answering what % of the calendar year power flows through the facility into BES, should this be calculated on an hourly basis? We would also like clarification for Item 7 regarding the request for SCADA data from the last 2 years to determine the minimum and maximum magnitude of the power flow out of the facility. What data should be used in situations with new facilities or in situations or where the system configuration (topology) has changed in such a way that the power flows in the area have changed, so the last 2 years of SCADA data is no longer relevant
Response: The SDT has deleted the checkboxes in Question 7. To replace the checkboxes, language has been added requesting the submitting entity to describe the conditions and the time duration when power flow through Element(s) into the BES. It is up to the submitting entity to determine how best to present the information supporting their request. **Q7**. If yes, then using metered or SCADA data for the most recent consecutive two calendar year period, what is the minimum and maximum magnitude of the power flow out of the ~~facility~~ Element(s)? ~~and d~~Describe the conditions and the time duration when this ~~could~~ occurs? The SDT recommends that each submitting entity work with its Regional Entity to resolve issues with information availability or access and, in the event such information is not available, whether suitable replacement data is acceptable. The SDT further recommends that where information is unavailable, the submitting entity state such in the comment area and provide the reason for this unavailability. This will signal the Regional Entity that an issue concerning information availability will need to be resolved as part of the review process.		
Ameren	No	From our perspective, the first question should be “Is the facility connected at 100 kV or above?” The questions should be reordered. Of the questions listed, question #3 should be #1, and questions #1 should be the last question in this section.

Organization	Yes or No	Question 2 Comment
		Regarding the word "permanent" as it is used to describe Flowgates, it is suggested that the word "limiting" or "constrained" be used instead.
Response: The SDT does not believe the order of the questions is significant since no single response or piece of supporting information will be solely dispositive in an Exception Request evaluation and all responses and supporting information provided will receive consideration. No change made. The SDT believes that the continued qualifier of "permanent" associated with the term "Flowgate" addresses the intent of the definition. No change made.		
ATC LLC	No	ATC proposes the following changes to Item #7:7a. Are Firm Power Transfers scheduled to flow out of, or through, this facility into the BES in the operating horizon? [for BES designations applicable to the operating horizon] Note: The consideration for power flowing into the BES should be based on normal operating conditions or base case (n-0 contingency analysis), not on historical real-time telemetry. 7b. Are Firm Power Transfers reserved to flow out of, or through, this facility into the BES in the planning horizon? [for BES designations applicable to the planning horizon)
Response: The General Instruction area on page one has been modified to clarify that a submitting entity may provide documents and any additional information that supports the request. It is up to the submitting entity to determine how best to present the information supporting their request. If the submitting entity wishes to provide this additional information it may do so by listing this information in the area provided under General Instructions on the Exception Request Form. **Page one**: List any attached supporting documents and any additional information that is included to supports the request:		
Farmington Electric Utility System	No	The form should be titled "For Transmission Elements" rather than "Facilities" to align with the BES definition and Appendix 5C of the NERC Rules of Procedure. The form should align with section 4.5.1 and 4.5.2 of Appendix 5C. It should include a listing of the Element(s) and the status based on the application of the

Organization	Yes or No	Question 2 Comment
		BES Definition. Question 6 relates to a 'facility' that is part of a Cranking Path. The latest revision of the BES Definition removed the designated blackstart Cranking Paths from the Inclusion of the BES in I3. Having a question regarding the Cranking Path in the Exception Request makes it appear Cranking Paths are still automatically included in the BES. Question 7; what is an alternate method if a Requesting Entity does not have SCADA data for the most recent two consecutive calendar years.

Response: In order to maintain consistency with the nomenclature used in the Exception Process Document, draft Appendix 5C of the NERC Rules of Procedure, the SDT has replaced "facilities" with "Element(s)", where appropriate.

A checkbox for indicating the current BES status and a space for listing elements for which an exception is sought is included in Sections I and II, respectively, of the Exception Request Form provided by the Rules of Procedure Team in their posting.

The SDT disagrees with eliminating the question pertaining to Cranking Path. It is important to realize a distinction between the BES definition and the Exception process. While the BES definition established bright-line criteria for the determination between BES and non-BES Element(s), the Exception Process requires an evaluation of all the responses and supporting materials provided as part of the Exception Request Form. No single response or piece of supporting information will be solely dispositive in an Exception Request evaluation. It is not correct to assume that simply because an evaluation criterion was removed from the bright-line definition it should also be eliminated from consideration in the Exception process. The SDT believes that cranking paths is among the factors to be given consideration in the evaluation for an Exception Request application. Any further discussion of this issue is within the scope of the Phase II SAR. No change made.

The SDT further disagrees that including Question 6 in the Exception Request Form, relating to Element(s) that are a part of a Cranking Path, makes it appear that Cranking Paths are automatically included in the BES. The BES definition and the Exception Request Procedure are separate processes.

The SDT recommends that each submitting entity work with its Regional Entity to resolve issues with information availability or access and, in the event such information is not available, whether suitable replacement data is acceptable. The SDT further recommends that where information is unavailable, the submitting entity state such in the comment area and provide the reason for this unavailability. This will signal the Regional Entity that an issue concerning information availability will need to be resolved as part

Organization	Yes or No	Question 2 Comment
of the review process. No change made.		
Metropolitan Water District of Southern California	No	General Comments: Metropolitan Water District of Southern California ("MWDSC") believes that additional work is necessary to explain how this Detailed Information to Support an Exception Request will be used in evaluating whether a transmission facility will be an exception to the BES. In addition, MWDSC agrees WECC that the proposed Technical Principles for Demonstrating BES Exceptions Request is lack of clarity. It does not provide detail information as to what entities must provide to support their requests, nor does it provide any criteria for consistency among regions in their assessment of requests. Lastly, the current proposal leaves it to each region to develop its own methodology and criteria for evaluating the technical studies. MWDSC believes that drafting team should establish a common method and criteria to apply continent-wide in achieving uniformity and consistency among regions in their assessment of exception requests. Comments to Checklist #4: MWDSC recommends the following changes to emphasize facility impact on the interconnection of the BES:"How does an outage of the facility impact the over-all reliability of to the interconnection of the BES?" Comments to Checklist #7: What percentage of power flow through entity's facility into the BES will be considered as an exception to the BES?
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.		

Organization	Yes or No	Question 2 Comment
		There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled

Organization	Yes or No	Question 2 Comment
		separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. The SDT believes no further clarification is needed in Question 4. The General Instruction area on page one has been modified to clarify that a submitting entity may provide documents and any additional information that supports their request. It is up to the submitting entity to determine how best to present the information supporting their request. If the submitting entity wishes to provide this additional information it may do so by listing this information in the area provided under General Instructions on the Exception Request Form. > **Page one**: List any attached supporting documents and any additional information that is included to supports the request: The Exception Process requires an evaluation of all the responses and supporting materials provided as part of the Exception Request Form. There are no set thresholds, the percentage of power flow through and entity's facility into the BES will be but one factor

Organization	Yes or No	Question 2 Comment
among others considered when evaluating a BES Exception Request.		
Transmission Access Policy Study Group		Question 7 asks, "[d]oes power flow through this facility into the BES?" As in the rest of the document, the reference should be to an "Element(s)," rather than to a "facility." In addition, we suggest that the meaning of power flowing "through" the Element(s) be clarified, consistent with clarification of the same point in Exclusion E3 of the BES Definition. In TAPS' comments on the BES Definition, also submitted today, TAPS suggests that the first sentence of Exclusion E3 be revised to state: "Power flows only into the LN, that is, at each individual connection at 100 kV or higher, the pre-contingency flow of power is from outside the LN into the LN for all hours of the previous 2 years." We propose that Question 7 in the Detailed Information to Support an Exception Requests be similarly revised: "Does power flow from this facility into the BES, i.e., at any individual connection at 100kV or higher, is the pre-contingency flow of power from the LN to the BES for any hour of the previous 2 years?"
Response: In order to maintain consistency with the nomenclature used in the Exception Process Document, draft Appendix 5C of the NERC Rules of Procedure, the SDT has replaced "facilities" with "Element(s)" where appropriate. The SDT disagrees with the use of parallel language for exclusions in the BES Definition and Exception Request Form. It is important to realize a distinction between the BES definition and the Exception process. While the BES definition established bright-line criteria for the determination between BES and non-BES Element(s), the Exception Process requires an evaluation of all the responses and supporting materials provided as part of the Exception Request Application Form.		
Tri-State Generation and Transmission Assn., Inc. Energy Mangement		Again Yes/No is conflicting in the question. The requested information in#2 is too vague and may be subjective. If the information in#7 is requested in the planning stage the data would not be available. What objective criteria would be used to determine the state of the exception request?

Organization	Yes or No	Question 2 Comment
TSGT G&T		Again Yes/No is conflicting in the question. The requested information in#2 is too vague and may be subjective. If the information in#7 is requested in the planning stage the data would not be available. What objective criteria would be used to determine the state of the exception request?

Response: The SDT disagrees that the information requested in Question 2 is too vague and subjective but understands the concerns raised by the commenters in not receiving hard and fast guidance on the Exception criteria. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in

Organization	Yes or No	Question 2 Comment
		rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of

Organization	Yes or No	Question 2 Comment
experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. As to the availability of needed information to support an exception request, the SDT recommends that each submitting entity work with its Regional Entity to resolve issues with information availability or access, and in the event such information is not available, whether suitable replacement data is acceptable. The SDT further recommends that where information is unavailable, the submitting entity state such in the comment area and provide the reason for this unavailability. This will signal the Regional Entity that an issue concerning information availability will need to be resolved as part of the review process. Finally, there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.		
WECC Staff	Yes	The requested information in the checklist is appropriate. However; the exceptions process as drafted, with no objective criteria defining how to assess the submittals, leaves it to each Regional Entity to develop their own criteria to evaluate the responses to the checklist included in the submittals, leading to inconsistency between Regional Entities. In addition, WECC recommends clarifying Question 7. On its face it is unclear what defines power flowing through a facility in the BES. It should be clear whether a qualitative or quantitative response is required.
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.		

Organization	Yes or No	Question 2 Comment
		There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled

Organization	Yes or No	Question 2 Comment
		separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. The SDT has deleted the checkboxes under Question 7. To replace the checkboxes, language has been added requesting the submitting entity to describe the conditions and the time duration when power flow through Element(s) into the BES. If the answer is yes to the question "Does power flow through this Element(s) into the BES," the sub-question seeks a quantitative amount. However, it is up to the submitting entity to determine how best to present the information supporting their request and any responses can be further described or qualified under the comments section. **Q7**. If yes, then using metered or SCADA data for the most recent consecutive two calendar year period, what is the minimum and maximum magnitude of the power flow out of the ~~facility~~ Element(s)? ~~and d~~Describe the conditions and the time duration when this ~~could~~ occurs?

Organization	Yes or No	Question 2 Comment
Transmission	Yes	"Impact" and "degree of impact" in question 2 should be framed with the criteria expected.

Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides

Organization	Yes or No	Question 2 Comment
		can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes

Organization	Yes or No	Question 2 Comment
will result in a favorable outcome.		
American Electric Power	Yes	We recommend capitalizing “facility”.
Response: In order to maintain consistency with the nomenclature used in the Exception Process Document, draft Appendix 5C of the NERC Rules of Procedure, the SDT has replaced “facilities” with “Element(s)”, where appropriate.		
Long Island Power Authority	Yes	On page 3 why reference if a facility is part of a Cranking Path after the SDT has deleted Cranking Paths from the Inclusion list as part of the BES definition.
Response: It is important to realize a distinction between the BES definition and the Exception Procedure. While the BES definition established bright-line criteria for the determination between BES and non-BES Element(s), the Exception Procedure requires an evaluation of all the responses and supporting materials provided as part of the Exception Request Application Form. No single response or piece of supporting information will be solely dispositive in an Exception Request evaluation. It is not correct to assume that simply because an evaluation criterion was removed from the bright-line definition it should also be eliminated from consideration in the Exception process. The SDT believes that Cranking Path is among the factors to be given consideration in the evaluation for an Exception Request application. Further discussion of this issue is within the scope of the Phase II SAR. No change made.		
City of Redding Electric Utility	Yes	
City of Redding	Yes	
Georgia System Operations Corporation	Yes	
Oncor Electric Delivery Company LLC	Yes	
Independent Electricity System Operator	Yes	

Organization	Yes or No	Question 2 Comment
NV Energy	Yes	
Central Hudson Gas & Electric Corporation	Yes	
Exelon	Yes	
Hydro One Networks Inc.	Yes	We believe that the SDT's proposed approach for exception criteria is reasonable; recognizing that one method/criteria can not be applicable to everyone and every situation within the ERO foot print. See our comment in Q1.
Holland Board of Public Works	Yes	
Southern Company Generation	Yes	We agree with the information being requested.
Dominion	Yes	
Southwest Power Pool Standards Review Team	Yes	
SERC Planning Standards Subcommittee	Yes	
Tacoma Power	Yes	Tacoma Power supports the information requested on page 2 and 3.
Springfield Utility Board	Yes	SUB agrees with the instructions, finding them to be clear and reasonable.
BGE	Yes	No comment.
Michigan Public Power Agency	Yes	

Organization	Yes or No	Question 2 Comment
Response: Thank you for your support.		

3. **Page four of the 'Detailed Information to Support an Exception Request' contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four that is missing? Please be as specific as possible with your comments.**

Summary Consideration: Several respondents suggested better clarity on whether responses should be market or reliability related. The SDT made slight modifications to the "Detailed Information to Support an Exception Request" form to request responses that are specifically reliability related.

Based on the comments received and past history for such situations, the SDT believes that entities will be able to obtain the requisite information necessary to submit a request. However, should an entity have difficulty, they will need to obtain the assistance of their Regional Entity to secure the data. If the entity still can't obtain the needed data, then the SDT fully expects that entity's Regional Entity to work with them to come up with a plan that will allow that entity to fill out the request form in a manner that will be acceptable to the Regional Entity so that processing of the request can continue.

The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to

NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication.

Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved."

The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the

complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

Page 1 - List any attached supporting documents and any additional information that is included to supports the request:

Generation - Q1. What is the MW value of the host Balancing Authority's most severe single Contingency and what is the generator's, or generator facility's generation resource's, percent of this value?

Generation - Q2. Is the generator or generator facility generation resource used to provide reliability-related Ancillary Services?

Generation - Q3. Is the generator generation resource designated as a must run unit for reliability?

Organization	Yes or No	Question 3 Comment
Northeast Power Coordinating Council	No	This Application generally applies to traditionally fueled generating facilities. Application form and justifications would be required for non-traditional resources such as solar and wind? Question 2 on page 4 asks, "Is the generator or generator facility used to provide Ancillary Services?" If some of these Generator check list items are market-related and not reliability-related, they should not be present. If the Ancillary Services are reliability-related, please explain their relation to BES reliability. Suggest inserting the word "reliability" before the words "must run" in question 3. Question 5 on page 4 asks, "Does the generator use the BES to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load?" This could mean the generator may serve local loads through non-BES facilities. In order to serve these local loads the generator would need to be connected to a Radial system, a Local Network or to local distribution facilities. Is this what is intended? Were there any other possibilities envisioned by the BES SDT?
Response: The SDT believes the form can be used for any type of generation resource as there are no restrictions on type in the		

Organization	Yes or No	Question 3 Comment
questions. No change made. The form has been modified to request only reliability related functions be included. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability--related Ancillary Services? **Q3**. Is the ~~generator~~ generation resource designated as a must run unit for reliability? If the entity serves the indicated Load through a radial system, etc., it should supply that information as part of its supporting information. No change made.		
ACES Power Marketing Standards Collaborators	No	Q5 has a "Description/Comments" section. Further clarification on what type of information to include under the Description would help "standardize" the supporting information and "will provide more clarity and continuity to the process." The definition of ancillary services varies and can be quite broad. It can include reactive power and voltage support for example. All generators provide some reactive power and voltage support. Thus, ancillary services should be further defined or one could construe it to limit any generator from being excepted.
Response: Entities applying for an exception can include any information they deem appropriate in the general and specific sections of the form. It would be difficult to establish specific criteria that would be applicable to all systems. Questions regarding ancillary services have been further clarified. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability--related Ancillary Services?		
Farmington Electric Utility System	No	Question 1, the SDT team should consider if the Submitting entity or Owner is part of a Reserve Sharing Group. The host BA's most single severe Contingency vs the obligation of reserves required as part of a Reserve Sharing Group may be substantial. The SDT team should clarify if it is a single generator or if it is the aggregate at a facility.

Organization	Yes or No	Question 3 Comment
Response: An entity can supply that information as part of its supporting information in its request. No change made. The assumption is that the request is being made as a result of the application of the definition which is for single units or aggregate as appropriate.		
Dominion	No	The SDT language specifying services acceptable for inclusion in an exclusion request references ancillary services identified under a Transmission Service Provider's OATT. However, there is great variation in the services that have actually been implemented and posted across North America under those OATTs. There is no consistent description or terminology to characterize those services. In short, Transmission Providers have been permitted to individualize OATT services to fit regional market structures and vernacular. For example, PJM's OATT includes a schedule for Blackstart Service. The FERC pro-forma tariff does not. ISO-NE's tariff includes the following ancillary services (which are performed by the ISO and TSP): o Scheduling, System Control and Dispatch Service o Energy Imbalance Service o Generator Imbalance Service Therefore, Dominion suggests that the SDT provide a specific list of ancillary services that would be eligible for exclusion, rather than rely on OATT references. Examples might include: reactive, voltage control or regulation services, frequency response and blackstart services. Dominion is also aware that the phrase " 'must run" is used in some RTO/ISO market systems to indicate intent to self-schedule the generator. Dominion suggests that question 3 be revised to read "Is the generator designated as a "must run" unit by either the Balancing Authority, Resource Planner or Reliability Coordinator?
Response: The form has been modified to request only reliability related functions are included. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability-related Ancillary Services? **Q3**. Is the ~~generator~~ generation resource designated as a must run unit for reliability?		
Southern Company	No	We do not agree completely with the information being requested. For checklist item #2, please specify what is included in "providing Ancillary Services" for a

Organization	Yes or No	Question 3 Comment
Generation		generator. For #4, can the question include a measure of evaluating the "most severe system impact"? Can the specific study that is required to be evaluated be outlined?
Response: Questions regarding ancillary services have been further clarified. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability-related Ancillary Services? The SDT refers the commenter to the statement that TPL methodologies should be followed in formulating the supporting information for the request.		
AECI and member G&Ts	No	Most of these questions appear relevant to the LN concept paper, but irrelevant to this standard's requirements. The last conditional of Item 5) must always be answered Yes, unless the local-network is islanded.
Response: The SDT does not see a need for a one-to-one correspondence between the definition items and the information requested. The form contains questions that will supply information the review panel will need to evaluate the request.		
NERC Staff Technical Review	No	For units designated as must run, the Submitting entity should be required to describe the reasons for which the unit has been so designated. We believe the general requirement to provide an appropriate reference is too vague, and should be appended with ". . . including a description of why the unit has been designated as must run and if applicable, the contingencies that would result in violation of the NERC Reliability Standards if the unit was not must run."
Response: The form has been modified to request only reliability related functions are included. Information such as shown in the comment can be entered as needed by the requesting entity. In general, an entity should supply any and all information that it feels is needed to support its request. **Q3**. Is the ~~generator~~ generation resource designated as a must run unit for reliability?		

Organization	Yes or No	Question 3 Comment
Duke Energy	No	Modify wording on #3 as follows: "Please provide the appropriate reference for the operating area where the facility is located."
Response: The SDT does not believe that the suggested wording provides any additional clarity. No change made.		
NV Energy	No	In question #7 of the form, it would be useful to the analysis for technical exception to include not only the minimum and maximum power flow out of the candidate facility, but also a description or demonstration of the "typical" magnitude or the "average" of such flow. An entity may provide this sort of information anyhow, but a prompt for this type of information could be useful and prevent having to solicit more information during the review. Should be included in Question 2.
New York State Dept. of Public Service	No	Question 6 should be dropped. Facilities in a cranking path for a blackstart resource should not be a consideration. Question 7 is circular. If a facility is used to flow power into the BES, by definition it is outside the BES. Needs clarification as to the information the question is seeking. Should be question 2.
Response: Please see the response to Q2.		
Consolidated Edison Co. of NY, Inc.	No	For Generation Facilities: This Application form would appear to generally apply to traditional generating facilities. o What Application form and justifications would be required for non-traditional resources, e.g., solar and wind? o The Application form at 2 asks, "Is the generator or generator facility used to provide Ancillary Services?"If some of these Generator check list items are market-related and not reliability-related, then they should not be present. o If the Ancillary Services are reliability-related, please explain their relation to BES

Organization	Yes or No	Question 3 Comment
		reliability. Recommendation: Insert the word "reliability" before the words "must run" in question 3. The Application form at 5 asks, "Does the generator use the BES to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load?" We assume this mean the generator may serve local loads through non-BES facilities. In order to serve these local loads the generator would need to be connected to a Radial system, a Local Network or to local distribution facilities. o Is this meaning above implied and intended by this question? o Were there any other possibilities envisioned by the BES SDT?
Response: The SDT believes the form can be used for any type of generation resource as there are no restrictions on type in the questions. The form has been modified to request only reliability related functions be included. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability–related Ancillary Services? **Q3**. Is the ~~generator~~ generation resource designated as a must run unit for reliability? Entities applying for an exception can include any information they deem appropriate in the general and specific sections of the form. If the entity serves the indicated Load through a radial system, etc., it should supply that information as part of its supporting information. No change made.		
American Electric Power	No	It is unclear how the process will work with the interaction among the various NERC Functions. For instance, an exception request from generation might require collaboration among other functional entities, i.e. GOP, TOP, and RC. The question "How does an outage of the generator impact the over-all reliability of the BES" may be subjective and dependent on contingencies at any given time. It would be dependent on what state the BES would be in the area the generator is located. More detail would be needed in describing the study required to have

Organization	Yes or No	Question 3 Comment
		consistent results.
Response: Please refer to the Rules of Procedure for clarity on how the process will provide consistency. As every generator will have different impact it is up to the entity to complete the studies and to respond appropriately in the written section of the question.		
ReliabilityFirst	No	If the systems are planned properly and the day-ahead analysis is done for maintenance work, the outage of any one unit and even with the most serve outage happening, the system should be capable of withstanding. These studies and analysis will need to look at multiple outages and groups of units being taken out and excluded before any could be exempt. What is the phrase "impact the over-all reliability" getting at? These studies and analysis will need to look at multiple outages and groups of elements being taken out and excluded. Will this be on a first come, first out process? As for the Ancillary Services question, ReliabilityFirst Staff believes that if a unit provides this service, it should be included in the BES. The same applies for the "must run units" in question 3. Omit question 5, E3 (LN) of the definition already talks to power flow and even if there is a small percentage of unit's output flowing onto the BES, it makes that entity a user of the BES, which should be included.
Response: The SDT refers the commenter to the phrase consistent 'with TPL methodologies' which the SDT believes will cover the item in question. The SDT reminds the commenter the evaluation in question is not for removing the Element from service but simply from inclusion or exclusion in the BES. Therefore, there should be no problem with evaluating multiple requests in the same area and no first in, first out scenario. Ancillary services or must run status is only one piece of information in a total review of the impact of the Element on the BES. The		

Organization	Yes or No	Question 3 Comment
SDT does not believe that simply because a generator provides ancillary services or that it is must run that it should be automatically included. There is more to the BES than just the local networks. No change made.		
Hydro-Quebec TransEnergie	No	
Manitoba Hydro	No	
Response: Without any specific comments, the SDT is unable to respond.		
ISO New England Inc	No	- Question 1o The question would be better worded as "How many MW are lost following the host Balancing Authority's most severe single Contingency...".o The question becomes difficult to answer when the most severe single Contingency can change on a
Response: A slight revision has been made to Question 1 which should provide more clarity in this regard. **Q1**. What is the MW value of the host Balancing Authority's most severe single Contingency and what is the ~~generator's, or generator facility's~~ generation resource's, percent of this value?		
PSEg Services Corp	No	With regards to question #2 ("Is the generator or generating facility used to provide Ancillary Services"), the answer for most synchronous generators is probably "yes" unless they are in a bid-based market that selects specific generators for Reactive Power delivery. Since most generators (with the exception of those with nuclear prime movers) provide Reactive Power to meet a Transmission Operator-specified voltage, they would provide that Ancillary Service. Other generators (again, with the exception of generators with nuclear prime movers) may be eligible to provide other Ancillary Services such as Spinning Reserve, but may have rarely done so. However, they still may be "used do provide" Spinning Reserve at any time. How would those generators respond to question #2? Questions #4 requires an analysis of the "most severe impact" associated an outage

Organization	Yes or No	Question 3 Comment
		of the Element proposed for exception. a. Both the newly Board approved TPL-001-2 standard and the existing TPL-004-1 require that severe contingencies be evaluated, but there are no performance requirements for them. For consistency, performance requirements for the most-severe-impact analysis needed to be defined by the team. If the team intended the "most-severe impact" analysis to only evaluate TPL outages that incorporate performance requirements, it should make that clear.b. The most-severe-outage impact question does not ask key relevant information such as: i. What is the probability that the "most severe impact "will occur?ii. Could the impact be readily mitigated and service restored? This point is critical because the impact of an outage lasting several minutes before restoration versus several hours before restoration should affect the analysis. What does the answer to the question #5 in the Generator Facilities section ("Does the generator use the BES to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load?") imply with respect to a generator's exclusion? Also, the phrase "deliver its actual or scheduled output ...to load" needs explanation. The use of "actual output" and "scheduled output" may have several contexts. a. For example, in a market, a generator's actual output may suddenly go to zero due a forced outage, but the generator has financial obligations that accrue for delivering its scheduled output, which is in fact provided by other sources since the generator is unavailable. Is the question asking about the use of BPS facilities by resources that may be substituted for delivery of a generator's scheduled output when it differs from its actual output?b. Now assume that a generator's actual output equals its scheduled output and that several generators are forced out of service in another Balancing Authority, resulting in a frequency decline. Generators within the interconnection with active governors and available spinning capacity will automatically increase their output above their scheduled output, resulting in Inadvertent Interchange. Is the question related to the BES facilities used to deliver such Inadvertent Interchange?c. Again assume that a generator's actual output equals its scheduled output. Is the question related to the actual BES facilities that may be used to deliver the generator's power to Load? That would require an

Organization	Yes or No	Question 3 Comment
		analysis of generator and load shift factors to determine what actual facilities carry the power generated from a generator to a specific load for a given set of assumptions on the system topology. In a market, this analysis would not be possible for generators that do not self-schedule for delivery to specific loads.
Response: The form has been modified to request only reliability related functions are included. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability--related Ancillary Services? The SDT reminds the commenter the requirement is only to follow the TPL methodologies which have been spelled out in TPL-001-2. An entity can supply any and all information that it thinks will support its request. Entities applying for an exception can include any information they deem appropriate in the general and specific sections of the form. It is simply just one piece of information that is considered as useful for the review panel in making its ultimate decision. Any clarifying points an entity wants to make in its request can be supplied as the entity thinks appropriate.		
City of St. George	No	The questions for generation facilities seem to be appropriate; however, how the answers are to be used by the region or NERC is unclear. Will a given response to a question make exclusion impossible? If so this needs to be known upfront and clearly documented. For example question 4, on page 4 is open for interpretation and debate as to what the impact to the over-all reliability of the BES is. The definition of "impact" is really the key to the whole definition effort. Load flow, voltage, frequency change limits may all be pieces to the puzzle. Are these criteria to be met in normal, N-1, N-2, etc. system configurations?
Response: Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT refers the commenter to the statement that TPL methodologies should be followed in formulating the supporting		

Organization	Yes or No	Question 3 Comment
information for the request.		
Ameren	No	It is suggested that question #2 be deleted and replaced with "Is the generator designated as a black-start unit in an entity's restoration plan?"
Response: The SDT assumes the commenter is actually referring to the sixth question for transmission. Please see the detailed response to Q2.		
Georgia System Operations Corporation	No	Item 2 asks about "the generator or generator Facility," but 3, 4 and 5 only refer to the generator. There is no immediately apparent reason for them to be different. The language in Item 2 seems preferable.
Response: The SDT has reviewed all of the terminology for consistency and made clarifying changes as necessary. For example: **Q1**. What is the MW value of the host Balancing Authority's most severe single Contingency and what is the ~~generator's, or generator facility's~~ generation resource's, percent of this value?		
IRC Standards Review Committee		We do not agree with the detailed information requirements for generators. In a deregulated environment, generators are free to bid into the market or offer their availability, to dispatched based on bid price and resource needs, or overall generation dispatch plans. A generator may be on line but not dispatched, or not on line at all due to maintenance outage or a decision to not start. Its status and generation level have little to do in determining whether or not it needs to be included as a BES facility. Rather, it is the generator's active contribution to the BES performance, namely, its protective relay setting and coordination with those of related facilities and its ability to control voltage, respond to contingencies, ride through frequency and voltage excursion, provide accurate model with verification, etc., are critical to BES reliability performance. There are currently no standards or requirements that mandate a generator to be on line or to attain a specific level of output, and we do not see such a need at all in the future. Whether or not the unit is designed as a MUST RUN will depend on whether the generator is (a) on line and bid into the market or be included in the dispatch plan, and (b) the prevailing system

Organization	Yes or No	Question 3 Comment
		conditions such as flow pattern, potential constraints, etc. A generator may be designated as a MUST RUN one day but not the others. Similar argument applies to a generator bidding in the ancillary service markets, or be dispatched to provide reserve or AGC control capability. In our view, generators' physical characteristics and their response to changes on the BES are important considerations for them to be included in the BES. These characteristics affect the assessment and actual performance of the BES in the following key areas: o Voltage and frequency ride through capability o Voltage control (AVR, etc.) o Underfrequency trip setting o Protection relay setting coordination o Data submission for modeling; verification of capability and model We therefore suggest that the entire P.4 be removed as the information it asks for has nothing to do with a generator's physical characteristics or material impact on BES reliability. Having a threshold by MVA suffices to determine if a generator needs to be included as a BES facility, whose characteristics, expected performance and data provision are important to achieve target BES performance and hence should be governed by reliability standards.
Response: The form has been modified to request only reliability related functions are included. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability-related Ancillary Services? **Q3**. Is the ~~generator~~ generation resource designated as a must run unit for reliability?		
Tri-State Generation and Transmission Assn., Inc. Energy Mangement		Again Yes/No is conflicting in the question. Information requested in#4 is subjective and too vague.
TSGT G&T		Again Yes/No is conflicting in the question. Information requested in #4 is subjective and too vague.
Response: The SDT has attempted to build in maximum flexibility within the form while still providing the review panel information that will be needed in evaluating a request. No change made.		

Organization	Yes or No	Question 3 Comment
Hydro One Networks Inc.	Yes	See comments in Q1.
Response: Please see response to Q1.		
Long Island Power Authority	Yes	Need to define the term "must run unit"
PacifiCorp	Yes	PacifiCorp suggests modifying Question 3 as follows: "Is the generator designated as a must run unit by the Balancing Authority?"
Response: The form has been modified to request only reliability related functions are included. **Q3**. Is the ~~generator~~ generation resource designated as a must run unit for reliability?		
Electricity Consumers Resource Council (ELCON)	Yes	Our "Yes" response is conditioned on the comments to Questions 1 and 2 above.
Response: Please see responses to Q1 and Q2.		
Bonneville Power Administration	Yes	Regarding #1 on page 4: BPA Believes seasonality may need to be considered when comparing the generator with the most severe single contingency.
Response: Seasonality issues can be explained in the written response areas of the application form or additional documentation can be provided as needed. No change made.		
WECC Staff	Yes	The requested information in the checklist is appropriate. However; the exceptions process as drafted, with no objective criteria defining how to assess the submittals, leaves it to each region to develop their own criteria to evaluate the responses to the checklist included in the submittals, leading to inconsistency between Regional Entities.
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many		

Organization	Yes or No	Question 3 Comment
		hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions

Organization	Yes or No	Question 3 Comment
being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.		
Kootenai Electric Cooperative Snohomish County PUD Blachly-Lane Electric	Yes	KEC agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. KEC suggests three refinements to the questions: (1) Question 2 should be modified

Organization	Yes or No	Question 3 Comment
Cooperative Central Electric Cooperative (CEC) Clearwater Power Company (CPC) Consumer's Power Inc. (CPI) Douglas Electric Cooperative (DEC) Fall River Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (Lincoln) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) Umatilla Electric Cooperative West Oregon Electric Cooperative (WOEC) Coos-Curry Electric		by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter is not. (2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, KEC suggests modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language:Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request.This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.

Organization	Yes or No	Question 3 Comment
Coooperative City of Austin dba Austin Energy		
Response: (1) Questions regarding ancillary services have been further clarified. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability–related Ancillary Services? (2) If the entity serves the indicated Load through a radial system, etc., it should supply that information as part of its supporting information. No change made. (3) This type of question is covered by the clarified line item on page 1 of the form: List any attached supporting documents and any additional information that is included to supports~~~~ the request:		
Central Lincoln	Yes	
Oncor Electric Delivery Company LLC	Yes	
Independent Electricity System Operator	Yes	
Consumers Energy	Yes	
Central Hudson Gas & Electric Corporation	Yes	
Exelon	Yes	
Holland Board of Public Works	Yes	
Transmission	Yes	

Organization	Yes or No	Question 3 Comment
Pepco Holdings Inc	Yes	
ATC LLC	Yes	
Southwest Power Pool Standards Review Team	Yes	
SERC Planning Standards Subcommittee	Yes	
City of Redding Electric Utility	Yes	
City of Redding	Yes	
Tacoma Power	Yes	Tacoma Power supports the information requested on page 4.
BGE	Yes	No comment.
Michigan Public Power Agency	Yes	

Response: Thank you for your support. The SDT did make some clarifying changes due to comments received.

Q2. Is the ~~generator or generator facility~~ generation resource used to provide reliability–related Ancillary Services?

Q3. Is the ~~generator~~ generation resource designated as a must run unit for reliability?

4. **Do you have concerns about an entity's ability to obtain the data they would need to file the 'Detailed Information to Support an Exception Request'? If so, please be specific with your concerns so that the SDT can fully understand the problem.**

Summary Consideration: Based on the comments received, the SDT believes that entities will be able to obtain the requisite information necessary to submit a request. However, should an entity have difficulty, they will need to obtain the assistance of their Regional Entity to secure the data. If the entity still can't obtain the needed data, then the SDT fully expects that entity's Regional Entity to work with them to come up with a plan that will allow that entity to fill out the request form in a manner that will be acceptable to the Regional Entity so that processing of the request can continue. The SDT recognizes that there will be costs associated with the request. The SDT feels that an entity may have to conduct a cost and benefit analysis in order to determine the value of pursuing a request.

No significant changes were made to the request form as a result of comments received to this question. There were suggestions to use some terms more consistently, and this suggestion was adopted. The SDT had used, "facility" and "element" to mean the same things, and has now adopted the word, "Element" throughout the revised document. Similarly the team changed the word, "application" to "request" for greater clarity.

Organization	Yes or No	Question 4 Comment
AECI and member G&Ts	No	
Ameren	No	
ATC LLC	No	
BGE	No	No comment.
Central Hudson Gas & Electric Corporation	No	
Central Lincoln	No	

Organization	Yes or No	Question 4 Comment
City of Redding	No	
Hydro One Networks Inc.	No	
Hydro-Quebec TransEnergie	No	
IRC Standards Review Committee	No	
ISO New England Inc	No	All concerns were captured in comments provided to the previous questions.
Long Island Power Authority	No	
National Grid	No	
NERC Staff Technical Review	No	
NV Energy	No	The information appears to be readily available to entities seeking exceptions.
Oncor Electric Delivery Company LLC	No	
PacifiCorp	No	PacifiCorp is speaking from a perspective where the Company is registered for multiple functions (i.e., TO, GO, TOP, GOP, BA, TPL, etc.) and the requested information is currently available from Company resources.
SERC Planning Standards Subcommittee	No	
Springfield Utility Board	No	

Organization	Yes or No	Question 4 Comment
Tacoma Power	No	Tacoma Power supports the expectation that entities will be able to supply the information requested.
Response: Thank you for your support.		
American Electric Power	No	As stated in the response to question #3, the question "How does an outage of the generator impact the over-all reliability of the BES" may be subjective and dependent on contingencies at any given time. It would be dependent on what state the BES would be in the area the generator is located. More detail would be needed in describing the study required to have consistent results.
Response: See response to Q3.		
Georgia System Operations Corporation	No	Throughout the document, because it will be part of a larger Exception Request Form, it should, when possible, use terms consistent with the rest of that form (e.g., "Request" rather than "application"). Similarly, defined terms (even if only defined in the context of the Request Form in which these Principles will be used) such as "Exception," "Request," "Element" or "Facility" should be capitalized; if the use of lower case is intended to convey a different meaning than what is defined, another term should be used to avoid confusion. The Definition and Request Form generally use the term "Element," so it is unclear why this document should so consistently use "facility." For consistency, "Element(s)" or possibly "Element(s) or Facility" should be used.
Response: The SDT has made changes to the Request Form based upon your comments, changing the word, "facility" to "Element" and "application" to "request" for consistency throughout the document.		
Independent Electricity System Operator	No	We anticipate that entities will be granted access to the required historical operations records and modeling data after signing of non-disclosure agreements with the

Organization	Yes or No	Question 4 Comment
		providers of the information.
Response: The SDT concurs that it may be necessary for entities to execute such agreements.		
Northeast Power Coordinating Council	No	According to the Applicability section, the TPL Reliability Standards are only applicable to the Planning Coordinator (PC) and the Transmission Planner (TP). Was it the BES SDT's assumption that Applicants would have the PC or TP run studies for them, or that all Applicants would gain access to those models and run the models themselves? (Ref. TPL-002-1b, Applicability: Planning Authority, and Transmission Planner.)
Pepco Holdings Inc	No	Not all TOs have the capability to perform the power flow and stability analysis on their own, necessary to meet the exception request. It may be burdensome for the TO to hire a consultant or to have their affiliated TPL perform the rigorous study/analysis as contained in the TPL standards. Additional details should be provided as to what part of the TPL standards apply. Should the Affiliated TPL be required to perform TOs studies for exception requests? If so should that be stated in a related standard as a requirement?
Southern Company Generation	Yes	An IPP with no Transmission Planning department may find it very difficult to perform an interconnection wide base case as required in the general instructions.
Bonneville Power Administration	Yes	BPA believes the studies discussed in pages 2-4 would likely need to be completed and the required information supplied by the Transmission Planner/Operator of the Balancing Authority Area since many of the assumptions regarding performance of the BES to delivery under a variety of operating conditions is known only to the TP and TOP of the system.
Consolidated Edison Co. of NY, Inc.	Yes	According to the Applicability section, the TPL Reliability Standards are only applicable to the Planning Coordinator (PC) and the Transmission Planner (TP). Was it the BES SDT's assumption that Applicants would have the PC or TP run studies for them, or that all Applicants would somehow gain access to those models and run the models

Organization	Yes or No	Question 4 Comment
		themselves? (Ref. TPL-002-1, Applicability: Planning Coordinator, and Transmission Planner.)
Response: The Request Form includes language indicating that studies need to be consistent with the methodologies described in the TPL standards, not that the studies need to be the actual Planning Coordinator or Transmission Planner studies. The SDT feels that it is up to the Registered Entity to work out the details for studies needed for a request.		
Orange and Rockland Utilities, Inc.	No	However, please clarify "facility" and include "N-1" for power-flow studying.
Response: The SDT has modified the document to consistently use the term, "Element" rather than facility throughout the document. The SDT believes that solely relying upon a single case study, i.e., N-1; would be inappropriate for the purposes of making a decision under this definition. Entities will need to consider the use of the Elements in a variety of cases to determine whether or not the Elements would be BES or not.		
WECC Staff	Yes	Entities would have a difficult time deciding what data to obtain. Getting the data for their own specific facilities should be relatively simple for the majority of entities. However, it is possible smaller entities may have a higher burden putting together the appropriate information for inclusion in a study case that they currently may not do. In addition, because the instructions state that a case will be "suitably complete and detailed," WECC believes there is insufficient guidance as to what amount and degree of detail in the data is sufficient for the submittal process. Without thresholds it is difficult to determine whether the entities will have the ability to obtain necessary data to file for an exception. At this time, WECC views the instructions as insufficient for these reasons.
Response: The SDT understands the concerns raised by the commenter in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenter that it directly solicited assistance in this matter in the first posting of the criteria and received		

Organization	Yes or No	Question 4 Comment
very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the application to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the application process. The SDT again points to the variations that will abound in the applications as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1, where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the		

Organization	Yes or No	Question 4 Comment
bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple applications will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.		
Blachly-Lane Electric Cooperative Central Electric Cooperative (CEC) City of Austin dba Austin Energy Clearwater Power Company	Yes	The Standards Drafting Team should consider whether it is necessary to require entities other than the entity filing the Exception Request to provide relevant information, either to the entity filing the Exception Request or to the Registered Entity receiving the Exceptions Request. For example, in order to answer Question 1 on page 4, regarding the impact of the generator under the most severe single contingency, it may be necessary for the relevant Balancing Authority to provide its Most Severe Single Contingency ("MSSC") to the registered entity seeking an Exception. Similarly, the relevant Transmission Operator or Balancing Authority may

Organization	Yes or No	Question 4 Comment
(CPC) Consumer's Power Inc. (CPI) Coos-Curry Electric Coooperative Douglas Electric Cooperative (DEC) Fall River Electric Cooperative (FALL) Kootenai Electric Cooperative Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (Lincoln) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) Snohomish County PUD Umatilla Electric Cooperative West Oregon Electric Cooperative (WOEC)		have information that is necessary to determine whether the generator has been designated as reliability-must-run or if it provides ancillary services supporting reliable operation of the interconnected transmission grid.

Organization	Yes or No	Question 4 Comment
Response: Based on the comments received, the SDT believes that entities will be able to obtain the requisite information necessary to submit a request. However, should an entity have difficulty, it will need to obtain the assistance of its Regional Entity to secure the data. If the entity still can't obtain the needed data, then the SDT fully expects that entity's Regional Entity to work with them to come up with a plan that will allow that entity to fill out the request form in a manner that will be acceptable to the Regional Entity so that processing of the request can continue.		
Exelon	Yes	This may be a burden on small entities and generators because they would need to use contractors to run studies in order to obtain the required data. Smaller entities and generators may not have the expertise, the software or the necessary personnel to perform studies.
Response: The SDT recognizes that there will be costs associated with the request. The SDT feels that an entity may have to conduct a cost and benefit analysis in order to determine the value of pursuing a request.		
PSEg Services Corp	Yes	It would depend upon the clarifications to the points raised above.
Response: The SDT suggests that you review the responses to the points raised above and if concerns still exist, please submit those concerns to the SDT as we proceed to the second phase of this project.		
Holland Board of Public Works Michigan Public Power Agency	Yes	On Page 4 Question 1, information on the host Balancing Authority's most severe single contingency may not be publically available and therefore difficult or impossible for a smaller entity to obtain. Even if the data is available, it may not be meaningful in a larger Balancing Authority area such as within MISO where the most severe contingency may be geographically and electrically remote. A more readily available and meaningful measure would be a comparison of the generator's capability as a percent of the peak load for the local Balancing Authority or sub-Balancing Authority, as applicable.
Response: The SDT believes that an entity can use any data or information available to it in order to make its request, especially if other information is not available. Note that the SDT modified the form to clarify that entities may submit additional information		

Organization	Yes or No	Question 4 Comment
(beyond the information listed on the form as "required") to support their request for an exception.		
Duke Energy	Yes	What is the process for obtaining data from a 3rd party that is either unregistered or unwilling to supply the data?
Response: The SDT is not aware of any instance where an unregistered entity would have vital information relevant to a request. For an organization unwilling to share, the SDT expects that entities may need to execute confidentiality or other agreements in order to obtain the use of the necessary information and data.		
ACES Power Marketing Standards Collaborators	Yes	Some generation owners may not be able to obtain their BA's most severe single Contingency. Many generator owners will not have access to the data necessary to demonstrate the reliability impact to the BES. This is particularly true for transmission dependent utilities.
City of St. George	Yes	The access to the required data would be potentially be a concern especially for smaller entities. Small entities will typically have to outsource the required studies to consultants and obtaining the data may be difficult for the consultants. The entities most likely to obtain exemptions (smaller & lower impact entities) are the ones that probably will have the most difficulty in obtaining the data. Generally larger utilities "upstream" from the smaller ones are hesitant to give information to other entities. Depending on the study requirements and criteria for application, this could be a very costly process.
Dominion	Yes	It has been Dominion's experience that CEII or Code/Standards of Conduct rules may restrict generation entities (GO/GOP) from obtaining some of the information necessary to perform the analysis needed to file the "Detailed Information to Support an Exception Request". Dominion is also aware that, in some cases, generation entities do not have the technical expertise (transmission planning, power flow and or stability analysis background) to perform such analysis.
Electricity Consumers	Yes	It may be necessary that the exception request form explicitly address this potential

Organization	Yes or No	Question 4 Comment
Resource Council (ELCON)		problem by allowing the entity seeking an exception to state that for reasons beyond its control it failed to acquire the necessary data, base case or supporting document to enable completion of the filing.
ReliabilityFirst	Yes	In some cases, models and even knowledge of the system configurations, operating protocols and procedures may not be well known by all the entities. System adjustments, load levels, topologies, maintenance and outage schedules, which happen daily, will or may be unknown to many entities, including the Regional Entities who may submit a request to include facilities. For cross regional boundaries, the problem becomes even larger. That coupled with generation unit owners/operators not permitted to know transmission information (i.e. Questions 4 and 5); this will put them at a huge disadvantage to participate in the exception request process.
Southwest Power Pool Standards Review Team	Yes	SCADA line flow data might be hard to capture for the last two years. Specifically the line flows may not be available.
Tri-State Generation and Transmission Assn., Inc. Energy Management	Yes	It may be hard for a GO to get the information requested in #1 or #4.
TSGT G&T	Yes	It may be hard for a GO to get the information requested in #1 or #4.
Response: Based on the comments received, the SDT believes that entities will be able to obtain the requisite information necessary to submit a request. However, should an entity have difficulty, it will need to obtain the assistance of its Regional Entity to secure the data. If the entity still can't obtain the needed data, then the SDT fully expects that entity's Regional Entity to work with them to come up with a plan that will allow that entity to fill out the request form in a manner that will be acceptable to the Regional Entity so that processing of the request can continue. The SDT expects that entities my need to execute confidentiality type or other agreements in order to obtain the use of the necessary information and data.		
Farmington Electric Utility System	Yes	See response to question 2

Organization	Yes or No	Question 4 Comment
Response: Please see response to Q2.		
Consumers Energy	Yes	
City of Redding Electric Utility	Yes	
Response: Without any specific comment, the SDT is unable to respond.		

5. **Are there other specific characteristics that you feel would be important for presenting a case and which are generic enough that they belong in the request? If so, please identify them here and provide suggested language that could be added to the document.**

Summary Consideration: Based on the responses to this question, the SDT offers the following for summary consideration.

Regarding the FERC seven factor test, an entity requesting an exception can always submit data related to that test for the Regional Entity and ERO to evaluate.

In response to the suggestions for additional inclusion in the technical criteria document, there are no restrictions on what data can be submitted in an exception request. An entity requesting an exception can always submit data it believes will be beneficial to its exception request for the Regional Entity and ERO to evaluate.

Finally, if an entity that is submitting an exception request cannot gain access to certain information that is listed in the technical criteria document, it should work with its Regional Entity to come up with substitute data that is acceptable. The submitting entity should state in its exception request submittal that it is unable to access certain data from other parties and explain the reasons why that is the case.

Organization	Yes or No	Question 5 Comment
Northeast Power Coordinating Council	Yes	There is no guidance provided as to how the information asked for in this form will be evaluated, and what the decision making process will entail. As such, a reference document should be developed and provide some guidance how to evaluate applications. Suggest that the BES SDT adopt the FERC Seven Factor test.
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are		

Organization	Yes or No	Question 5 Comment
always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience		

Organization	Yes or No	Question 5 Comment
gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. Regarding the FERC seven factor test, an entity requesting an exception can always submit data related to that test for the Regional Entity and ERO to evaluate.		
Hydro One Networks Inc.	Yes	The general approach, information, data, and assessments proposed seem to be reasonable. However, guidance is not provided as to how this information may be evaluated in the decision making process. As such, a reference document should be developed and provide guidance how applications will be assessed. For example"1) Does the element(s)? o Would have qualified under one of the exclusions or inclusions but have marginally different threshold as prescribed in the definition; o transfer bulk power within (intra) or between (inter) two Balancing Authority Areas; o monitor facilities included in an Interconnection Reliability Operating Limit (IROL); o are not considered necessary for the operation of interconnected transmission

Organization	Yes or No	Question 5 Comment
		system under normal conditions, contingency or prolonged outage conditions.2) Are System Element(s) located in close electrical proximity to Load? o Electrical proximity may be a measurement of system impedance between load centers within the system seeking exception. o Other physical characteristics.3) Are System Elements treated as primarily radial in character? o Smaller deviation from the exclusion E1. o This can be demonstrated by the way the connections to the BES are operated (e.g., the local area is not operated as part of the BES with disconnection procedures when events occur in the local area to separate it.) o This can also be demonstrated by the way resources in the local area are treated in operations, for example, they are not included in a regional dispatch or secured by an ISO/RTO. o Power flows into the system, but rarely flows out. i. This can be demonstrated through transactional records or load flow analysis where it is shown that flow out does not occur or occurs only under a very limited set of conditions and for a limited quantity of energy. a. The limited set of conditions must clearly state the conditions where power flows out, for example, only under specified contingency events. b. Transactional records provided must be for the same time specified in the Exception Rules of Procedure for performing periodic exception self-certifications (presently two years). c. Power entering the system is not recognized or regularly transported on to some other system. (This can be demonstrated by operational procedures that restrict use of delivered power to that system, e.g., the absence of a wheeling agreement or an agreement that generally restricts wheeling under normal) d. The System Element(s) have a very small Distribution Factor on any other BES Element(s). o System Elements are not necessary for the operation of interconnected transmission under normal, contingency or prolonged outage conditions.
WECC Staff	Yes	In order to make a determination of BES status of an element, there should be a listing of effects of the outage on certain facilities, frequencies, voltages, transmission elements, or other information that should be included in the submittal by the entity. Without further specification of requirements for presenting a case it is likely that the Regional Entity will receive inconsistent submittals of data. Leaving open the question of what constitutes a sufficient presentation of a case would likely lead to a wide

Organization	Yes or No	Question 5 Comment
		spectrum of submittals with respect to the amount of data and level of detail in the data.

Response: The technical criteria document currently includes a request for information related to an outage of an element on the BES.

The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and

Organization	Yes or No	Question 5 Comment
		there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

Organization	Yes or No	Question 5 Comment
City of Redding Electric Utility	Yes	
Georgia System Operations Corporation	Yes	
Bonneville Power Administration	Yes	
Response: Without specific comments, the SDT is unable to respond.		
IRC Standards Review Committee	Yes	One acid test to determine if a facility needs to be included or can be excluded from a BES facility is to simulate an uncleared fault at that facility. If the simulation shows a stable BES performance, then it suggests that even if the fault is not cleared due to whatever reason, the facility has no adverse impact that can lead to instability, cascading or collapse of the BES.
Response: There are no restrictions on what data can be submitted in an exception request. Regarding an uncleared fault test, an entity requesting an exception can always submit data related to that test for the RE and NERC to evaluate.		
Snohomish County PUD Blachly-Lane Electric Cooperative Central Electric Cooperative (CEC) Clearwater Power Company (CPC) Consumer's Power Inc. (CPI) Douglas Electric Cooperative (DEC)	Yes	As discussed in our responses to Questions 1 through 3, SNPD believes that certain additional questions are necessary to elicit all information that may be relevant to an Exceptions Request. As discussed in our answer to Question 4, we are also concerned that it may be necessary to obtain information that is in the hands of the relevant Balancing Authority, Transmission Provider, or other entity, and not in the hands of the entity submitting an Exceptions Request, to develop a complete record upon which a reasoned decision concerning an Exceptions Request can be based.

Organization	Yes or No	Question 5 Comment
Fall River Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (Lincoln) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) Umatilla Electric Cooperative West Oregon Electric Cooperative (WOEC) Coos-Curry Electric Coooperative City of Austin dba Austin Energy Kootenai Electric Cooperative		
Response: Please see the detailed responses to Q1 – Q4.		
Consolidated Edison Co. of NY, Inc.	Yes	We strongly recommend that the BES SDT adopt the FERC Seven Factor test for local distribution.

Organization	Yes or No	Question 5 Comment
Response: There are no restrictions on what data can be submitted in an exception request. Regarding the FERC seven factor test, an entity requesting an exception can always submit data related to that test for the Regional Entity and ERO to evaluate.		
American Electric Power	No	As stated in the response to question #3, it is unclear how the process will work with the interaction among the various NERC Functions. For instance, an exception request from generation might require collaboration among other functional entities, i.e. GOP, TOP, and RC. The existence of a must run unit means that unit has a material impact on any configuration of the BES and as such would need a serious waiver to not be considered a BES facility. As such, a must run unit would not receive an exception. As a result, should question #3 be removed? Criteria for applying for an exception should be outlined before filling out the form.
Response: If an entity that is submitting an exception request cannot gain access to certain information that is listed in the technical criteria document, it should work with its Regional Entity to come up with substitute data that is acceptable. The submitting entity should state in its exception request submittal that it is unable to access certain data from other parties and explain the reasons why that is the case. As stated in the proposed ERO Rules of Procedure, ""No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved.". Please see the proposed ERO Rules of Procedure for details on filling out a form.		
Farmington Electric Utility System	Yes	The SDT should consider additional limits on Generation. For example, if a generation prime mover (turbine) has a maximum output of 35 MW but is coupled to a generator with a rating in excess of 75 MVA. The generator output is limited by the turbine - thus the rating of the turbine should be a taken into consideration rather than the generator rating.
Hydro-Quebec TransEnergie	Yes	The general characteristics of the Interconnection (such as frequency or voltage variation), as they may guide the decision for exclusion of specific elements.

Organization	Yes or No	Question 5 Comment
Response: Regarding the suggestions for inclusion in the technical criteria document, there are no restrictions on what data can be submitted in an exception request. An entity requesting an exception can always submit data it believes will be beneficial to its exception request for the RE and NERC to evaluate. No change made.		
Indeck Energy Services	Yes	As acknowledged in the response to Question 12 comments on the previous BES definition, the BES definition is expansive compared to the definition of the BPS in the FPA Section 215. The inclusion of the limited Exclusions is an attempt to remedy the situation. However, the Exclusions need to include a fifth one that if, based on studies or other assessments, it can be shown that any tranmission or generator element otherwise identified as part of the BES is not important to the reliability of the BPS, then that element should be excluded from the mandatory standards program. There has never been a study to show that elements, such as a 20 MW wind farm, 60 MW merchant generator (which operates infrequently in the depressed market) in a large BA (eg NYISO) or a radial transmission line connecting a small generator are important to the reliability of the BPS. They are covered by the mandatory standards program through the registration criteria. The BES Definition is the opportunity to permit an entity to demonstrate that an element is unimportant to reliability of the BPS. The SDT has identified a small subset of elements that it is willing to exclude. By their very nature, these exclusions dim the bright line that is the stated goal of this project. However, the SDT's foresight seems limited in its selections. Analytical studies are used to evaluate contingencies that could lead to the Big Three (cascading outages, instability or voltage collapse). Such a study showing that a transmission or generation element is bounded by the N-1 or N-2 contingency would exclude it from the BES definition. For example, in a BA with a NERC definition Reportable Disturbance of approximately 400 MW (eg NYISO), a 20 MW wind farm, 60 MW merchant generator or numerous other smaller facilities would be bounded by larger contingencies. It would take more than six 60 MW merchant generators with close location and common mode failure to even be a Reportable Disturbance, much less become the N-1 contingency for the Big Three. Exclusion E5 should be "E5 - Any facility that can be demonstrated to the Regional Entity by analytical study or other

Organization	Yes or No	Question 5 Comment
		assessment to be unimportant to the reliability of the BPS (with periodic reports by the Regional Entity to NERC of any such assessments).”
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
City of Redding	No	
ATC LLC	No	
Ameren	No	
Central Lincoln	No	
National Grid	No	
Oncor Electric Delivery Company LLC	No	
Independent Electricity System Operator	No	
City of St. George	No	

Organization	Yes or No	Question 5 Comment
PSEg Services Corp	No	
ReliabilityFirst	No	
Long Island Power Authority	No	
Consumers Energy	No	
Orange and Rockland Utilities, Inc.	No	
ISO New England Inc	No	All concerns were captured in comments provided to the previous questions.
Duke Energy	No	
NV Energy	No	
Central Hudson Gas & Electric Corporation	No	
Exelon	No	
Transmission	No	
PacifiCorp	No	
NERC Staff Technical Review	No	
Dominion	No	
TSGT G&T	No	

Organization	Yes or No	Question 5 Comment
Pepco Holdings Inc	No	
Southern Company Generation	No	
Tri-State Generation and Transmission Assn., Inc. Energy Mangement	No	
SERC Planning Standards Subcommittee	No	
ACES Power Marketing Standards Collaborators	No	
Southwest Power Pool Standards Review Team	No	
Tacoma Power	No	Tacoma Power does not know of any characteristics to add at this time.
BGE	No	No comment.
Michigan Public Power Agency	No	
Response: Thank you for your support.		

6. **Are you aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? If so, please identify them here and provide suggested language changes that may clarify the issue.**

Summary Consideration: The majority of commenters responded that they were not aware of any conflicts. However, some comments were supplied indicating concerns.

Three commenters expressed the need to address the function of an Element or system that is subject to an exception request to determine whether it is a "facilit[y] used in the local distribution of electric energy" and therefore excluded from the BES under Section 215(a)(1) of the Federal Power Act. Those commenters have been directed to question 2 for detailed responses on this issue.

Two commenters submitted concerns that the ERO does not have the authority to apply the BES definition in Canada. The SDT is attempting to craft a BES definition that can be applied within the ERO footprint. It is neither within the scope of the SDT nor is it appropriate for the SDT to provide a Canadian regulatory resolution within the definition. As such, the SDT agrees that the ERO will have to address these types of non-jurisdictional situations with relevant Regions through the exception procedure.

Two commenters expressed a concern that information necessary to perform an analysis may be restricted either by federal-/state Codes/Standards of Conduct and/or CEII prohibitions. Based on the comments received, the SDT believes that entities will be able to obtain the requisite information necessary to submit a request. However, should an entity have difficulty, it will need to obtain the assistance of its Regional Entity to secure the data. If the entity still can't obtain the needed data, then the SDT fully expects that entity's Regional Entity to work with them to come up with a plan that will allow that entity to fill out the request form in a manner that will be acceptable to the Regional Entity so that processing of the request can continue.

One comment stated that organized markets have a "must run" generator concept that has nothing to do with reliability. Thus, Q3 for generation facilities might be confused with market tariff provisions. To resolve this concern, the SDT has clarified Q3 for generation resources as follows:

3. Is the ~~generator~~ generation resource designated as a must run unit for reliability?

Organization	Yes or No	Question 6 Comment
Northeast Power Coordinating	No	

Organization	Yes or No	Question 6 Comment
Council		
SERC Planning Standards Subcommittee	No	
Southwest Power Pool Standards Review Team	No	
WECC Staff	No	
Bonneville Power Administration	No	
TSGT G&T	No	
Pepco Holdings Inc	No	
Southern Company Generation	No	
Tri-State Generation and Transmission Assn., Inc. Energy Mangement	No	
NERC Staff Technical Review	No	
Transmission	No	
PacifiCorp	No	
Hydro One Networks Inc.	No	We believe, and support that RoP exception procedures are adequately dealing with

Organization	Yes or No	Question 6 Comment
		this issue.
Exelon	No	
Duke Energy	No	
NV Energy	No	
Central Hudson Gas & Electric Corporation	No	
American Electric Power	No	AEP is not aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue.
Consumers Energy	No	
Orange and Rockland Utilities, Inc.	No	
ISO New England Inc	No	
PSEg Services Corp	No	
City of St. George	No	
Blachly-Lane Electric Cooperative	No	
Central Electric Cooperative (CEC)	No	

Organization	Yes or No	Question 6 Comment
Clearwater Power Company (CPC)	No	
Consumer's Power Inc. (CPI)	No	
Douglas Electric Cooperative (DEC)	No	
Fall River Electric Cooperative (FALL)	No	
Lane Electric Cooperative (LEC)	No	
Independent Electricity System Operator	No	
Lincoln Electric Cooperative (Lincoln)	No	
Northern Lights Inc. (NLI)	No	
Okanogan County Electric Cooperative (OCEC)	No	
Pacific Northwest Generating Cooperative (PNGC)	No	
Raft River Rural Electric Cooperative (RAFT)	No	

Organization	Yes or No	Question 6 Comment
Umatilla Electric Cooperative	No	
West Oregon Electric Cooperative (WOEC)	No	
Central Lincoln	No	
National Grid	No	
Oncor Electric Delivery Company LLC	No	
Coos-Curry Electric Coooperative	No	
Ameren	No	
Georgia System Operations Corporation	Yes	
ATC LLC	No	
Farmington Electric Utility System	No	
City of Redding	No	
Tacoma Power	No	Tacoma Power is not aware of any conflicts at this time.
Springfield Utility Board	No	

Organization	Yes or No	Question 6 Comment
BGE	No	No comment.
Michigan Public Power Agency	No	
Long Island Power Authority		Not aware of any
Response: Thank you for your response.		
Indeck Energy Services	Yes	As acknowledged in the response to Question 12 comments on the previous BES definition, the BES definition is expansive compared to the definition of the BPS in the FPA Section 215. The inclusion of the limited Exclusions is an attempt to remedy the situation. However, the Exclusions need to include a fifth one that if, based on studies or other assessments, it can be shown that any tranmission or generator element otherwise identified as part of the BES is not important to the reliability of the BPS, then that element should be excluded from the mandatory standards program. There has never been a study to show that elements, such as a 20 MW wind farm, 60 MW merchant generator (which operates infrequently in the depressed market) in a large BA (eg NYISO) or a radial transmission line connecting a small generator are important to the reliability of the BPS. They are covered by the mandatory standards program through the registration criteria. The BES Definition is the opportunity to permit an entity to demonstrate that an element is unimportant to reliability of the BPS. The SDT has identified a small subset of elements that it is willing to exclude. By their very nature, these exclusions dim the bright line that is the stated goal of this project. However, the SDT's foresight seems limited in its selections. Analytical studies are used to evaluate contingencies that could lead to the Big Three (cascading outages, instability or voltage collapse). Such a study showing that a transmission or generation element is bounded by the N-1 or N-2 contingency would exclude it from the BES definition. For example, in a BA with a NERC definition Reportable Disturbance of approximately 400 MW (eg NYISO), a 20 MW wind farm, 60 MW merchant generator or numerous other smaller facilities would be bounded by larger contingencies. It would take more than six 60 MW merchant generators with close

Organization	Yes or No	Question 6 Comment
		location and common mode failure to even be a Reportable Disturbance, much less become the N-1 contingency for the Big Three. Exclusion E5 should be "E5 - Any facility that can be demonstrated to the Regional Entity by analytical study or other assessment to be unimportant to the reliability of the BPS (with periodic reports by the Regional Entity to NERC of any such assessments)."
Response: The SDT has already incorporated a note at the bottom of the definition stating that exceptions can be pursued through the exception process. The SDT feels that this note is sufficient to address the concerns raised herein. In addition, the SDT reminds the commenter that all threshold values will be examined in Phase II of this project. No change made.		
City of Redding Electric Utility	Yes	
Response: Without a specific comment, the SDT is unable to respond.		
Hydro-Quebec TransEnergie	Yes	For HQT's system, the proposed BES definition combined with the exception procedure are presently incompatible or at least inconsistent with the regulatory framework applicable in Quebec. The proposed changes have not address this concern, neither the SDT's responses to our previous comments last May (Q.9).We reiterate that the definition and the exception procedure shall be determined by Quebec's regulator, the RÃ©gie de l'Ã‰nergie du QuÃ©bec, (Quebec Energy Board) which has the responsibility to ensure that electric power transmission in Quebec is carried out according to the reliability standards it adopts. Per se, it would be necessary that E1 and E3 grant exclusions with much higher level of generation. It would also be necessary to allow for several levels of application for the Reliability Standards, in accordance with the RÃ©gie de l'Ã©nergie du QuÃ©bec approach: the Bulk Power System (BPS) as determined using an impact-based methodology, the Main Transmission System (MTS), and other parts of Regional System. Standards related to the protection system (PRC-004-1 and PRC-005-1) and those related to the design of the transmission system (TPL 001-0 to TPL-004-0) shall be applicable to the first level, but all other reliability standards shall be applied to the second level, the MTS. The MTS definition is somewhat different than the Bulk Electric System

Organization	Yes or No	Question 6 Comment
		definition, and it includes elements that impact the reliability of the grid, supply-demand balance and interchanges.We argue that it would be necessary for NERC to address the regulatory issues outside ot the present context of the SDT and ROP team.
Manitoba Hydro	Yes	Canadian Entities are not under FERC jurisdiction, so the revised BES Definition may not apply. A number of Canadian Entities have the BES defined within their provincial legislation. This may introduce differences and even contradictions between elements that are included in the BES according to provincial legislation and the NERC definition.
Response: The SDT is attempting to craft a BES definition that can be applied within the ERO footprint. It is neither within the scope of the SDT nor is it appropriate for the SDT to provide a Canadian regulatory resolution within the definition. As such, the SDT agrees that the ERO will have to address these types of non-jurisdictional situations with relevant Regions through the exception procedure.		
Kootenai Electric Cooperative	Yes	As discussed in more detail in our response to Question 2, KEC believes it is necessary to address the function of an Element or system that is subject to an Exceptions Request to determine whether it is a "facilit[y] used in the local distribution of electric energy" and therefore excluded from the BES under Section 215(a)(1) of the Federal Power Act.
City of Austin dba Austin Energy	Yes	As discussed in more detail in our response to Question 2, AE believes it is necessary to address the function of an Element or system subject to an Exceptions Request to determine whether it is a "facilit[y] used in the local distribution of electric energy" and, therefore, excluded from the BES under Section 215(a)(1) of the Federal Power Act.
Snohomish County PUD	Yes	As discussed in more detail in our response to Question 2, SNPD believes it is necessary to address the function of an Element or system that is subject to an Exceptions Request to determine whether it is a "facilit[y] used in the local distribution of electric energy" and therefore excluded from the BES under Section 215(a)(1) of the Federal Power Act.

Organization	Yes or No	Question 6 Comment
Response: Please see response to Q2.		
ReliabilityFirst	Yes	Since the inception of the Open Access Transmission Tariff, transmission models and even knowledge of the systems, operating protocols and procedures may not be well known or known at all by all the entities. System adjustments, load levels, topologies, maintenance and outage schedules (i.e. market sensitive information), which happens daily is not permitted to be known by the generation side of the industry. An unknown at this point and without a common set of criteria to be used by the Regional Entities and NERC Staff and Panels, it will be difficult to make consistent determinations across the ERO Enterprise.
Dominion	Yes	Much of the information necessary to perform the analysis required is restricted either by federal and/or state Codes/Standards of Conduct and/or CEII prohibitions.
Response: Please see response to Q4.		
ACES Power Marketing Standards Collaborators	Yes	Some organized markets have a must run concept that has nothing to do with reliability. Thus, Q3 for generation facilities might be confused with these tariff provisions.
Response: To resolve this concern, the SDT has clarified question 3 for generation resources to read: **3**. Is the ~~generator~~ generation resource designated as a must run unit for reliability?		

7. **Are there any other concerns with the proposed approach for demonstrating BES Exceptions that haven't been covered in previous questions and comments (bearing in mind that the definition itself and the proposed Rules of Procedure changes are posted separately for comments)? Please be as specific as possible with your comments.**

Summary Consideration: Based on the responses to this question, the SDT offers the following for summary consideration.

The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception application form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the application to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the application process. The SDT again points to the variations that will abound in the applications as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there

is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the application details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO panel for adjudication.

In addition, the SDT would point to the SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

NERC and the industry cannot wait until Phase 2 for the development of the exception process as it is an Order No. 743 directive that must be addressed by the FERC established deadline of January 25, 2012.

If an entity that is submitting an exception request cannot gain access to certain information that is listed in the technical criteria document, it should work with its Regional Entity to come up with substitute data that is acceptable. In addition, the submitting entity should state in its exception request submittal that it is unable to access certain data from other parties and explain the reasons why that is the case.

Organization	Yes or No	Question 7 Comment
LG&E and KU Energy	Yes	LG&E and KU Energy request clarification as to how the two year data requirement would apply to a new facility for which the owner/operator requests an exemption.
Response: The SDT recommends that a submitting entity work with its Regional Entity to determine how best to handle this type of a situation.		
Tacoma Power	Yes	Tacoma Power has a concern that the form may be too general in nature. The task before NERC and the industry is to promote consistency in the application of the BES definition. The form will require the regions to develop individual criteria for assessing an exception request and making a recommendation on the request. We recommend in Phase 2 that the SDT develop specific evaluation criteria for the regions to apply to

Organization	Yes or No	Question 7 Comment
		an exception request. Thank you for consideration of our comments.
City of Redding City of Redding Electric Utility	Yes	Redding acknowledges there is an immediate need for a method where an entity can present evidence that their facilities are "not necessary for the Reliable Operation of the interconnected bulk power transmission system" as stated in the NERC Rules of Procedure Section 3.0. "BASIS FOR APPROVAL OF AN EXCEPTION." Without a process to present the evidence then the RE and the ERO are under no mandate to review facilities in light of any criteria besides the BES definition as NERC clearly pointed out in the City of Holland case where Holland was forced to register by the RE (RFC). However, Redding is very concerned that under the proposed Exception process the final evaluation of an element or facility is left to the sole judgment of NERC. The concern is there is no method, criteria, measurement, or standard that NERC will use for the evaluation. It is also a concern that NERC has a predetermined definition of Distribution Facilities and will not evaluate networked Distribution Facilities fairly. NERC has already stated their predetermined position as to what they determine to be distribution and not distribution facilities in their "MOTION TO INTERVENE AND COMMENTS OF THE NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION" filed in the case of the City of Holland, Michigan (Docket No. RC11-5-000). On page 10 and 11 of this motion, under the section labeled "A. Holland's 138 kV lines are transmission rather that local distribution facilities" NERC states "Distribution facilities generally are characterized as elements that are designed and can carry electric energy (Watts/MW) in one direction only at any given time from a single source point (distribution substation) to final load centers." NERC has clearly stated that only radial facilities are considered distribution facilities and were unwilling to consider that network facilities over 100Kv could be classified as Distribution Facilities in this case. Holland's claim of NERC over-reaching their authority appears to have credibility. In conclusion, Redding supports the proposed exception process as it stands on the grounds that it allows an entity the right to a process which NERC is currently not obligated to allow, it requires that NERC judge the facilities on the merit of "necessary for the Reliable Operation of the interconnected bulk power transmission system", and it allows an appeals process that must judge if NERC evaluated facilities on the standard set forth. However,

Organization	Yes or No	Question 7 Comment
		Redding's vote is conditional on the completion of phase 2 where the term "necessary for the Reliable Operation of the interconnected bulk power transmission system" needs to be defined.
Independent Electricity System Operator	Yes	We believe that the SDT proposed approach for exception criteria is reasonable recognizing that one method/criteria cannot be applicable to everyone and every situation within the ERO foot print. However, we believe that there is huge gap and lack of any transparency on how the exception application will be evaluated and processed. We strongly suggest that SDT develop a reference or a guidance document as part of the RoP that should provide some guidance to Registered Entities, Regional Entities and the ERO on how an exception application should be processed. The absence of such guidance will pose a challenge for each entity including the ERO, and may result in discrepancies amongst Regional Entities. The process may be perceived by registered entities as being non-transparency.
City of St. George	Yes	Clear, concise criteria with consistent repeatable results are a must for a successful outcome of the project effort. The included questions are appropriate questions but the use of those questions and the ultimate outcome is unclear with the current version. The background information indicates that continent wide criteria are not feasible. It is understood that this is a very difficult task and will be difficult to achieve (especially in the time allotted). However, if the decisions are left up to a "panel" to decide the results will be inconsistent and will vary region by region, as well as differ over time. The process involved will be very time consuming (i.e. expensive) and will be difficult to control especially during the initial timeframe. History has demonstrated that review and approval processes that pass from the entity to the regions, then to NERC and then on to FERC backup very easily due to limited staff and resources.The drafting team may want to consider moving this topic to Phase 2 of the project. However, Phase 2 needs to have fairly quick time frame in order to provide the needed direction to the industry in a timely manner.

Organization	Yes or No	Question 7 Comment
PSEg Services Corp	Yes	An applicant should be able to clearly tell whether or not an exception request will likely be granted before it is submitted. It is nearly impossible to divine the whether a request will be granted from a set of data questions. The team is urged to state the exclusion criteria explicitly; data questions required to evaluate a request should directly reference each criterion. See Order 743, paragraph 115: "NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid."
ISO New England Inc	Yes	Given all of these decisional inputs requested by the Exception Application there needs to be some guidance or clarification here regarding the criteria that will be used to render a yes or no decision other than simply filling out the Application and allowing the Rules of Procedure process to take place. The Application process for Exceptions (inclusions or exclusions) appears to be subjective and lacks the decisional technical criteria for the applicant to be confident of the outcome.
Manitoba Hydro	Yes	Manitoba Hydro strongly disagrees with the proposed 'Detailed Information to Support an Exception Request' document and associated exception process for the following reasons: -It is not clear what elements or situations beyond what is covered in the core definition and associated inclusions and exclusions that the drafting team is hoping to capture through the exception process. Further, it is unclear what the benefit to reliability would be by allowing an impact based exception process given that entities will be extremely unlikely to use the exception process to include elements in the BES. -The exception process will be extremely resource intensive, particularly in the absence of any Industry approved threshold criteria. The costs to properly administer and monitor the process to ensure that impact based modeling is done accurately and that it captures the frequent changes on a dynamic system will occupy a wealth of Industry, NERC and Regional Entity time to the detriment of reliability.-It is not reasonable for industry to approve the exception process without knowing what thresholds are required to demonstrate an element as being part of the

Organization	Yes or No	Question 7 Comment
		BES or not. We are concerned that BES determinations would be subjective and would vary from case to case with the particular staff examining the request. BES elements should be established and agreed upon by Industry, not set by a NERC panel. We understand that the drafting team has made this change in the interests of time, but the impact of the BES definition is too broad for this project to be rushed. -The 2010-17 project goals to increase the clarity of the BES definition and establish a 'bright-line' are compromised by the exception process. Changes and alterations to the BES definition should be approved by Industry through the Standards Under Development Process. An interpretation request or SAR should be developed by an entity if they feel that the core definition and associated exceptions and inclusions should be modified. We ask that NERC requests that FERC re-examines the directive to develop an exception process given that the BES definition, which already includes a list of exceptions, is sufficient to standalone without an associated exception process.
ReliabilityFirst	Yes	FERC Order 743-A, paragraph 1, discusses that NERC should "...establish an exemption process and criteria for excluding facilities that are not necessary for operating the interconnected transmission network". It also directed in paragraph 4 that "Order No. 743 also directed the ERO to develop an exemption process that includes clear, objective, transparent and uniformly applicable criteria for exempting facilities that are not necessary for operating the interconnected transmission grid." The SDT proposed a set of questions titled "Detailed Information to Support an Exception Request" to assist in the exemption process but in our mind is not "exception criteria" as stated in the FERC Orders. ReliabilityFirst Staff believes that NERC should develop criteria for which facilities or Elements could be exempted from the core definition; an example being Local Networks as outlined in the current draft of the definition. ReliabilityFirst Staff believes the Local Network exclusion is not "bright line" and could be removed from the core definition and used as criteria for exclusion in the exemption process. Item b of the LN (E3) exclusion would need evidence to support the historical and future power flows. Historical data and future power flow study results would be needed to support this exception. Additionally, another example for exemption criterion for inclusion to the BES could be any 69 kV network facilities that

Organization	Yes or No	Question 7 Comment
		provide a parallel path to the BES. Evidence such as one-line diagrams along with power flow studies would need to be provided through the exemption process for these types of facilities to be included in the BES. ReliabilityFirst Staff believes that any BES facilities should not be candidates for exemption based upon the arbitrary determination of a panel that considers the aspects stated in the document "Detailed Information to Support an Exception Request". Without uniform criteria as stated in the FERC Orders, it will be difficult for the panels to make consistent determinations across the ERO Enterprise.
Hydro One Networks Inc.	Yes	As mentioned above, we strongly suggest and encourage that SDT to develop a reference or a guidance document that will provide guidance to Registered Entities, Regional Entities and the ERO on how an exception application should/would be processed.
Arizona Public Service Company	Yes	In accordance with WECC's position paper issued on October 5, 2011, AZPS agrees with WECC in that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests.
SRP	Yes	SRP agrees with WECC Staff comments.
WECC Staff	Yes	WECC is very concerned that there are no specific qualifications or requirements, either for the entities or for the Regional Entity, with respect to: o the determination of which studies need to be conducted; o the format of the study data that should be submitted; or o the key performance measures that should be evaluated. This vagueness will lead to inconsistency in studies run, data submitted, and measures of data evaluation. If this inconsistency occurs, it will result in a potentially subjective and discordant process on multiple levels for both the submitting entities and the Regional Entities. It may result in submitting entity having to run multiple studies in order to determine what will be acceptable proof, which is overly burdensome on both the

Organization	Yes or No	Question 7 Comment
		submitting entity requesting the exception and the Regional Entity reviewing the request. It also makes the consistency that FERC has requested difficult to assess and achieve. If the goal of the exceptions process is to result in consistent determinations across the regions, then WECC recommends that to the extent possible, the process be objective, clear, and include detailed instructions. The development of such an objective and detailed process is a difficult task and will require additional time. WECC believes it is better to not have an exceptions process in the interim period than to have an inefficient and overly burdensome process in place. To allow adequate time to complete the task of developing a detailed and consistent process WECC recommends that the Detailed Information to Support BES Exceptions Request be included in Phase II of the BES definition project.

Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to

Organization	Yes or No	Question 7 Comment
		reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Organization	Yes or No	Question 7 Comment
Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. In addition, NERC and the industry cannot wait until Phase 2 for the development of the exception process as it is an Order No. 743 directive that must be addressed by the FERC established deadline of January 25, 2012.		
Dominion	Yes	The Detailed Information to Support an Exception Request form has 2 sections; one for transmission facilities and another for generation facilities. Yet, the Project 2010-17 Definition of Bulk Electric System document uses other terms such as real and reactive power resources, dispersed power producing resources, static or dynamic devices, blackstart resources, radial systems, local networks (LN), and reactive power devices. Dominion suggests that the Detailed Information to Support an Exception Request form be revised to conform to the Project 2010-17 Definition of Bulk Electric System document through either use of some sort of 'selection' (checkbox, drop down, write in) or revision of transmission facilities and generation facilities to be more inclusive.
Response: The SDT is only determining the content of the technical criteria document. NERC will be responsible for addressing the format and user features of the final technical criteria document.		
TSGT G&T Tri-State Generation and Transmission Assn., Inc. Energy Mangement	Yes	TSGT believes that the proposed "Technical Principles for Demonstrating BES Exceptions Request" does not clearly define the basis for decisions to exclude or include, which will lead to inconsistent application by the Regions. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining how to assess the materials submitted, the current methodology leaves it to

Organization	Yes or No	Question 7 Comment
		each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO.

Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to

Organization	Yes or No	Question 7 Comment
		reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Organization	Yes or No	Question 7 Comment
Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.		
NERC Staff Technical Review	Yes	At a minimum, we believe there are some facilities which should not be excluded from the BES under any circumstances and a list of such facilities should be documented, including facilities such as (1) Elements that are relied on in the determination of an Interconnection Reliability Operating Limit (IROL); (2) Blackstart resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage, (3) Elements subject to Nuclear Plant Interface Requirements (NPIRs) as agreed to by a Nuclear Plant Generator Operator and a Transmission Entity defined in NUC-001, (4) Elements identified as required to comply with a NERC Reliability Standard by application of criteria defined within the standard (e.g., the test defined in PRC-023 to identify sub-200 kV Elements to which the standard is applicable), and (5) a generating unit that is designated as a must run unit to assure reliability of the BES. Also, to make the process of reviewing exception applications consistent and transparent some high level guidance should be developed as to how the information provided will be assessed by the Regional Entities and NERC. In addition to supporting the objectives of consistency and transparency, this also would provide benefit to entities submitting an exception application by allowing them to understand how the Required Information will be evaluated.
Response: The SDT notes that all BES definition exception requests are considered unique and will be handled on a case-by-case basis. In addition, there is no prohibition on what facilities can be included in an exception request. To say that an Element(s) can be automatically excluded or included on a continent-wide basis is contrary to the SDT's intent. While most of the items noted do reside on the exception request form, the SDT reminds the commenter that the proposed ERO Rules of Procedure state that "No single piece		

Organization	Yes or No	Question 7 Comment
		of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be

Organization	Yes or No	Question 7 Comment
supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.		

Organization	Yes or No	Question 7 Comment
Michigan Public Power Agency	Yes	The following revisions should be made to the procedures: 1. The Technical Review Panel (TRP) provided for in Section 5.3 should not include any staff from the host Regional Entity. 2. The Regional Entity should be required to include an attestation of a qualified individual or individuals to support the factual and technical bases for the decision. This is necessary for purposes of establishing a record in the event of an appeal. If a dispute is appealed, there must be someone at the Regional Entity level that serves as the witness supporting the Regional Entity decision. Currently, there is no accountability for the arguments and suppositions put forth by the Regional Entity; no individuals that stand behind the technical bases proffered in the Regional Entity's written decision. Requiring a qualified individual to attest to the facts and technical arguments relied upon in arriving at the decision will ensure that someone at the Regional Entity level is prepared to take responsibility for reviewing a decision before it is issued, to stand behind the assertions and conclusions reached by the Regional Entity, and whom the Submitting Party may cross examine at hearing. 3. A party seeking an exception should have the right to request a hearing and should not be limited to a paper process. 4. The procedures should not permit the TRP or the Regional Entity to make a decision based upon information that is outside of the record placed before it. That is, the TRP and the Regional Entity may not, on their own, conduct an investigation or seek information independently from what has been presented to it. If the TRP or the Regional Entity requires additional information, it must be requested and provided transparently, and the Submitting Party must have an opportunity to comment upon or challenge that information before the TRP or the Regional Entity relies upon it in any way. This is not currently happening at the Regional Entity and NERC level - decisions have been made based upon documents and information that are not part of the record; the information is not shared with the Submitting Party (the party challenging registration) prior to (or after) a decision is made.

Organization	Yes or No	Question 7 Comment
		5. Section 5.2.2. should be revised as follows: "Upon Acceptance of the Exception Request, the Regional Entity and Submitting Party (and Owner, if different) shall confer to establish milestones in order to complete the substantive review of the Exception Request within six months after Acceptance of the Exception Request or within an alternative time period under Section 5.0. The Regional Entity and the Submitting Party (and Owner, if different) shall also discuss whether and to what extent a reduced compliance burden is appropriate during the review period. At the conclusion of the review period, the Regional Entity shall issue a notice (in accordance with Sections 5.2.3) stating is Recommendation that the Exception Request be approved or disapproved."
Holland Board of Public Works	Yes	The following revisions should be made to the procedures: 1. The Technical Review Panel (TRP) provided for in Section 5.3 should not include any staff from the host Regional Entity. 2. The Regional Entity should be required to include an attestation of a qualified individual or individuals to support the factual and technical bases for the decision. This is necessary for purposes of establishing a record in the event of an appeal. If a dispute is appealed, there must be someone at the Regional Entity level that serves as the witness supporting the Regional Entity decision. Currently, there is no accountability for the arguments and suppositions put forth by the Regional Entity; no individuals that stand behind the technical bases proffered in the Regional Entity's written decision. Requiring a qualified individual to attest to the facts and technical arguments relied upon in arriving at the decision will ensure that someone at the Regional Entity level is prepared to take responsibility for reviewing a decision before it is issued, to stand behind the assertions and conclusions reached by the Regional Entity, and whom the Submitting Party may cross examine at hearing. 3. A party seeking an exception should have the right to request a hearing and should not be limited to a paper process. 4. The procedures should not permit the TRP or the Regional Entity to make a decision

Organization	Yes or No	Question 7 Comment
		based upon information that is outside of the record placed before it. That is, the TRP and the Regional Entity may not, on their own, conduct an investigation or seek information independently from what has been presented to it. If the TRP or the Regional Entity requires additional information, it must be requested and provided transparently, and the Submitting Party must have an opportunity to comment upon or challenge that information before the TRP or the Regional Entity relies upon it in any way. This is not currently happening at the Regional Entity and NERC level - decisions have been made based upon documents and information that are not part of the record; the information is not shared with the Submitting Party (the party challenging registration) prior to (or after) a decision is made. 5. Section 5.2.2. should be revised as follows: "Upon Acceptance of the Exception Request, the Regional Entity and Submitting Party (and Owner, if different) shall confer to establish milestones in order to complete the substantive review of the Exception Request within six months after Acceptance of the Exception Request or within an alternative time period under Section 5.0. The Regional Entity and the Submitting Party (and Owner, if different) shall also discuss whether and to what extent a reduced compliance burden is appropriate during the review period. At the conclusion of the review period, the Regional Entity shall issue a notice (in accordance with Sections 5.2.3) stating is Recommendation that the Exception Request be approved or disapproved."
Response: Your comments are not focused on the technical criteria document and they have been forwarded to the BES ROP team for consideration in their separate process.		
Central Hudson Gas & Electric Corporation	Yes	The 'Technical Principles for Demonstrating BES Exceptions' process was intended to establish technical exception 'criteria' which would be used by the industry to understand what facilities would qualify for inclusions and exclusions from the BES. What has been produced, however, is essentially a listing of 'electrical system indicators', identified on the form, which may be material to making a decision regarding, 'is it BES or not'. The thresholds (or acceptable values) for the indicators,

Organization	Yes or No	Question 7 Comment
		however, have not been determined. It is understood that in Phase II of the BES Definition development process, the SDT will attempt to address these issues but until that work has been completed, the industry will remain enmeshed in confusion and inefficient application of resources and funding. Without these criteria, it is very difficult to believe that this process can be transparent and consistent. Re: Question 4. (For Transmission Facilities)For the purposes of responding to this question, what constitutes the BES? It would seem that you must exclude the elements you are seeking exceptions for or else the exception request is rendered essentially worthless.

Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception application form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the application to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request.

Organization	Yes or No	Question 7 Comment
On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the application process. The SDT again points to the variations that will abound in the applications as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the application details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO panel for adjudication. Finally, the SDT would point to the SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
National Grid	Yes	We are assuming that "yes" answers on this checklist are not intended to result in automatic rejection of the application. We think the procedure would benefit from a general statement noting that all answers taken together will be considered to make clear that no single answer will necessarily be dispositive of the outcome.
Response: Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception application form will		

Organization	Yes or No	Question 7 Comment
mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved."		
Indeck Energy Services	Yes	As acknowledged in the response to Question 12 comments on the previous BES definition, the BES definition is expansive compared to the definition of the BPS in the FPA Section 215. The inclusion of the limited Exclusions is an attempt to remedy the situation. However, the Exclusions need to include a fifth one that if, based on studies or other assessments, it can be shown that any tranmission or generator element otherwise identified as part of the BES is not important to the reliability of the BPS, then that element should be excluded from the mandatory standards program. There has never been a study to show that elements, such as a 20 MW wind farm, 60 MW merchant generator (which operates infrequently in the depressed market) in a large BA (eg NYISO) or a radial transmission line connecting a small generator are important to the reliability of the BPS. They are covered by the mandatory standards program through the registration criteria. The BES Definition is the opportunity to permit an entity to demonstrate that an element is unimportant to reliability of the BPS. The SDT has identified a small subset of elements that it is willing to exclude. By their very nature, these exclusions dim the bright line that is the stated goal of this project. However, the SDT's foresight seems limited in its selections. Analytical studies are used to evaluate contingencies that could lead to the Big Three (cascading outages, instability or voltage collapse). Such a study showing that a transmission or generation element is bounded by the N-1 or N-2 contingency would exclude it from the BES definition. For example, in a BA with a NERC definition Reportable Disturbance of approximately 400 MW (eg NYISO), a 20 MW wind farm, 60 MW merchant generator or numerous other smaller facilities would be bounded by larger contingencies. It would take more than six 60 MW merchant generators with close location and common mode failure to even be a Reportable Disturbance, much less become the N-1 contingency for the Big Three. Exclusion E5 should be "E5 - Any facility that can be demonstrated to the Regional Entity by analytical study or other

Organization	Yes or No	Question 7 Comment
		assessment to be unimportant to the reliability of the BPS (with periodic reports by the Regional Entity to NERC of any such assessments)."
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
American Electric Power	No	AEP agrees with the overall approach demonstrated by the exception request form; however, its appropriateness will be largely dependent on the process eventually used for its implementation.AEP would like guidance on how moth-balled generation should be treated. Perhaps this could be added to the exception form as well.
Response: The SDT is not able to respond to specific requests related to potential future exception requests. Please use the BES definition and the exception request form, after its approval by the NERC Board of Trustees and FERC, for such a request. Also, please consider working with your Regional Entity to determine how moth-balled facilities should be treated.		
Snohomish County PUD Blachly-Lane Electric Cooperative Central Electric Cooperative (CEC) Clearwater Power Company	No	As a general matter, SNPD believes the SDT has provided a reasonable check list that will work in most cases to elicit necessary information from the entity submitting an Exception Request. With the added language suggested in our answers to the previous questions, we believe the proposed form will serve its intended purpose of ensuring that decisions regarding Exception Requests are based upon consistent information and are consistent with the requirements of the Federal Power Act and the BES Definition as developed by the Standards Drafting Team. SNPD also supports the Standards Drafting Team's determination to abandon its initial approach to

Organization	Yes or No	Question 7 Comment
(CPC) Consumer's Power Inc. (CPI) Douglas Electric Cooperative (DEC) Fall River Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (Lincoln) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) Umatilla Electric Cooperative West Oregon Electric Cooperative (WOEC) Coos-Curry Electric Coooperative City of Austin dba Austin Energy		technical criteria, which would have required adherence to specific numerical thresholds. SNPD agrees that this approach was not workable on a nationwide basis, and that the approach embodied in the current draft of the Technical Principles, which would require specific kinds of information on a generic basis but would leave engineering judgment about the significance of that information to the relevant RE, is more workable and provides appropriate deference to the experience and judgment of the REs.

Organization	Yes or No	Question 7 Comment
Kootenai Electric Cooperative		
BGE	No	No comment.
Farmington Electric Utility System	No	
ATC LLC	No	
Ameren	No	
Georgia System Operations Corporation	No	
Oncor Electric Delivery Company LLC	No	
Central Lincoln	No	
Long Island Power Authority	No	
Consumers Energy	No	
Orange and Rockland Utilities, Inc.	No	
Duke Energy	No	
NV Energy	No	
Exelon	No	

Organization	Yes or No	Question 7 Comment
Transmission	No	
PacifiCorp	No	
Pepco Holdings Inc	No	
Southern Company Generation	No	
Bonneville Power Administration	No	
Southwest Power Pool Standards Review Team	No	
ACES Power Marketing Standards Collaborators	No	
Northeast Power Coordinating Council	No	
SERC Planning Standards Subcommittee	No	
Response: Thank you for your support.		

END OF REPORT

Consideration of Comments on Initial Ballot Project 2010-17 BES Technical Exceptions

Date of Initial Ballot: September 30 – October 10, 2011

Summary Consideration: Many commenters followed instructions and cast their ballot while simply pointing to their detailed comments in the posted comment report. The SDT thanks those commenters as this greatly reduces the administrative workload on the SDT. Those who decided to place comments in the ballot report for the most part echoed comments that had already been seen by the SDT in the posted comment report which was administered first by the SDT. As a result, there were no changes to the definition due to comments received in the ballot report. However, for ease of reference, the changes to the definition made as a result of those comments are repeated here.

The SDT made the following changes to the request form due to industry comments received:

- **General** – Clarified the use of facility versus Element(s).
- **Page 1** – Deleted 's' : List any attached supporting documents and any additional information that is included to support~~s~~ the request:
- **Generation - Q1.** Replaced 'generator's or generator's facility' with 'generation resource': What is the MW value of the host Balancing Authority's most severe single Contingency and what is the ~~generator's, or generator facility's~~ generation resource's, percent of this value?
- **Generation - Q2**. Replaced 'generator's or generator's facility' with 'generation resource': Is the ~~generator or generator facility~~ generation resource used to provide reliability ~~-~~related Ancillary Services?
- **Generation - Q3**. Replaced 'generator's or generator's facility' with 'generation resource': Is the ~~generator~~ generation resource designated as a must run unit for reliability?

The SDT feels that it is important to remind the industry that Phase II of this project will begin immediately after the conclusion of Phase I as SDT resources clear up. The same SDT will follow through with Phase II.

The SDT is recommending that this project be moved forward to the recirculation ballot stage.

There were two comments that were repeated multiple times throughout the various documents. The first topic was about how to sort through the definition inclusions and exclusions, i.e., which takes precedence. The SDT offers this guidance on that issue:

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.

Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.

In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.

The second item is about providing specific guidance on how the information on the exception request form will be used in making decisions on inclusions/exclusions in the exception process. The SDT provides the following information on this item:

The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication.

Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further,

reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved."

The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

If you feel that the drafting team overlooked your comments, please let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 404-446-2560 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

[1] The appeals process is in the Standards Processes Manual: http://www.nerc.com/docs/standards/sc/Standard_Processes_Manual_Approved_May_2010.pdf.

Voter	Entity	Segment	Vote	Comment
Kirit Shah	Ameren Services	1	Negative	Please refer to Ameren comments submitted using the Comment Form.
Andrew Z Pusztai	American Transmission Company, LLC	1	Negative	Comments submitted.
Robert Smith	Arizona Public Service Co.	1	Negative	Comments submitted
John Bussman	Associated Electric Cooperative, Inc.	1	Negative	comments posted on comment form
Donald S. Watkins	Bonneville Power Administration	1	Negative	comments submitted for both BES ballots
Christopher L de Graffenried	Consolidated Edison Co. of New York	1	Negative	See Con Edison's comments on the Technical Principles submitted separately by electronic survey form.
Michael S Crowley	Dominion Virginia Power	1	Negative	Please see Dominion's submitted comments
Bernard Pelletier	Hydro-Quebec TransEnergie	1	Negative	Please see our comments on the Technical Information to Support BES Exception.
Chris W Bolick	Associated Electric Cooperative, Inc.	3	Negative	Please see comments of Associated Electric Cooperative
Charles Yeung	Southwest Power Pool, Inc.	2	Negative	SPP's comments on this concurrent ballot/comment period have been submitted and provide support for our Negative vote. In addition, SPP is a member of the IRC SRC and is in support of those comments on this standard. Please refer to these sets of comments for our recommendations.
Kathleen Goodman	ISO New England, Inc.	2	Negative	please refer to detailed comments submitted for this project.

Voter	Entity	Segment	Vote	Comment
Tracy Sliman	Tri-State G & T Association, Inc.	1	Negative	Comments submitted on electronic form.
Rebecca Berdahl	Bonneville Power Administration	3	Negative	Please see BPA's responses on the comment form submitted seperately.
Andrew Gallo	City of Austin dba Austin Energy	3	Negative	Austin Energy (AE) has submitted detailed comments on this issue through its official Comment document. Please refer to those comments.
Peter T Yost	Consolidated Edison Co. of New York	3	Negative	Con Edison comments have been submitted separately.
Richard Blumenstock	Consumers Energy	3	Negative	See Consumers Energy's comments on the official submittal form.
Michael F. Gildea	Dominion Resources Services	3	Negative	See Dominin's submitted comments.
Janelle Marriott	Tri-State G & T Association, Inc.	3	Negative	Tri-State G&T Load Serving Entity comments were submitted through the formal electronic comment process.
David Frank Ronk	Consumers Energy	4	Negative	See Comments of Consumers Energy Company
Francis J. Halpin	Bonneville Power Administration	5	Negative	Please see BPA's responses on the comment form submitted seperately.
Jeanie Doty	City of Austin dba Austin Energy	5	Negative	Austin Energy (AE) has submitted detailed comments on this issue through its official Comment document. Please refer to those comments.
Wilket (Jack) Ng	Consolidated Edison Co. of New York	5	Negative	See Con Edison’s comments on the Technical Principles submitted separately by electronic survey form.

Voter	Entity	Segment	Vote	Comment
David C Greyerbiehl	Consumers Energy Company	5	Negative	See Consumers Energy's comments on the official comment submittal forms.
Mike Garton	Dominion Resources, Inc.	5	Negative	See comments filed on this project.
Dan Roethemeyer	Dynegy Inc.	5	Negative	Comments to be submitted with the SERC OC Standards Review Group.
Christopher Schneider	MidAmerican Energy Co.	5	Negative	See the MidAmerican submitted comments. The BES definition needs additional specific inclusion or exclusion provisions that clearly exclude variable resource generation collector circuits rated below 100 kV and generators less than 20 MVA connected to those collector circuits in accordance with the registration criteria.
Mahmood Z. Safi	Omaha Public Power District	5	Negative	See Doug Peterchuck's comments
Glen Reeves	Salt River Project	5	Negative	See comments submitted
Brenda S. Anderson	Bonneville Power Administration	6	Negative	Please see BPA's responses on the comment form submitted seperately.
Lisa L Martin	City of Austin dba Austin Energy	6	Negative	Austin Energy (AE) has submitted detailed comments on this issue through its official Comment document. Please refer to those comments.
Nickesha P Carrol	Consolidated Edison Co. of New York	6	Negative	Con Edison comments have been submitted separately.
Louis S. Slade	Dominion Resources, Inc.	6	Negative	See comments submitted by Dominion.
Steven L. Rueckert	Western Electricity Coordinating Council	10	Negative	Comments Submitted

Voter	Entity	Segment	Vote	Comment
Ajay Garg	Hydro One Networks, Inc.	1	Negative	After careful analysis of the proposed documents, Hydro One Networks Inc. is casting a negative vote. We commend the SDT for the effort in facing the challenge. However, we believe that the proposed definition and the exception request criteria still need further work. Some issues need to be resolved before a final approval is granted. Please see our detailed comments as provided in the on-line system.
Anthony E Jablonski	ReliabilityFirst Corporation	10	Affirmative	Comments submitted
Guy V. Zito	Northeast Power Coordinating Council, Inc.	10	Affirmative	NPCC will be submitting comments on behalf of our members through the formal comment process along with suggestions to address those comments.
Bruce Lovelin	Central Lincoln PUD	9	Affirmative	I support the additional comments prepared by Steve Alexanderson of Central Lincoln PUD
Margaret Ryan	Pacific Northwest Generating Cooperative	8	Affirmative	Please see PNGC's separate comment form.
Kevin Querry	FirstEnergy Solutions	6	Affirmative	FirstEnergy supports the proposed technical information to support BES exceptions and offers comments and suggestions through the formal comment period.
Richard L. Montgomery	Florida Municipal Power Agency	6	Affirmative	Please see comments submitted through the formal comments
Thomas Washburn	Florida Municipal Power Pool	6	Affirmative	See FMPA's comments
William D Shultz	Southern Company Generation	5	Affirmative	Comments from Southern Company Generation are being submitted via the electronic comment form found on the project page.
Edward P. Cox	AEP Marketing	6	Affirmative	Comments are being submitted via electronic form by Thad Ness on behalf of American Electric Power.

Voter	Entity	Segment	Vote	Comment
Gary Carlson	Michigan Public Power Agency	5	Affirmative	Comments submitted separately
David Schumann	Florida Municipal Power Agency	5	Affirmative	Please see comments submitted through the formal comments
James M Howard	Lakeland Electric	5	Affirmative	Refer to comments from FMPA.
Brock Ondayko	AEP Service Corp.	5	Affirmative	Comments are being submitted via electronic form by Thad Ness on behalf of American Electric Power.
Aleka K Scott	Pacific Northwest Generating Cooperative	4	Affirmative	Please see PNGC's separate comment form.
Douglas Hohlbaugh	Ohio Edison Company	4	Affirmative	FirstEnergy supports the proposed technical information to support BES exceptions and offers comments and suggestions through the formal comment period.
Guy Andrews	Georgia System Operations Corporation	4	Affirmative	See electronic comment form submitted by Georgia System Operations Corp
Joseph DePoorter	Madison Gas and Electric Co.	4	Affirmative	Please see the MRO NSRF comments concerning this project.
Bob C. Thomas	Illinois Municipal Electric Agency	4	Affirmative	Illinois Municipal Electric Agency (IMEA) appreciates the SDT's diligence in developing technical inforamtion to support the BES Exception process. With its Affirmative vote, IMEA supports and recommends comments submitted by the Transmission Access Policy Study Group.
Shamus J Gamache	Central Lincoln PUD	4	Affirmative	See Central Lincoln PUD comments (CLPUD) Posted by Steve Alexanderson.
John Allen	City Utilities of Springfield,	4	Affirmative	City Utilities of Springfield, Missouri supports the comments from SPP.

Voter	Entity	Segment	Vote	Comment
	Missouri			
Frank Gaffney	Florida Municipal Power Agency	4	Affirmative	Please see comments submitted through the formal comments
Steve Eldrige	Umatilla Electric Cooperative	3	Affirmative	Please see UEC's separate comment form.
Marc Farmer	West Oregon Electric Cooperative, Inc.	3	Affirmative	Please see WOEC's separate comment form.
Ian S Grant	Tennessee Valley Authority	3	Affirmative	My company has submitted comments via the comment form.
Jon Shelby	Northern Lights Inc.	3	Affirmative	Please see NLI's separate comment form.
Ray Ellis	Okanogan County Electric Cooperative, Inc.	3	Affirmative	Please see Okanogan's separate comment form.
John S Bos	Muscatine Power & Water	3	Affirmative	MPW agrees with the comments submitted by the MRO NERC Standards Review Forum (NSRF)
Rick Crinklaw	Lane Electric Cooperative, Inc.	3	Affirmative	Please see LEC's separate comment form.
Michael Henry	Lincoln Electric Cooperative, Inc.	3	Affirmative	Please see Lincoln's separate comment form.
Stephan Kern	FirstEnergy Energy	3	Affirmative	FirstEnergy supports the proposed technical information to support BES exceptions and offers comments and suggestions through the formal comment

Voter	Entity	Segment	Vote	Comment
	Delivery			period.
Joe McKinney	Florida Municipal Power Agency	3	Affirmative	Please see comments submitted through the formal comments
William N. Phinney	Georgia Systems Operations Corporation	3	Affirmative	See electronic comment form from Georgia System Operations Corporation
William Bush	Holland Board of Public Works	3	Affirmative	Please see Holland Board of Public Works' comment form.
Dave Sabala	Douglas Electric Cooperative	3	Affirmative	Please see DEC's separate comment form.
Bryan Case	Fall River Rural Electric Cooperative	3	Affirmative	Please see FREC's separate comment form.
Dave Hagen	Clearwater Power Co.	3	Affirmative	Please see Clearwater's separate comment form.
Roman Gillen	Consumers Power Inc.	3	Affirmative	Please see CPI's separate comment form.
Roger Meader	Coos-Curry Electric Cooperative, Inc	3	Affirmative	Please see CCEC's separate comment form.
Steve Alexanderson	Central Lincoln PUD	3	Affirmative	Comments previously submitted.
Dave Markham	Central Electric Cooperative, Inc. (Redmond, Oregon)	3	Affirmative	Please see Central's separate comment form.

Voter	Entity	Segment	Vote	Comment
Bud Tracy	Blachly-Lane Electric Co-op	3	Affirmative	Please see BLEC's separate comment form.
Rich Salgo	Sierra Pacific Power Co.	1	Affirmative	Comments Submitted
Charles B Manning	Electric Reliability Council of Texas, Inc.	2	Affirmative	ERCOT ISO has joined the IRC SRC comments submitted.
David Thorne	Potomac Electric Power Co.	1	Affirmative	Comments submitted
Richard Burt	Minnkota Power Coop. Inc.	1	Affirmative	While MPC is voting affirmative, we ask that you see the comments submitted by the MRO NERC Standards Review Forum (NSRF).
Gordon Pietsch	Great River Energy	1	Affirmative	Please see MRO NSRF comments
William J Smith	FirstEnergy Corp.	1	Affirmative	FirstEnergy supports the proposed technical information to support BES exceptions and offers comments and suggestions through the formal comment period.
Paul B. Johnson	American Electric Power	1	Affirmative	Comments are being submitted via electronic form by Thad Ness on behalf of American Electric Power.
Stuart Sloan	Consumers Power Inc.	1	Affirmative	Please see CPI's separate comment form.
Response: The SDT thanks you for following the instructions with regard to comments. This greatly reduces the administrative burden for the SDT and will help accelerate the process.				
Paul Morland	Colorado Springs Utilities	1	Negative	Colorado Springs Utilities believes that the proposed Technical Information to Support BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the

Voter	Entity	Segment	Vote	Comment
				studies submitted will be overly burdensome on our staff. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable us to understand what is necessary for submitting an exception request. To allow sufficient time to complete this difficult task, we believe that the Detailed Information to Support BES Exceptions Request should not be part of the Phase 1 Bulk Electric System Definition effort, but should be postponed and included in the Phase 2 effort.

Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either

Voter	Entity	Segment	Vote	Comment
party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. The SDT is required to submit the exception process as part of the revised definition on January 25, 2012 as specified in Order743.				

Voter	Entity	Segment	Vote	Comment
Martyn Turner	Lower Colorado River Authority	1	Negative	1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: LCRA TSC supports the inclusion of transformers (with both the primary and secondary windings operated at 100-kV or higher) in the BES definition; however, additional clarification is suggested. The term transformers needs to be further defined with respect to function (auto transformers, phase angle regulators, generator step-up transformers, etc.). Similarly, a separate definition for "Transformer" could be developed and included in the NERC Glossary of Terms. 3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: 4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: 5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: LCRA TSC suggests consistency between this inclusion criteria and the criteria used in I2 for "generation".

Voter	Entity	Segment	Vote	Comment
				6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: This inclusion conflicts with exclusion E4. Which one takes priority? 7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The current wording is unclear with respect to the treatment of normally open switching devices. LCRA TSC suggests the following language to replace the existing language on the note to E1: “Two radial systems connected by a normally open, manually operated switching device, as depicted on prints or one-line diagrams for example, may be considered as radial systems under this exclusion.” The current wording is unclear with respect to “non-retail generation”. The sudden loss of large, radial-supplied load may result in reliability deficiencies. LCRA TSC suggests stating a load level or a load capacity in the exclusion. 8. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2 (behind-the-meter generation)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: 9. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3 (local network)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: 10. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E4 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Voter	Entity	Segment	Vote	Comment
				Yes: No: X Comments: This exclusion conflicts with inclusion item I5. Which one takes priority? 11. Are there any other concerns with this definition that haven't been covered in previous questions and comments remembering that the exception criteria are posted separately for comment? Yes: X No: Comments: LCRA TSC supports the direction the standards drafting team taking with this project on the BES Definition and encourages further clarification as noted in these comments for proper application.
Response: The SDT directs LCRA to the detailed responses in the regular comment form as these comments are identical to those contained there.				
Greg C. Parent	Manitoba Hydro	3	Negative	Manitoba Hydro strongly disagrees with the proposed 'Detailed Information to Support an Exception Request' document and associated exception process for the following reasons: -It is not clear what elements or situations beyond what is covered in the core definition and associated inclusions and exclusions that the drafting team is hoping to capture through the exception process. Further, it is unclear what the benefit to reliability would be by allowing an impact based exception process given that entities will be extremely unlikely to use the exception process to include elements in the BES. -The exception process will be extremely resource intensive, particularly in the absence of any Industry approved threshold criteria. The costs to properly administer and monitor the process to ensure that impact based modeling is done accurately and that it captures the frequent changes on a dynamic system will occupy a wealth of Industry, NERC and Regional Entity time to the detriment of reliability. -It is not reasonable for industry to approve the exception process without knowing what thresholds are required to demonstrate an element as being part of the BES or not. We are concerned that BES determinations would be subjective and would vary from case to case with the particular staff examining the request. BES elements should be established and agreed upon by Industry, not set by a NERC panel. We understand that the drafting team has made this change in the interests of time, but the impact of the BES definition is too broad for this project to be rushed. -The 2010-17 project goals to increase the clarity of the BES definition and establish a 'bright-line' are compromised by the exception process. Changes and alterations to the BES

Voter	Entity	Segment	Vote	Comment
				definition should be approved by Industry through the Standards Under Development Process. An interpretation request or SAR should be developed by an entity if they feel that the core definition and associated exceptions and inclusions should be modified. We ask that NERC requests that FERC re-examines the directive to develop an exception process given that the BES definition, which already includes a list of exceptions, is sufficient to standalone without an associated exception process.
S N Fernando	Manitoba Hydro	5	Negative	Manitoba Hydro strongly disagrees with the proposed 'Detailed Information to Support an Exception Request' document and associated exception process for the following reasons: -It is not clear what elements or situations beyond what is covered in the core definition and associated inclusions and exclusions that the drafting team is hoping to capture through the exception process. Further, it is unclear what the benefit to reliability would be by allowing an impact based exception process given that entities will be extremely unlikely to use the exception process to include elements in the BES. -The exception process will be extremely resource intensive, particularly in the absence of any Industry approved threshold criteria. The costs to properly administer and monitor the process to ensure that impact based modeling is done accurately and that it captures the frequent changes on a dynamic system will occupy a wealth of Industry, NERC and Regional Entity time to the detriment of reliability. -It is not reasonable for industry to approve the exception process without knowing what thresholds are required to demonstrate an element as being part of the BES or not. We are concerned that BES determinations would be subjective and would vary from case to case with the particular staff examining the request. BES elements should be established and agreed upon by Industry, not set by a NERC panel. We understand that the drafting team has made this change in the interests of time, but the impact of the BES definition is too broad for this project to be rushed. -The 2010-17 project goals to increase the clarity of the BES definition and establish a 'bright-line' are compromised by the exception process. Changes and alterations to the BES definition should be approved by Industry through the Standards Under Development Process. An interpretation request or SAR should be developed by an entity if they feel that the core definition and associated exceptions and inclusions should be modified. We ask that NERC requests that FERC re-examines the

Voter	Entity	Segment	Vote	Comment
				directive to develop an exception process given that the BES definition, which already includes a list of exceptions, is sufficient to standalone without an associated exception process.
Daniel Prowse	Manitoba Hydro	6	Negative	Manitoba Hydro strongly disagrees with the proposed 'Detailed Information to Support an Exception Request' document and associated exception process for the following reasons: -It is not clear what elements or situations beyond what is covered in the core definition and associated inclusions and exclusions that the drafting team is hoping to capture through the exception process. Further, it is unclear what the benefit to reliability would be by allowing an impact based exception process given that entities will be extremely unlikely to use the exception process to include elements in the BES. -The exception process will be extremely resource intensive, particularly in the absence of any Industry approved threshold criteria. The costs to properly administer and monitor the process to ensure that impact based modeling is done accurately and that it captures the frequent changes on a dynamic system will occupy a wealth of Industry, NERC and Regional Entity time to the detriment of reliability. -It is not reasonable for industry to approve the exception process without knowing what thresholds are required to demonstrate an element as being part of the BES or not. We are concerned that BES determinations would be subjective and would vary from case to case with the particular staff examining the request. BES elements should be established and agreed upon by Industry, not set by a NERC panel. We understand that the drafting team has made this change in the interests of time, but the impact of the BES definition is too broad for this project to be rushed. -The 2010-17 project goals to increase the clarity of the BES definition and establish a 'bright-line' are compromised by the exception process. Changes and alterations to the BES definition should be approved by Industry through the Standards Under Development Process. An interpretation request or SAR should be developed by an entity if they feel that the core definition and associated exceptions and inclusions should be modified. We ask that NERC requests that FERC re-examines the directive to develop an exception process given that the BES definition, which already includes a list of exceptions, is sufficient to standalone without an associated exception process.

Voter	Entity	Segment	Vote	Comment
Joe D Petaski	Manitoba Hydro	1	Negative	Manitoba Hydro strongly disagrees with the proposed 'Detailed Information to Support an Exception Request' document and associated exception process for the following reasons: -It is not clear what elements or situations beyond what is covered in the core definition and associated inclusions and exclusions that the drafting team is hoping to capture through the exception process. Further, it is unclear what the benefit to reliability would be by allowing an impact based exception process given that entities will be extremely unlikely to use the exception process to include elements in the BES. -The exception process will be extremely resource intensive, particularly in the absence of any Industry approved threshold criteria. The costs to properly administer and monitor the process to ensure that impact based modeling is done accurately and that it captures the frequent changes on a dynamic system will occupy a wealth of Industry, NERC and Regional Entity time to the detriment of reliability. -It is not reasonable for industry to approve the exception process without knowing what thresholds are required to demonstrate an element as being part of the BES or not. We are concerned that BES determinations would be subjective and would vary from case to case with the particular staff examining the request. BES elements should be established and agreed upon by Industry, not set by a NERC panel. We understand that the drafting team has made this change in the interests of time, but the impact of the BES definition is too broad for this project to be rushed. -The 2010-17 project goals to increase the clarity of the BES definition and establish a 'bright-line' are compromised by the exception process. Changes and alterations to the BES definition should be approved by Industry through the Standards Under Development Process. An interpretation request or SAR should be developed by an entity if they feel that the core definition and associated exceptions and inclusions should be modified. We ask that NERC requests that FERC re-examines the directive to develop an exception process given that the BES definition, which already includes a list of exceptions, is sufficient to standalone without an associated exception process.
Danny Dees	MEAG Power	1	Negative	We believe that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the

Voter	Entity	Segment	Vote	Comment
				checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO. We believe that a Yes vote for the Technical Principles for Demonstrating BES Exceptions Request will result in minimal or no changes to today's process under the current definition which includes the language "as defined by the Regional Reliability Organization." While the proposed Technical Principles for Demonstrating BES Exceptions Request includes a checklist that must be submitted with exception requests, a yes vote will still require each region to develop their own methods and criteria for assessing materials submitted with exemption requests. We believe that a No vote with guidance to the drafting team that objective methods and criteria must be developed and applied continent-wide will result in the desired uniformity and consistency among regions in their assessment of exception requests. To allow sufficient time to complete this difficult task, we believe that the Detailed Information to Support BES Exceptions Request should not be part of the Phase 1 Bulk Electric System Definition effort, but should be postponed and included in the Phase 2 effort.
Ernest Hahn	Metropolitan Water District of Southern California	1	Negative	MWDSC supports WECC's comments that proposed Technical Information to Support BES Exceptions does not provide the necessary clarity, nor does it provide any criteria for consistency among regions. This detail should be postponed and included in the Phase 2 SAR effort.

Voter	Entity	Segment	Vote	Comment
Kevin Smith	Balancing Authority of Northern California	1	Negative	We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO.
Terry L Baker	Platte River Power Authority	3	Negative	Platte River believes that a Yes vote for the Technical Principles for Demonstrating BES Exceptions Request will result in minimal changes to today's process under the current definition which includes the language "as defined by the Regional Reliability Organization." While the proposed Technical Principles for Demonstrating BES Exceptions Request includes a checklist that must be submitted with exception requests, a yes vote will still require each region to develop their own methods and criteria for assessing materials submitted with exemption requests. We believe that a No vote with guidance to the drafting team that objective methods and criteria must be developed and applied continent-wide will result in the desired uniformity and consistency among regions in their assessment of exception requests.
Roland Thiel	Platte River Power Authority	5	Negative	Definition of BES Platte River believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although Platte River ballots "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. Platte River recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, Platte River agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification. That said, Platte River is prepared to support the BES definition as proposed by the SDT going forward. Platte River has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. Detailed Information to Support BES Exceptions Requests

Voter	Entity	Segment	Vote	Comment
				Platte River believes that a Yes vote for the Technical Principles for Demonstrating BES Exceptions Request will result in minimal changes to today's process under the current definition which includes the language "as defined by the Regional Reliability Organization." While the proposed Technical Principles for Demonstrating BES Exceptions Request includes a checklist that must be submitted with exception requests, a yes vote will still require each region to develop their own methods and criteria for assessing materials submitted with exemption requests. We believe that a No vote with guidance to the drafting team that objective methods and criteria must be developed and applied continent-wide will result in the desired uniformity and consistency among regions in their assessment of exception requests.
Carol Ballantine	Platte River Power Authority	6	Negative	Platte River believes that a Yes vote for the Technical Principles for Demonstrating BES Exceptions Request will result in minimal changes to today's process under the current definition which includes the language "as defined by the Regional Reliability Organization." While the proposed Technical Principles for Demonstrating BES Exceptions Request includes a checklist that must be submitted with exception requests, a yes vote will still require each region to develop their own methods and criteria for assessing materials submitted with exemption requests. We believe that a No vote with guidance to the drafting team that objective methods and criteria must be developed and applied continent-wide will result in the desired uniformity and consistency among regions in their assessment of exception requests.
John C. Collins	Platte River Power Authority	1	Negative	Platte River believes that a Yes vote for the Technical Principles for Demonstrating BES Exceptions Request will result in minimal changes to today's process under the current definition which includes the language "as defined by the Regional Reliability Organization." While the proposed Technical Principles for Demonstrating BES Exceptions Request includes a checklist that must be submitted with exception requests, a yes vote will still require each region to develop their own methods and criteria for assessing materials submitted with exemption requests. We believe that a No vote with guidance to the drafting team that objective methods and criteria must be developed and applied continent-wide will result in the desired uniformity and consistency among regions in their assessment of exception requests.

Voter	Entity	Segment	Vote	Comment
Dana Wheelock	Seattle City Light	3	Negative	Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although SCL ballots "Negative" we agree with and strongly support the Technical Exceptions Principles as a concept. However, SCL finds that the Principles as written do not provide the necessary clarity as what applying entities must provide to support their request, nor do they provide adequate criteria for consistency among regions in their assessment of requests. SCL recommends the development of objective methods and criteria for identifying which facilities may be excluded from or included in the BES. SCL also recommends the development of one or more examples that illustrate what studies must be submitted and what must be documented as part of an exception request. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address issues such as the exception process. SCL has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. SCL is prepared to support the BES Exception process as proposed by the SDT going forward.
Hao Li	Seattle City Light	4	Negative	Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although SCL ballots "Negative" we agree with and strongly support the Technical Exceptions Principles as a concept. However, SCL finds that the Principles as written do not provide the necessary clarity as what applying entities must provide to support their request, nor do they provide adequate criteria for consistency among regions in their assessment of requests. SCL recommends the development of objective methods and criteria for identifying which facilities may be excluded from or included in the BES. SCL also recommends the development of one or more examples that illustrate what studies must be submitted and what must be documented as part of an exception request. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis

Voter	Entity	Segment	Vote	Comment
				within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address issues such as the exception process. SCL has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. SCL is prepared to support the BES Exception process as proposed by the SDT going forward.
Michael J. Haynes	Seattle City Light	5	Negative	Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although SCL ballots "Negative" we agree with and strongly support the Technical Exceptions Principles as a concept. However, SCL finds that the Principles as written do not provide the necessary clarity as what applying entities must provide to support their request, nor do they provide adequate criteria for consistency among regions in their assessment of requests. SCL recommends the development of objective methods and criteria for identifying which facilities may be excluded from or included in the BES. SCL also recommends the development of one or more examples that illustrate what studies must be submitted and what must be documented as part of an exception request. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address issues such as the exception process. SCL has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. SCL is prepared to support the BES Exception process as proposed by the SDT going forward.
Dennis Sismaet	Seattle City Light	6	Negative	Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although SCL ballots "Negative" we agree with and strongly support the Technical Exceptions Principles

Voter	Entity	Segment	Vote	Comment
				as a concept. However, SCL finds that the Principles as written do not provide the necessary clarity as what applying entities must provide to support their request, nor do they provide adequate criteria for consistency among regions in their assessment of requests. SCL recommends the development of objective methods and criteria for identifying which facilities may be excluded from or included in the BES. SCL also recommends the development of one or more examples that illustrate what studies must be submitted and what must be documented as part of an exception request. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address issues such as the exception process. SCL has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. SCL is prepared to support the BES Exception process as proposed by the SDT going forward.
Pawel Krupa	Seattle City Light	1	Negative	Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although SCL ballots "Negative" we agree with and strongly support the Technical Exceptions Principles as a concept. However, SCL finds that the Principles as written do not provide the necessary clarity as what applying entities must provide to support their request, nor do they provide adequate criteria for consistency among regions in their assessment of requests. SCL recommends the development of objective methods and criteria for identifying which facilities may be excluded from or included in the BES. SCL also recommends the development of one or more examples that illustrate what studies must be submitted and what must be documented as part of an exception request. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address issues such as the exception process. SCL has taken the opportunity

Voter	Entity	Segment	Vote	Comment
				to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. SCL is prepared to support the BES Exception process as proposed by the SDT going forward.
Tim Kelley	Sacramento Municipal Utility District	1	Negative	We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO.
Richard K Vine	California ISO	2	Negative	The ISO believes that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. The lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. The ISO believes that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO.
Barbara Constantinescu	Independent Electricity	2	Negative	We believe that the SDT proposed approach for exception criteria is reasonable recognizing that one method/criteria cannot be applicable to everyone and every

Voter	Entity	Segment	Vote	Comment
	System Operator			situation within the ERO foot print. However, we believe that there is huge gap and lack of any transparency on how the exception application will be evaluated and processed. We strongly suggest that SDT develop a reference or a guidance document as part of the RoP that should provide some guidance to Registered Entities, Regional Entities and the ERO on how an exception application should be processed. The absence of such guidance will pose a challenge for each entity including the ERO, and may result in discrepancies amongst Regional Entities. The process may be perceived by registered entities as being non-transparency.
Alden Briggs	New Brunswick System Operator	2	Negative	The NBSO has concern about the lack of clarity and specificity with respect to what analyses and study results are required. This lack of clarity and specificity may lead to inconsistent application of the Technical Principles by both Registered Entities and Regional Entities.
Steven Grego	MEAG Power	5	Negative	We believe that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO. We believe that a Yes vote for the Technical Principles for Demonstrating BES Exceptions Request will result in minimal or no changes to today's process under the current definition which includes the

Voter	Entity	Segment	Vote	Comment
				language "as defined by the Regional Reliability Organization." While the proposed Technical Principles for Demonstrating BES Exceptions Request includes a checklist that must be submitted with exception requests, a yes vote will still require each region to develop their own methods and criteria for assessing materials submitted with exemption requests. We believe that a No vote with guidance to the drafting team that objective methods and criteria must be developed and applied continent-wide will result in the desired uniformity and consistency among regions in their assessment of exception requests. To allow sufficient time to complete this difficult task, we believe that the Detailed Information to Support BES Exceptions Request should not be part of the Phase 1 Bulk Electric System Definition effort, but should be postponed and included in the Phase 2 effort.
Steven M. Jackson	Municipal Electric Authority of Georgia	3	Negative	We believe that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO. We believe that a Yes vote for the Technical Principles for Demonstrating BES Exceptions Request will result in minimal or no changes to today's process under the current definition which includes the language "as defined by the Regional Reliability Organization." While the proposed

Voter	Entity	Segment	Vote	Comment
				Technical Principles for Demonstrating BES Exceptions Request includes a checklist that must be submitted with exception requests, a yes vote will still require each region to develop their own methods and criteria for assessing materials submitted with exemption requests. We believe that a No vote with guidance to the drafting team that objective methods and criteria must be developed and applied continent-wide will result in the desired uniformity and consistency among regions in their assessment of exception requests. To allow sufficient time to complete this difficult task, we believe that the Detailed Information to Support BES Exceptions Request should not be part of the Phase 1 Bulk Electric System Definition effort, but should be postponed and included in the Phase 2 effort.
John H Hagen	Pacific Gas and Electric Company	3	Negative	This does not provide clarity on the criteria that will be used to manage the inclusion/exclusion process. Leaving it up to the regions will only create variances that this effort was chartered to eliminate. To support a bright line BES defintion, the exclusion process must not have subjective results baed on regional variances. We may be better off without an exclusion process and include the exclusions as written into the definition.
Mike Ramirez	Sacramento Municipal Utility District	4	Negative	We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO.
Bethany Hunter	Sacramento Municipal Utility District	5	Negative	We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO.
Claire Warshaw	Sacramento Municipal Utility District	6	Negative	We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their

Voter	Entity	Segment	Vote	Comment
				initial assessment and recommendations to the ERO.
James Leigh-Kendall	Sacramento Municipal Utility District	3	Negative	We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO.
Mark B Thompson	Alberta Electric System Operator	2	Negative	The AESO agrees with the WECC, who say: WECC Staff believes that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO.
Lisa C Rosintoski	Colorado Springs Utilities	6	Negative	Colorado Springs Utilities believes that the proposed Technical Information to Support BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the

Voter	Entity	Segment	Vote	Comment
				studies submitted will be overly burdensome on our staff. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable us to understand what is necessary for submitting an exception request. To allow sufficient time to complete this difficult task, we believe that the Detailed Information to Support BES Exceptions Request should not be part of the Phase 1 Bulk Electric System Definition effort, but should be postponed and included in the Phase 2 effort.
Jennifer Eckels	Colorado Springs Utilities	5	Negative	Colorado Springs Utilities believes that the proposed Technical Information to Support BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on our staff. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable us to understand what is necessary for submitting an exception request. To allow sufficient time to complete this difficult task, we believe that the Detailed Information to Support BES Exceptions Request should not be part of the Phase 1 Bulk Electric System Definition effort, but should be postponed and included in the Phase 2 effort.
Spencer Tacke	Modesto Irrigation District	4	Negative	We believe that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and

Voter	Entity	Segment	Vote	Comment
				the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO. Thank you.
William M Chamberlain	California Energy Commission	9	Negative	We agree with WECC that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO. We are voting No to allow the drafting team to develop objective methods and criteria that can be applied continent-wide, resulting in the desired uniformity and consistency among regions in their assessment of exception requests.
Allen Mosher	American Public Power Association	4	Affirmative	See comments submitted in response to BES Definition. APPA also requests more specificity on the detailed information required to support BES exceptions processed through the NERC Rules of Procedure drafting process. Additional

Voter	Entity	Segment	Vote	Comment
				technical specificity will help ensure consistency between regions and transparency for registered entities on the technical studies and data required to support exception requests. These issues should be addressed in Phase 2.

Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication.

Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers

Voter	Entity	Segment	Vote	Comment
the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.				
Marilyn Brown	New York Power Authority	3	Negative	1. Page one of the 'Detailed Information to Support an Exception Request' contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one that is missing? Please be as specific as possible with your comments. Yes: X No: Comments: No comments. 2. Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there information that you believe needs to be on page two or three that is missing? Please be as specific as possible with your comments. Yes: No: X Comments: For Question 2 on page 2, recommend that the specific types of studies to be provided are defined to add consistency and transparency to the Exception request process. Recommend that the concept and the words "material to" be included as part of

Voter	Entity	Segment	Vote	Comment
				the question as follows “Is the facility material to permanent Flowgates in the Eastern Interconnection.....” For Question 4 on page 2, recommend that single contingency analysis be performed and submitted to demonstrate impacts to the BES. For Question 6 on page 3, recommend that “Cranking Path” be removed to be consistent with the draft BES Definition. Recommend that the concept and the words “material to and designated as part of” be included as part of the question. Recommend rewording Question 6 as follows “Is the facility a Blackstart resource material to and designated as part of the Transmission Operator’s restoration plan?” For Question 7 on page 3, facilities less than two years old or under construction would not be able to provide SCADA data for the most recent consecutive two calendar year period. Facility rating changes and the magnitude of such changes which trigger application or reapplication of the exception process are not addressed. Recommend that Question 7 be revised to address these issues. 3. Page four of the ‘Detailed Information to Support an Exception Request’ contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four that is missing? Please be as specific as possible with your comments. Yes: No: X Comment Form for 2nd Draft of Project 2010-17: Definition of BES (BES) Technical Principles for Demonstrating BES Exceptions Page 4 of 5 Comments: For Question 2 on page 4, recommend that the specific generator ancillary service products be defined to add consistency and transparency to the Exception Request process. For Question 3 on page 4, recommend that confirmation of must-run generation be provided by the Reliability Coordinator, Reliability Planner, or the Balancing Authority as a clarification to the “appropriate reference”. 4. Do you have concerns about an entity’s ability to obtain the data they would need to file the ‘Detailed Information to Support an Exception Request’? If so, please be specific with your concerns so that the SDT can fully understand the problem. Yes: No: X Comments: No comments. Comment Form for 2nd Draft of Project 2010-17: Definition of BES (BES) Technical Principles for Demonstrating BES Exceptions Page 5 of 5 5. Are there other specific characteristics that you feel would be important for presenting a case and which are generic enough that they belong in the request? If so, please identify them here and provide suggested language that could be added to the document. Yes:

Voter	Entity	Segment	Vote	Comment
				No: X Comments: No comments. 6. Are you aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? If so, please identify them here and provide suggested language changes that may clarify the issue. Yes: No: X Comments: No comments. 7. Are there any other concerns with the proposed approach for demonstrating BES Exceptions that haven't been covered in previous questions and comments (bearing in mind that the definition itself and the proposed Rules of Procedure changes are posted separately for comments)? Please be as specific as possible with your comments. Yes: X No: Comments: Completing the exception form does not provide the entity with any indication of whether the Exception will be granted or rejected. It would be more effective and efficient to revise the Exception request questions to provide confirmation or rejection after completion of the form. Consistent application of the exception process across regions may become challenging with separate exception request review teams.
Gerald Mannarino	New York Power Authority	5	Negative	Comments: For Question 2 on page 2, recommend that the specific types of studies to be provided are defined to add consistency and transparency to the Exception request process. Recommend that the concept and the words "material to" be included as part of the question as follows "Is the facility material to permanent Flowgates in the Eastern Interconnection....." For Question 4 on page 2, recommend that single contingency analysis be performed and submitted to demonstrate impacts to the BES. For Question 6 on page 3, recommend that "Cranking Path" be removed to be consistent with the draft BES Definition. Recommend that the concept and the words "material to and designated as part of" be included as part of the question. Recommend rewording Question 6 as follows "Is the facility a Blackstart resource material to and designated as part of the Transmission Operator's restoration plan?" For Question 7 on page 3, facilities less than two years old or under construction would not be able to provide SCADA data for the most recent consecutive two calendar year period. Facility rating changes and the magnitude of such changes which trigger application or reapplication of the exception process are not addressed. Recommend that Question 7 be revised to address these issues. Comments: For Question 2 on page 4, recommend that the specific generator ancillary service products be defined to

Voter	Entity	Segment	Vote	Comment
				add consistency and transparency to the Exception Request process. For Question 3 on page 4, recommend that confirmation of must-run generation be provided by the Reliability Coordinator, Reliability Planner, or the Balancing Authority as a clarification to the "appropriate reference".
William Palazzo	New York Power Authority	6	Negative	1. Page one of the 'Detailed Information to Support an Exception Request' contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one that is missing? Please be as specific as possible with your comments. Yes: X No: Comments: No comments. 2. Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there information that you believe needs to be on page two or three that is missing? Please be as specific as possible with your comments. Yes: No: X Comments: For Question 2 on page 2, recommend that the specific types of studies to be provided are defined to add consistency and transparency to the Exception request process. Recommend that the concept and the words "material to" be included as part of the question as follows "Is the facility material to permanent Flowgates in the Eastern Interconnection....." For Question 4 on page 2, recommend that single contingency analysis be performed and submitted to demonstrate impacts to the BES. For Question 6 on page 3, recommend that "Cranking Path" be removed to be consistent with the draft BES Definition. Recommend that the concept and the words "material to and designated as part of" be included as part of the question. Recommend rewording Question 6 as follows "Is the facility a Blackstart resource material to and designated as part of the Transmission Operator's restoration plan?" For Question 7 on page 3, facilities less than two years old or under construction would not be able to provide SCADA data for the most recent consecutive two calendar year period. Facility rating changes and the magnitude of such changes which trigger application or reapplication of the exception process are not addressed. Recommend that Question 7 be revised to address these issues. 3. Page four of the 'Detailed Information to Support an Exception Request' contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four that is missing? Please be as specific as possible with your

Voter	Entity	Segment	Vote	Comment
				comments. Yes: No: X Comments: For Question 2 on page 4, recommend that the specific generator ancillary service products be defined to add consistency and transparency to the Exception Request process. For Question 3 on page 4, recommend that confirmation of must-run generation be provided by the Reliability Coordinator, Reliability Planner, or the Balancing Authority as a clarification to the "appropriate reference". 4. Do you have concerns about an entity's ability to obtain the data they would need to file the 'Detailed Information to Support an Exception Request'? If so, please be specific with your concerns so that the SDT can fully understand the problem. Yes: No: X Comments: No comments.
Arnold J. Schuff	New York Power Authority	1	Negative	You do not have to answer all questions. Enter all comments in simple text format. Insert a "check" mark in the appropriate boxes by double-clicking the gray areas. 1. Page one of the 'Detailed Information to Support an Exception Request' contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one that is missing? Please be as specific as possible with your comments. Yes: X No: Comments: No comments. 2. Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there information that you believe needs to be on page two or three that is missing? Please be as specific as possible with your comments. Yes: No: X Comments: For Question 2 on page 2, recommend that the specific types of studies to be provided are defined to add consistency and transparency to the Exception request process. Recommend that the concept and the words "material to" be included as part of the question as follows "Is the facility material to permanent Flowgates in the Eastern Interconnection....." For Question 4 on page 2, recommend that single contingency analysis be performed and submitted to demonstrate impacts to the BES. For Question 6 on page 3, recommend that "Cranking Path" be removed to be consistent with the draft BES Definition. Recommend that the concept and the words "material to and designated as part of" be included as part of the question. Recommend rewording Question 6 as follows "Is the facility a Blackstart resource material to and designated as part of the Transmission Operator's restoration

Voter	Entity	Segment	Vote	Comment
				plan?" For Question 7 on page 3, facilities less than two years old or under construction would not be able to provide SCADA data for the most recent consecutive two calendar year period. Facility rating changes and the magnitude of such changes which trigger application or reapplication of the exception process are not addressed. Recommend that Question 7 be revised to address these issues. 3. Page four of the 'Detailed Information to Support an Exception Request' contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four that is missing? Please be as specific as possible with your comments. Yes: No: X Comments: For Question 2 on page 4, recommend that the specific generator ancillary service products be defined to add consistency and transparency to the Exception Request process. For Question 3 on page 4, recommend that confirmation of must-run generation be provided by the Reliability Coordinator, Reliability Planner, or the Balancing Authority as a clarification to the "appropriate reference". 4. Do you have concerns about an entity's ability to obtain the data they would need to file the 'Detailed Information to Support an Exception Request'? If so, please be specific with your concerns so that the SDT can fully understand the problem. Yes: No: X Comments: No comments. 5. Are there other specific characteristics that you feel would be important for presenting a case and which are generic enough that they belong in the request? If so, please identify them here and provide suggested language that could be added to the document. Yes: No: X Comments: No comments. 6. Are you aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? If so, please identify them here and provide suggested language changes that may clarify the issue. Yes: No: X Comments: No comments. 7. Are there any other concerns with the proposed approach for demonstrating BES Exceptions that haven't been covered in previous questions and comments (bearing in mind that the definition itself and the proposed Rules of Procedure changes are posted separately for comments)? Please be as specific as possible

Voter	Entity	Segment	Vote	Comment
				with your comments. Yes: X No: Comments: Completing the exception form does not provide the entity with any indication of whether the Exception will be granted or rejected. It would be more effective and efficient to revise the Exception request questions to provide confirmation or rejection after completion of the form. Consistent application of the exception process across regions may become challenging with separate exception request review teams.

Response: 1. Thank you for your support.
2. See response to #10 below. Material is an unmeasurable concept. No change made. The SDT believes that an entity should follow the TPL methodology in formulating its request. If the entity believes that an n-1 analysis is all that is needed then it can submit just an n-1 analysis. No change made. Cranking Path information is just one piece of information that may be of value to the ERO Panel in making its decision. No change made. If two years worth of data are not available, the SDT believes that a Regional Entity will accept what is available and will work with the submitter to come up with an acceptable plan to move forward.
3. Ancillary service products differ from region to region so providing a list in the form would be problematic. The form has sufficient flexibility for the entity to specify which products it is dealing with. However, the SDT has clarified the language concerning ancillary service products and must run units to indicate that only reliability-based information is pertinent.

Q2. Is the ~~generator or generator facility~~ generation resource used to provide reliability--related Ancillary Services?

Q3. Is the ~~generator~~ generation resource designated as a must run unit for reliability?

4. 5. & 6. Without a specific comment, the SDT is unable to respond.
7. The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.
There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the

Voter	Entity	Segment	Vote	Comment
ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved."				

Voter	Entity	Segment	Vote	Comment
The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.				
Doug Peterchuck	Omaha Public Power District	1	Negative	The technical document on exceptions is appropriate, but there should be a guideline on what a typical exception is. The guideline can easily be created by what is now listed within the four-item "Exclusion List". For example when looking at the current Local Network exclusion (E3), it looks to be based on a regional request and thus is in direct conflict with FERC's order. We interpret the creation of a technical document regarding a proposed BES exclusion as a case that should be examined during the Exception Process and not during the BES definition process. The simple question that FERC could eventually ask is why don't all listed exclusions include a technical justification?
Response: The SDT did not provide a technical justification for items that are simply being copied from the existing definition. Technical justification was only provided for items that are new with this revision.				
John T. Underhill	Salt River Project	3	Negative	Definition of Bulk Electric System (BES) The Blackstart "Cranking Path" has been deleted from Inclusion 3 of the BES definition. However, NERC standards EOP-005 and CIP-002, R1.2.4 require documenting the Cranking Path. In addition, CIP-002-4 identifies the Cranking Path as a Critical Asset in Attachment 1. Compliance to the NERC Standards needs to be an exact science whenever possible. SRP does not argue the inclusion or exclusion of Cranking Path. However, if it is excluded, guidance must be provided on whether or not a Cranking Path is subject to the previously mentioned Standards. Detailed Information to Support BES Exceptions Request SRP agrees with the WECC Staff recommendation on the "Detailed Information to Support BES Exceptions Request." "WECC Staff believes that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support

Voter	Entity	Segment	Vote	Comment
				their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO."
Steven J Hulet	Salt River Project	6	Negative	SRP agrees with the WECC Staff recommendation on the "Detailed Information to Support BES Exceptions Request." "WECC Staff believes that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods

Voter	Entity	Segment	Vote	Comment
				and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO."
Robert Kondziolka	Salt River Project	1	Negative	Definition of Bulk Electric System (BES) The Blackstart "Cranking Path" has been deleted from Inclusion 3 of the BES definition. However, NERC standards EOP-005 and CIP-002, R1.2.4 require documenting the Cranking Path. In addition, CIP-002-4 identifies the Cranking Path as a Critical Asset in Attachment 1. Compliance to the NERC Standards needs to be an exact science whenever possible. SRP does not argue the inclusion or exclusion of Cranking Path. However, if it is excluded, guidance must be provided on whether or not a Cranking Path is subject to the previously mentioned Standards. Detailed Information to Support BES Exceptions Request SRP agrees with the WECC Staff recommendation on the "Detailed Information to Support BES Exceptions Request." "WECC Staff believes that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO."

Voter	Entity	Segment	Vote	Comment
Response: Cranking Path information is just one piece of information that may be of value to the ERO Panel in making its decision. No change made. The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception				

Voter	Entity	Segment	Vote	Comment
request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.				
Marie Knox	Midwest ISO, Inc.	2	Negative	We support the SDT's decision to exclude the cranking paths from the BES definition since testing and verification of the use of facilities in the cranking path is already covered by the appropriate EOP standards. However Inclusion I3 (blackstart) is extraneous given there is already designation specific for system restoration covered by an existing standard; EOP-005-2. Therefore, information on whether the facility is part of a Cranking Path associated with a Blackstart Resource, should not be required to receive consideration for an exception.
Response: The SDT disagrees that Blackstart Resources should not be included in the BES Definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without				

Voter	Entity	Segment	Vote	Comment
connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES elements. No change made. Cranking Path information is just one piece of information that may be of value to the ERO Panel in making its decision. EOP-005-2 has no relevance in this regard. No change made.				
Linda Jacobson	City of Farmington	3	Negative	FEUS appreciates the efforts of the SDT. However, the Detailed Information to Support an Exception Request does not align with the Draft Appendix 5C as it is applied to 'Facilities' rather than 'Elements' and is unclear how it is applied for an Inclusion Exception. Additional Comments have been submitted using the comment form.
Response: Please see the detailed responses to comments for Farmington in the general consideration of comments document for the technical criteria.				
Gregg R Griffin	City of Green Cove Springs	3	Affirmative	GCS appreciates the SDT's work on this project. For the most part,GCS supports what it believes to be the intent of the proposed language. The proposed specific exclusion of facilities used in the local distribution of electric energy is appropriate and consistent with Section 215 of the Federal Power Act. However, we have suggestions to better carry out what we believe to be the SDT's intent. The first sentence can be read as: "... all ... Real Power and Reactive Power resources connected at 100 kV or higher", which is surely not what the SDT intends. The basic problem is that Inclusions I2 and I4 do not modify the first sentence, e.g., from a set theory perspective, the set described by the first sentence includes the sets described in inclusions I2 and I4; hence, I2 and I4 do not modify the first sentence. From a literal reading, this would cause any size generator connected at 100 kV to be included, which is surely not the intent of the SDT. For similar reasons, the core definition and Inclusion I5 now has the effect of including all generators connected at 100 kV since a generator is a "dynamic device ... supplying or absorbing Reactive Power". The word "dedicated" in I5 is not sufficient in GCS's mind to unambiguously exclude generators from this statement. FMPA suggests the following wording to address these issues: "Transmission Elements (not including elements used in the local distribution of electric energy) and Real Power

Voter	Entity	Segment	Vote	Comment
				and Reactive Power resources as described in the list below, unless excluded by Exclusion or Exception: a. Transmission Elements other than transformers and reactive resources operated at 100 kV or higher. b. Transformers with primary and secondary terminals operated at 100 kV or higher. c. Generating resource(s) (with gross individual or gross aggregate nameplate rating per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above. d. Blackstart Resources identified in the Transmission Operator's restoration plan. e. Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above, but not including generation on the retail side of the retail meter. f. Non-generator static or dynamic devices dedicated to supplying or absorbing more than 6 MVAr of Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in bullet 2 above." 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: Yes No: Comments: Please see comments to Question 1 3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: yes No: Comments: Please see comments to Question 1 4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: Yes No: Comments: Please see comments to Question 1. 5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)?

Voter	Entity	Segment	Vote	Comment
				If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: Yes No: Comments: We recommend clarifying that the dispersed power resources covered by this inclusion do not include generators on the retail side of the retail meter. Specifically, we recommend that the Inclusion read: "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100kV or above, but not including generation on the retail side of the retail meter." 6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: Comments: To help clarify and to avoid inclusion of de minimis reactive resources, we propose a size threshold of 6 MVAr consistent with the smallest size generator included in the BES at a 0.95 power factor, which is a common leading power factor used in Facility Connection Requirements for generators. In other words, 6 MVAr is consistent with typically the least amount of MVAr required to be absorbed by the smallest generator meeting the registry criteria. 7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: Yes No: Comments: FMPA supports the exclusion of radial systems from the BES Definition. Such systems are generally not "necessary for operating an interconnected electric transmission network," the standard in Orders 743 and 743-A. We have several suggestions to clarify the proposed language for this Exclusion. Proposed Exclusion E1 refers to "[a] group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher." We appreciate the SDT's clarification of the point of connection requirement, but the term "a single point of connection" should be further defined (more clearly than just by voltage), and should be generic enough to encompass the various bus configurations. It is not the case, for example, that each individual breaker position

Voter	Entity	Segment	Vote	Comment
				in a ring bus is a separate point of connection for this purpose; in that situation, a bus at one voltage level at one substation should be considered “a single point of connection.” Some examples of configurations that should be considered a single point of connection for this purpose are at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf, Examples 1-6. Although the core definition (appropriately) refers to “Transmission Elements” (with a capital “T”), proposed Exclusion E1 refers to “transmission Elements” (with a lowercase “t”). To avoid confusion, either “Transmission” should be capitalized in both locations, or the word “transmission” should simply be deleted from Exclusion E1, leaving a “group of contiguous Elements.” We understand that the lack of capitalization may have been a deliberate choice by the SDT in an attempt to avoid confusion that SDT members believe exists in the Glossary definition. If the Glossary definition of Transmission is unclear-which GCS does not necessarily believe is the case-the answer is not to simply abandon the Glossary definition in favor of an entirely und
Response: Please see the detailed responses to comments for Green Cove in the ballot consideration of comments document for the definition.				
Jose Escamilla	CPS Energy	3	Negative	The sample form "Request for Exception to the Bulk Electric System Definition" developed by the BES ROP Team is a more complete form.
Response: The SDT believes that the indicated form was an early draft and is no longer applicable. The SDT has worked closely with the Rules of Procedure team to make certain that the form is coordinated with the proposed ERO Rules of Procedure changes.				
David Kiguel	Hydro One Networks, Inc.	3	Negative	After careful analysis of the proposed documents, Hydro One Networks Inc. is casting a negative vote. We commend the SDT for the effort in facing the challenge. However, we believe that the proposed definition and the exception request criteria still needs further work. Some issues need to be resolved before a final approval is granted. Please see our detailed comments as provided in the on-line system.
Response: Please see the detailed responses to comments for Hydro One in the general consideration of comments document for the technical criteria.				
Jack W Savage	Modesto Irrigation	3	Negative	MID is voting No with the following comments. Inclusions and exclusions are based upon the ERO Statement of Compliance Registry Criteria - currently 75MVA. What

Voter	Entity	Segment	Vote	Comment
	District			is the SDT's technical justification for using this generation level? If 75MVA is the criteria for including facilities as part of the BES, why is that same criteria not applied at voltages below 100kv? Is 75MVA of generation within an area whose load far exceeds that 75MVA cause to classify that entire area as part of the BES and not exclude it as a Local Network? Why are customer owned generators treated differently than other generators? Where is "non-retail generation" defined? The Detailed Information to Support an Exception Request requests information that is not included or mentioned in the definition of the BES. One example is reference to a Balancing Authorities most severe single contingency outage. How does the SDT justify inclusion of these type of questions which are not supported by the actual definition of the BES?
Response: The SDT recognizes that some candidate local networks will have far in excess of 75 MVA of load demand, yet it believes that the 75 MVA threshold value given in Exclusion E3.a is an appropriate level regardless of the amount of load. This value is consistent with the existing threshold of aggregate generation in the ERO Statement of Compliance Registry Criteria. The generation values used in the BES definition will receive more attention and refinement as part of Phase 2 of this Project 2010-17. The SDT assumes the commenter is referring to Exclusion E2. This exclusion is simply clarifying what already exists in the ERO Statement of Compliance Registry Criteria for behind-the-meter generation. Non-retail generation is the generation on the system (supply) side of the meter. The indicated information is simply one piece of data that the SDT felt might be of value in the decision process and does not believe that data requested has to match one for one with the actual language of the definition.				
Jeff Nelson	Springfield Utility Board	3	Negative	Excellent progress has been made, but the technical information to support BES exceptions needs strengthening. For example, unscheduled flows in or out of a local network should not be used as a determination of whether a network is excluded. Reactive devices needs clarification as there are some reactive devices used for power factor correction, for example, on systems above 100kV that SUB believes should be exempt from the BES
Response: The SDT believes it is vital to ensure both that power flow is always in the direction from the BES toward the LN at all points of connection, and that the LN facilities not be used for “wheeling” type transactions. The SDT believes the existing language accomplishes this. The suggested language in this comment touches on an important aspect, the scheduled use of the facilities, but the SDT believes that the existing language is more appropriate to express this point. No change made. Special circumstances such as described by SUB will need to be submitted to the exception process. In general, the SDT believes that reactive				

Voter	Entity	Segment	Vote	Comment
devices above 100 kV should be part of the BES.				
Mark Ringhausen	Old Dominion Electric Coop.	4	Negative	I cannot vote for this as it references in I2 the ERO Statement of Compliance Registry Criteria, which can be changed without stakeholder review and approval. The industry would be held to a changing standard that is not included in the Standars itself.
Response: This is a factor for the definition and not the criteria. Voting on the two separate issues should be done separately on their own individual merits. In response to comments, the SDT has deleted the reference to the ERO Statement of Compliance Registry and replaced it with the existing numeric values. This way, any changes to the ERO Statement of Compliance Registry prior to resolution of threshold values in Phase II will not affect the definition				
Michelle R DAntuono	Occidental Chemical	5	Negative	1. Page 1 of the Detailed Information to Support an Exception Request contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one and is missing? Please be as specific as possible with your comments. No: X Comments: It would be helpful to specify what the “key performance measures of BES reliability” are in the instructions (or at least examples of what these measures are in relation to the TPL Table 1). There must be some guidance on the relative level that should be considered acceptable to exclude a facility. Since the Regional Entities are responsible under the proposed Rules of Procedure to recommend the approval or disapproval of an exception request, it makes sense that they should provide this guidance. However, the DBESSDT should suggest an acceptable minimum - perhaps 10% of the allowed voltage transient dip or frequency excursion as assessed under a single contingency scenario. 2. Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there information that you believe needs to be on page three and is missing? Please be as specific as possible with your comments. No: X Comments: Item 4 needs to be expanded to provide some guidance on what an acceptable “impact to the over-all reliability of the BES” is. Also, there needs to be some sort of qualifier for the request to specify the “most severe system impact of an outage of the facility,” i.e., at least add the

Voter	Entity	Segment	Vote	Comment
				qualifier that it only requires a credible scenario. For example, what is the status of the BES when the outage of the facility occurs such that it represents the "most severe impact." Most Regional Entities have settled on Transmission Planning models and thresholds that any new transmission deployment must minimally meet before it goes online. In some Regions, power transfer distribution factor may be gating factor - others may look at transient response. Whatever the case, the Regions should use those same criteria for BES exceptions - reduced to some conservative percentage level; perhaps 10% of the available margin. 3. Page four of the Detailed Information to Support an Exception Request contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four and is missing? Please be as specific as possible with your comments. No: X Comments: Item 4 needs to be expanded to provide some guidance on what an acceptable "impact to the over-all reliability of the BES" is. Also, there needs to be some sort of qualifier for the request to specify the "most severe system impact of an outage of the facility," i.e., at least add the qualifier that it only requires a credible scenario. For example, what is the status of the BES when the outage of the facility occurs such that it represents the "most severe impact." Most Regional Entities have settled on Transmission Planning models and thresholds that any new generation deployment must minimally meet before it goes online. In some Regions, power transfer distribution factor may be gating factor - others may look at transient response. Whatever the case, the Regions should use those same criteria for BES exceptions - reduced to some conservative percentage level; perhaps 10% of the available margin. 4. Do you have concerns about an entity's ability to obtain the data they would need to file the Detailed Information to Support an Exception Request? If so, please be specific with your concerns so that the SDT can fully understand the problem. Yes: X Comments: Having the data to perform studies of generator outage effects on the BES may require sharing of potentially confidential and/or classified information between the generator and transmission entities. Obviously, "base case" and possibly "N-1" information would need to be shared. Hence, there needs to be some assurance that information will be provided (Possibly in the proposed Appendix 5C of the NERC Rules of Procedure).

Voter	Entity	Segment	Vote	Comment
				5. Are there other specific characteristics that you feel would be important for presenting a case and generic enough that they belong in the request? If so, please identify them here and provide suggested language that could be added to the document. Yes: No: Comments: 6. Are you aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? If so, please identify them here and provide suggested language changes that may clarify the issue. Yes: X Comments: This Detailed Information to Support an Exemption Request document obviously does not conform to FERC Order 743, Sections 115,116 "NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid." The question is will the justification for declining to observe this FERC directive be sufficient. We would assert that is it a lesser consequence for the BES to raise the single generation threshold to 75 MVA than it is to violate this FERC directive by not providing clear, objective, transparent and uniform criteria for the exemption process. We understand that the FERC directive was not well conceived in that if a bright line criteria could be developed for the exemption process, it should be included in the BES Definition itself. However, it leaves the exemption process that FERC had originally conceived non-attainable and causes angst to the industry. 7. Are there any other concerns with this approach that haven't been covered in previous questions and comments bearing in mind that the definition itself and the proposed Rules of Procedure changes are posted separately for comments? Please be as specific as possible with your comments. Yes: No: Comments:
Response: 1. 2. & 3. The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional				

Voter	Entity	Segment	Vote	Comment
discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.				

Voter	Entity	Segment	Vote	Comment
Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. 4. If confidential data is involved in the submittal, the SDT expects the Regional Entity to work with the submitter to get around this problem. 5. & 7. Thank you for your response. 6. The SDT believes the process is in alignment with Order 743 directives as explained above.				
Colin Anderson	Ontario Power Generation Inc.	5	Negative	OPG has cast a negative ballot in the BES Definition poll. Since we disagree with the Definition, and the justification for it, we don't see the need for an exception process. OPG continues to question the need for the changes required (and costs imposed) as a result of the new BES definition. OPG disagrees in general with proceeding to implement a 100 kV brightline definition in the absence of a properly quantified cost/benefit analysis. Entities are being asked to incur a high cost for no demonstrated benefit in wide-area reliability.
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at				

Voter	Entity	Segment	Vote	Comment
the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the				

Voter	Entity	Segment	Vote	Comment
proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 & 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 & 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.				
Steven Grega	Public Utility District No. 1 of Lewis County	5	Negative	Process should make it easier to prove facility is a non-BES; process should take into account the plant load factor, if the plant is dispatchable and if it cricital resource as determine by the BA. Most facilities should be able to prove they are not part of the BES. In WECC, only critical cranking paths are part of BES.
Response: The SDT has attempted to make the exception process as easy as possible while still providing the information necessary to properly process a request. Factors such as described by the commenter can be supplied with the submittal as there is no limit or constraint on additional information that can be supplied by the submitter.				

Voter	Entity	Segment	Vote	Comment
Larry Nordell	Montana Consumer Counsel	8	Negative	The BES exception process must be cognizant of costs and benefits. In addition to the explicit information required in the current proposal it needs to provide an opportunity for an exception for elements whose failure would have no consequential impacts on the bulk system, and a process for an exception for elements for which the costs inclusion can be shown to be clearly in excess of the benefits of inclusion.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 & 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 & 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.				
Diane J Barney	National Association of Regulatory Utility Commissioners	9	Negative	The draft definition has a circularity issue with the Registry, lacks clarity in some aspects, and lacks a technical basis and cost/benefit analysis. (See specific comments submitted.)
Response: Please see the specific responses provided.				
John D Varnell	Tenaska Power Services Co.	6	Abstain	Which part of this definition has the highest priority inclusions or exclusions.
Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included				

Voter	Entity	Segment	Vote	Comment
in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.				
Brenda Powell	Constellation Energy Commodities Group	6	Affirmative	While the Technical Principles for BES Exception are acceptable, they are quite complicated. Further simplification may ease the process.

Voter	Entity	Segment	Vote	Comment
Response: The SDT has attempted to make the exception process as easy as possible while still providing the information necessary to properly process a request.				
Greg Lange	Public Utility District No. 2 of Grant County	3	Affirmative	Public Utility District No. 2 of Grant County (GCPD) agrees that the General Instructions set forth the basic information that would be necessary to support an Exception Request. GCPD is concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. GCPD envisions that at least four different kinds of documents would be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details. GCPD suggests that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts. GCPD agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. GCPD suggests three refinements to the questions: (1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter is not.

Voter	Entity	Segment	Vote	Comment
				(2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, GCPD suggests modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.
Response: The SDT believes that the form allows for the flexibility of an entity supplying any types of diagrams that it believes will support its request. This is a preferable situation to coming up with a hard coded list. No change made. The SDT will consider completing a sample form in Phase II. The SDT has modified the wording of the question to clarify the intent. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability-~~-~~related Ancillary Services? The SDT does not believe that the suggested wording change provides any additional clarification and may even cause confusion. No change made. The SDT agrees that any information that might support a request should be allowed and has clarified the wording on page 1 to that effect. **Page 1** - List any attached supporting documents and any additional information that is included to supports the request:				
Jeffrey S Brame	North Carolina Electric Membership Corp.	5	Affirmative	In general, we support the "Detailed Information to Support an Exception Request". However, we have identified a few concerns that warrant the SDT's consideration. Q1, Q5 and Q6 in the Transmission Facilities section have a "Description/Comments" section. What type of information should be included

Voter	Entity	Segment	Vote	Comment
				under the Description for each of these questions? Providing more guidance here would help achieve the "standardization, clarity and continuity of process" that we seek. Regarding Q2: A permanent flowgate should not be part of the detailed information to support an exception. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no ransactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the permanent adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. In the Transmission Facilities section, we are unclear about what "an appropriate list" in Q3 is supposed to be. Is it supposed to be a list of all IROLs or only those for which the answer is yes? Why is a list even necessary since the answer to the question answers Exclusion E3.c? If the answer to Q3 is no, is this asking the submitter to prove the negative? For Q2 in the Generation Facilities section, the definition of ancillary services varies and can be quite broad. It can include reactive power and voltage support for example. All generators provide some reactive power and voltage support. Thus, ancillary services should be further defined or one could construe it to limit any generator from being excluded. For Q1 in the Generation Facilities section, some generation owners may not be able to obtain their BA's most severe single Contingency. Many generator owners will not have access to the data necessary to demonstrate the reliability impact to the BES. This is particularly true for transmission dependent utilities.

Voter	Entity	Segment	Vote	Comment
Doug White	North Carolina Electric Membership Corp.	3	Affirmative	In general, we support the proposed definition of the BES. However, we have identified a few concerns that warrant the SDT's consideration. We'd prefer to see the language from the ERO Statement of Compliance Registry Criteria repeated within the BES Definition itself instead of referencing an outside document. As it stands right now, the Compliance Registry Criteria needs to stay intact for Phase I of this project. That makes the Compliance Registry Criteria reliant on the BES Definition and vice versa. We understand that the Statement of Compliance Registry Criteria may be reviewed/revised at the same time Phase 2 of this project is being developed, therefore we agree with Inclusion I2 of this draft. Blackstart Resources can actually be on the distribution system. There is still the question of whether the distribution system would then be subjected to the enforceable standards. If so, there would most likely be a significant cost increase associated with tracking compliance for these distribution systems without a commensurate increase in reliability since Blackstart Resources are rarely used. This could very well cause entities to un-designate Blackstart Resources on distribution systems to avoid these distribution systems from becoming part of the BES. The same rationale that was used for eliminating cranking paths could also be applied to Blackstart Resources. A flowgate should not be used to limit applicability of E3. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the "permanent" adjective applied to flowgates probably limits the

Voter	Entity	Segment	Vote	Comment
				applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First, flowgates are created to manage congestion. The IDC is more of a congestion management tool than a reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve IROLs that have been violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The characteristics of the flowgate make it a good proxy for estimating how much contractual use has been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROLs, many simply are not. The term "non-retail generation" used in Exclusion E1 (item c) and again in E3 (item a) should be clarified (see comments for question 8 below). The Note after item c should also be clarified to indicate that closing a normally open switch doesn't affect this exclusion. Detailed Information to Support an Exception Request: Vote affirmative with the comments below Comments for Ballot (these may be copied and pasted): In general, we support the "Detailed Information to Support an Exception Request". However, we have identified a few concerns that warrant the SDT's consideration. Q1, Q5 and Q6 in the Transmission Facilities section have a "Description/Comments" section. What type of information should be included under the Description for each of these questions? Providing more guidance here would help achieve the "standardization, clarity and continuity of process" that we seek. Regarding Q2: A permanent flowgate should not be part of the detailed information to support an exception. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates

Voter	Entity	Segment	Vote	Comment
				in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the permanent adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. In the Transmission Facilities section, we are unclear about what "an appropriate list" in Q3 is supposed to be. Is it supposed to be a list of all IROLs or only those for which the answer is yes? Why is a list even necessary since the answer to the question answers Exclusion E3.c? If the answer to Q3 is no, is this asking the submitter to prove the negative? For Q2 in the Generation Facilities section, the definition of ancillary services varies and can be quite broad. It can include reactive power and voltage support for example. All generators provide some reactive power and voltage support. Thus, ancillary services should be further defined or one could construe it to limit any generator from being excluded. For Q1 in the Generation Facilities section, some generation owners may not be able to obtain their BA's most severe single Contingency. Many generator owners will not have access to the data necessary to demonstrate the reliability impact to the BES. This is particularly true for transmission dependent utilities.

Response: In response to comments, the SDT has deleted the reference to the ERO Statement of Compliance Registry and replaced it with the existing numeric values. This way, any changes to the ERO Statement of Compliance Registry prior to resolution of threshold values in Phase II will not affect the definition.

The SDT has determined that it should be conservative with regard to allowing exclusion for radial systems that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent radial systems without blackstart resources. No change made.

Voter	Entity	Segment	Vote	Comment
The SDT believes that the language in Exclusion E3.c prohibiting "Flowgates" from qualifying for definitional exclusion is appropriate and necessary. As a definitional exclusion characteristic, Exclusion E3.c must follow the principle of being a bright-line and easily identifiable, and as such, the SDT feels that the definition cannot allow some types of Flowgates and disallow others. Flowgates must continue to be a prohibiting characteristic under Exclusion E3, since these facilities are more likely to be used in the transfer of bulk power than not. An entity who wishes to make a case for exclusion of a unique type of Flowgate facility can do so through the exception process. The SDT believes that the continued qualifier of "permanent" associated with the term "Flowgate" addresses the majority of the concern in this comment. No change made. Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. The requesting entity should supply any and all information that it feels will help support its request. No change made. The SDT has modified the wording of the question to clarify the intent. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability--related Ancillary Services? Any information that an entity believes will support its request should be included. No change made. The SDT believes that the language in Exclusion E3.c prohibiting "Flowgates" from qualifying for definitional exclusion is appropriate and necessary. As a definitional exclusion characteristic, Exclusion E3.c must follow the principle of being a bright-line and easily identifiable, and as such, the SDT feels that the definition cannot allow some types of Flowgates and disallow others. Flowgates must continue to be a prohibiting characteristic under Exclusion E3, since these facilities are more likely to be used in the transfer of bulk power than not. An entity who wishes to make a case for exclusion of a unique type of Flowgate facility can do so through the exception process. The SDT believes that the continued qualifier of "permanent" associated with the term "Flowgate" addresses the majority of the concern in this comment. No change made. The SDT believes that the wording is clear as stated and that the list would be those IROLs that include the Element(s) in question. No change made. The SDT has modified the wording of the question to clarify the intent. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability--related Ancillary Services? Based on the comments received, the SDT believes that entities will be able to obtain the requisite information necessary to submit a request. However, should an entity have difficulty, they will need to obtain the assistance of their Regional Entity to secure the data. If the entity still can't obtain the needed data, then the SDT fully expects that entity's Regional Entity to work with them to come up with a plan that will allow that entity to fill out the request form in a manner that will be acceptable to the Regional Entity so that processing of the request can continue.				

Voter	Entity	Segment	Vote	Comment
Claston Augustus Sunanon	Orlando Utilities Commission	6	Affirmative	Orlando Utilities Commission supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date.
Brad Chase	Orlando Utilities Commission	1	Affirmative	Orlando Utilities Commission supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. in addition, phase II should include a clear distinction between the BES and BPS.
Ballard K Mutters	Orlando Utilities Commission	3	Affirmative	Orlando Utilities Commission supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date.
Response: The exception process is being worked on in parallel with the definition and will be part of the same filing. Phase II will start up as soon as Phase I is completed and the SDT has the available resources to work on it.				
Noman Lee Williams	Sunflower Electric Power Corporation	1	Affirmative	Q1, Q5 and Q6 in the Transmission Facilities section have a "Description/Comments" section. What type of information should be included under the Description for each of these questions? Providing more guidance here would help achieve the "standardization, clarity and continuity of process" that we seek. Regarding Q2: A permanent flowgate should not be part of the detailed information to support an exception. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms

Voter	Entity	Segment	Vote	Comment
				definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the permanent adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First,flowgates are created to manage congestion. The IDC is more of a congestion management tool than a reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve IROLs that have been violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The characteristics of the flowgate make it a good proxy for estimating how much contractual use has been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROLs, many simply are not. In the Transmission Facilities section, we are unclear about what "an appropriate list" in Q3 is supposed to be. Is it supposed to be a list of all IROLs or only those for which the answer is yes? Why is a list even necessary since the answer to the question answers Exclusion E3.c? If the answer to Q3 is no, is this asking the submitter to prove the negative? For Q2 in the Generation Facilities section, the definition of ancillary services varies and can be quite broad. It can include reactive power and voltage support for example. All generators provide some reactive power and voltage support. Thus, ancillary services should be further defined or one could construe it to limit any generator from being excluded. For Q1 in the Generation Facilities section, some generation owners may not be

Voter	Entity	Segment	Vote	Comment
				able to obtain their BA's most severe single Contingency. Many generator owners will not have access to the data necessary to demonstrate the reliability impact to the BES. This is particularly true for transmission dependent utilities.
James Jones	Southwest Transmission Cooperative, Inc.	1	Affirmative	In general, we support the "Detailed Information to Support an Exception Request". However, we have identified a few concerns that warrant the SDT's consideration. Q1, Q5 and Q6 in the Transmission Facilities section have a "Description/Comments" section. What type of information should be included under the Description for each of these questions? Providing more guidance here would help achieve the "standardization, clarity and continuity of process" that we seek. Regarding Q2: A permanent flowgate should not be part of the detailed information to support an exception. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the permanent adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First,flowgates are created to manage congestion. The IDC is more of a congestion management tool than a reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve IROLs that have been

Voter	Entity	Segment	Vote	Comment
				violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The characteristics of the flowgate make it a good proxy for estimating how much contractual use has been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROLs, many simply are not. In the Transmission Facilities section, we are unclear about what "an appropriate list" in Q3 is supposed to be. Is it supposed to be a list of all IROLs or only those for which the answer is yes? Why is a list even necessary since the answer to the question answers Exclusion E3.c? If the answer to Q3 is no, is this asking the submitter to prove the negative? For Q2 in the Generation Facilities section, the definition of ancillary services varies and can be quite broad. It can include reactive power and voltage support for example. All generators provide some reactive power and voltage support. Thus, ancillary services should be further defined or one could construe it to limit any generator from being excluded. For Q1 in the Generation Facilities section, some generation owners may not be able to obtain their BA's most severe single Contingency. Many generator owners will not have access to the data necessary to demonstrate the reliability impact to the BES. This is particularly true for transmission dependent utilities.

Response: Any information that an entity believes will support its request should be included. No change made.
The SDT believes that the language in Exclusion E3.c prohibiting "Flowgates" from qualifying for definitional exclusion is appropriate and necessary. As a definitional exclusion characteristic, Exclusion E3.c must follow the principle of being a bright-line and easily identifiable, and as such, the SDT feels that the definition cannot allow some types of Flowgates and disallow others. Flowgates must continue to be a prohibiting characteristic under Exclusion E3, since these facilities are more likely to be used in the transfer of bulk power than not. An entity who wishes to make a case for exclusion of a unique type of Flowgate facility can do so through the exception process. The SDT believes that the continued qualifier of "permanent" associated with the term "Flowgate" addresses the majority of the concern in this comment. No change made.
Any information that an entity believes will support its request should be included. No change made.
The SDT has modified the wording of the question to clarify the intent.

Q2. Is the ~~generator or generator facility~~ generation resource used to provide reliability--related Ancillary Services?

Based on the comments received, the SDT believes that entities will be able to obtain the requisite information necessary to submit a request.

Voter	Entity	Segment	Vote	Comment
However, should an entity have difficulty, they will need to obtain the assistance of their Regional Entity to secure the data. If the entity still can't obtain the needed data, then the SDT fully expects that entity's Regional Entity to work with them to come up with a plan that will allow that entity to fill out the request form in a manner that will be acceptable to the Regional Entity so that processing of the request can continue.				
Paul Cummings	City of Redding	5	Affirmative	Redding's vote is conditional on the adoption and dedication to Phase 2 of this project.
Response: Phase II will begin as soon as Phase I is over and the SDT has the resources available to continue.				
Sam Nietfeld	Snohomish County PUD No. 1	5	Affirmative	Below are SNPD's responses to the NERC comment form for the Definition of the BES (Project 2010-17)Technical Principles for Demonstrating BES Exceptions). SNPD believes the refinements below will clarify the current draft of the BES definition, without hanging the current intent. 1. Page one of the 'Detailed Information to Support an Exception Request' contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. SNPD is concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. SNPD envisions that at least four different kinds of documents would be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details, such as breaker settings. SNPD suggests that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts. 2. Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there

Voter	Entity	Segment	Vote	Comment
				information that you believe needs to be on page two or three that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest three modifications to the proposed language to ensure consistency with Section 215 of the Federal Power Act, with the BES Definition, and to provide an entity seeking an Exception with the opportunity to submit all relevant information: 1) SNPD suggests that a new question should be added concerning the function of the facility, which would read: "Does the facility function as a local distribution facility rather than a Transmission facility? If yes, please provide a detailed explanation of your answer." Section 215(a)(1) of the FPA makes clear that "facilities used in the local distribution of electric energy" are excluded from the BES, 16 U.S.C. Â§ 824o(a)(1), and the most recent draft of the BES definition incorporates the same language. SNPD believes a question to address the function of the Element or system subject to an Exception Request is necessary to determine whether the Element or system is "used" in local distribution and thereby to ensure that this statutory limit on the BES is observed in the Exceptions process. Further, we believe a variety of information may be relevant to determining whether a particular facility functions as local distribution rather than as part of the BES. For example, if power is not scheduled across the facility or if capacity on the system is not posted on the relevant OASIS, it is likely to function as local distribution, not transmission. Similarly, if power enters the system and is delivered to load within the system rather than moving to load located on another system, its function is local distribution rather than transmission. SNPD proposes the language above as an open-ended question so that the entity submitting the Exceptions Request can provide this and any other information it deems relevant to facility function. 2) SNPD suggests modifying question 6 to "Is the facility part a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. 3) A general

Voter	Entity	Segment	Vote	Comment
				"catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While SNPD believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant. 3. Page four of the 'Detailed Information to Support an Exception Request' contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. SNPD suggests three refinements to the questions: 1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter is not. 2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, SNPD suggests modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the

Voter	Entity	Segment	Vote	Comment
				generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? 3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional in
John D Martinsen	Public Utility District No. 1 of Snohomish County	4	Affirmative	Below are SNPD's responses to the NERC comment form for the Definition of the BES (Project 2010-17)Technical Principles for Demonstrating BES Exceptions). SNPD believes the refinements below will clarify the current draft of the BES definition, without hanging the current intent. 1. Page one of the 'Detailed Information to Support an Exception Request' contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. SNPD is concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. SNPD envisions that at least four different kinds of documents would be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details, such as breaker settings. SNPD suggests that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts. 2. Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there

Voter	Entity	Segment	Vote	Comment
				information that you believe needs to be on page two or three that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest three modifications to the proposed language to ensure consistency with Section 215 of the Federal Power Act, with the BES Definition, and to provide an entity seeking an Exception with the opportunity to submit all relevant information: 1) SNPD suggests that a new question should be added concerning the function of the facility, which would read: "Does the facility function as a local distribution facility rather than a Transmission facility? If yes, please provide a detailed explanation of your answer." Section 215(a)(1) of the FPA makes clear that "facilities used in the local distribution of electric energy" are excluded from the BES, 16 U.S.C. Â§ 824o(a)(1), and the most recent draft of the BES definition incorporates the same language. SNPD believes a question to address the function of the Element or system subject to an Exception Request is necessary to determine whether the Element or system is "used" in local distribution and thereby to ensure that this statutory limit on the BES is observed in the Exceptions process. Further, we believe a variety of information may be relevant to determining whether a particular facility functions as local distribution rather than as part of the BES. For example, if power is not scheduled across the facility or if capacity on the system is not posted on the relevant OASIS, it is likely to function as local distribution, not transmission. Similarly, if power enters the system and is delivered to load within the system rather than moving to load located on another system, its function is local distribution rather than transmission. SNPD proposes the language above as an open-ended question so that the entity submitting the Exceptions Request can provide this and any other information it deems relevant to facility function. 2) SNPD suggests modifying question 6 to "Is the facility part a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. 3) A general

Voter	Entity	Segment	Vote	Comment
				"catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While SNPD believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant. 3. Page four of the 'Detailed Information to Support an Exception Request' contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. SNPD suggests three refinements to the questions: 1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter is not. 2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, SNPD suggests modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the

Voter	Entity	Segment	Vote	Comment
				generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? 3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional in
William T Moojen	Snohomish County PUD No. 1	6	Affirmative	Below are SNPD's responses to the NERC comment form for the Definition of the BES (Project 2010-17)Technical Principles for Demonstrating BES Exceptions). SNPD believes the refinements below will clarify the current draft of the BES definition, without hanging the current intent. 1. Page one of the 'Detailed Information to Support an Exception Request' contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. SNPD is concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. SNPD envisions that at least four different kinds of documents would be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details, such as breaker settings. SNPD suggests that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts. 2. Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there

Voter	Entity	Segment	Vote	Comment
				information that you believe needs to be on page two or three that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest three modifications to the proposed language to ensure consistency with Section 215 of the Federal Power Act, with the BES Definition, and to provide an entity seeking an Exception with the opportunity to submit all relevant information: 1) SNPD suggests that a new question should be added concerning the function of the facility, which would read: "Does the facility function as a local distribution facility rather than a Transmission facility? If yes, please provide a detailed explanation of your answer." Section 215(a)(1) of the FPA makes clear that "facilities used in the local distribution of electric energy" are excluded from the BES, 16 U.S.C. Â§ 824o(a)(1), and the most recent draft of the BES definition incorporates the same language. SNPD believes a question to address the function of the Element or system subject to an Exception Request is necessary to determine whether the Element or system is "used" in local distribution and thereby to ensure that this statutory limit on the BES is observed in the Exceptions process. Further, we believe a variety of information may be relevant to determining whether a particular facility functions as local distribution rather than as part of the BES. For example, if power is not scheduled across the facility or if capacity on the system is not posted on the relevant OASIS, it is likely to function as local distribution, not transmission. Similarly, if power enters the system and is delivered to load within the system rather than moving to load located on another system, its function is local distribution rather than transmission. SNPD proposes the language above as an open-ended question so that the entity submitting the Exceptions Request can provide this and any other information it deems relevant to facility function. 2) SNPD suggests modifying question 6 to "Is the facility part a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. 3) A general

Voter	Entity	Segment	Vote	Comment
				"catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While SNPD believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant. 3. Page four of the 'Detailed Information to Support an Exception Request' contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. SNPD suggests three refinements to the questions: 1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter is not. 2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, SNPD suggests modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the

Voter	Entity	Segment	Vote	Comment
				generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? 3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional in
Long T Duong	Snohomish County PUD No. 1	1	Affirmative	Below are SNPD's responses to the NERC comment form for the Definition of the BES (Project 2010-17)Technical Principles for Demonstrating BES Exceptions). SNPD believes the refinements below will clarify the current draft of the BES definition, without hanging the current intent. 1. Page one of the 'Detailed Information to Support an Exception Request' contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. SNPD is concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. SNPD envisions that at least four different kinds of documents would be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details, such as breaker settings. SNPD suggests that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts. 2. Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there

Voter	Entity	Segment	Vote	Comment
				information that you believe needs to be on page two or three that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest three modifications to the proposed language to ensure consistency with Section 215 of the Federal Power Act, with the BES Definition, and to provide an entity seeking an Exception with the opportunity to submit all relevant information: 1) SNPD suggests that a new question should be added concerning the function of the facility, which would read: "Does the facility function as a local distribution facility rather than a Transmission facility? If yes, please provide a detailed explanation of your answer." Section 215(a)(1) of the FPA makes clear that "facilities used in the local distribution of electric energy" are excluded from the BES, 16 U.S.C. Â§ 824o(a)(1), and the most recent draft of the BES definition incorporates the same language. SNPD believes a question to address the function of the Element or system subject to an Exception Request is necessary to determine whether the Element or system is "used" in local distribution and thereby to ensure that this statutory limit on the BES is observed in the Exceptions process. Further, we believe a variety of information may be relevant to determining whether a particular facility functions as local distribution rather than as part of the BES. For example, if power is not scheduled across the facility or if capacity on the system is not posted on the relevant OASIS, it is likely to function as local distribution, not transmission. Similarly, if power enters the system and is delivered to load within the system rather than moving to load located on another system, its function is local distribution rather than transmission. SNPD proposes the language above as an open-ended question so that the entity submitting the Exceptions Request can provide this and any other information it deems relevant to facility function. 2) SNPD suggests modifying question 6 to "Is the facility part a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. 3) A general

Voter	Entity	Segment	Vote	Comment
				"catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While SNPD believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant. 3. Page four of the 'Detailed Information to Support an Exception Request' contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. SNPD suggests three refinements to the questions: 1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter is not. 2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, SNPD suggests modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the

Voter	Entity	Segment	Vote	Comment
				generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? 3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional in
Response: Please see the detailed responses to comments for Snohomish in the general consideration of comments document for the technical criteria.				
Harold Taylor	Georgia Transmission Corporation	1	Affirmative	Throughout the document, because it will be part of a larger Exception Request Form, it should, when possible, use terms consistent with the rest of that form (e.g., "Request" rather than "application"). Similarly, defined terms (even if only defined in the context of the Request Form in which these Principles will be used) such as "Exception," "Request," "Element" or "Facility" should be capitalized; if the use of lower case is intended to convey a different meaning than what is defined, another term should be used to avoid confusion. The Definition and Request Form generally use the term "Element," so it is unclear why this document should so consistently use "facility." For consistency, "Element(s)" or possibly "Element(s) or Facility" should be used.
Response: The SDT has attempted to clean up any inconsistencies in terminology.				
Gregory S Miller	Baltimore Gas & Electric Company	1	Affirmative	While the Technical Principles for BES Exception are acceptable, they are quite complicated. Further simplification may ease the process.
Response: The SDT would point the commenter to the Phase II draft SAR which contains wording to allow for a review of the principles after a 12 month period of real-world experience.				
Charles A. Freibert	Louisville Gas and Electric Co.	3	Affirmative	LG&E and KU Energy request clarification as to how the two year data requirement would apply to a new facility for which the owner/operator requests an exemption.
Response: If two years worth of data are not available, the SDT believes that a Regional Entity will accept what is available and will work with the submitter to come up with an acceptable plan to move forward.				

Voter	Entity	Segment	Vote	Comment
Anthony Schacher	Salem Electric	3	Affirmative	Salem Electric is encouraged to see that the standard drafting team understands the reality that in many circumstances many small radially fed utilities have no effect on the bulk electric system. By permitting reasonable and prudent exceptions it will allow many of the small utilities to be able to spend our limited time and resources on the reliability of our systems for our end users, instead of undertaking unnecessary steps to protect a system upon which we have no effect. The exception process is thorough but still manageable for small utilities with limited resources. Salem Electric would like to thank the Standards Drafting Team for their hard work and dedication in defining the Bulk Electric System.
Thomas C Duffy	Central Hudson Gas & Electric Corp.	3	Affirmative	The 'Technical Principles for Demonstrating BES Exceptions' process was intended to establish technical exception 'criteria' which would be used by the industry to understand what facilities would qualify for inclusions and exclusions from the BES. What has been produced, however, is essentially a listing of 'electrical system indicators', identified on the form, which may be material to making a decision regarding, 'is it BES or not'. The thresholds (or acceptable values) for the indicators, however, have not been determined. It is understood that in Phase II of the BES Definition development process, the SDT will attempt to address these issues but until that work has been completed, the industry will remain enmeshed in confusion and inefficient application of resources and funding. Without these criteria, it is very difficult to believe that this process can be transparent and consistent.
Jason Fortik	Lincoln Electric System	3	Affirmative	No comments.
Benjamin Friederichs	Big Bend Electric Cooperative, Inc.	3	Affirmative	These principles seem reasonable.
Response: Thank you for your support.				

END OF REPORT

Consideration of Comments

Definition of the Bulk Electric System (Project 2010-17)

The Bulk Electric System Drafting Team thanks all commenters who submitted comments on the 2nd draft of the Definition of the Bulk Electric System (Project 2010-17). These standards were posted for a 45-day public comment period from August 26, 2011 through October 10, 2011. Stakeholders were asked to provide feedback on the standards and associated documents through a special electronic comment form. There were 113 sets of comments, including comments from approximately 255 different people from approximately 156 companies representing all 10 Industry Segments as shown in the table on the following pages.

All comments submitted may be reviewed in their original format on the standard's project page:

http://www.nerc.com/filez/standards/Project2010-17_BES.html

The SDT made the following changes to the definition due to industry comments received:

- Clarified the wording in Inclusion I1 to indicate that at least one secondary terminal must be at 100 kV or higher to accommodate multiple terminal transformers.
- Removed the reference to the ERO Statement of Compliance Registry Criteria in Inclusion I2 so that there is no chance of the registry values being changed and affecting the definition prior to resolution of threshold values in Phase 2 of this project.
- Clarified that generators were not part of Inclusion I5 to avoid improperly pulling in small generators.
- Clarified the language of Exclusion E2 by re-ordering the text as suggested.
- Clarified the language of Exclusion E3.b as suggested.
- Clarified the compliance obligation date of the revised definition in the Implementation Plan.

The SDT feels that it is important to remind the industry that Phase 2 of this project will begin immediately after the conclusion of Phase 1. For consistency, the same SDT will follow through with Phase 2.

Minority opinions expressed in this document are as follows:

- Some commenters feel that threshold values should be resolved in Phase 1. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist

through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

- Several commenters suggested that the requirement under Exclusion E3.b should apply only during normal operating conditions, in other words, commenters felt that some power flow should be allowed to flow from the candidate local network back into the BES as long as it only occurred under abnormal conditions. The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that in order to maintain the intent of a bright-line characteristic in the BES definition such a qualifier could not be accommodated. However, the SDT pointed out that for those circumstances where a candidate for local network is unable to utilize the local network exclusion due to an abnormal situation that caused power to flow out of the network, the network could be a suitable candidate that could apply for exclusion under the Exception Process.
- Some commenters expressed the opinion that Blackstart Resources are not required for the normal operation of the interconnected transmission system. The directive by FERC to revise the definition of the BES has been interpreted by the SDT to include all Facilities necessary for reliably operating the interconnected transmission system under both normal and emergency conditions. This interpretation by the SDT includes situations related to Blackstart Resources and system restoration. Blackstart Resources have the ability to be started without the support of the interconnected transmission system in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The SDT maintains that Blackstart Resources must be included in the definition.

The SDT is recommending that this project be moved forward to the recirculation ballot stage.

There were two comments that were repeated multiple times throughout the various documents. The first topic was about how to sort through the definition inclusions and exclusions, i.e., which takes precedence. The SDT offers this guidance on that issue:

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the

Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

> "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.

Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.

In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.

The second item is about providing specific guidance on how the information on the exception request form will be used in making decisions on inclusions/exclusions in the exception process. While not

technically part of this document which is about the definition, since the question did come up in these comments, the SDT provides the following information:

The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication.

Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result ofa sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved."

The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Finally, the SDT would point to the draft SAR for Phase 2 of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase 1 of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission,

you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 404-446-2560 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

[1] The appeals process is in the Reliability Standards Development Procedures: http://www.nerc.com/standards/newstandardsprocess.html.

Index to Questions, Comments, and Responses

1. **The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.** 20
2. **The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.** 77
3. **The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.** 97
4. **The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.** 139
5. **The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.** 158
6. **The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.** 190
7. **The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.** 223
8. **The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2 (behind-the-meter generation)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.** 269
9. **The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3 (local network)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.** 289
10. **The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E4 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.** 338

11. Are there any other concerns with this definition that haven't been covered in previous questions and comments remembering that the exception criteria are posted separately for comment?.....358

RFC Suggested changes to definition: 411

Pacificorp additional comments: 413

Rochester Diagrams:. 415

The Industry Segments are:

1 — Transmission Owners
2 — RTOs, ISOs
3 — Load-serving Entities
4 — Transmission-dependent Utilities
5 — Electric Generators
6 — Electricity Brokers, Aggregators, and Marketers
7 — Large Electricity End Users
8 — Small Electricity End Users
9 — Federal, State, Provincial Regulatory or other Government Entities
10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Gerald Beckerle	SERC OC Standards Review Group	X		X							

	Additional Member	Additional Organization	Region	Segment Selection
1.	Jeff Harrison	AECI		1, 3, 5, 6
2.	Eugend Warnecke	Ameren		1, 3
3.	Dan Roethemeyer	Dynegy		5
4.	Danny Dees	MEAG	SERC	1, 3, 5
5.	Brad Young	LGE/KU	SERC	3
6.	Marc Butts	Southern	SERC	1, 5
7.	Scott Brame	NCEMC	SERC	1, 3, 4, 5
8.	Tim Hattaway	PowerSouth	SERC	1, 5
9.	Steve McElhaney	SMEPA	SERC	1, 3, 4, 5
10.	Joel Wise	TVA	SERC	1, 3, 5, 6

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10

11.	Dwayne Roberts	OMU	SERC	3, 5
12.	Jake Miller	Dynegy	SERC	5
13.	Andy Burch	EEI	SERC	5
14.	Tom Burns	PJM	SERC	2
15.	M. R. Castello	Alabama Power	SERC	3
16.	Bob Dalrymple	TVA	SERC	1, 3, 5, 6
17.	Robert Thomasson	BREC	SERC	1
18.	Randy Hubbert	Southern	SERC	1, 5
19.	Phil Whitmer	Southern	SERC	1, 5
20.	Alvis Lanton	SIPC	SERC	1
21.	Jim Case	Entergy	SERC	1, 3, 6
22.	Mike Hirst	Cogentrix	SERC	5
23.	Gene Delk	SCEandG	SERC	1, 3, 5, 6
24.	Mike Bryson	PJM	SERC	2
25.	John Troha	SERC	SERC	10

2.	Group	David Taylor	NERC Staff Technical Review										
No additional members listed.													
3.	Group	Guy Zito	Northeast Power Coordinating Council										X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Alan Adamson	New York State Reliability Council, LLC	NPCC	10
2.	Gregory Campoli	New York Independent System Operator	NPCC	2
3.	Kurtis Chong	Independent Electricity System Operator	NPCC	2
4.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1
5.	Chris de Graffenried	Consolidated Edison Co. of New York Inc.	NPCC	1
6.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10
7.	Peter Yost	Consoldiated Edison Co. of New York, Inc.	NPCC	3
8.	Mike Garton	Dominion Resources Services, Inc.	NPCC	5
9.	Kathleen Goodman	ISO - New England	NPCC	2
10.	Chantel Haswell	FPL Group, Inc.	NPCC	5
11.	David Kiguel	Hydro One Networks Inc.	NPCC	1
12.	Michael Lombardi	Northeast Utilities	NPCC	1

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
13.	Randy MacDonald	New Brunswick Power Transmission	NPCC 9										
14.	Bruce Metruck	New York Power Authority	NPCC 6										
15.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC 10										
16.	Robert Pellegrini	The United Illumianting Company	NPCC 1										
17.	Si Truc Phan	Hydro-Quebec TransEnergie	NPCC 1										
18.	David Ramkalawan	Ontario Power Generation, Inc.	NPCC 5										
19.	Saurabh Saksena	National Grid	NPCC 1										
20.	Michael Schiavone	National Grid	NPCC 1										
21.	Wayne Sipperly	New York Power Authority	NPCC 5										
22.	Donald Weaver	New Brunswick System Operator	NPCC 2										
23.	Ben Wu	Orange and Rockland Utilities	NPCC 1										
4.	Group	Charles Long	SERC Planning Standards Subcommittee	X									X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Pat Huntley	SERC	SERC	10
2.	John Sullivan	Ameren Services Co.	SERC	1
3.	James Manning	NC Electric Membership Corp.	SERC	1
4.	Philip Kleckley	SC Electric and Gas Co.	SERC	1
5.	Bob Jones	Southern Company Services	SERC	1
6.	Jim Kelley	PowerSouth Energy Cooperative	SERC	1

5.	Group	Jonathan Hayes	Southwest Power Pool Standards Review Team		X								

	Additional Member	Additional Organization	Region	Segment Selection
1.	Gregory McAuley	Oklahoma Gas and Electric	SPP	1, 3, 5
2.	Harold Wyble	Kansas City Power and Light	SPP	1, 3, 5, 6
3.	Jamie Strickland	Oklahoma Gas and Electric	SPP	1, 3, 5
4.	Mark Wurm	Board of Public Utilities City of McPherson	SPP	1, 3, 5
5.	John Allen	City Utilities of Springfield	SPP	1, 4
6.	Louis Guidry	CLECO	SPP	1, 3, 5
7.	Robert Cox	Lea County Electric	SPP	
8.	Sean Simpson	Board of Public Utilities City of McPherson	SPP	1, 3, 5
9.	Stephen McGie	Coffeyville	SPP	

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
10.	Valerie Pinamonti	American Electric Power	SPP	1, 3, 5									
11.	Michael Bensky		SPP										
12.	Robert Rhodes	Southwest Power Pool	SPP	2									
13.	Jonathan Hayes	Southwest Power Pool	SPP	2									
6.	Group	Frank Gaffney	Florida Municipal Power Agency	X		X	X	X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Tim Beyrle	City of New Smyrna Beach	FRCC	4
2.	Greg Woessner	Kissimmee Utility Authority	FRCC	3
3.	Jim Howard	Lakeland Electric	FRCC	3
4.	Lynne Mila	City of Clewiston	FRCC	3
5.	Joe Stonecipher	Beaches Energy Services	FRCC	1
6.	Cairo Vanegas	FPUA	FRCC	4
7.	Randy Hahn	Ocala Utility Services	FRCC	3

7.	Group	Steve Rueckert	WECC Staff										X

No additional members listed.

8.	Group	Chris Higgins	Bonneville Power Administration	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Lorissa Jones	Transmission Internal Ops	WECC	1
2.	Steve Larson	General Counsel	WECC	1, 3, 5, 6
3.	Rebecca Berdahl	Long Term Sales and Purchases	WECC	3
4.	John Anasis	Technical Operations	WECC	1
5.	Erika Doot	Generation Support	WECC	3, 5, 6
6.	Don Watkins	System Operations	WECC	1
7.	Fran Halpin	Duty Scheduling	WECC	5
8.	Joe Rogers	Transfer Services	WECC	3

9.	Group	Bruce Wertz	Texas RE NERC Standards Subcommittee										X

	Additional Member	Additional Organization	Region	Segment Selection
1.	David Baker	Bandera Electric Cooperative	ERCOT	NA
2.	Gary L. Rayborn	Wharton County Electric Cooperative	ERCOT	NA
3.	Phillip Amaya	Magic Valley EC	ERCOT	NA
4.	Gary Nietsche	Fayette EC	ERCOT	NA

Group/Individual		Commenter	Organization		Registered Ballot Body Segment									
					1	2	3	4	5	6	7	8	9	10
5.	Tim Soles	Occidental Power Services	ERCOT	NA										
6.	Lee Stubblefield	City of Fredericksburg	ERCOT	NA										
7.	Lowell Ogle	City of Brenham	ERCOT	NA										
8.	John Ohlhausen	Medina EC	ERCOT	NA										
9.	Jimmy Sikes	City of Georgetown	ERCOT	NA										
10.	Ron Hughes	San Patricio EC	ERCOT	NA										
11.	Lou White	City of San Marcos	ERCOT	NA										
12.	David Peterson	Central Texas EC	ERCOT	NA										
13.	Gerry Nunan	Karnes EC	ERCOT	NA										
14.	Joe Farley	City of Weatherford	ERCOT	NA										
15.	Flint Geagley	City of Lampasas	ERCOT	NA										
16.	William Bissette	City of Seguin	ERCOT	NA										
17.	Brian Green	Farmers EC		NA										
18.	Jose Escamilla	CPS Energy	ERCOT	NA										
19.	Pam Zdenek	Infigen	NA - Not Applicable	NA										
10.	Group	Joe Tarantino	Balancing Authority Northern California		X									

	Additional Member	Additional Organization	Region	Segment Selection
1.	SMUD		WECC	1, 3, 4, 5, 6
2.	MID		WECC	4, 5
3.	City of Redding		WECC	3, 4, 5, 6
4.	City of Roseville		WECC	NA

11.	Group	Jean Nitz	ACES Power Marketing Standards Collaborators						X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Mohan Sachdeva	Buckeye Power, Inc.	RFC	3, 4
2.	Susan Sosbe	Wabash Valley Power Association	SERC	3

12.	Group	Louis Slade	Dominion		X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Connie Lowe		RFC	5, 6
2.	Mike Garton		MRO	5, 6
3.	Michael Gildea		NPCC	5, 6

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
4. Michael Crowley			SERC	1, 3									
5. Sean Iseminger			SERC	5, 6									
13.	Group	David Thorne	Pepco Holdings Inc and Affiliates	X		X							
Additional Member	**Additional Organization**	**Region**	**Segment Selection**										
1. Carl Kinsley	Delmarva Power and Light Co	RFC	1, 3										
14.	Group	Cynthia S. Bogorad	Transmission Access Policy Study Group	X		X	X	X	X				
Please see www.tapsgroup.org for TAPS' more than 40 members.													
15.	Group	John P. Hughes	Electricity Consumers Resource Council (ELCON)	X		X		X	X	X			
No additional members listed.													
16.	Group	William D Shultz	Southern Company Generation					X					
Additional Member	**Additional Organization**	**Region**	**Segment Selection**										
1. Tom Higgins	Southern Company Generation	SERC	5										
2. Terry Crawley	Southern Company Generation	SERC	5										
3. Therron Wingard	Southern Company Genreation	SERC	5										
4. Ed Goodwin	Southern Company Generation	SERC	5										
17.	Group	David Dockery or John Bussman	AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative	X		X		X	X				
No additional members listed.													
18.	Group	Janelle Marriott Gill	Tri-State Generation and Transmission Assn., Inc. Energy Management			X		X					
No additional members listed.													
19.	Group	Will Smith	MRO NERC Standards Review Forum (NSRF)										X
Additional Member	**Additional Organization**	**Region**	**Segment Selection**										
1. Mahmood Safi	Omaha Public Utility District	MRO	1, 3, 5, 6										
2. Chuck Lawrence	American Transmission Company	MRO	1										

Group/Individual		Commenter	Organization		Registered Ballot Body Segment									
					1	2	3	4	5	6	7	8	9	10
3.	Tom Webb	Wisconsin Public Service Corporation	MRO	3, 4, 5, 6										
4.	Jodi Jenson	Western Aera Power Administration	MRO	1, 6										
5.	Ken Goldsmith	Alliant Energy	MRO	4										
6.	Alice Ireland	Xcel Energy	MRO	1, 3, 4, 6										
7.	Dave Rudolph	Basin Electric Power Cooperative	MRO	1, 3, 5, 6										
8.	Eric Ruskamp	Lincoln Electric System	MRO	1, 3, 5, 6										
9.	Joe DePoorter	Madison Gas and Electric	MRO	3, 4, 5, 6										
10.	Scott Nickels	Rochester Public Utilities	MRO	4										
11.	Terry Harbour	MidAmerican Energy Company	MRO	1, 3, 5, 6										
12.	Marie Knox	Midwest ISO Inc.	MRO	2										
13.	Lee Kittleson	Otter Tail Power Company	MRO	1, 3, 4, 5										
14.	Scott Bos	Muscantine Power and Water	MRO	1, 3, 5, 6										
15.	Tony Eddleman	Nebraska Public Power District	MRO	1, 3, 5										
16.	Mike Brytowski	Great River Energy	MRO	1, 3, 5, 6										
17.	Richard Burt	Minnkota Power Cooperative	MRO	1, 3, 5, 6										
18.	Will Smith	Midwest Reliability Orgnization	MRO	10										
20.	Group	Al DiCaprio	IRC Standards Review Committee			X								

	Additional Member	Additional Organization	Region	Segment Selection
1.	Steve Myers	ERCOT	ERCOT	2
2.	Terry Bilke	MISO	MRO	2
3.	Don Weaver	NBSO	NPCC	2
4.	Mark Thompson	AESO	WECC	2
5.	Greg Campoli	NYISO	NPCC	2
6.	Charles Yeung	SPP	SPP	2
7.	Ben Li	IESO	NPCC	2

21.	Individual	Ian Grant	Tennessee Valley Authority	X		X		X				X		
22.	Individual	Janet Smith	Arizona Public Service Company	X		X		X	X					
23.	Individual	David Kiguel	Hydro One Networks Inc.	X		X								
24.	Individual	Mark Conner	Tri-State GandT	X										
25.	Individual	Brandy A. Dunn	Western Area Power Administration	X										

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
26.	Individual	William Bush	Holland Board of Public Works			X							
27.	Individual	Katie Coleman	Texas Industrial Energy Consumers							X			
28.	Individual	Sandra Shaffer	PacifiCorp	X		X		X	X				
29.	Individual	Heather Hunt	NESCOE									X	
30.	Individual	Antonio Grayson	Southern Company	X		X							
31.	Individual	Irion A. Sanger	Industrial Customers of Northwest Utilities							X			
32.	Individual	Doug Hohlbaugh	FirstEnergy Corp.	X		X	X	X	X				
33.	Individual	John Bee	Exelon	X		X		X					
34.	Individual	Gary Carlson	Michigan Public Power Agency					X					
35.	Individual	Richard Malloy	Idaho Falls Power			X		X					
36.	Individual	Anthony Jablonski	ReliabilityFirst										X
37.	Individual	Colin Anderson	Ontario Power Generation Inc.					X					
38.	Individual	Thomas C. Duffy	Central Hudson Gas and Electric Corporation			X							
39.	Individual	Manny Robledo	City of Anaheim			X	X						
40.	Individual	Deborah J Chance	Chevron U.S.A. Inc.					X		X	X		
41.	Individual	Alice Ireland	Xcel Energy	X		X		X	X				
42.	Individual	Edwin Tso	Metropolitan Water District of Southern California	X									
43.	Individual	Greg Rowland	Duke Energy	X		X		X	X				
44.	Individual	David Proebstel	Clallam County PUD No.1			X							
45.	Individual	Richard Salgo	NV Energy	X									
46.	Individual	Jerome Murray	Oregon Public Utility Commission Staff									X	
47.	Individual	Mary Jo Cooper	Z Global Engineering and Energy Solutions			X							
48.	Individual	Eric Salsbury	Consumers Energy			X	X	X					
49.	Individual	Tracy Richardson	Springfield Utility Board			X							

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
50.	Individual	Kerry Wiedrich	Mission Valley Power			X						X	
51.	Individual	Denise M. Lietz	Puget Sound Energy	X		X		X					
52.	Individual	Chris de Graffenried	Consolidated Edison Co. of NY, Inc.	X		X		X	X				
53.	Individual	Gail Shaw	Tillamook PUD			X						X	
54.	Individual	Thad Ness	American Electric Power	X		X		X	X				
55.	Individual	Joe Petaski	Manitoba Hydro	X		X		X	X				
56.	Individual	Robert Ganley	Long Island Power Authority	X									
57.	Individual	John A. Gray	The Dow Chemical Company					X		X	X		
58.	Individual	Rick Hansen	City of St. George			X		X				X	
59.	Individual	Donald E. Nelson	Massachusetts Department of Public Utilities									X	
60.	Individual	David Burke	Orange and Rockland Utilities, Inc.	X		X							
61.	Individual	Bud Tracy	Blachly-Lane Electric Cooperative (BLEC)			X							
62.	Individual	Roger Meader	Coos-Curry Electric Cooperative (CCEC)			X							
63.	Individual	Kathleen Goodman	ISO New England Inc		X								
64.	Individual	Dave Markham	Central Electric Cooperatve (CEC)			X							
65.	Individual	Dave Hagen	Clearwater Power Company (CPC)			X							
66.	Individual	Eric Lee Christensen	Snohomish County PUD	X		X	X	X					
67.	Individual	Roman Gillen	Consumer's Power Inc.	X		X							
68.	Individual	Dave Sabala	Douglas Electric Cooperative (DEC)			X							
69.	Individual	Bryan Case	Fall River Rural Electric Cooperative (FALL)			X							
70.	Individual	Rick Crinklaw	Lane Electric Cooperative (LEC)			X							
71.	Individual	Michael Henry	Lincoln Electric Cooperative (LEC)								X		
72.	Individual	Jon Shelby	Northern Lights Inc. (NLI)			X							
73.	Individual	Randy MacDonald	NBPT	X									
74.	Individual	Ray Ellis	Okanogan County Electric Cooperative								X		

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
			(OCEC)										
75.	Individual	Donald Jones	Texas Reliability Entity										X
76.	Individual	Diane Barney	New York State Dept of Public Service									X	
77.	Individual	Rick Paschall	Pacific Northwest Generating Cooperative (PNGC)	X		X	X				X		
78.	Individual	Heber Carpenter	Raft River Rural Electric Cooperative (RAFT)			X							
79.	Individual	Marc Farmer	West Oregon Electric Cooperative								X		
80.	Individual	John Seelke	PSEG Services Corp	X		X		X	X				
81.	Individual	Sylvain Clermont	Hydro-Quebec TransEnergie	X								X	
82.	Individual	Michael Falvo	Independent Electricity System Operator		X								
83.	Individual	John Allen	Rochester Gas and Electric and New York State Electric and Gas	X									
84.	Individual	Steve Eldrige	Umatilla Electric Cooperative (UEC)	X		X							
85.	Individual	Steve Alexanderson	Central Lincoln			X	X					X	
86.	Individual	Allan Long	Memphis Light, Gas and Water Division	X									
87.	Individual	Shane Sweet	Harney Electric Cooperative, Inc.			X							
88.	Individual	Russell Noble	Cowlitz County PUD			X	X	X					
89.	Individual	Brian Evans-Mongeon	Utility Services, Inc.								X		
90.	Individual	Martyn Turner	LCRA Transmission Services Corporation	X									
91.	Individual	Saurabh Saksena	National Grid	X		X							
92.	Individual	Jennifer Flandermeyer	Kansas City Power and Light Company	X		X		X	X				
93.	Individual	Darryl Curtis	Oncor Electric Delivery Company LLC	X									
94.	Individual	Joe Tarantino	Sacramento Municipal Utility District	X		X	X	X	X				
95.	Individual	Don Schmit	Nebraska Public Power District	X		X		X					
96.	Individual	David M. Conroy	Central Maine Power Company	X									
97.	Individual	Kirit Shah	Ameren	X		X		X	X				
98.	Individual	Guy Andrews	Georgia System Operations Corporation			X	X						

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
99.	Individual	Scott Miller	MEAG Power	X		X		X					
100.	Individual	Paul Titus	Northern Wasco County PUD			X							
101.	Individual	Linda Jacobson-Quinn	Farmington Electric Utility System			X							
102.	Individual	Allen Rinard	South Houston Green Power, LLC					X		X			
103.	Individual	Angela P Gaines	Portland General Electric Company	X		X		X	X				
104.	Individual	Andrew Gallo	City of Austin dba Austin Energy	X		X	X	X	X				
105.	Individual	Martin Kaufman	ExxonMobil Research and Engineering	X				X					
106.	Individual	David Kahly	Kootenai Electric Cooperative			X							
107.	Individual	Andy Pusztai	ATC LLC	X									
108.	Individual	Bo Jones	Westar Energy	X		X		X	X				
109.	Individual	Mary Downey	Redding Electric Utility			X	X	X	X				
110.	Individual	Paul Cummings	City of Redding					X					
111.	Individual	Keith Morisette	Tacoma Power	X		X	X	X	X				
112.	Individual	Rex Roehl	Indeck Energy Services					X					
113.	Individual	Frank Cumpton	BGE	X									

1. **The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.**

Summary Consideration: After consideration of the comments below, the SDT has decided against making any changes to the draft core definition as the changes suggested do not provide additional clarity. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

No changes were made to the core definition.

Organization	Yes or No	Question 1 Comment
NERC Staff Technical Review	No	The sentence, “This does not include facilities used in the local distribution of electricity,” is a commentary or statement of objective rather than a definition of what facilities comprise the BES. Including such information that does not define the facilities to be included or excluded will be a source of confusion in applying the definition. The BES definition as proposed by the SDT may in fact include such facilities and as stated in paragraph 37 of Order 743: “Determining where the line between “transmission” and “local distribution” lies, which includes an inquiry into which lower voltage “transmission” facilities are necessary to operate the interconnected transmission system, should be part of the exemption process the ERO develops.”If the drafting team believes that Exclusions E1 through E4 in the

Organization	Yes or No	Question 1 Comment
		definition are sufficient to not include any facilities used in the local distribution of electricity then those exclusions, and not the aforementioned sentence in the "core definition," define the facilities that are not included (i.e., the sentence is unnecessary).
Response: The SDT discussed your comment and decided against deletion of the sentence in the core definition that refers to facilities used in the local distribution of electricity. There were many commenters who were in favor of the inclusion of the sentence in the core definition. Additionally, the SDT does not agree with the premise that the exclusions are fully sufficient to not include any facilities used in the local distribution of electricity in the definition. No change made.		
Southwest Power Pool Standards Review Team	No	The last sentence of the core states that no distribution facilities will be included, but some of these facilities could be included due to blackstart resources. We don't disagree with the idea of removing distribution facilities, but would like to see some clarification or qualifier.
Westar Energy	No	The last sentence of the core part of the definition states that no distribution facilities will be included, but we feel that some of these facilities could be included due to also being blackstart resources. We agree with the idea of removing distribution facilities, but would like to see some clarification or a qualifier with regards to blackstart resources.
Response: The inclusion of Blackstart Resources in Inclusion I3 is meant to include the blackstart generators but is not meant to include any local distribution facilities at voltage levels < 100 kV that may connect the Blackstart Resources to the BES. No change made.		
Southern Company Generation	No	We have two concerns with the changes that are proposed. First, the use of "effective dates" and "compliance obilgations ... shall begin" in the implementation plan of the definition change is confusing. Effective date is usually used to indicate the mandatory and enforceable date of a new item. Second, a radial circuit from 100kV to a generating facility with two (2) 20 MVA generators seems to meet both the inclusion criteria (I2) and the

Organization	Yes or No	Question 1 Comment
		exculsion criteria (E1). Which criteria is dominant, inclusion or exclusion?

Response: See the responses addressing the Effective Dates and the C compliance Obligations in Question 11.

As to the second part of your question, the two generators would be included in the BES by virtue of their gross individual nameplate ratings. However, the radial circuit itself would be excluded since the gross generation was not equal to or greater than 75 MVA.

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.

Organization	Yes or No	Question 1 Comment
Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
National Grid	No	While we agree that the BES should not include facilities used in the local distribution of energy, we feel that this is already captured in Exclusion E3. Stating it in the core definition is confusing, and should be eliminated. We suggest removing "This does not include facilities used in the distribution of electric energy" from the core definition.
IRC Standards Review Committee	No	While we agree with the changes to the definition, we do not understand the purpose of the final sentence "This does not include facilities used in the local distribution of electric energy." Since the issue of local (distribution) networks is addressed under Exclusion E3, we do not see the added benefit of the referenced text.
Response: The SDT discussed your comment and decided against deletion of the sentence in the core definition that refers to facilities used in the local distribution of electricity. There were many commenters who were in favor of the inclusion of the sentence in the core definition. Furthermore, Exclusion E3 does not by itself define the entire population of facilities used in the local distribution of electricity.		
Hydro One Networks Inc.	No	Although we agree with the concept and commend the SDT for developing explicit inclusions and exclusions as part of the definition, we believe there are several outstanding issues and concerns listed as our response to Q11 that need to be addressed by the SDT and by NERC as the ERO.
Response: Please see the detailed response to Q11.		

Organization	Yes or No	Question 1 Comment
Massachusetts Department of Public Utilities	No	The Massachusetts Department of Public Utilities ("MA DPU") appreciates the opportunity to provide comments on the second draft definition of the Bulk Electric System ("BES"). Massachusetts is the largest state by population and load in New England. It comprises 46% of both the region's population and electricity consumption. Generating plants located in Massachusetts represent 42% of New England's capacity and our capitol city, Boston, is the largest load center in the region. Some of the revisions since the last posting of the draft BES definition have improved the proposed language. However, the MA DPU has a number of concerns regarding both the substance of the definition and the process for developing this standard: 1) Phased Approach. While well-intentioned, separating the BES definition project into two separate phases is problematic from both a procedural and substantive perspective. While we recognize that the filing due date is rapidly approaching, the BES definition cannot be considered in a vacuum, divorced from the concerns raised by a number of parties in response to past postings of the BES definition. The issues NERC has identified for consideration during the proposed "Phase 2" are inseparable from the development of the BES definition (e.g., generation thresholds, technical justification for the 100 kV threshold) and should be squarely addressed before a definition is adopted and ratepayers incur costs related to compliance with mandates that may or may not be revised through the second phase of the project. The importance of considering concerns before adopting a definition is heightened by the proposed two-year implementation requirement. This short implementation period almost guarantees that entities will commit resources shortly after adoption of the definition to ensure compliance within the mandated period. In other words, ratepayers will bear costs related to compliance irrespective of any change resulting from the Phase 2 process or the exception process. Expediency, while understandable given the filing deadline, must be balanced against the risk that a multi-phased approach could lead to

Organization	Yes or No	Question 1 Comment
		significant consumer costs without attendant meaningful reliability benefits. 2) Cost-Benefit Analysis. A cost impact analysis should be performed as part of developing any reliability standard. However, the development of the BES definition has failed to consider the cost impacts of the definition (and its inclusions and exclusions) and has not weighed these impacts against identified benefits that the definition would achieve. The MA DPU supported the May 21, 2011 comments from the New England States Committee on Electricity ("NESCOE") on the last posting of the BES definition. In these comments, NESCOE stated that "any new costs a revised definition imposes - which fall ultimately on consumers - should provide meaningful reliability benefits." A cost-benefit analysis should be integral to the development of a BES definition and, indeed, any reliability standard. This analysis should include a probabilistic risk assessment examining the likelihood of an event and the costs and risks resulting from such event, which should be weighed against the costs of complying with the proposed reliability measures. 3) Technical Justification. In addition to performing a cost-benefit analysis, a technical basis must be provided to justify a proposed reliability standard. However, the proposed BES definition does not provide a technical justification for the 100 kV threshold, the threshold for generation resources, or other elements of the definition. As stated above, while well-intentioned and understandable, deferring this technical justification to a later and separate phase of the project is a flawed and potentially costly approach. Providing a technical justification for a reliability standard is a core function of standards development and should be addressed at the forefront of the process rather than relegated to a separate phase largely undertaken after a standard is filed. In Order 743, the Federal Energy Regulatory Commission ("FERC" or "the Commission") directed NERC to revise the BES definition. Revision to Electric Reliability Organization Definition of Bulk Electric System, Order No. 743A, 134 FERC Â¶ 61,210

Organization	Yes or No	Question 1 Comment
		(Mar. 17, 2011) at P 8, citing to Revision to Electric Reliability Organization Definition of Bulk Electric System, Order No. 743, 133 FERC Â¶ 61,150 (2010). The Commission stated that one way NERC could address the technical and policy concerns FERC had identified would be to institute a "bright-line threshold that includes all facilities operated at or above 100 kV except defined radial facilities, and establish an exemption process and criteria for excluding facilities [NERC] determines are not necessary for operating the interconnected transmission network." Id. at P 8. However, the Commission made clear in Order 743 that NERC may propose an alternative proposal and that the 100 kV threshold is an "initial line of demarcation" to be refined through exclusions and exemptions. Id. at PP 8, 40. Accordingly, unless and until NERC provides a technical justification for its approach, the Standard should use the 100 kV threshold concept in a way that is consistent with the Commission's guidance. Specifically, the two criteria that bound the BES definition are (1) the statutory exclusion of facilities used in local distribution, and (2) the requirement that the facilities included be "necessary for reliable operation" of the interconnected transmission system. A definition that recognizes these limits, coupled with an efficient and transparent exception process, would appear to meet the Commission's expectations. For these reasons, absent a technical justification for imposing a 100 kV threshold, the MA DPU supports the revised core definition offered by NESCOE in comments filed on this 2nd Draft: "All Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher that are necessary for the reliable operation of the interconnected transmission network, including but not limited to the facilities listed below as Inclusions, and excluding (1) facilities that are used in the local distribution of electric energy, and (2) the facilities and systems listed below as Exclusions. Other Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." The definition of the BES is

Organization	Yes or No	Question 1 Comment
		critical to NERC's role as ERO and will have a significant impact on system reliability and cost to consumers. While FERC had concerns that the existing definitions for the bulk power system were under-inclusive, the proposed Standard, as drafted, risks erring in the opposite direction and appears inconsistent with the Commission's guidance in this area.
NESCOE	No	The New England States Committee on Electricity ("NESCOE") appreciates the opportunity to provide comments on the revised BES definition. NESCOE is New England's Regional State Committee and represents the collective views of the six New England states. Please consider this submission to reflect the views of the States of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont. Some of these states may submit separate comments in addition to this joint filing. NESCOE does not believe that the proposed changes address our fundamental concerns. As NESCOE pointed out in its comments on the previous draft, the definition's reliance on a 100 kV "bright line" threshold may impose substantial costs on New England ratepayers without achieving meaningful reliability benefits. NERC and the drafting team have not provided any technical justification for imposing the 100 kV test, despite its potential for over-inclusiveness and significant costs. NESCOE believes that the Federal Energy Regulatory Commission ("FERC" or "the Commission") recognizes the need to avoid this result. As the Commission pointed out in Order 743A, Order 743 does not mandate the application of a 100 kV threshold, and NERC is free to propose alternatives. Unless and until NERC provides a technical justification for its approach, the Standard should use the 100 kV threshold concept in a way that is consistent with the Commission's guidance. Specifically, the Standard should make clear that the 100 kV threshold is an "initial line of demarcation," and not the end of the analysis. According to Order 743A, the two criteria that bound the BES definition are (1) the statutory exclusion of facilities used in local

Organization	Yes or No	Question 1 Comment
		distribution, and (2) the requirement that the facilities included be "necessary for reliable operation" of the interconnected transmission system. A definition that recognizes these limits, coupled with an efficient and transparent exceptions process, would meet FERC's expectations. The proposed definition does not meet this standard. For these reasons, absent a technical justification for imposing a 100 kV threshold, NESCOE suggests the following revised core definition: "All Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher that are necessary for the reliable operation of the interconnected transmission network, including but not limited to the facilities listed below as Inclusions, and excluding (1) facilities that are used in the local distribution of electric energy, and (2) the facilities and systems listed below as Exclusions. Other Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." Where FERC had concerns that the existing definitions for the bulk power system were under-inclusive, the proposed Standard risks erring in the opposite direction. Because the definition of the BES is critical to NERC's role as ERO and will have a significant impact on ratepayers, NESCOE believes the drafting team should track FERC's guidelines as closely as possible, or provide a specific technical justification for relying on the 100 kV bright line threshold.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition		

Organization	Yes or No	Question 1 Comment
coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that the best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
ReliabilityFirst	No	This seems very confusing, but should be clear and easy enough for anyone to pickup, read, understand, apply and arrive at the same conclusion. The term local distribution needs to be either defined or have some guidance provided on what it is intended to cover. A suggestion for defining distribution would be that radials and local networks makeup distribution facilities. Radials usually terminate at distribution or customer substations and local networks are primarily used for distribution also. The Commission granted NERC the ability to define distribution in Order 743-A, paragraphs 67-71. It is not clear if the BES is meant to be a contiguous system or not from the language in the revised definition. ReliabilityFirst Staff believes that the BES should be contiguous, and therefore, any facilities needed to connect real and reactive resources to the BES need to be included. To maintain reliability, the BES cannot have pockets of generation that are not connected

Organization	Yes or No	Question 1 Comment
		to the BES via BES facilities. ReliabilityFirst Staff believes that without including the paths from BES generators in the BES, the reliable operation of the system could be jeopardized if the paths are unavailable due to non-compliance to Reliability Standards. For example, wind farm collector systems at voltages operated at less than 100 kV should be included in the BES for the above reason.
Response: The SDT discussed your comment and decided against deletion of the sentence in the core definition that refers to facilities used in the local distribution of electricity. There were many commenters who were in favor of the inclusion of the sentence in the core definition. Additionally, the SDT does not agree that Exclusions E1 and E3 are fully sufficient to not include any facilities used in the local distribution of electricity in the definition. No change made. The SDT has previously stated the existing BES definition does not mandate contiguity of the BES and the proposed definition is carrying that principle forward. Simply making a blanket statement the BES must be contiguous could have unintended consequences. However, the BES understands the importance of the concept and has agreed to discuss contiguity issues in Phase 2 of this project.		
Ontario Power Generation Inc.	No	OPG continues to question the need for the changes required (and costs imposed) as a result of this new definition. This is particularly true in the NPCC region where an impact based methodology is being used to determine the set of BES elements. A very clear 100kV bright line, as proposed in this draft, will dramatically increase the list of generation elements that must meet reliability standards, without a corresponding increase in wide-area reliability. OPG recommends that the work planned for phase II, technical justification of the generation and voltage thresholds, should be completed before implementing the new definition of BES.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or		

Organization	Yes or No	Question 1 Comment
contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.		
Kansas City Power and Light Company	No	There is no established basis for the generation thresholds referenced through the ERO Statement of Compliance Registry Criteria in Appendix 5B and the specificity of 75 MVA in the proposed BES definition. The objectives identified in the Phase 2 SAR for the definition of the Bulk Electric System include establishing an engineering basis for the generation thresholds. Phase 2 will be critical in refining and improving the Bulk Electric System definition and bringing additional clarity to the definition.
New York State Dept of Public Service	No	The core definition is still deficient due to a lack of technical support for basing the BES definition on 100 kV and for lack of any cost/benefit analysis.
City of Anaheim	No	The City of Anaheim recommends either changing the E1 (b) language back to that of the previous BES definition draft, i.e. 75 MVA or above connected at 100 kV or above, or limit the amount of generation allowed within a Radial Element or Local Network to 300 MVA or less, which is the amount of uncontrolled load loss that constitutes a reportable "disturbance" pursuant to EOP-004 and DOE Form OE-417. If DOE and NERC do not consider a 300 MW uncontrolled loss of load a reportable event, then why would the potential loss of a 75 MVA of non-critical generator connected at 69 kV make a Radial Element or Local Network critical to the reliability of the BES? The current ERO Statement of Compliance Criteria does not require GO/GOP

Organization	Yes or No	Question 1 Comment
		registration for generation connected below 100 kV as long as it's not critical to the reliability of the BES, i.e. black start, etc., even if the amount of generation is greater than 75 MVA. There is good reason for this because the mere loss of 75 MVA generator would not affect the reliability of a system as big as the Western Interconnection, at all, and a fault at say 69 kV would have sufficient impedance not to affect the BES from an electrical perspective.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
Consolidated Edison Co. of NY, Inc.	No	o Please clarify the phrase “facilities used in local distribution” as used in the ‘core’ BES Definition. What is the purpose of this phrase in the BES Definition? How does the SDT propose that an entity demonstrate that a facility is used in local distribution? o Does this phrase “facilities used in local distribution” establish a jurisdictional boundary which takes precedence over all other parts of the BES Definition and Designations? o If this phrase does not take precedence over the remainder of the BES Definition and Designations, i.e., perhaps only over some parts BES Definition and Designations, or over none of the BES Definition and Designations, then what was the drafting teams understanding of and intent

Organization	Yes or No	Question 1 Comment
		with regard to “facilities used in local distribution?” o What are Entities supposed to do with respect to “facilities used in local distribution” identified by State and Provincial regulators? o How has NERC assured that the posted BES Definition and Designations meet the intent of the Commission to establish an exemption process that avoids identifying “facilities used in local distribution” as part of the BES (Â¶37 and Â¶39 below)? Recommendations: If “facilities used in local distribution” are to be excluded on jurisdictional grounds, then o The last sentence in the Core definition should be revised as follows: “This does not include facilities used in the local distribution of electric energy, as identified by a jurisdictional governmental authority.” o We strongly recommend that the BES SDT adopt the FERC Seven Factor test as a proven basis for establishing the boundary between jurisdictional Transmission and non-jurisdictional “facilities used in local distribution.” Supporting Discussion: In FERC Order 743-A the Commission stated69. We agree ... that the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes” By adopting this FERC Seven Factor test, the BES SDT will have fulfilled its obligation to respond to these FERC mandates relating to “local distribution” as stated in FERC Order 743: “Determining where the line between ‘transmission’ and ‘local distribution’ lies,” (Â¶37),”To the extent that any individual line would be considered to be local distribution, that line would not be considered part of the bulk electric system” (Â¶39), to establish “[A] means to track and review facilities that are classified as local distribution to ensure accuracy and consistent application of the definition” (Â¶119).Supporting References: FERC Order 743 observed some believe that “the Commission’s [and by extension NERC’s] proposal exceeds its jurisdiction by encompassing local distribution facilities that are not necessary for operating the interconnected transmission network.” [FERC

Organization	Yes or No	Question 1 Comment
		Order 743, Â¶27.]In this regard FERC Order 743 states: At Â¶37, Congress specifically exempted “facilities used in the local distribution of electric energy” from the definition. ... Determining where the line between “transmission” and “local distribution” lies, which includes an inquiry into which lower voltage “transmission” facilities are necessary to operate the interconnected transmission system, should be part of the exemption process the ERO develops. And at Â¶39, To the extent that any individual line would be considered to be local distribution, that line would not be considered part of the bulk electric system. And at Â¶119, ... [W]e believe that it would be beneficial for the ERO in maintaining a list of exempted facilities, to consider including a means to track and review facilities that are classified as local distribution to ensure accuracy and consistent application of the definition. Similarly, the ERO could track exemptions for radial facilities. [Emphasis added]Note that in Â¶119 the Commission clearly distinguishes between “radial facilities” and “local distribution” just as it differentiates between jurisdictional radials and non-jurisdictional local distribution facilities in footnote 82:82 As discussed further below, the Commission uses the term “exclusion” herein when discussing facilities expressly excluded by the statute (i.e., local distribution) and the term “exemption” when referring to the exemption process NERC will develop for use with facilities other than local distribution that may be exempted from compliance with the mandatory Reliability Standards for other reasons. FERC Order 743-A suggests:69. We agree with Consumers Energy, Portland General and others that the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes ...”
Response: The SDT discussed your comments and decided not to make changes to the core definition. The SDT included the last sentence in the draft BES core definition as a reference to Section 215 of the Energy Power Act that excludes these facilities from the bulk power system. In addition, FERC specifically excluded these facilities in Orders No. 743 and 743-A. By asking if this sentence defines a jurisdictional boundary, you are asking the SDT for a legal conclusion that is beyond the scope of the project.		

Organization	Yes or No	Question 1 Comment
The SDT expects that most of the facilities used in the local distribution of energy will be covered by the 100 kV voltage level as well as Exclusions E1 through E4. In the event the BES definition does not provide a definitive determination on whether an Element is classified as BES or non-BES, the Rules of Procedure Exception Process may be utilized on a case-by-case basis to either include or exclude an Element. While the SDT does not agree with the premise that Exclusions E1 through E4 are fully sufficient to not include any facilities used in the local distribution of electricity in the definition, the SDT declined to use the FERC Seven Factor Test to define the dividing line between transmission and distribution as this is not an applicable test in all areas of North America which includes the Canadian Provinces. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
Hydro-Quebec TransEnergie	No	The proposed revision to the definition maintaining this bright line of 100 kV would expand significantly what is considered to be BES in HQT's case (the amount of added facilities could be ten times more). Since the main structure of Quebec system is included in the BES where the best norms and standards apply, the inclusion in the BES of sub-systems at lower voltage and including generation will not bring significant impact on the reliable operation of the interconnected system, because of the nature of the Quebec Interconnection. Furthermore for HQT's system, the proposed BES definition combined with the exception procedure are presently incompatible or at least inconsistent

Organization	Yes or No	Question 1 Comment
		with the regulatory framework applicable in Quebec. The proposed changes have not address this concern, neither the SDT's responses to our previous comments last May (Q.1 and 12).We reiterate that the definition and the exception procedure shall be determined by Quebec's regulator, the RÃ©gie de l'Ã‰nergie du QuÃ©bec, (Quebec Energy Board) which has the responsibility to ensure that electric power transmission in Quebec is carried out according to the reliability standards it adopts. Per se, it would be necessary that E1 and E3 grant exclusions with much higher level of generation. It would also be necessary to allow for several levels of application for the Reliability Standards, in accordance with the RÃ©gie de l'Ã©nergie du QuÃ©bec approach: the Bulk Power System (BPS) as determined using an impact-based methodology, the Main Transmission System (MTS), and other parts of Regional System. Standards related to the protection system (PRC-004-1 and PRC-005-1) and those related to the design of the transmission system (TPL 001-0 to TPL-004-0) shall be applicable to the first level, but all other reliability standards shall be applied to the second level, the MTS. The MTS definition is somewhat different than the Bulk Electric System definition, and it includes elements that impact the reliability of the grid, supply-demand balance and interchanges. We argue that it would be necessary for NERC to address the regulatory issues outside ot the present context of the SDT and ROP team.
Response: While the SDT appreciates the differences within the North American continent, it attempted to craft a BES definition that can be applied within the ERO footprint. It is neither within the scope of the SDT nor is it appropriate for the SDT to provide any regulatory resolution within the definition. As previously stated in our responses, the SDT believes that Acts and Regulations supersede the requirements of any Standard setting body. As such, we agree that NERC along with relevant Regions will have to address these types of non-jurisdictional situations directly or explicitly through the Exception Process.		
Rochester Gas and Electric and New York State Electric and Gas	No	The second sentence, "This does not include facilities used in the local distribution of electric energy," is vague and not sufficiently clear for northeast industry expert colleagues to be certain of what is "not included."

Organization	Yes or No	Question 1 Comment
		This sentence seems to apply only to distribution facilities that have already been classified based on the FERC "Seven Factor Test" in Order 888. If so, this sentence be re-written as follows for clarity: "This does not include facilities classified as distribution facilities." For US entities, this classification is clearly delineated in our annual FERC Form 1 filing.
Central Maine Power Company	No	The second sentence, "This does not include facilities used in the local distribution of electric energy," is vague and not sufficiently clear for northeast industry expert colleagues to be certain of what is "not included." This sentence seems to apply only to distribution facilities that have already been classified based on the FERC "Seven Factor Test" in Order 888. If so, this sentence should be restated as follows for clarity: "This does not include facilities classified as distribution facilities." For US entities, this classification is clearly delineated in our annual FERC Form 1 filing.
Response: The SDT discussed your comment and decided against revision of the sentence in the core definition that refers to facilities used in the local distribution of electricity. There were many commenters who were in favor of the inclusion of the sentence as written in the core definition.		
South Houston Green Power, LLC	No	South Houston Green Power, LLC [SHGP], a registered generator owner in ERCOT, submits the following comments: Cogeneration facilities, some of which are well over 75 MW in size, are located at a number of industrial sites owned by SHGP and its affiliates. Some of these cogeneration facilities generate power that is distributed within the industrial site and used for manufacturing plant operations. In some instances, excess power not required for plant operations is delivered back into the electric transmission grid through the tie line(s) connecting the industrial site to the grid. While the tie lines and some of the internal lines at these industrial sites operate at 100kV or higher, they do not perform anything that resembles a transmission function. Rather than transmit power long distances from generation to load centers, the tie lines and internal lines perform primarily

Organization	Yes or No	Question 1 Comment
		an end user distribution function consisting of the distribution of power brought in from the grid or generated internally to different plants within each industrial site. In some cases, the facilities also perform an interconnection function to the extent they enable power from cogeneration facilities to be delivered into the grid. The voltage of the tie lines and internal lines at these industrial sites is dictated by the load and basic configuration of each site. Higher voltage lines are used when necessary to meet applicable load requirements or to reduce line losses. That does not mean that such lines perform a transmission function. SHGP would oppose any BES definition that would by default subject either the tie lines or the internal lines at such industrial sites to the mandatory reliability standards applicable to Transmission Owners and Transmission Operators when they more readily fit the Generation Owner / Generation Operator standards. Such an expanded BES definition would subject registered entities to substantial compliance costs and create potential exposure to penalties, but would not likely substantially enhance the reliability of the BES. Perhaps such costs and exposure could be justified in exceptional circumstances, if subjecting these facilities to compliance with reliability standards were to result in a material increase in reliability of the BES. There is reason to believe, however, that in many cases the additional reliability benefit would be minimal at best. The tie lines and internal lines at industrial sites owned by SHGP and its affiliates have been operated for years as end user distribution and interconnection facilities, and practices and procedures have developed over the years that have enabled such operations to achieve a high degree of reliability for such sites. Requiring these facilities to now operate in a different manner as transmission facilities may well result in a degradation of the reliability of the manufacturing plants located at such sites. For example, outages would have to be coordinated with the RTO, which may not be interested in coordinating such outages with scheduled manufacturing plant outages. In

Organization	Yes or No	Question 1 Comment
		light of these considerations, SHGP agrees with the proposed revisions to the core definition, particularly the proposal to include a sentence expressly excluding facilities used in the local distribution of electric energy, provided it is understood that end user-owned delivery facilities located "behind-the-meter" are, regardless of voltage level, by default outside the scope of this definition.
Response: See the detailed comments on this issue in the responses to the comments on the Exception Process as well as the Detailed Information to Support an Exception Request Form.		
Indeck Energy Services	No	As acknowledged in the response to Question 12 comments on the previous BES definition, the BES definition is expansive compared to the definition of the BPS in the FPA Section 215. The inclusion of the limited Exclusions is an attempt to remedy the situation. However, the Exclusions need to include a fifth one that if, based on studies or other assessments, it can be shown that any tranmission or generator element otherwise identified as part of the BES is not important to the reliability of the BPS, then that element should be excluded from the mandatory standards program. There has never been a study to show that elements, such as a 20 MW wind farm, 60 MW merchant generator (which operates infrequently in the depressed market) in a large BA (eg NYISO) or a radial transmission line connecting a small generator are important to the reliability of the BPS. They are covered by the mandatory standards program through the registration criteria. The BES Definition is the opportunity to permit an entity to demonstrate that an element is unimportant to reliability of the BPS. The SDT has identified a small subset of elements that it is willing to exclude. By their very nature, these exclusions dim the bright line that is the stated goal of this project. However, the SDT's foresight seems limited in its selections. Analytical studies are used to evaluate contingencies that could lead to the Big Three (cascading outages, instability or voltage collapse). Such a study showing that a transmission or generation element is bounded by the N-1 or N-2

Organization	Yes or No	Question 1 Comment
		contingency would exclude it from the BES definition. For example, in a BA with a NERC definition Reportable Disturbance of approximately 400 MW (eg NYISO), a 20 MW wind farm, 60 MW merchant generator or numerous other smaller facilities would be bounded by larger contingencies. It would take more than six 60 MW merchant generators with close location and common mode failure to even be a Reportable Disturbance, much less become the N-1 contingency for the Big Three. Exclusion E5 should be "E5 - Any facility that can be demonstrated to the Regional Entity by analytical study or other assessment to be unimportant to the reliability of the BPS (with periodic reports by the Regional Entity to NERC of any such assessments)."
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. In the event that the BES definition does not provide a definitive determination on whether an Element is classified as BES or non-BES, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
Snohomish County PUD Kootenai Electric Cooperative	Yes	The Public Utility District No. 1 of Snohomish County ("SNPD") believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. SNPD therefore strongly supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with

Organization	Yes or No	Question 1 Comment
		the BES definition; and, (2) the SDT moving forward expeditiously on Phase 2 of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. SNPD strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, SNPD supports use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. Â§ 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate - "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. Â§

Organization	Yes or No	Question 1 Comment
		824o(a)(4) - will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. Â§ 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). For similar reasons, Snohomish believes use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. Snohomish recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, Snohomish agrees with the approach taken by the SDT, which is to propose a Phase 2 of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase 2 proceeds expeditiously, Snohomish is prepared to support the BES definition as proposed by the SDT. While Snohomish strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the

Organization	Yes or No	Question 1 Comment
		second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, Snohomish believes a 200-kV threshold would be more appropriate for WECC than a 100-kV threshold. In addition, a 200-kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view is therefore incorrect. That being said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, Snohomish will support the SDT's proposal and will not further pursue its claims regarding the 200-kV threshold. Finally, we suggest that the SDT address the circumstance when an Element is covered by both an Inclusion and an Exclusion. We note that some of the inclusions already contain language addressing this question. For example, Inclusion 1 indicates that transformers falling within the specified parameters are part of the BES ". . . unless excluded under Exclusions E1 or E3." Where it is not already included, similar language should be included in the other Inclusions and/or Exclusions to explain whether the SDT intends the Inclusions or the Exclusions to predominate in situations where facilities might be covered by both.

Organization	Yes or No	Question 1 Comment
		We suggest clarifying language in our responses to Questions 2 and 5.
Response: The exception process will be filed concurrently with the definition. Phase 2 of this project will begin immediately following the conclusion of Phase 1 as SDT resources free up. The goal of the SDT and the Rules of Procedure Team is to have the Exception Process begin concurrently with the implementation of the revised BES Definition. Please see responses to Q2 and Q5.		
Metropolitan Water District of Southern California	Yes	Metropolitan Water District of Southern California ("MWDSC") generally supports the core definition of the Bulk Electric System as proposed. However, some of the proposed Inclusions and Exclusions need to be clarified as identified in questionnaires #6 and #10 below.
Response: Please see the detailed responses in Q6 and Q11 below.		
Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperatve (CEC) Clearwater Power Company (CPC) Consumer's Power Inc. Douglas Electric Cooperative (DEC) Fall River Rural Electric Cooperative (FALL)	Yes	The Public Utility District No. 1 of Clallam County ("CLPD") believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. CLPD therefore strongly supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase 2 of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. CLPD strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below"

Organization	Yes or No	Question 1 Comment
Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC)		to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, CLPD supports use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. Â§ 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate - "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. Â§ 824o(a)(4) - will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. Â§ 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service).For similar reasons, Clallam believes use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the term

Organization	Yes or No	Question 1 Comment
		"Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. Clallam recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, Clallam agrees with the approach taken by the SDT, which is to propose a Phase 2 of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase 2 proceeds expeditiously, Clallam is prepared to support the BES definition as proposed by the SDT. While Clallam strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our II proceeds expeditiously, Clallam is prepared to support the BES definition as proposed by the SDT. While Clallam strongly supports the overall approach adopted

Organization	Yes or No	Question 1 Comment
		by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, Clallam believes a 200-kV threshold would be more appropriate for WECC than a 100-kV threshold. In addition, a 200-kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view is therefore incorrect. That being said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, Clallam will support the SDT's proposal and will not further pursue its claims regarding the 200-kV threshold.
Response: The exception process will be filed concurrently with the definition. Phase 2 of this project will begin immediately following the conclusion of Phase 1 as SDT resources free up. The goal of the SDT and the Rules of Procedure Team is to have the Exception Process begin concurrently with the implementation of the revised BES Definition.		
Michigan Public Power Agency	Yes	The Michigan Public Power Agency (MPPA) believes the SDT continues to make substantial progress towards a clear and workable definition of the

Organization	Yes or No	Question 1 Comment
		Bulk Electric System (“BES”) that markedly improves both the existing definition and the SDT’s previous proposal. MPPA therefore strongly supports the new definition, although our support is conditioned on: (1) A workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase 2 of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. MPPA strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase “Unless modified by the lists shown below” to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., “all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher”). (2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, MPPA supports use of the phrase “all Transmission Elements” and the qualifying sentence: “This does not include facilities used in the local distribution of electric energy.” This language helps ensure that FERC, NERC, and the Regional Entities (“REs”) will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act (“FPA”). In Section 215(a)(1), Congress unequivocally excluded “facilities used in the local distribution of electric energy” from the keystone “bulk-power system” definition. 16 U.S.C. Â§ 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission

Organization	Yes or No	Question 1 Comment
		system, where the reliability problems Congress intended to regulate - "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. Â§ 824o(a)(4) - will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. Â§ 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). MPPA also believes the use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. MPPA believes this was one of the many key elements addressed by FERC in Order No. 743 and reinforced by FERC Order No. 743A and has been missing from the previous definition as well as the original definition being used since Compliance efforts commenced in June, 2007 . Because of this lack of clarity MPPA has had numerous discussions with the region regarding all 17 of our member's connection to the TO/TOP in Michigan. Our discussions have resulted in defending 6 of our members specifically from the "Bright Line definition" path while having no tools in our tool box to substantiate our exclusion. When a small municipality with a peak load of 12.6 MW and no generation must be defended from a TO and/or TOP registration just because of its connection to it's TO/TOP the process requires needed adjustment for clarity. This was too small to even qualify as a DP under the Statement of Compliance Registry Criteria but must have to defend itself from a TO/TOP registration issue. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry

Organization	Yes or No	Question 1 Comment
		Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. A member of MPPA has been involved in a registration issue and it has a 3rd party study conducted by a nation consulting firm showing for the MISO area, generation levels of 100 MVA and 300 MVA aggregate or above are below the standard calculation mathematical significant impact criteria for static and dynamic planning protocol. MPPA recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, MPPA agrees with the approach taken by the SDT, which is to propose a Phase 2 of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase 2 proceeds expeditiously, MPPA is prepared to support the BES definition as proposed by the SDT. While MPPA strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Eastern Interconnection. That being said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition

Organization	Yes or No	Question 1 Comment
		that works in the Eastern Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, MPPA will support the SDT's proposal. Finally, we suggest that the SDT address the circumstances when a facility is covered by both an Inclusion and an Exclusion. We note that some of the inclusions already contain language addressing this question. For example, Inclusion 1 indicates that transformers falling within the specified parameters are part of the BES ". . . unless excluded under Exclusions E1 or E3." Where it is not already included, similar language should be included in the other Inclusions and/or Exclusions to explain whether the SDT intends the Inclusions or the Exclusions to predominate in situations where facilities might be covered by both. We suggest clarifying language in our comments to I1 and I4 below.
Response: The exception process will be filed concurrently with the definition. Phase 2 of this project will begin immediately following the conclusion of Phase 1 as SDT resources free up. The goal of the SDT and the Rules of Procedure Team is to have the Exception Process begin concurrently with the implementation of the revised BES Definition. See the detailed response to your comments regarding Inclusion I1 and I4 in the specific questions and responses below.		
FirstEnergy Corp.	Yes	However, consider changing the last sentence to read "This does not include facilities operated at less than 100kV, unless modified below, which are are used in the local sub-transmission and distribution of electric energy."
Response: The SDT discussed your comments and decided not to change the core definition. The BES definition does not include facilities operated at less than 100 kV.		
Industrial Customers of Northwest	Yes	The Industrial Customers of Northwest Utilities ("ICNU") submits the

Organization	Yes or No	Question 1 Comment
Utilities		following comments regarding the North American Electric Reliability Corporation's ("NERC") proposal for defining the Bulk Electric System ("BES"). ICNU is an incorporated, non-profit association of large end-use electric customers in the Pacific Northwest, with offices in Portland, Oregon. ICNU previously submitted comments in the Western Electricity Coordinating Council's ("WECC") process for defining the BES. ICNU's members are not electric utilities, but some ICNU members own substations that are interconnected to utility transmission systems and utility distribution systems. In addition, in some cases, ICNU members operate local distribution facilities behind their substations to serve their end-use loads. In some cases, the ICNU member's interconnection to the utility-owned transmission system or distribution system is via a utility-owned radial line; and, in others, the ICNU member's distribution system is looped into the utility's transmission system for reliability purposes. Finally, some ICNU members have local distribution systems that include the ICNU member's backup generating facilities. ICNU is submitting comments, because these facilities arguably could fall within NERC's proposed definition of BES. ICNU appreciates the work that NERC has done to date, and encourages NERC to develop a rule that recognizes the unique aspects of the Pacific Northwest transmission system and the particular needs of end-use customers. Given the arbitrary requirements and limitations imposed by the Federal Energy Regulatory Commission, ICNU supports NERC's overall approach to defining the BES. NERC has proposed a bright line rule in which all transmission elements operated 100 kV or higher will be included in the definition, subject to certain inclusions and exclusions. ICNU supports NERC's goal of excluding facilities in the local distribution of electric energy. NERC proposes three general classes of exclusions, which includes certain radial systems, generating units that serve all or part of retail customer's load, and local networks. Specifically, NERC proposes that: 1) radial systems 100 kV and higher shall be excluded if they only serve load, or only include

Organization	Yes or No	Question 1 Comment
		certain generation resources less than 75 MVA; 2) generating units that serve customer load on the customer meter are excluded if the net capacity provided to the BES does not exceed 75 MVA and standby, back up and maintenance power services are provided; 3) local networks operated less than 300 kV that distribute power to load rather than transfer bulk power across the interconnected system; and 4) reactive power owned and operated by a retail customer solely for its own benefit. ICNU supports these exclusions; however, ICNU is concerned that certain end-use retail customer facilities that do not impact the BES may still be inappropriately included. NERC appears to recognize this possibility and includes an exception process to include or exclude facilities on a case-by-case basis. ICNU urges NERC to develop this exception process, and to review the work by WECC regarding how to structure an appropriate exception. At a minimum, the exception process should not require end-use customers to perform costly and complex studies, but should instead require utilities or regional organizations that have the relevant expertise to conduct the necessary studies to determine if a specific facility should be removed or included in the BES. ICNU is also concerned about the term "non-retail generation," which does not appear to have a corresponding definition. ICNU understands that non-retail generation is intended to apply to generation behind the retail customer's meter. ICNU recommends that net metered systems should not count towards the generation limits for radial and local network systems.
Response: See the detailed comments on this issue in the responses to the comments on the Rules of Procedure Exception Process as well as the Detailed Information to Support an Exception Request Form. To address your second comment, the SDT declined to change the term "non-retail generation". Non-retail generation is the generation on the system (supply) side of the retail meter.		

Organization	Yes or No	Question 1 Comment
PacifiCorp	Yes	PacifiCorp believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. PacifiCorp strongly supports the new definition, conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase 2 of the standards development process in accordance with the SAR recently put forward by the SDT.
Response: The SDT appreciates your support for the clarifying changes made to the core definition. The goal of the SDT and the Rules of Procedure Team is to have the Exception Process begin concurrently with the implementation of the revised BES Definition. Phase 2 of this project will begin immediately following the conclusion of Phase 1 as SDT resources free up.		
Holland Board of Public Works	Yes	Holland BPW believes that the proposed definition is an improvement to the status quo, but requires additional work. The thresholds for classifying generators as Bulk Electric System (BES) must be revised. There was little technical support for proposing the current thresholds. No greater evidence than that which was proffered for the initial thresholds should be required to modify those standards. Four years of compliance experience and industry feedback support increasing these thresholds. Holland BPW supports increasing the generation thresholds from 20 MVA (individual gross nameplate) and 75 MVA (aggregate gross nameplate) to not less than 100 MVA (individual gross nameplate) and 300 MVA (aggregate gross nameplate). Holland BPW recognizes that the SDT and NERC have committed to making these revisions as part of "Phase 2", and are asking the industry to trust that such an initiative will not succumb to work on other initiatives. However, even if work on this initiative commences

Organization	Yes or No	Question 1 Comment
		immediately, entities that should be removed from the Compliance Registry face costs of compliance or the risk of non-compliance penalties even though their facilities are not necessary for the reliable operation of the interconnected transmission system. That said, there are two significant improvements in the revised draft. First, it is essential to make clear that the "Inclusions" and "Exclusions" apply only to the first sentence of the core definition (i.e., "Transmission Elements"). The revised definition appears to address this. By placing "Unless modified by the lists shown below" at the beginning of the first sentence of the definition clarifies that the lists of Inclusions and Exclusions pertain only to "Transmission Elements" that would otherwise be included or excluded from the core definition. The revised definition and the lists of Inclusions and Exclusions do not and cannot be applied in a manner to pull in facilities used in the local distribution of electric energy as BES facilities because Congress, by statute, has already determined that such facilities are outside of NERC's reach, as recognized by the second sentence of the definition. Second, Holland BPW supports the addition of the second sentence of the core definition that states, "This does not include facilities used in the local distribution of electric energy." This language provides necessary recognition to the jurisdictional limitation provided for in Section 215 of the Federal Power Act, and as recognized by the FERC in Orders 743 and 743-A (see, e.g., Â¶Â¶ 58-59 in 743-A). Finally, if the revised definition goes forward, it is imperative that the rules of procedure providing for an exception process be adopted at the same time.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing		

Organization	Yes or No	Question 1 Comment
deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. As for your second group of comments, the SDT appreciates your support for the clarifying changes made to the core definition. The goal of the SDT and the Rules of Procedure Team is to have the Exception Process begin concurrently with the implementation of the revised BES Definition.		
Dominion	Yes	Dominion agrees with the clarifying changes provided that the use of the capitalized terms “Transmission” and “Elements” mean that an Element that is radial is not part of the BES regardless of whether it is specifically included in the Exclusions (E1 through E4).
Response: To the extent that a radial facility that is >100 kV does not meet the exclusion criteria as specified in Exclusions E1 through E4, the Exception Process can be used to provide a final decision on whether the facility is or is not a BES Element.		
Sacramento Municipal Utility District	Yes	In an effort to avoid potential confusion and provide clarity we believe the following sentence “This does not include facilities used in the local distribution of electric energy” more appropriately fits under the “exclusions,” rather than “inclusions,” section.
ISO New England Inc	Yes	The second sentence is unclear with respect to its intent. If it’s intended to cover the exclusion described in E3, the sentence is not needed. If it’s intended to mean something else, it is unclear as to what is intended and likely should be deleted.
Manitoba Hydro	Yes	Manitoba Hydro agrees in general with the changes made to the core definition but the sentence ‘This does not include facilities used in the local

Organization	Yes or No	Question 1 Comment
		distribution of electric energy' should be removed as it is covered under Exclusion E3 and reduces the clarity of the core definition.
City of Austin dba Austin Energy	Yes	In an effort to avoid potential confusion and provide clarity we believe the sentence, "This does not include facilities used in the local distribution of electric energy," more appropriately fits under the "exclusions" (rather "inclusions") section.
Balancing Authority Northern California	Yes	In an effort to avoid potential confusion and provide clarity we believe the following sentence "This does not include facilities used in the local distribution of electric energy" more appropriately fits under the "exclusions," rather than "inclusions," section.
Response: The SDT discussed your comment and decided against moving the sentence in the core definition that refers to facilities used in the local distribution of electricity to the Exclusions section. There were many commenters who were in favor of the inclusion of the sentence in the core definition.		
ExxonMobil Research and Engineering	Yes	However, in Order 743, FERC directed NERC to further delineate the differences between transmission systems (used to transfer electric power between regions) and distribution systems (used to deliver electric power locally). The inclusions and exclusions defined in the draft BES definition are a step in the right direction, but further work is necessary during Phase 2 to meet the intention of the order. Additionally, the SDT should consider defining terms, such as non-retail generation, or providing references (footnotes) that elaborate on the referenced concept.
Response: Thank you for your support of Phase 2. Non-retail generation is the generation on the system (supply) side of the retail meter.		

Organization	Yes or No	Question 1 Comment
Transmission Access Policy Study Group	Yes	TAPS appreciates the SDT's work on this project. For the most part, TAPS supports what it believes to be the intent of the proposed language. The proposed specific exclusion of facilities used in the local distribution of electric energy is appropriate and consistent with Section 215 of the Federal Power Act. However, we have one suggestion to better carry out what we believe to be the SDT's intent. The SDT proposes to change the core generation definition from the prior version's "...Real Power resources as described below, and Reactive Power resources connected at 100 kV or higher unless such designation is modified by the list shown below," to "Unless modified by the lists shown below, ... Real Power and Reactive Power resources connected at 100 kV or higher...." Because of this change from "as described below... unless... modified by the list shown below" to simply "unless modified by the lists shown below," the proposed core definition now has the effect of including all generation, regardless of size, that is connected at over 100kV. We do not think this is the SDT's intent. For the same reason, the core definition now has the effect of including all Reactive Power resources connected at over 100kV, including generators; Inclusion I5, which includes "[s]tatic or dynamic devices dedicated to supplying or absorbing Reactive Power," does not alter the core definition's inclusion of all Reactive Power resources connected at over 100kV (whether "dedicated" or not). The most straightforward solution to this problem is to simply delete Real and Reactive Power resources from the core definition, so that such resources are instead handled entirely in the Inclusions. The core definition would thus read: "Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher. This does not include facilities used in the local distribution of electric energy."
Florida Municipal Power Agency	Yes	FMPA appreciates the SDT's work on this project. For the most part, FMPA supports what it believes to be the intent of the proposed language. The proposed specific exclusion of facilities used in the local distribution of

Organization	Yes or No	Question 1 Comment
		electric energy is appropriate and consistent with Section 215 of the Federal Power Act. However, we have suggestions to better carry out what we believe to be the SDT's intent. The first sentence can be read as: "... all ... Real Power and Reactive Power resources connected at 100 kV or higher", which is surely not what the SDT intends. The basic problem is that Inclusions I2 and I4 do not modify the first sentence, e.g., from a set theory perspective, the set described by the first sentence includes the sets described in inclusions I2 and I4; hence, I2 and I4 do not modify the first sentence. From a literal reading, this would cause any size generator connected at 100 kV to be included, which is surely not the intent of the SDT. For similar reasons, the core definition and Inclusion I5 now has the effect of including all generators connected at 100 kV since a generator is a "dynamic device ... supplying or absorbing Reactive Power". The word "dedicated" in I5 is not sufficient in FMPA's mind to unambiguously exclude generators from this statement. FMPA suggests the following wording to address these issues:"Transmission Elements (not including elements used in the local distribution of electric energy) and Real Power and Reactive Power resources as described in the list below, unless excluded by Exclusion or Exception: a. Transmission Elements other than transformers and reactive resources operated at 100 kV or higher. b. Transformers with primary and secondary terminals operated at 100 kV or higher. c. Generating resource(s) (with gross individual or gross aggregate nameplate rating per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above. d. Blackstart Resources identified in the Transmission Operator's restoration plan. e. Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a

Organization	Yes or No	Question 1 Comment
		voltage of 100 kV or above, but not including generation on the retail side of the retail meter. f. Non-generator static or dynamic devices dedicated to supplying or absorbing more than 6 MVAr of Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in bullet 2 above."
Response: The SDT discussed your comments and declined to make changes to the core definition. However, clarifying changes were made to Inclusion I2 to specify the generation thresholds to be included in the BES. In addition, the SDT added a clarifying phrase to Inclusion I5 to emphasize that the item is not meant to apply to generators.		
MEAG Power	Yes	MEAG agrees to the clarifying changes to the core definition in general, however, we maintain that 200kV and above is the correct bright line for the BES.
Electricity Consumers Resource Council (ELCON)	Yes	However, one of the FERC directives in Order 743 charged NERC with delineating the difference between transmission and distribution. The Inclusions and Exclusions are a step in that direction, but this subject will need more consideration in Phase 2.
Texas RE NERC Standards Subcommittee	Yes	However, one of the FERC directives in Order 743 charged NERC with delineating the difference between transmission and distribution. The Inclusions and Exclusions are a step in that direction, but this subject will need more consideration in Phase 2.
SERC OC Standards Review Group	Yes	The SERC OC Standards Review Group agrees to the clarifying changes to the core definition in general; however, we maintain that 200kV and above is the correct bright line for the Bulk Electric System.
AECI and member GandTs, Central Electric Power Cooperative, KAMO	Yes	In general, we agree with this revision. We however believe the correct voltage thresholds to be, transformer primary voltage of 200 kV or higher and

Organization	Yes or No	Question 1 Comment
Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative		secondary voltage of 100 kV or higher.
Tennessee Valley Authority	Yes	TVA agrees to the clarifying changes to the core definition in general; however, we maintain that 200kV and above is the correct bright line for the Bulk Electric System, and requests that the Phase 2 for the project use 200kV and above or develop a transmission voltage and/or an MVA threshold that is technically based.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
Puget Sound Energy	Yes	This draft of the defintion is very much improved. We appreciate the work of the Standard Development Team and its efforts to increase the clarity of this important definition. For additional clarity, the first paragraph should read "Unless specifically excluded under the list of exclusions below or included or excluded through the Procedure for Requesting and Receiving an Exception from the Application of the NERC Definition of Bulk Electric System, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher,

Organization	Yes or No	Question 1 Comment
		including those Transmission Elements described in the list of inclusions below." The sentence "This does not include facilities used in the local distribution of electric energy." should be removed from the first paragraph. Because this issue is specifically addressed in exclusions E1 and E3, the inclusion of this general sentence here is unnecessary and could even be ambiguous (raising the question of whether additional Transmission Elements might be excluded even if not described in E1 or E2).
Response: The SDT discussed your comment and decided against deletion of the sentence in the core definition that refers to facilities used in the local distribution of electricity. There were many commenters who were in favor of the inclusion of the sentence in the core definition. Additionally, the SDT does not agree with the premise that the exclusions are fully sufficient to not include any facilities used in the local distribution of electricity in the definition. No change made.		
Z Global Engineering and Energy Solutions	Yes	We support these changes however feel that further clarification needs to be made regarding the E1 Note. This note currently states "Note - A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion" This note is not clear. We recommend that the note is rewritten to be clear that a normally open switching device should not be viewed as normally closed as the regions are currently doing. Possible language: "Note: A normally open switching device between radial systems, as depicted on prints or oneline diagrams, for example, does not classify the two or more radial lines as a loop line. The exclusion will still apply.”}"
Response: The SDT discussed your comment and declined to make the suggested change. It is the intent of the SDT that a switch that is marked normally open as depicted on prints or one-lines be treated as normally open when deciding whether a facility is or is not a BES Element.		
Northern Wasco County PUD	Yes	We agree with the changes. We must point out that the overall flow, or how one proceeds through the inclusions and exclusions is not clear. Can an item

Organization	Yes or No	Question 1 Comment
		that meets an inclusion be subsequently excluded? If so, this needs to be explicitly stated. So far, we only have the flow chart produced by the ROP team that indicates otherwise (http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf). This was made evident by the question at the 9/28 webinar regarding an I5 capacitor on an E3 local network. The questioner thought the capacitor was BES per I5, but the answer was that it was excluded per E3. We can find no support for the answer given. The listing of specific exclusions within I1 (exception proves the rule) argues for questioner's stance that the capacitor is BES as written. Also, if included items could subsequently be excluded, they would be no different from any other item that met the voltage threshold of 100kV. There would be no need for any of the inclusions if all possible outputs from the inclusion tests go to the same exclusion test inputs. We strongly support the addition of the language regarding local distribution facilities, as it matches congressional intent to leave the regulation of these facilities to state and local authorities.
Harney Electric Cooperative, Inc.	Yes	HEC agrees with the changes by the SDT. Although HEC believes that there needs to be explicit language stating whether or not an item that meets inclusion can be overridden by an exclusion. An example of this was given during the Webinar on 9/28 regarding a Capacitor included under I5 yet excluded under E3 according to the NERC representative.
Central Lincoln	Yes	We agree with the changes. We must point out that the overall flow, or how one proceeds through the inclusions and exclusions is not clear. Can an item that meets an inclusion be subsequently excluded? If so, this needs to be explicitly stated. So far, we only have the flow chart produced by the ROP team that indicates otherwise (http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf). This was made evident by the question at the 9/28 webinar regarding an I5 capacitor on an E3 local network. The questioner thought the capacitor was

Organization	Yes or No	Question 1 Comment
		BES per I5, but the answer was that it was excluded per E3. We can find no support for the answer given. The listing of specific exclusions within I1 (exception proves the rule) argues for questioner's stance that the capacitor is BES as written. Also, if included items could subsequently be excluded, they would be no different from any other item that met the voltage threshold of 100kV. There would be no need for any of the inclusions if all possible outputs from the inclusion tests go to the same exclusion test inputs.We strongly support the addition of the language regarding local distribution facilities, as it matches congressional intent to leave the regulation of these facilities to state and local authorities.
Mission Valley Power	Yes	Mission Valley Power - We agree with the changes. We must point out that the overall flow, or how one proceeds through the inclusions and exclusions is not clear. Can an item that meets an inclusion be subsequently excluded? If so, this needs to be explicitly stated. So far, we only have the flow chart produced by the ROP team that indicates otherwise (http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf). This was made evident by the question at the 9/28 webinar regarding an I5 capacitor on an E3 local network. The questioner thought the capacitor was BES per I5, but the answer was that it was excluded per E3. We can find no support for the answer given. The listing of specific exclusions within I1 (exception proves the rule) argues for questioner's stance that the capacitor is BES as written. Also, if included items could subsequently be excluded, they would be no different from any other item that met the voltage threshold of 100kV. There would be no need for any of the inclusions if all possible outputs from the inclusion tests go to the same exclusion test inputs. We strongly support the addition of the language regarding local distribution facilities, as it matches congressional intent to leave the regulation of these facilities to state and local authorities.
Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will		

Organization	Yes or No	Question 1 Comment
identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		

Organization	Yes or No	Question 1 Comment
Long Island Power Authority	Yes	Need to define the term "local distribution"
Response: The SDT believes that with the last sentence in the core definition and Exclusions E1 and E3 that the term has been sufficiently distinguished with regard to the BES. No change made.		
Utility Services, Inc.	Yes	Upon reflection of the core definition and BES Inclusion Designations, Utility Services believes that there is an unintended redundancy between the two. Utility Services would like to suggest that the portion of the core definition that refers to the Real and Reactive Power resources be removed from the core and to leave the Inclusions as is.
Response: The SDT discussed your comment and decided against making a change to the core definition. However, a new parenthetical was added in Inclusion I5 to clarify that the item is meant to exclude generators.		
Cowlitz County PUD	Yes	Cowlitz County PUD No. 1 (Cowlitz) commends the SDT for the simplified concise core definition. However, Cowlitz believes that only Real and Reactive Power resources necessary for the support of the BES should be included. Therefore, Cowlitz suggests the core definition or the Inclusions section state this. This will allow basis for demonstrating resource Elements should be excluded from the BES through the Rules of Procedure exception process. This is not to say that owners of non-BES resource Elements should not be registered, as such entities may still have an obligation to contribute BES Reliability functions. Cowlitz votes affirmative and believes the above concern can be addressed in Phase 2.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of		

Organization	Yes or No	Question 1 Comment
industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
Ameren	Yes	a)The general concept is sound, but the Inclusion and Exclusion sections create so many circular references it is virtually impossible to take a definitive stance on whether an asset is included or excluded to the BES definition. Please revise the inclusion and exclusion criteria to give pinpointed statements that are final and do not reference other criteria, that then again reference other criteria. b)We believe that 200kV and above is the appropriate bright line for the Bulk Electric System. c)In I5, only those Reactive Power devices applied for the purpose of BES support or BES voltage control should be included. A Reactive Power device connected at >100kV but used for the purpose of voltage support to local load should not be included. d)The core definition uses "Transmission Elements" while E1 uses "transmission Elements". What is the difference? If one or both terms are applicable, their definition should be included.
Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit		

Organization	Yes or No	Question 1 Comment
breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the		

Organization	Yes or No	Question 1 Comment
definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. The SDT points the commenter to Exclusion E4 for the handling of such a situation. The SDT considered the disposition of the word "transmission" in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element".		
The Dow Chemical Company	Yes	The Dow Chemical Company ("Dow) is an international chemical and plastics manufacturing firm and a leader in science and technology, providing chemical, plastic, and agricultural products and services to many essential consumer markets throughout the world. Dow and certain of its worldwide affiliates and subsidiaries, including Union Carbide Corporation, own and operate electrical facilities at a number of industrial sites within the U.S., principally, in Texas and Louisiana. The electrical facilities at these various industrial sites are configured similarly and perform similar functions. In most cases, a tie line or lines connect the industrial site to the electric transmission grid. Power is delivered from the electric transmission grid to the industrial site through the tie line(s). Lines "behind-the-meter" within the industrial site then deliver power to individual manufacturing plants within the site. Additionally, cogeneration facilities, some of which are well over 75 MW in size, are located at a number of industrial sites owned by Dow and its subsidiaries. These cogeneration facilities generate power that is distributed within the industrial site and used for manufacturing plant operations. In some instances, excess power not required for plant operations is delivered back into the electric transmission grid through the tie line(s) connecting the industrial site to the grid. While the tie lines and some of the internal lines at these industrial sites operate at 100kV or higher, they do not perform anything that resembles a transmission

Organization	Yes or No	Question 1 Comment
		function. Rather than transmit power long distances from generation to load centers, the tie lines and internal lines perform primarily an end user distribution function consisting of the distribution of power brought in from the grid or generated internally to different plants within each industrial site. In some cases, the facilities also perform an interconnection function to the extent they enable power from cogeneration facilities to be delivered into the grid. The voltage of the tie lines and internal lines at these industrial sites is dictated by the load and basic configuration of each site. Higher voltage lines are used when necessary to meet applicable load requirements or to reduce line losses. That does not mean that such lines perform a transmission function. At some sites, Dow is registered as a Generation Owner and Generation Operator. At other sites, the applicable Regional Entity has found that such registration is not required because of the relatively small amount of power supplied to the grid from the applicable cogeneration resources, even though those cogeneration resources have an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating). Tie lines (to the grid) and internal lines at an industrial site that operate at 100kV or higher should be excluded from the BES definition if, due to the relatively small amount of power supplied to the grid from the generation resources at the site, the owner of those generation resources is not required to be registered as a Generation Owner and the operator of those generation resources is not required to be registered as a Generation Operator. At sites where the owner of the generation resources is registered as a Generation Owner and the operator of those generation resources is registered as a Generation Operator, the internal lines (between the generation resources and the manufacturing plants) that operate at 100kV or higher should be excluded from the BES definition, because they are distribution and not transmission facilities. The lines interconnecting the generation resources at such sites to the transmission grid should be included in the BES definition, but the owner and operator of such

Organization	Yes or No	Question 1 Comment
		interconnection lines should not be registered as a Transmission Owner or Transmission Operator. In no instance has a Regional Entity determined that Dow or any subsidiary should be registered as a Transmission Owner or Transmission Operator. Instead, such interconnection lines should be considered as part of the generation resource and Generation Owners and Generation Operators should be subject to reliability standards specifically developed for such interconnection lines. Dow is strongly opposed to any BES definition that would result in either the tie lines or the internal lines at industrial sites being subject to the mandatory reliability standards applicable to Transmission Owners and Transmission Operators. Complying with reliability standards would cause Dow and its subsidiaries to incur substantial compliance costs and create potential exposure to penalties in the future for noncompliance. Perhaps such costs and exposure could be justified if subjecting these facilities to compliance with reliability standards resulted in a material increase in reliability of the BES, but there is no reason to believe that will be the case. In fact, the opposite might be true. The tie lines and internal lines at industrial sites owned by Dow and its subsidiaries have been operated for decades as end user distribution and interconnection facilities, and practices and procedures have developed over the years that have enabled such operations to achieve a high degree of reliability for such sites. Requiring these facilities to now operate in a different manner as transmission facilities may well result in a degradation of the reliability of the manufacturing plants located at such sites. For example, outages would have to be coordinated with the RTO, which may not be interested in coordinating such outages with scheduled manufacturing plant outages. In light of these considerations, Dow agrees with the proposed revisions to the core definition, particularly the proposal to include a sentence expressly excluding facilities used in the local distribution of electric energy, provided it is understood that end user-owned delivery facilities located “behind-the-meter” are, regardless of

Organization	Yes or No	Question 1 Comment
		voltage level, presumptively outside the scope of this definition.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration.		
City of Redding	Yes	Redding is concerned that NERC has a predetermined definition of Distribution Facilities and will not evaluate networked distribution facilities fairly. NERC stated their predetermined position in their "MOTION TO INTERVENE AND COMMENTS OF THE NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION" filed in the case of the City of Holland, Michigan (Docket No. RC11-5-000). On page 10 and 11 of this motion, under the section labeled "A. Holland's 138 kV lines are transmission rather that local distribution facilities" NERC states "Distribution facilities generally are characterized as elements that are designed and can carry electric energy (Watts/MW) in one direction only at any given time from a single source point (distribution substation) to final load centers." NERC is clearly states that only radial facilities are considered distribution facilities and are unwilling to consider that network facilities over 100Kv could be classified as Distribution Facilities. Holland's claim of NERC over reaching their authority appears to have credibility. In conclusion, Redding supports the addition of Distribution Facilities as an exclusion but believes that the BES Definition phase 2 needs to clearly define the difference between Distribution and Transmission Facilities by identifying the equipment "necessary for the Reliable Operation of the interconnected bulk power transmission system".
Response: See the detailed comments on this issue in the Responses to the comments to the Question 2 of the Exception Process		

Organization	Yes or No	Question 1 Comment
as well as the Detailed Information to Support an Exception Request Form. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
Xcel Energy		In general, Xcel Energy supports the changes to the core definition of Bulk Electric System. Some additional clarification may be required as suggested below under the individual Inclusions or Exclusions.
Tacoma Power	Yes	Tacoma Power supports the core definition as currently written.
Redding Electric Utility	Yes	
ATC LLC	Yes	
Portland General Electric Company	Yes	
Farmington Electric Utility System	Yes	
Georgia System Operations Corporation	Yes	
Nebraska Public Power District	Yes	The drafting team has done a great job of adding clarity and to improving the BES definition. Although more work is needed as noted in comments

Organization	Yes or No	Question 1 Comment
		below, overall the drafting team is on the right track with the BES defintion.
Oncor Electric Delivery Company LLC	Yes	
LCRA Transmission Services Corporation	Yes	
Memphis Light, Gas and Water Division	Yes	
Independent Electricity System Operator	Yes	
PSEG Services Corp	Yes	
Orange and Rockland Utilities, Inc.	Yes	
City of St. George	Yes	The core definition is acceptable as long as the concerns for inclusion and exclusion are addressed as outlined in the other comments.
American Electric Power	Yes	
Tillamook PUD	Yes	We strongly support the addition of the language regarding local distribution facilities, as it matches congressional intent to leave the regulation of these facilities to state and local authorities.
Consumers Energy	Yes	
Springfield Utility Board	Yes	SUB particularly agrees with the addition of, “This does not include facilities used in the local distribution of electric energy.” to the BES draft definition.

Organization	Yes or No	Question 1 Comment
NV Energy	Yes	The core definition is simpler than the prior version. We support the addition of the last sentence regarding the exclusion of facilities used in the local distribution of electric energy.
Duke Energy	Yes	
Chevron U.S.A. Inc.	Yes	Yes. Very good progress was made in the process. The initial overly broad language was inadvertently including parties that are not necessary to meet the NERC and FERC goals. The current language has clarified some of the ambiguities.
Central Hudson Gas and Electric Corporation	Yes	
Idaho Falls Power	Yes	We generally support the changes made.
Exelon	Yes	
Southern Company	Yes	
Texas Industrial Energy Consumers	Yes	
Tri-State GandT	Yes	We believe that the new definition is a good clarification.
Western Area Power Administration	Yes	
Tri-State Generation and Transmission Assn., Inc. Energy Management	Yes	We believe that the new definiation is a good clarification.
MRO NERC Standards Review Forum	Yes	

Organization	Yes or No	Question 1 Comment
(NSRF)		
Pepco Holdings Inc and Affiliates	Yes	
ACES Power Marketing Standards Collaborators	Yes	
WECC Staff	Yes	
Bonneville Power Administration	Yes	
Northeast Power Coordinating Council	Yes	
SERC Planning Standards Subcommittee	Yes	
BGE	Yes	No comment.
Response: Thank you for your support.		

2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: Several commenters asked for additional clarity in the description of the types of transformers covered by Inclusion I1 and in response the SDT has slightly revised the language in Inclusion I1 based upon comments received and to provide additional clarity as shown below.

Several commenters suggested that Inclusion I1 contain a statement to identify the subset of transformers that are not covered by Inclusion I1 and the SDT declined to make this revision. The SDT believes the use of language in the definition to state what is also excluded is redundant and not needed in the definition.

Some comments were received suggesting modifying to Inclusion I1 to add a 200 kV threshold. Using a 200 kV voltage threshold and/or an MVA threshold for inclusion of transformers in the BES and the addition of demarcation points will be considered in Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

Several commenters asked for additional clarity on the hierarchy of inclusions and exclusions. The SDT provides the following guidance on this topic.

The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.

Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.

In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.

I1 - Transformers with the primary terminal and at least one secondary terminal~~s~~ operated at 100 kV or higher unless excluded under Exclusion E1 or E3.

Organization	Yes or No	Question 2 Comment

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	More specific description is needed for the equipment intended to be included in I1. For example, is it intended to include autotransformers, PARs, primary, secondary, tertiary windings, etc.? There will be difficulty applying the definition to facilities without this detail. Suggest rewording to: All transformers (including auto-transformers, voltage regulators, and phase angle regulators and all windings) with primary and secondary terminals operated at or above 100kV, and generator step-up (GSU) transformers with one terminal operated at or above 100KV, unless excluded by E1 or E3.
NESCOE	No	NESCOE supports the revised Inclusion I1 language that treats Exclusions E1 and E3 as alternative exclusions, either of which may qualify as an exclusion. However, specificity is needed regarding what equipment is included in I1 (e.g., autotransformers, PARs, primary, secondary, tertiary windings).
Massachusetts Department of Public Utilities	No	The MA DPU supports the revised Inclusion I1 language that treats Exclusions E1 and E3 as alternative exclusions, either of which may qualify as an exclusion. However, specificity is needed regarding what equipment is included in I1 (e.g., autotransformers, PARs, primary, secondary, tertiary windings).

Response: Several commenters indicated that additional specificity is needed to describe the transformers in Inclusion I1 and the SDT added the word, "terminal" and the phrase, "at least one" to Inclusion I1 for additional clarity. The revised Inclusion I1 now reads:

> **I1** - Transformers with the primary terminal and at least one secondary terminal~~s~~ operated at 100 kV or higher unless excluded under Exclusion E1 or E3.

The SDT provides the following guidance with respect to inclusions and exclusions to provide clarity on how to use the definition and in response to your comment:

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between

Organization	Yes or No	Question 2 Comment
BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
AECI and member GandTs,	No	"100 kV or above" should be modified to "200 kV or above with a registered

Organization	Yes or No	Question 2 Comment
Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative		rating of 150 MVA or greater."
Response: The issue of transformer voltage level and possibly an MVA threshold level will be discussed in Phase 2 of this project. No change made.		
Duke Energy	No	For clarity regarding 3 and 4 winding transformers, it should say "primary and at least one secondary terminal operated at 100 kV or higher.
Response: The SDT has revised the language to provide the clarity suggested in the comment. **I1** - Transformers with the primary terminal and at least one secondary terminal~~s~~ operated at 100 kV or higher unless excluded under Exclusion E1 or E3.		
New York State Dept of Public Service	No	o I1 lacks specificity that can lead to confusion and required clarifications. Suggested wording change: All transformers (including auto-transformers, voltage regulators, and phase angle regulators and all windings) with primary and secondary terminals operated at or above 100 kV, and generator step-up (GSU) transformers with one terminal operated at or above 100 kV, unless excluded by E1 or E3.
ISO New England Inc	No	I1 needs to be clarified such that it is clear on whether this includes autotransformers, phase angle regulators, and devices which have a tertiary winding. Using the tertiary winding as an example, it is not clear whether the tertiary winding itself is considered BES, especially if it is serving a radial system

Organization	Yes or No	Question 2 Comment
		as described in E1.
Response: The SDT has slightly revised the language in Inclusion I1 based upon comments received and to provide clarity. Since a transformer is one Element, any additional tertiary windings would be included in the BES if a transformer meets this criterion for inclusion. **I1** - Transformers with the primary terminal and at least one secondary terminal~~s~~ operated at 100 kV or higher unless excluded under Exclusion E1 or E3.		
Rochester Gas and Electric and New York State Electric and Gas	No	We generally agree, but suggest modification to the language of Inclusion I1 to clarify its application for transformers with more than two windings: "Transformers with two or more terminals operated at 100 kV or higher, unless excluded under Exclusion E1 and E3." Based on this wording, transformer tertiary windings would also be BES - is that the intent?
Central Maine Power Company	Yes	We generally agree, but suggest modification to the language of Inclusion I1 to clarify its application for transformers with more than two windings: "Transformers with two or more terminals operated at 100 kV or higher, unless excluded under Exclusion E1 or E3." Based on this wording, transformer tertiary windings would also be BES - is that the intent?
Response: It is correct that associated tertiary windings are included in the BES if the transformer is based upon the language in Inclusion I1. Also, the SDT has slightly revised the language in Inclusion I1 based upon comments received and to provide clarity. Since a transformer is one Element, any additional tertiary windings would be included in the BES if a transformer meets this criterion for inclusion. **I1** - Transformers with the primary terminal and at least one secondary terminal~~s~~ operated at 100 kV or higher unless excluded under Exclusion E1 or E3.		
LCRA Transmission Services Corporation	No	LCRA TSC supports the inclusion of transformers (with both the primary and secondary windings operated at 100-kV or higher) in the BES definition; however, additional clarification is suggested. The term transformers needs to

Organization	Yes or No	Question 2 Comment
		be further defined with respect to function (auto transformers, phase angle regulators, generator step-up transformers, etc.). Similarly, a separate definition for "Transformer" could be developed and included in the NERC Glossary of Terms.
Response: The SDT believes the existing language is clear and the proposed additional language would be redundant. However, in response to comments from others, the SDT has made clarifying changes to Inclusion I1 that should address your concerns and obviate the need for a separate definition for transformers. **I1** - Transformers with the primary terminal and at least one secondary terminal~~s~~ operated at 100 kV or higher unless excluded under Exclusion E1 or E3.		
ExxonMobil Research and Engineering	Yes	The Inclusion I1 contains the phrase "unless excluded under Exclusion E1 or E3". While recognizing that this is a welcomed clarification on how I1 interacts with the Exclusion section, it is inconsistent with Inclusions I2 through I5. The BES SDT team should consider how to standardize the language around the interactions between the Inclusions and Exclusions (perhaps add an "unless" qualifier for each Inclusion).
Response: The SDT provides the following guidance with respect to inclusions and exclusions to provide clarity on how to use the definition and in response to your comment: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of		

Organization	Yes or No	Question 2 Comment
electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
Ameren	Yes	Agree in general, but have the following comments: a) We agree in general with the revisions to the specific inclusions for transformers in I1; however, we believe the transformer voltage level should be 200kV or above. b) The inclusion is unclear since it includes a certain voltage transformers, but excludes those that have E1 or E3 Exclusion criteria. Each exclusion criteria has multiple stipulations to its applicability, and then has a final inclusive reference to I3. Please make the wording exact and not dependent on clausal statements.

Organization	Yes or No	Question 2 Comment
Response: The issue of transformer voltage level and possibly an MVA threshold level will be discussed in Phase 2 of this project. The SDT provides the following guidance with respect to inclusions and exclusions to provide clarity on how to use the definition and in response to your comment: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.		

Organization	Yes or No	Question 2 Comment
Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
Memphis Light, Gas and Water Division	Yes	We believe further clarification is needed to limit BES transformers only to those serving the transmission system and not distribution loads, such as excluding transformers with one or both terminals operating below 100 kV.
Response: Transformers are excluded from the BES if the secondary terminal operates below 100 kV. No change made.		
Puget Sound Energy	Yes	Inclusion I1 references primary and secondary terminals of transformers, while Inclusions I2 and I5 reference the high-side of transformers. The SDT should consider using consistent terminology throughout the definition for this concept.
Response: The SDT has reviewed the entire document for consistency in phrasing but in this particular situation finds no problem in the terminology employed. No change made.		
Michigan Public Power Agency Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperatve (CEC)	Yes	MPPA supports the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As MPPA understands it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100 kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. MPPA believes the SDT's intent would be clarified by adding a sentence at the end of

Organization	Yes or No	Question 2 Comment
Clearwater Power Company (CPC) Snohomish County PUD Consumer's Power Inc. Douglas Electric Cooperative (DEC) Fall River Rural Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC) Kootenai Electric Cooperative		Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100 kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase 2 SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. There are many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. MPPA has some members who have been forced to sell of such assets in the hopes of remove the necessity for a TO/TOP registration path in this region. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network

Organization	Yes or No	Question 2 Comment
		meeting the requirements of Exclusion E2."

Response: The SDT has slightly revised Inclusion I1 to provide additional clarity. The SDT believes it is not necessary to state what transformers are not included in the BES, which would be redundant.

> **I1** - Transformers with the primary terminal and at least one secondary terminal~~s~~ operated at 100 kV or higher unless excluded under Exclusion E1 or E3.

The development of demarcation points will be included in Phase 2 of this project.

The SDT provides the following guidance with respect to inclusions and exclusions to provide clarity on how to use the definition and in response to your comment:

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3

Organization	Yes or No	Question 2 Comment
(local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
Cowlitz County PUD	Yes	Cowlitz supports the SDT's efforts to simplify this inclusion. However, Cowlitz suggests the following change to clarify the inclusive nature of the use of "and:" Transformers with primary and secondary terminals both operated at 100 kV or high**er…**
City of Austin dba Austin Energy	Yes	We believe additional clarification of transformers to be included may be achieved with respect to auto transformers, phase angle regulators and generator step-up transformers by adding the following sentence: All transformers (including autotransformers, voltage regulators, and phase angle regulators) with primary and secondary terminals operated at or above 100kV, unless excluded by E1 or E3.
Sacramento Municipal Utility District	Yes	We believe additional clarification of transformers that are to be included may be achieved with respect to auto transformers, phase angle regulators and generator step-up transformers by adding the following recommended sentence: "All transformers (including autotransformers, voltage regulators, and phase angle regulators) with primary and secondary terminals operated at or above 100kV, unless excluded by E1 or E3."

Organization	Yes or No	Question 2 Comment
Utility Services, Inc.	Yes	Utility Services supports the comments offered by other commenters who suggest that transformers and other related devices be mentioned in the inclusion.
PacifiCorp	Yes	PacifiCorp suggests a clarification to I1 to provide as follows: "Transformers with either primary or secondary terminals, or both, that operate at or below 100 kV are not part of the BES."
Balancing Authority Northern California	Yes	We believe additional clarification of transformers that are to be included may be achieved with respect to auto transformers, phase angle regulators and generator step-up transformers by adding the following recommended sentence: "All transformers (including autotransformers, voltage regulators, and phase angle regulators) with primary and secondary terminals operated at or above 100kV, unless excluded by E1 or E3."
Response: The SDT has slightly revised the language in Inclusion I1 based upon comments received and to provide clarity. **I1** - Transformers with the primary terminal and at least one secondary terminal~~s~~ operated at 100 kV or higher unless excluded under Exclusion E1 or E3.		
PacifiCorp	Yes	PacifiCorp suggests a clarification to I1 to provide as follows: "Transformers with either primary or secondary terminals, or both, that operate at or below 100 kV are not part of the BES."
Response: The SDT believes it is not necessary to state what transformers are not included in the BES, which would be redundant. No change made.		
Florida Municipal Power Agency	Yes	Please see comments to Question 1
Response: Please see response to Q1.		

Organization	Yes or No	Question 2 Comment
MEAG Power	Yes	We agree in general with the revisions to the specific inclusions for transformers in I1; however, we believe the transformer voltage level should be 200kV or above.
Tennessee Valley Authority	Yes	TVA agrees in general with the revisions to the specific inclusions for transformers in I1; however, we believe the low side transformer voltage level should be 200kV or above, and requests that the Phase 2 for the project use 200kV and above or develop a transmission voltage and/or an MVA threshold that is technically based.
SERC OC Standards Review Group	Yes	We agree in general with the revisions to the specific inclusions for transformers in I1; however, we believe the transformer voltage level should be 200kV or above.
Response: The issue of transformer voltage level and possibly an MVA threshold level will be discussed in Phase 2 of this project. No change made.		
National Grid	Yes	
Farmington Electric Utility System	Yes	
South Houston Green Power, LLC	Yes	
Portland General Electric Company	Yes	
Northern Wasco County PUD	Yes	Northern Wasco County PUD strongly agrees with this inclusion as written. It is consistent with the recent PRC-004 and PRC-005 interpretation and the NERC definition of Transmission. We believe the recent changes to this inclusion add

Organization	Yes or No	Question 2 Comment
		clarity.
Georgia System Operations Corporation	Yes	
Nebraska Public Power District	Yes	
Kansas City Power and Light Company	Yes	
Oncor Electric Delivery Company LLC	Yes	
Harney Electric Cooperative, Inc.	Yes	HEC agrees with the inclusions to I1 and believes that add clarity to the definition.
Central Lincoln	Yes	Central Lincoln strongly agrees with this inclusion as written. It is consistent with the recent PRC-004 and PRC-005 interpretation and the NERC definition of Transmission. We believe the recent changes to this inclusion add clarity.
PSEG Services Corp	Yes	
Hydro-Quebec TransEnergie	Yes	
Independent Electricity System Operator	Yes	
Orange and Rockland Utilities, Inc.	Yes	
Tillamook PUD	Yes	Tillamook PUD strongly agrees with this inclusion as written. It is consistent with the recent PRC-004 and PRC-005 interpretation and the NERC definition of

Organization	Yes or No	Question 2 Comment
		Transmission. We believe the recent changes to this inclusion add clarity.
American Electric Power	Yes	
Manitoba Hydro	Yes	
Long Island Power Authority	Yes	
The Dow Chemical Company	Yes	
City of St. George	Yes	
Mission Valley Power	Yes	Mission Valley Power - Comments: Mission Valley Power strongly agrees with this inclusion as written. It is consistent with the recent PRC-004 and PRC-005 interpretation and the NERC definition of Transmission. We believe the recent changes to this inclusion add clarity.
NV Energy	Yes	The changes made to I1 (Transformers) appropriately resolves several of the industry concerns about three-winding transformers as well as an inadvertent use of the word “and” rather than “or”.
Z Global Engineering and Energy Solutions	Yes	
Consumers Energy	Yes	
Springfield Utility Board	Yes	SUB supports and appreciates the change in language from, “unless excluded under Exclusions E1 and E3” to “Exclusion E1 or E3”. This makes it clear that Radial System or Local Network transformers should not be considered BES facilities, regardless of operating voltage.

Organization	Yes or No	Question 2 Comment
Chevron U.S.A. Inc.	Yes	
Metropolitan Water District of Southern California	Yes	
Idaho Falls Power	Yes	We support the language as drafted.
ReliabilityFirst	Yes	
Ontario Power Generation Inc.	Yes	
Central Hudson Gas and Electric Corporation	Yes	
City of Anaheim	Yes	
Southern Company	Yes	
FirstEnergy Corp.	Yes	
Exelon	Yes	
Hydro One Networks Inc.	Yes	
Tri-State GandT	Yes	
Western Area Power Administration	Yes	
Texas Industrial Energy Consumers	Yes	

Organization	Yes or No	Question 2 Comment
Tri-State Generation and Transmission Assn., Inc. Energy Management	Yes	
MRO NERC Standards Review Forum (NSRF)	Yes	
IRC Standards Review Committee	Yes	
ACES Power Marketing Standards Collaborators	Yes	
Dominion	Yes	The proposed changes are much clearer than proposed language in the 1st draft of this BES definition.
Pepco Holdings Inc and Affiliates	Yes	
Electricity Consumers Resource Council (ELCON)	Yes	
Southern Company Generation	Yes	
WECC Staff	Yes	
Bonneville Power Administration	Yes	
Texas RE NERC Standards	Yes	

Organization	Yes or No	Question 2 Comment
Subcommittee		
SERC Planning Standards Subcommittee	Yes	
Southwest Power Pool Standards Review Team	Yes	
NERC Staff Technical Review	Yes	
ATC LLC	Yes	
Westar Energy	Yes	
Redding Electric Utility	Yes	
City of Redding	Yes	
Tacoma Power	Yes	Tacoma Power supports Inclusion I1 as currently written.
BGE	Yes	No comment.

Response: Thank you for your support. Due to comments received from others the SDT has made clarifying changes as follows:

I1 - Transformers with the primary terminal and at least one secondary terminal~~s~~ operated at 100 kV or higher unless excluded under Exclusion E1 or E3.

3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: Comments received regarding the threshold level for generators, the relationship between the NERC Compliance Registry and the BES Definition and the need for contiguous BES elements will be considered in the Phase 2 review.

In response to comments regarding the reference to the ERO Statement of Compliance Registry Criteria (SCRC) the SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.

The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

Inclusion I2 was clarified as follows:

I2 - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.

Organization	Yes or No	Question 3 Comment

Organization	Yes or No	Question 3 Comment
Northeast Power Coordinating Council	No	In deference to direction given to the Drafting Team, Inclusion I2 should remove the reference to the Statement of Compliance Registry Criteria. The current language induces circular arguments without a true governing document. The definition should drive what appears in the registration criteria. I2 should be revised to read: "Generating resources with a gross nameplate rating of 20MVA or greater, or generating plant/facility connected at a common bus, with an aggregate nameplate rating of 75MVA or greater and is directly connected to a BES Element." This is consistent with the proposed I2 and the current Compliance Registry Criteria. Ultimately the definition should be the governing document and provide the details of what generation should be included. It is understood that Phase 2 of this project will address this.
Balancing Authority Northern California	No	We recommend removing the reference of the ERO Statement of Compliance Registry Criteria (Registry Criteria). The BES Definition should be the governing document and independent of ERO registration requirements. The definition should drive what appears in the Registry Criteria. Additionally, we support using the BES Phase 2 technical analysis to identify and provide technical support for determining the appropriate minimum MVA rating that a single unit, or the aggregation of multiple units, must meet to be considered part of the BES.
Oregon Public Utility Commission Staff	No	Reference to NERC Statement of Compliance Registry Criteria (SCRC) needs to be eliminated from the BES Definition. This circularity must be eliminated. Proposed revised language is:"I2 - Generating resource(s) with a gross individual nameplate rating greater than 20 MVA or with a gross aggregate nameplate rating greater than 75 MVA including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above."
American Electric Power	No	AEP is a proponent of cross-referencing related documents to avoid elements from becoming out of sync, however, rather than having the BES Definition document reference the ERO Statement of Compliance Registry Criteria, perhaps it should be

Organization	Yes or No	Question 3 Comment
		the other way around. This definition document undergoes a more thorough industry development and review process. The ERO Statement of Compliance Registry Criteria does not get specific in regards to device types. The BES Definition document is a more appropriate place to designate inclusion criteria.
New York State Dept of Public Service	No	In I2, there is a reference to the Statement of Compliance Registry Criteria. However, the Statement references the BES definition. This circular logic results in a fatally flawed definition. The statement reference should be replaced with the actual intended words.
Rochester Gas and Electric and New York State Electric and Gas	No	Inclusion I2 should remove the reference to the Statement of Compliance Registry Criteria. The definition should stand on its own. I2 should be revised to read: "Generators with a gross nameplate rating of 20 MVA or greater, or a generating plant/facility connected at a common bus, with a gross aggregate nameplate rating of 75 MVA or greater and is directly connected at a voltage of 100 kV or above. BES includes the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above." This is consistent with the proposed I2 and the current Compliance Registry Criteria.
Sacramento Municipal Utility District	No	We recommend removing the reference of the ERO Statement of Compliance Registry Criteria (Registry Criteria). The BES Definition should be the governing document and independent of ERO registration requirements. The definition should drive what appears in the Registry Criteria. Additionally, we support using the BES Phase 2 technical analysis to identify and provide technical support for determining the appropriate minimum MVA rating that a single unit, or the aggregation of multiple units, must meet to be considered part of the BES.
Central Maine Power Company	No	Inclusion I2 should remove the reference to the Statement of Compliance Registry Criteria. The definition should stand on its own. I2 should be revised to read: "Generators with a gross nameplate rating of 20 MVA or greater, or a generating plant/facility connected at a common bus, with a gross aggregate nameplate rating of

Organization	Yes or No	Question 3 Comment
		75 MVA or greater; and is directly connected at a voltage of 100 kV or above. BES includes the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above." This is consistent with the proposed I2 and the current Compliance Registry Criteria.
Farmington Electric Utility System	No	FEUS is concerned I2 is dependent on the Statement of Compliance Registry Criteria (SCRC). Modification of the SCRC is not required to go through the same process of modification of a Standard but section 1400 of the NERC Rules of Procedure. Section 1400 does allow for industry comment and requires multiple tiers of approval. However, it seems by changing the SCRC generating resources may be included or excluded from the BES - without requiring modification to the definition of the BES through the Standards Development Process. In addition, Page 4 Section I of the SCRC is dependent on the NERC definition of the BES. Logically, the SCRC should be dependent on the definition of the BES not the inverse.
Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project. **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.		
Electricity Consumers Resource Council (ELCON)	No	Since an aggregate of 75 MVA is allowed at a single site, there is no basis for maintaining the 20 MVA for a single generator. The proposed MOD-026 assigns thresholds by region that are much higher than 20 MVA for modeling purposes. Since modeling generally would require more granularity than what is necessary for the reliable operation of the interconnected transmission system (BES), the SDT might want to review the threshold basis for NERC Project 2007-09 (Generator Verification). It is understood that the threshold will be reconsidered in Phase 2 of the BES Definition Project; however, a modest change from 20 to 75 MVA seems

Organization	Yes or No	Question 3 Comment
		appropriate on an interim basis justified by the current 75 MVA aggregate per site. The following phrase should be added at the end "unless excluded under Exclusion E2."
Texas RE NERC Standards Subcommittee	No	Since an aggregate of 75 MVA is allowed at a single site, there is no basis for maintaining the 20 MVA for a single generator. The proposed MOD-026 assigns thresholds by region that are much higher than 20 MVA for modeling purposes. Since modeling generally would require more granularity than what is necessary for the reliable operation of the interconnected transmission system (BES), the SDT might want to review the threshold basis for NERC Project 2007-09 (Generator Verification).
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. Coordination between the BES Definition and the MOD Standards will be addressed in Phase 2.		
Tri-State GandT	No	1. The parenthetical phrase regarding the ERO SCRC is not clear. Is the intent that the inclusion applies to any generating resource that is required to register as a Generator or Generator Operator per the ERO SCRC? Or was a reference to the 75 MVA threshold inadvertently omitted? It also seems that it wouldn't need to be in parentheses, just make it a phrase in the sentence. 2. The wording of the sentence after the parenthetical phrase is also worded

Organization	Yes or No	Question 3 Comment
		awkwardly. Suggest changing it to "including the generator terminals and all electrical equipment up to and including the high side of generator step up transformers, if they are connected at a voltage of 100 kV or higher.
Tri-State Generation and Transmission Assn., Inc. Energy Management	No	1. The parenthetical phrase regarding the ERO SCRC is not clear. Is the intent that the inclusion applies to any generating resource that is required to register as a Generator or Generator Operator per the ERO SCRC? Or was a reference to the 75 MVA threshold inadvertently omitted? It also seems that it wouldn't need to be in parentheses, just make it a phrase in the sentence. 2. The wording of the sentence after the parenthetical phrase is also worded awkwardly. Suggest changing it to "including the generator terminals and all electrical equipment up to and including the high side of generator step up transformers, if they are connected at a voltage of 100 kV or higher.
Pepco Holdings Inc and Affiliates	No	The definition should not reference the ERO Statement of Compliance Registry Criteria; rather the actual generation threshold criteria should be listed in the definition itself. This way the definition can stand on it's own without having to refer to another document for applicability. Also, the wording should be changed to read "including the generator terminals through the high side of any dedicated generator step-up transformer(s), connected at a voltage of 100kV or above." Otherwise, the present wording could ensnare distribution facilities (similar to the cranking path argument in I3) if a 21 MVA generator was connected on a distribution line with no dedicated generator step-up transformer. In that case the distribution line and substation feeder transformer might be construed to be in scope.

Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.

I2 - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate

Organization	Yes or No	Question 3 Comment
nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above. The I2 inclusion refers only to generation " … through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above." No change made.		
ExxonMobil Research and Engineering	No	The Inclusion I1 contains the phrase "unless excluded under Exclusion E1 or E3". While recognizing that this is a welcomed clarification on how I1 interacts with the Exclusion section, it is inconsistent with Inclusions I2 through I5. The BES SDT team should consider how to standardize the language around the interactions between the Inclusions and Exclusions (perhaps add an "unless" qualifier for each Inclusion).
South Houston Green Power, LLC	No	SHGP agrees with the proposed revisions to Inclusion I2, but requests the following phrase added at the end "unless excluded under Exclusion E2".
Nebraska Public Power District	No	Inclusion 2 does not take into consideration a later exclusion (Exclusion 3). At the end of Inclusion 2 after the words "..100 kV or above." Add the words ", unless excluded under Exclusion 3".
MRO NERC Standards Review Forum (NSRF)	No	Unless excluded under E2.
Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. *Element is defined* in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "		

Organization	Yes or No	Question 3 Comment
Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
Harney Electric Cooperative, Inc.	No	HEC would like to see the inclusion of specific thresholds that are technically justified.
City of St. George	No	The basis for the Compliance Registry Criteria generation levels for inclusion seems to be arbitrary with little or no justification. As currently proposed, a small 20 MVA

Organization	Yes or No	Question 3 Comment
		generator must comply with same requirements as large units of several hundred MVA of generation capacity. Phase 2 of the BES project may help address the issue but in the meantime many facilities must comply with numerous standards with little or no benefit to the reliability of the actual BES. No timeline for Phase 2 is indicated. Finding a bright line number for the generation levels on a per unit or overall plant basis will be a difficult task, but the present MVA levels of the Registration Criteria are very low for automatic inclusion. The compliance requirements of an entity should match the impact to the system.
NV Energy	No	While we do not agree with making specific reference and linkage to the generator thresholds of the SCRC, it is understood that a timely justification of any alternative threshold was not possible. It is of paramount importance that the subject of generation thresholds be addressed in subsequent development of this Definition. We are of the opinion that generation ought to be considered as a "user" of the BES, not necessarily a part of the BES, similar in concept to the way Load uses the BES. Using this concept, the BES would be restricted to the "wires" type facilities. Standards would nevertheless be applicable to generators that use the BES, so no gap in reliability would exist.
Idaho Falls Power	No	Reliance upon the Registry Criteria falls back to the 20MVA threshold. We believe this threshold is very low and unnecessarily draws in small entities for which there is no impact to the BES. We understand the barriers and the volume of tenchnical evidence required for any change and we therefore have no alternative language to suggest.
PacifiCorp	No	Requiring owners of single generators (20 MVA - 75 MVA) to meet reliability standards that owners of distributed power producing resources (See I4) do not have to meet is discriminatory. The limit for a single unit should be set to 75 MVA until such time as a technical review can determine the appropriate levels for all generation resources. However, even with this concern, PacifiCorp supports the entire BES definition in its current form based on the timeframe under which the SDT

Organization	Yes or No	Question 3 Comment
		is operating and with an emphasis based on a phase II SAR to address PacifiCorp's objections regarding generation levels.
Holland Board of Public Works	No	It is essential that regional entities and NERC recognize that "facilities used in the local distribution of electric energy" are not included in the definition of BES, regardless of the gross individual or gross aggregate nameplate rating of generation resources. While the addition of the second sentence in the core definition makes this clarification, Holland BPW believes it is necessary that regional entities and NERC recognize that neither this Inclusion nor any of the Inclusions may be used as a basis to compel registration and compliance in such instances, regardless of the size of the generators. The statutory exemption of facilities used in the local distribution of electric energy is not limited by generator number or capability. NERC's definitions cannot impose limitations that are not set forth in the statute. For purposes of the exclusion of facilities that might otherwise meet the definition of BES, the thresholds for determining what generating resources constitute BES facilities should be modified from the current levels (gross individual nameplate capacity of 20 MVA or gross aggregate nameplate rating of 75 MVA). Holland BPW supports modification of the thresholds to not less than 100 MVA (gross individual nameplate capacity) and 300 MVA (gross aggregate nameplate).
Hydro One Networks Inc.	No	We do not agree with the thresholds of 20 MVA for a single unit and 75 MVA aggregate at a plant, carried forward from the compliance registry. We understand the suggested phased approach and expect that the issue will be dealt with at that future time. With the exception of units that are must runs for reliability reasons, we suggest that the SDT should consider units smaller than 75 MVA or x MVA is designated as BES support element and not BES element. These units should only be required to comply with a handful of relevant NERC Standards. For example, o Voltage and frequency ride through capability o Voltage control (AVR, etc.) o Underfrequency trip setting o Protection relay setting coordination o Data submission for modeling; verification of capability and model These smaller and geographically dispersed generating resources should neither be designated as BES

Organization	Yes or No	Question 3 Comment
		element nor be required to have its connection path be designated as BES. We suggest removing the parentheses enclosing the text “with gross individual...” since their inclusion may lead to an erroneous reading of provision to include generators that do not meet ERO Statement of Compliance Registry Criteria.
Response: The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
Ontario Power Generation Inc.	No	OPG does not agree that the question of the 20 MVA (single) versus 75 MVA (aggregate) threshold should be deferred until a subsequent phase of the standard development process ("Phase 2"). This question should be resolved now. In general, key elements of the development process should not be parsed out into multiple phases, in hopes that "Standard Development Fatigue" will eliminate critics of the approach. Further, selecting the generator terminals as the boundary for BES within the generating station means that the Isolated Phase Bus (IPB), which connects the generator terminals to the Low Voltage (LV) terminals of the generator step-up (GSU) transformer, is now included as a BES element. The IPB is operated at low voltage, no more than 22kV, so including it as a BES element is going beyond the FERC order 743 and 743a. OPG strongly recommends that the BES boundary be moved to the LV terminals of the GSU transformer.

Organization	Yes or No	Question 3 Comment
Response: The SDT acknowledges and appreciates your perspective and frustration. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. The I2 inclusion refers to generation"… including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above. Comments received regarding the threshold level for generators, the relationship between the NERC Compliance Registry and the BES Definition and the need for contiguous BES elements will be considered in the Phase 2 review.		
Chevron U.S.A. Inc.	No	It is not logical to allow an aggregate of 75 MVA at a single site for multiple generators while maintaining 20 MVA for a single generator. Further, if a party exceeds export of 75 MVA to meet an emergency condition on the grid, it should not be a triggering event for BES definition. Parties should be concerned with keeping the grid operational rather than the adverse effect of exceeding 75 MVA.
Response: The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric		

Organization	Yes or No	Question 3 Comment
System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. Please see the detailed responses to Q9.		
Massachusetts Department of Public Utilities	No	Failing to establish a known MVA rating at this stage is problematic. The BES definition cannot be considered in a vacuum, and adjusting or establishing thresholds such as MVA ratings will create regulatory uncertainty and may result in additional costs and unnecessary system upgrades. Additionally, Inclusion I2 should remove the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document regarding generation that is included in the BES.
NESCOE	No	Failing to establish a known MVA rating at this stage is problematic. The BES definition cannot be considered in a vacuum, and adjusting or establishing thresholds such as MVA ratings will create regulatory uncertainty and may result in additional costs and unnecessary system upgrades. Additionally, Inclusion I2 should remove the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document regarding generation that is included in the BES.
Northern Wasco County PUD	No	Referencing the Criteria which in turn references the BES definition creates a circular definition. Northern Wasco County PUD encourages the adoption of specific thresholds that are technically justified. We also note that the Criteria and its revisions do not go through the standards development process, so that thresholds may change with little warning and without triggering an implementation plan for facilities that may be swept into the BES as a result.
Central Lincoln	No	Referencing the Criteria which in turn references the BES definition creates a circular definition. Central Lincoln encourages the adoption of specific thresholds that are

Organization	Yes or No	Question 3 Comment
		technically justified. We also note that the Criteria and its revisions do not go through the standards development process, so that thresholds may change with little warning and without triggering an implementation plan for facilities that may be swept into the BES as a result.
Tillamook PUD	No	Referencing the Criteria which in turn references the BES definition creates a circular definition. Tillamook PUD encourages the adoption of specific thresholds that are technically justified. We also note that the Criteria and its revisions do not go through the standards development process, so that thresholds may change with little warning and without triggering an implementation plan for facilities that may be swept into the BES as a result.
Mission Valley Power	No	Mission Valley Power - Referencing the Criteria which in turn references the BES definition creates a circular definition. Mission Valley Power encourages the adoption of specific thresholds that are technically justified. We also note that the Criteria and its revisions do not go through the standards development process, so that thresholds may change with little warning and without triggering an implementation plan for facilities that may be swept into the BES as a result.

Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.

> **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.

The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications

Organization	Yes or No	Question 3 Comment
that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
City of Austin dba Austin Energy	No	We recommend removing the reference of the ERO Statement of Compliance Registry Criteria (Registry Criteria). The BES Definition should be the governing document and independent of ERO registration requirements. The definition should drive what appears in the Registry Criteria. Additionally, we support using the BES Phase 2 technical analysis to identify and provide technical support for determining the appropriate minimum MVA rating that a single unit, or the aggregation of multiple units, must meet to be part of the BES.
The Dow Chemical Company	No	Comments: Dow agrees with the proposed revisions to Inclusion I2, particularly the proposal to expressly reference the ERO Statement of Compliance Registry Criteria, but the following phrase should be added at the end "unless excluded under Exclusion E2".

Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project due to numerous comments received.

> **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Organization	Yes or No	Question 3 Comment
Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. *Element is defined* in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either		

Organization	Yes or No	Question 3 Comment
include or exclude an Element.		
LCRA Transmission Services Corporation	No	
Response: Without a specific comment the SDT is unable to respond.		
Kansas City Power and Light Company	No	Nameplate rating of the generator is not a reflection of what can be actually injected into the transmission system with resulting electrical impacts on transmission loading and behavior. Recommend the BES definition be based on a generators established net accredited generating capacity instead of what it could do by nameplate rating. In addition, many generators do not achieve their nameplate rating due to limitations imposed by the limitations and capabilities of their turbine/boiler capabilities. Using the nameplate rating will not allow the exclusion of some generators that should be excluded. Recommend the following language: Generating resource(s) with a net accredited capability per the ERO Statement of Compliance Registry Criteria and including the generator terminals through the high-side of the step-up transformer(s), connected at a voltage of 100 kV or above.
Response: For Phase 1, the SDT has used nameplate rating in order to maintain consistency with the ERO Statement of Compliance Registry Criteria. No change made. The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values		

Organization	Yes or No	Question 3 Comment
and provide compelling justification for modifications to the existing values.		
Ameren	No	a) This definition becomes dependent on a document that can be changed without direct correlation to the BES definition. Remove the reference to the ERO Statement of Compliance Registry Criteria, and simply state the criteria as currently used. There is no need to look up another definition in another document to identify what is included in the BES definition. b) All MOD Standards' requirements for generators should also follow this definition.
Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project. **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above. b) Coordination between the BES Definition and the MOD Standards will be addressed in Phase 2.		
Tacoma Power	Yes	Tacoma Power generally supports Inclusion I2 and deferring the appropriate quantitative thresholds to those that will be determined in Phase 2. However, the term “gross individual” and “gross aggregate” nameplate rating, although industry used terms, are not industry defined or uniformly understood and applied. Nameplate ratings are determined from discussions and negotiations between the designer, supplier and the owner and it is the owner that makes the final determination of the generating station equipment nameplate ratings. Nameplate ratings for thermal or hydro plants may be based on such things as: fuel mix (best, worst and average), fuel delivery capacity, reservoir level, best efficiency point, normal operating point, ancillary equipment capacities, emissions and discharge restrictions, continuous versus peak output and designed versus installed and tested capacities. It would be more uniform to establish new or use existing criteria to

Organization	Yes or No	Question 3 Comment
		define “gross individual” and “gross aggregate” nameplate ratings, such as that used in the Code of Federal Regulations CFR 18, Part 11.1, “Authorized Installed Capacity” for hydraulic units and CFR 18, Part 287.101, “Determination of Powerplant Design Capacity” for steam electric, combustion turbine and combined cycle units.
Response: For Phase 1, the SDT has used nameplate rating in order to maintain consistency with the ERO Statement of Compliance Registry Criteria. No change made. The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
Hydro-Quebec TransEnergie		We believe that automatic inclusion of such generation and the path to connect them to the BES would bring a great amount of facilities in the BES. Generation should be considered on a different level such as "BES Support Elements" and provisions should be made so that some specific reliability standards would apply to them.
Response: The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the		

Organization	Yes or No	Question 3 Comment
technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
Snohomish County PUD Kootenai Electric Cooperative	Yes	SNPD supports the changes made in Inclusion 2 and believe that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support the SDT's proposal for a Phase 2 of the BES Definition process to examine the technical justification for these thresholds and to establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less due process and industry input than the Standards Development Process. Compare NERC Rules of Procedure Â§ 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC Â¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase 2 through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little due process. SNPD also believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this

Organization	Yes or No	Question 3 Comment
		approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify “candidates for registration.” SCRC at p.3, Â§ 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase 2 should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC.We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes to include generation in the BES if the “Generation resource(s)” has a “nameplate rating per the ERO Statement of Compliance Registry.” We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase 2 but we believe simply stating that the threshold will be “per the ERO Statement of Compliance Registry” is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: “Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100 kV or above.” Two definitions would then be added to the note at the end of the definition to read as follows:"For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria.""For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring

Organization	Yes or No	Question 3 Comment
		registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria."The “materiality threshold” is intended to refer to the generator threshold developed in Phase 2. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase 2 without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase 2 process based upon the technical analysis planned for Phase 2, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase 2 is completed.Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase 2 are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase 2 on the threshold issue is completed. Fourth, the phrase “or that meets the materiality threshold to be included in this definition” is intended to preserve the SDT’s flexibility to make a determination that generators below a specific threshold are not “necessary to” maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any

Organization	Yes or No	Question 3 Comment
		threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Hence, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase 2 under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100 kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100 kV or above." Finally, as discussed further in our answer to Questions 5 and 6, SNPD believes more clarity may be achieved by collapsing Inclusion 5, addressing Reactive Power resources, and Inclusion 4, which addresses dispersed renewable resources, into a single Inclusion that addresses "power producing resources" (the language used in current Inclusion 4).

Organization	Yes or No	Question 3 Comment
Response: Thank you – the SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project. **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above. Please see detailed responses to Q5 and Q6.		
Independent Electricity System Operator	Yes	While we agree with Inclusion I2, we suggest removing the parentheses enclosing the text “with gross individual...” since their inclusion may lead to an erroneous reading of provision to include generators that do not meet ERO Statement of Compliance Registry Criteria.
Puget Sound Energy	Yes	The term "per" should be replaced by "greater than the levels specified for a Generator Owner/Operator in". For a definition of this importance, the term "per" is too vague.
Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2,		

Organization	Yes or No	Question 3 Comment
instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project. **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.		
Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperatve (CEC) Clearwater Power Company (CPC) Consumer's Power Inc. Douglas Electric Cooperative (DEC) Fall River Rural Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric	Yes	CLPD supports the changes made in Inclusion 2 and believe that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support that aspect of the SDT's proposal for a Phase 2 of the BES Definition process that would examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach becauseif the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less due process and industry input than the Standards Development Process. Compare NERC Rules of Procedure Â§ 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC Â¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase 2 through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little due process.CLPD believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance

Organization	Yes or No	Question 3 Comment
Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC)		upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, Â§ 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase 2 should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC.We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes that generation be included in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase 2 but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100 kV or above." Two definitions would then be added to the note at the end of the definition to read as follows:For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria.For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating unitsthat are

Organization	Yes or No	Question 3 Comment
		connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance RegistryCriteria..The "materiality threshold" is intended to refer to the generator threshold developed in Phase 2. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase 2 without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase 2 process based upon the technical analysis planned for Phase 2, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase 2 is completed.Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase 2 are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase 2 on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate

Organization	Yes or No	Question 3 Comment
		that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase 2 under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100 kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100 kV or above."
Response: The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing		

Organization	Yes or No	Question 3 Comment
deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project. **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.		
Southern Company Generation	Yes	Yes, provided that the minimum gross individual nameplate rating threshold is the same as the gross aggregate nameplate rating (currently > 75MVA). The MVA ratings are specified in many places in the BES definition, where a reference is made in I2 to using the Statement of Compliance Registry Criteria. We believe that the BES definition should point to the Statement of Compliance Registry Criteria and not include MVA values. We also believe individual units < 75MVA should be excluded unless they have been shown to be critical to BES reliability through a technical justification study performed by the transmission planning authority.
Michigan Public Power Agency	Yes	MPPA supports the changes made in Inclusion 2 and believe that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. MPPA also supports the SDT's proposal for a Phase 2 of the BES Definition process that would

Organization	Yes or No	Question 3 Comment
		examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less due process and industry input than the Standards Development Process. Compare NERC Rules of Procedure Â§ 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC Â¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase 2 through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little due process. MPPA also believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, Â§ 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase 2 should be incorporated directly into the BES Definition rather than being incorporated by

Organization	Yes or No	Question 3 Comment
		reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes to include generation in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase 2 but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100 kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria..The "materiality threshold" is intended to refer to the generator threshold developed in Phase 2. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller

Organization	Yes or No	Question 3 Comment
		generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase 2 without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase 2 process based upon the technical analysis planned for Phase 2, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase 2 is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase 2 are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase 2 on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase 2 under

Organization	Yes or No	Question 3 Comment
		the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100 kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100 kV or above." MPPA and its members believe it is essential that regional entities and NERC recognize that "facilities used in the local distribution of electric energy" are not included in the definition of BES, regardless of the gross individual or gross aggregate nameplate rating of generation resources. While the addition of the second sentence in the core definition makes this clarification, MPPA and its members believes it is necessary that regional entities and NERC recognize that neither this Inclusion nor any of the Inclusions may be used as a basis to compel registration and compliance in such instances, regardless of the size of the generators. The statutory exemption of facilities used in the local distribution of electric energy is not limited by generator number or capacity. NERC's definitions cannot impose limitations that are not set forth in the statute. For purposes of the exclusion of facilities that might otherwise meet the definition of BES, the thresholds for determining what generating resources

Organization	Yes or No	Question 3 Comment
		constitute BES facilities should be modified from the current levels (gross individual nameplate capacity of 20 MVA or gross aggregate nameplate rating of 75 MVA). MPPA and its members would support modification of the thresholds to not less than 100 MVA (gross individual capacity) and 300 MVA (gross aggregate nameplate).

Response: The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.

> **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.

Texas Industrial Energy Consumers	Yes	The interplay between Inclusion I2, which references the Statement of Registry Compliance, and Exclusions E1-E3 is unclear. Under the Registry criteria, "a customer-owned or operated generator/generation that serves all or part of retail load with electric energy on the customer's side of the retail meter may be excluded as a candidate for registration ... if (i) the net capacity provided to the bulk power system does not exceed the criteria above." It appears that the SDT intended to invoke this provision by referencing the Statement of Registry Compliance, which counts only the "net" capacity provided, by referencing the Statement of Compliance

Organization	Yes or No	Question 3 Comment
		Registry Criteria. However, Exclusions E1 and E3 exclude generation on the basis of "gross nameplate ratings." For customer-owned facilities, this treatment is inconsistent with netting treatment provided in the Statement of Registry Compliance. Exclusions E1-E3 should be revised to reference the Statement of Compliance Registry Criteria as well so that customer-owned generation is included or excluded based on its net capacity to the grid rather than its gross nameplate capacity. TIEC also supports revisiting and potentially raising the thresholds that trigger registration as a Generation Owner or Operator. TIEC understands that the SDT has decided to maintain the status quo as reflected in NERC's Registry Criteria at this time. TIEC looks forward to addressing potential modifications to the thresholds in the appropriate context.

Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. *Element is defined* in the NERC Glossary of Terms as:

> "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Organization	Yes or No	Question 3 Comment
Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power,	Yes	The word "identified" should be replaced with "designated".

Organization	Yes or No	Question 3 Comment
MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative		
Response: The SDT believes this comment was intended for Q4 and directs you to the detailed response provided there.		
Dominion	Yes	Dominion interprets the revised language to exclude generating resources connected at less than 100 kV. If this interpretation is not accurate, then Dominion does not support the revised language.
Response: The I2 inclusion refers only to generation " … through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above."		
Transmission Access Policy Study Group	Yes	TAPS supports the intent of proposed Inclusion I2. For the sake of clarity, we suggest revising "per the ERO Statement of Compliance Registry Criteria" to "as described in the ERO Statement of Compliance Registry Criteria."
ACES Power Marketing Standards Collaborators	Yes	We'd prefer to see the language from the ERO Statement of Compliance Registry Criteria repeated within the BES Definition itself instead of referencing an outside document. As it stands right now, the Compliance Registry Criteria needs to stay intact for Phase 1 of this project. That makes the Compliance Registry Criteria reliant on the BES Definition and vice versa. We understand that the Statement of Compliance Registry Criteria may be reviewed/revised at the same time Phase 2 of this project is being developed, therefore we agree with Inclusion I2 of this draft.
Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed		

Organization	Yes or No	Question 3 Comment
and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project. **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.		
Florida Municipal Power Agency	Yes	Please see comments to Question 1
Response: Please see response to Q1.		
Redding Electric Utility	Yes	Redding believes that the definition should drive what appears in the Registry Criteria, therefore we only support this on a temporary basis based on the premise that the BES Phase 2 technical analysis will identify and provide technical support for determining the appropriate minimum MVA rating for a single unit or the aggregation of multiple units.
City of Redding	Yes	Redding believes that the definition should drive what appears in the Registry Criteria, therefore we only support this on a temporary basis based on the premise that the BES Phase 2 technical analysis will identify and provide technical support for determining the appropriate minimum MVA rating for a single unit or the aggregation of multiple units.
MEAG Power	Yes	We agree in general with the revisions to I2 for generation; however, we maintain that 200kV and above is the correct bright line for the Bulk Electric System.
Tennessee Valley Authority	Yes	TVA agrees in general with the revisions to I2 for generation; however, we maintain that 200kV and above is the correct bright line for generation connected to the Bulk Electric System, and requests that the Phase 2 for the project use 200kV and above or develop a transmission voltage and/or an MVA threshold that is technically based.

Organization	Yes or No	Question 3 Comment
SERC Planning Standards Subcommittee	Yes	We are concerned that the generator MVA limits are too low and strongly support addressing this issue in Phase 2 of this project.
NERC Staff Technical Review	Yes	The drafting team's proposed approach for Inclusion I2 (generation), including the reference to the ERO Statement of Compliance Registry Criteria, is generally acceptable given the scope of this project and the breaking of the project into two phases. Thresholds for generator MVA rating and interconnection voltage should be considered in the second phase of this project.
SERC OC Standards Review Group	Yes	We agree in general with the revisions to I2 for generation; however, we maintain that 200kV and above is the correct bright line for the Bulk Electric System.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
ATC LLC	Yes	
Westar Energy	Yes	
Portland General Electric Company	Yes	

Organization	Yes or No	Question 3 Comment
Georgia System Operations Corporation	Yes	
Oncor Electric Delivery Company LLC	Yes	
National Grid	Yes	
Cowlitz County PUD	Yes	Cowlitz also strongly supports Phase 2 to address the lack of technical justification of the MVA bright line criteria.
Utility Services, Inc.	Yes	
PSEG Services Corp	Yes	
ISO New England Inc	Yes	
Manitoba Hydro	Yes	
Long Island Power Authority	Yes	
Z Global Engineering and Energy Solutions	Yes	
Consumers Energy	Yes	
Metropolitan Water District of Southern California	Yes	
Duke Energy	Yes	

Organization	Yes or No	Question 3 Comment
Central Hudson Gas and Electric Corporation	Yes	
City of Anaheim	Yes	
ReliabilityFirst	Yes	
Southern Company	Yes	
FirstEnergy Corp.	Yes	
Exelon	Yes	
Western Area Power Administration	Yes	
IRC Standards Review Committee	Yes	
WECC Staff	Yes	
Bonneville Power Administration	Yes	BPA agrees with the I2 changes and feels that they are excellent.
Southwest Power Pool Standards Review Team	Yes	
BGE	Yes	No comment.
Response: Thank you for your support. However, the SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the		

Organization	Yes or No	Question 3 Comment
possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project. **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.		

4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: The directive by FERC to revise the definition of the BES has been interpreted by the SDT to include all Facilities necessary for reliably operating the interconnected transmission system under both normal and emergency conditions. This interpretation by the SDT includes situations related to Blackstart Resources and system restoration. Blackstart Resources have the ability to be started without the support of the interconnected transmission system in order to meet a Transmission Operators restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The SDT maintains that Blackstart Resources must be included in the definition however their associated Cranking Paths are not included in the BES definition as they can fall within distribution class levels. Cranking Paths will be discussed further in Phase 2 of this project.

No changes were made to Inclusion I3 from the previous posting.

Organization	Yes or No	Question 4 Comment
SERC OC Standards Review Group	No	We agree with the changes but believe clarity would be added by changing the word “identified” to “designated”.
Tennessee Valley Authority	No	TVA agrees with the changes but believe clarity would be added by changing the word “identified” to “designated”.
Southern Company	No	We agree with the changes but believe clarity would be added by changing the word “identified” to “designated”.
MEAG Power	No	We agree with the changes but believe clarity would be added by changing the word “identified” to “designated”.
Response: ‘Identified’ is consistent with the wording in EOP-005-2. The SDT does not feel that this change would add any additional clarity. No change made.		

Organization	Yes or No	Question 4 Comment
Texas Reliability Entity	No	We feel that the Cranking Path should be included in the BES definition. Inclusion of the Cranking Path is vital to a functional, sustainable and reliable system restoration (and restoration plan) regardless of where the Cranking Path is located. CIP-002-4 Attachment 1 recognizes the critical nature of the Cranking Path.
NERC Staff Technical Review	No	The cranking path(s) identified in the Transmission Operator's restoration plan should be included in the BES definition.
Response: Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system Elements. The Transmission Operator's restoration plans identify a number of possible system restoration scenarios to address the uncertainty of the actual requirements needed to address a particular restoration event including Cranking Paths. Therefore, the SDT maintains that Cranking Paths are not required to be included in the BES definition as they are essentially a moving target and could include distribution Elements. The Cranking Paths issue will be discussed anew in Phase 2 of this project. No change made.		
NESCOE	No	While NESCOE appreciates that cranking paths were excluded in response to industry comments, as we stated in comments to the prior posting of the BES definition, blackstart units should be excluded from the BES. Such units are appropriately covered under regional restoration procedures and applicable NERC standards (see for example, Emergency Operating Procedure EOP-005-2). However, should blackstart units be included in subsequent postings of the definition, we suggest that the language be revised to state that only those units "material to" the BES are included.
Ontario Power Generation Inc.	No	To assure availability of the generation blackstart resources identified in the Transmission Operator's Power System Restoration Plan the generators are tested according to the requirements of reliability standard EOP-009. Blackstart resources are only required post LOBES (Loss of Bulk Electric System) and in many cases do not contribute to the reliability of the BES under normal operating conditions. OPG recommends that this inclusion be removed from the new definition of BES.
IRC Standards Review	No	We support the SDT's decision to exclude the cranking paths from the BES definition since testing and verification of the use of facilities in the cranking path is already

Organization	Yes or No	Question 4 Comment
Committee		covered by the appropriate EOP standards. This inclusion is extraneous given there is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. We therefore suggest removing Inclusion I3.
Hydro One Networks Inc.	No	We agree with the SDT in excluding the cranking paths from the BES definition, a point we had raised in our comments to the previous posting. We also disagree with the inclusion of blackstart resources and reiterate our view that their inclusion is superfluous given there is already a designation specific for system restoration covered by an existing standard, to recognize their reliability impacts and to ensure their expected performance. NERC Standard EOP-005-2 stipulates the requirements for testing blackstart resources and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. We therefore suggest completely removing Inclusion I3.We suggest the SDT to drop I3 on the basis that: o The availability and performance expectations of blackstart resources are ensured by existing related standards; and o Unless they meet the BES definition under inclusion I2, there is no perceived reliability value in everyday operation of the BES.
Northeast Power Coordinating Council	No	Eliminating I3 should be considered based on the availability and performance expectations of black start resources being ensured by existing standards, and unless they meet the BES definition under the I2 inclusion they do not have any reliability impact on BES operation. If I3 is retained, suggest rewording Inclusion I3 to read as follows: Black start resources material to and designated as part of the Transmission

Organization	Yes or No	Question 4 Comment
		Operator's restoration plan.
Independent Electricity System Operator	No	We thank the SDT for excluding the cranking paths from the BES definition, a point we had raised in our comments to the previous posting. However, we had also disagreed with the inclusion of Blackstart Resources and reiterate our view that their inclusion is superfluous given there is already a designation specific for system restoration covered by an existing standard, to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. We therefore suggest removing Inclusion I3 entirely.
FirstEnergy Corp.	Yes	We agree with the team's conclusion to remove cranking paths from the BES definition since NERC (i.e. EOP standards) specifically address reliability matters associated with cranking paths. Although we believe item I3 (blackstart unit) is unnecessary as part of the BES Definition, we will not object to its inclusion. A blackstart unit is a facility necessary for BES restoration, but not necessarily required to be included within the BES Definition.

Response: The SDT disagrees that Blackstart Resources should not be included in the BES Definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES elements. No change made.

Organization	Yes or No	Question 4 Comment
ACES Power Marketing Standards Collaborators	No	Blackstart Resources can actually be on the distribution system. There is still the question of whether the distribution system would then be subjected to the enforceable standards. If so, there would most likely be a significant cost increase associated with tracking compliance for these distribution systems without a commensurate increase in reliability since Blackstart Resources are rarely used. This could very well cause entities to un-designate Blackstart Resources on distribution systems to avoid these distribution systems from becoming part of the BES. The same rationale that was used for eliminating cranking paths could also be applied to Blackstart Resources.
Response: Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system Elements. The Transmission Operator's restoration plans identify a number of possible system restoration scenarios to address the uncertainty of the actual requirements needed to address a particular restoration event including Cranking Paths. Therefore, the SDT maintains that Cranking Paths are not required to be included in the BES definition as they are essentially a moving target and could include distribution Elements. The Cranking Paths issue will be discussed anew in Phase 2 of this project. The SDT feels that the situation described would fall within a minimal percentage of units and therefore would be subject to the Exception Process as applicable. No change made.		
ReliabilityFirst	No	Blackstart Resource is a defined NERC term, but as outlined in the definition, it could be read to include the transmission assets that also make up the resource as part of the TOP plan. Is that the intent? ReliabilityFirst Staff also feels that without including the Cranking Paths, the reliable operation of the system could be jeopardized if a restoration is required and the Cranking Paths are unavailable due to non-compliance to Reliability Standards.
Response: The SDT does not agree that the definition of Blackstart Resource necessarily encompasses transmission assets. No change made. Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system Elements. The Transmission Operator's restoration plans identify a number of possible system restoration scenarios to address the uncertainty of the actual requirements needed to address a particular restoration event including Cranking Paths. Therefore,		

Organization	Yes or No	Question 4 Comment
the SDT maintains that Cranking Paths are not required to be included in the BES definition as they are essentially a moving target and could include distribution Elements. The Cranking Paths issue will be discussed anew in Phase 2 of this project. No change made.		
Central Maine Power Company	No	Inclusion I3 should be changed to include the phrase, “material to,” currently in the Statement of Compliance Registry Criteria (Section 3C3). Based on the definition wording, the Generator Step-Up transformer (GSU) would not be BES if the generator would not otherwise already be included as BES under another definition provision.
Rochester Gas and Electric and New York State Electric and Gas	No	Inclusion I3 should be changed to include the phrase, “material to,” currently in the Statement of Compliance Registry Criteria (Section 3C3). Based on the definition wording, the Generator Step-Up transformer (GSU) would not be BES if the generator would not otherwise already be included as BES under another definition provision.
Orange and Rockland Utilities, Inc.		Minimum Power system and material? NERC registry criteria for generation section "3C3"
Massachusetts Department of Public Utilities	No	The inclusion should be revised to specify that only those blackstart units that are “material to” the BES are included in the definition.
Consolidated Edison Co. of NY, Inc.	No	We suggest using wording from the Statement of Compliance Registry Criteria:Any generator regardless of size which is material to ... [Ref: Statement of Compliance Registry Criteria, III.c.3-Blackstart]Define “material to” as a generator listed as a necessary part of the TOP-defined minimum system to restore the BES. This term “material to” should exclude Blackstart-capable generators not necessary for BES restoration or only used for local distribution system restoration. Wording Recommendation: Following the words “identified in” add the words “and material to” so that the new Inclusion reads:I3 - Blackstart Resources identified in and material to the Transmission Operator’s restoration plan.
Response: The SDT believes that adding language such as “material to” does not provide clarity and remains immeasurable. No		

Organization	Yes or No	Question 4 Comment
change made.		
Manitoba Hydro	No	Inclusion I3 should specifically state that only the Blackstart Resources specified through EOP-005-2 R1.4 are included in the BES since "Transmission Operator restoration plan' is not a NERC defined term. Suggested wording:"I3 - Blackstart Resources identified through EOP-005-2 R1.4"
Response: The SDT appreciates your concern but does not believe it is appropriate to reference a standard in the definition. Any modification to the standard including an interpretation or a simple re-versioning for errata would change the standard number and thus require that the definition be updated. No change made.		
ISO New England Inc	No	The SDT has interpreted the FERC Directive to revise the BES definition in a manner that goes beyond the mandate of ensuring that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT states that operation is interpreted as being under both normal and emergency conditions. However, loss of all electric power is the end state condition when all normal and emergency remediating actions have failed to prevent a collapse of the grid. System restoration involves the use of blackstart generators that are not resources necessary for operating the electrical grid but rather a means to recover following (not part of the emergency itself) an extreme emergency. The SDT should simply refer to the current Compliance Registry, which, for now, appears to adequately deal with the issue of how to treat Blackstart resources. I3 states "Blackstart Resources identified in the Transmission Operator's restoration plan". This is contrary to the preferred language that is part of the approved ERO Statement of Compliance Registry, III.C.3 that states, "Any generator, regardless of size, that is a blackstart unit material to (emphasis added) and designated as part of a transmission operator entity's restoration plan". This language is necessary to distinguish between those Blackstart Resources that are depended upon to restore the BES following an emergency ("Key Facilities") as compared to those Blackstart Resources that are used to restore power to customer load.

Organization	Yes or No	Question 4 Comment
		Additionally, discussions with others during the preparation of comments have revealed that some interpret this requirement to include the GSU. We do not interpret this in this manner, but this should be clarified to avoid confusion.
Response: The SDT disagrees that Blackstart Resources should not be included in the BES Definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES elements. No change made. The SDT does not agree that the definition of Blackstart Resource necessarily encompasses transmission assets such as GSUs.		
SRP	No	The Blackstart 'Cranking Path' has been deleted from Inclusion 3 of the BES definition. However, NERC Standards EOP-005 and CIP-002, R1.2.4, require documenting the Cranking Path. In addition, CIP-002—4 identifies the Cranking Path as a Critical Asset in Attachment 1. Compliance to the NERC Standards needs to be an exact science whenever possible. SRP does not argue the inclusion or exclusion of Cranking Path. However, if it is excluded, guidance must be provided on whether or not a Cranking Path is subject to the previously mentioned Standards.
Response: Cranking Paths are subject to any standard in which they are specifically spelled out.		
Tacoma Power	Yes	Tacoma Power generally support Inclusion I3 as written. We continue to believe the BES should only include the Blackstart Resources that support a regional recovery. We propose changing Inclusion I3 to read,"Blackstart Resources identified in the Transmission Operator's restoration plan and included in a regional restoration plan."

Organization	Yes or No	Question 4 Comment
Response: The SDT does not agree that the definition should specify Blackstart Resources included in regional restoration plans as those regional systems may not be included in the BES nor have any impact on the BES. No change made.		
Ameren	Yes	a)The definition should include only those black start generators connected 100 kV and above and included in the restoration plan. b)We agree with the changes but believe clarity would be added by changing the word "identified" to "designated".
Response: Blackstart Resources are required to be registered regardless of connected voltage level. The SDT is remaining consistent with its earlier position on that point. No change made. 'Identified' is consistent with the wording in EOP-005-2. The SDT does not feel that this change would add any additional clarity at this time. No change made.		
Utility Services, Inc.	Yes	Utility Services supports suggestions by others that request that the language of the Inclusion use the exact language of the SCRC III.3.c. Leaving the language as is will likely increase the number of black start facilities beyond those currently applicable.
Response: Adding language such as "material to" found in the ERO Statement of Compliance Registry Criteria does not provide clarity and remains immeasurable. No change made.		
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power	Yes	In general, we agree with this revision. However, the aggregate MVA threshold should be 150 MVA or greater, and threshold voltage level should be 200kV or higher.

Organization	Yes or No	Question 4 Comment
Cooperative		
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
City of Redding	Yes	Redding recommends the following rewording: "The Primary Blackstart resources designated in the Transmission Operator's restoration plan." We believe it reduces reliability if all Blackstart generation either primary or secondary are required to be BES. Requiring all Blackstart capable units to be BES creates an incentive to leave certain blacstart units out of restoration plans in order to avoid BES inclusion. By making only the primary Blackstart unit a BES element then Transmission Operators will be more willing to include ALL Blackstart units in their plan thus creating a complete procedure for the Transmission Operator to restore the system.
Redding Electric Utility	Yes	Redding recommends the following rewording: "The Primary Blackstart resources designated in the Transmission Operator's restoration plan." We believe it reduces reliability if all Blackstart generation either primary or secondary are required to be BES. Requiring all Blackstart capable units to be BES creates an incentive to leave certain blacstart units out of restoration plans in order to avoid BES inclusion. By making only the primary Blackstart unit a BES element then Transmission Operators will be more willing to include ALL Blackstart units in their plan thus creating a complete procedure for the Transmission Operator to restore the system.

Organization	Yes or No	Question 4 Comment
City of Austin dba Austin Energy	Yes	We recommend rewording Inclusion I3 as follows: "Only Primary Blackstart resources designated as part of the Transmission Operator's restoration plan." We have concerns that making all Blackstart generation either primary or secondary BES elements creates an incentive to remove those secondary Blackstart capable units in an effort to avoid BES inclusion. We believe that making the primary Blackstart unit the only BES element will remove this incentive. In so doing, this will allow the secondary Blackstart units to remain in the Transmission Operator's plan and training program as an alternate tool for the Transmission Operator to restore the system.
Sacramento Municipal Utility District	Yes	We recommend rewording Inclusion I3 as follows: "Only Primary Blackstart resources designated as part of the Transmission Operator's restoration plan." We have concerns that making all Blackstart generation either primary or secondary BES elements will create an incentive to remove those secondary Blackstart capable units in order to avoid BES inclusion. Making the primary Blackstart unit the only BES element will remove this incentive. In so doing, this will allow the secondary Blackstart units to remain in the Transmission Operator's plan and training program as an alternate tool for the Transmission Operator to restore the system.
Balancing Authority Northern California	Yes	We recommend rewording Inclusion I3 as follows: "Only Primary Blackstart resources designated as part of the Transmission Operator's restoration plan." We have concerns that making all Blackstart generation either primary or secondary BES elements will create an incentive to remove those secondary Blackstart capable units in order to avoid BES inclusion. Making the primary Blackstart unit the only BES element will remove this incentive. In so doing, this will allow the secondary Blackstart units to remain in the Transmission Operator's plan and training program as an alternate tool for the Transmission Operator to restore the system.
Response: The SDT discussed the recommended wording and determined that it did not provide further clarity to the definition. Utilizing "primary" and "secondary" as a deterministic method for inclusion would create regional inconsistencies with application of the definition which is contrary to the intent to create a consistent continent-wide definition. No change made.		

Organization	Yes or No	Question 4 Comment
WECC Staff	Yes	WECC agrees with the inclusion of the blackstart units, but does not agree with the deletion of the cranking path from the I3. The cranking path should be included in the definition since the NERC standards EOP-005 and CIP-002 R1.2.4 require documenting the cranking path. The revised CIP-002-4 Standard identifies the cranking path as a critical asset in Attachment 1 (1.5).
Response: Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system Elements. The Transmission Operator's restoration plans identify a number of possible system restoration scenarios to address the uncertainty of the actual requirements needed to address a particular restoration event including Cranking Paths. Therefore, the SDT maintains that Cranking Paths are not required to be included in the BES definition as they are essentially a moving target and could include distribution Elements. The Cranking Paths issue will be discussed anew in Phase 2 of this project. No change made.		
Florida Municipal Power Agency	Yes	Please see comments to Question 1
Response: Please see response to Q1.		
ExxonMobil Research and Engineering	Yes	
ATC LLC	Yes	
Westar Energy	Yes	
Northern Wasco County PUD	Yes	We agree with the removal of the voltage language, since the inclusions and exclusions apply only to equipment over 100 kV.
Farmington Electric Utility System	Yes	

Organization	Yes or No	Question 4 Comment
South Houston Green Power, LLC	Yes	
Portland General Electric Company	Yes	
Georgia System Operations Corporation	Yes	
Nebraska Public Power District	Yes	
LCRA Transmission Services Corporation	Yes	
National Grid	Yes	
Kansas City Power and Light Company	Yes	
Oncor Electric Delivery Company LLC	Yes	
Umatilla Electric Cooperative (UEC)	Yes	UEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Central Lincoln	Yes	We agree with the removal of the voltage language, since the inclusions and exclusions apply only to equipment over 100 kV.
Harney Electric Cooperative,	Yes	HEC agrees with the inclusions to the core definition.

Organization	Yes or No	Question 4 Comment
Inc.		
Cowlitz County PUD	Yes	
PSEG Services Corp	Yes	
Hydro-Quebec TransEnergie	Yes	
Pacific Northwest Generating Cooperative (PNGC)	Yes	PNGC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Raft River Rural Electric Cooperative (RAFT)	Yes	RAFT supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
West Oregon Electric Cooperative	Yes	WOEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Lincoln Electric Cooperative (LEC)	Yes	LEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Northern Lights Inc. (NLI)	Yes	NLI supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is

Organization	Yes or No	Question 4 Comment
		simply a specific type of such an interconnection facility.
Okanogan County Electric Cooperative (OCEC)	Yes	OCEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Douglas Electric Cooperative (DEC)	Yes	DEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Fall River Rural Electric Cooperative (FALL)	Yes	FALL supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Lane Electric Cooperative (LEC)	Yes	LEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Clearwater Power Company (CPC)	Yes	CPC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Snohomish County PUD	Yes	SNPD supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.

Organization	Yes or No	Question 4 Comment
Consumer's Power Inc.	Yes	CPI supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Central Electric Cooperatve (CEC)	Yes	CEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Coos-Curry Electric Cooperative (CCEC)	Yes	CCEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Blachly-Lane Electric Cooperative (BLEC)	Yes	BLEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Long Island Power Authority	Yes	
The Dow Chemical Company	Yes	
City of St. George	Yes	
American Electric Power	Yes	
Tillamook PUD	Yes	Tillamook PUD agrees with the removal of the voltage language since the inclusions and exclusions only apply to equipment over 100 kV.

Organization	Yes or No	Question 4 Comment
NV Energy	Yes	
Z Global Engineering and Energy Solutions	Yes	
Consumers Energy	Yes	
Mission Valley Power	Yes	Mission Valley Power - We agree with the removal of the voltage language, since the inclusions and exclusions apply only to equipment over 100 kV.
Puget Sound Energy	Yes	
Central Hudson Gas and Electric Corporation	Yes	
City of Anaheim	Yes	
Chevron U.S.A. Inc.	Yes	
Metropolitan Water District of Southern California	Yes	
Duke Energy	Yes	
Clallam County PUD No.1	Yes	CLPD supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Exelon	Yes	

Organization	Yes or No	Question 4 Comment
Michigan Public Power Agency	Yes	
Idaho Falls Power	Yes	We support the inclusion as drafted.
Tri-State GandT	Yes	
Western Area Power Administration	Yes	
Texas Industrial Energy Consumers	Yes	
PacifiCorp	Yes	PacifiCorp supports the removal of reference to Cranking Paths in I3. There is no reason to classify as BES the facilities interconnecting a BES generator to the interconnected transmission system.
Tri-State Generation and Transmission Assn., Inc. Energy Management	Yes	
MRO NERC Standards Review Forum (NSRF)	Yes	
Electricity Consumers Resource Council (ELCON)	Yes	
Southern Company Generation	Yes	
Pepco Holdings Inc and Affiliates	Yes	Agree with the SDT decision to delete the inclusion of Black Start Cranking Paths.

Organization	Yes or No	Question 4 Comment
Dominion	Yes	
Bonneville Power Administration	Yes	
Texas RE NERC Standards Subcommittee	Yes	
SERC Planning Standards Subcommittee	Yes	
Southwest Power Pool Standards Review Team	Yes	
BGE	Yes	No comment.
Response: Thank you for your support.		

5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: Several comments sought clarification that Inclusion I4 was directed at including resources such as wind and solar farms and sought a distinction between Inclusions I2 and I4. The SDT believes this is presently clear in the definition. Inclusion I4 specifically addresses wind and solar farms being dispersed power producing resources that "utilize[e] a system designed primarily for aggregating capacity." The essential distinction between Inclusion I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose.

The SDT also clarifies that Inclusion I4 speaks towards the inclusion of the generation resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2.

There were a number of comments seeking clarification on the location of the common point of connection. While the SDT does not believe additional clarification of the term "common point" is needed in the BES definition, the following guidance is provided. The common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system.

Some stakeholders asked for clarity on the issue of units on the customer's side of the retail meter. Generating units on the customer's side of the retail meter are not included under Inclusion I4 since customer-side retail generation typically does not "utilize[e] a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above."

Several comments sough clarification of the definitional difference between "dispersed power" and "distributed generation" as used in the BES definition. While the SDT does not believe that further clarity of these terms is needed in the BES definition, it clarifies that distributed generation is generally defined as: a generator that is located close to the particular Load that it is intended to serve and is interconnected to the utility distribution system. The U.S Energy Information Administration (EIA) and FERC generally use this as a basic definition. The language of Inclusion I4 stating "Dispersed power producing resources . . . utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above" was selected so as not to confuse what is traditionally considered distributed generation with the types of systems to be included in Inclusion I4.

The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

No changes were made to Inclusion I4 based on comments provided in response to this question.

Organization	Yes or No	Question 5 Comment
Northeast Power Coordinating Council	No	Suggest the term “common point” needs clarification and/or definition (is risk of single mode failure intended, i.e. where all the resources could be lost for a single event?). Suggest the following wording: “connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 KV or above.” Dispersed power producing sources such as wind and solar should not be included as BES elements because of the variable and intermittent nature of these resources. If these dispersed power producing resources had dedicated energy storage facilities only then that could make them BES elements. Generally the collector systems for these resources (from the bulk transmission system reliability perspective) do not differ from distribution systems which are excluded from the BES.
Response: While the SDT does not believe that additional clarification of the term “common point” is needed in the BES definition, the following guidance is provided. The common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the		

Organization	Yes or No	Question 5 Comment
individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system. No change made. The SDT disagrees with excluding dispersed power producing sources such as wind and solar from the BES definition. These resources comprise a significant share of the North American resource mix. No change made. The SDT does not believe further clarification of Dispersed Power Resources is needed. Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources "utilize[e] a system designed primarily for aggregating capacity." Furthermore, Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.		
Southwest Power Pool Standards Review Team	No	We believe that the removal of the wording "single site" in I2 would remove the need to cover dispersed power producing resources in I4. What is the reason for keeping I4 in this version? Also we understand that 75MVA is held in I4 because of no direct link to the registry criteria, but feel that this number could change in phase two of the project which would create unnecessary work in the future.
Response: The essential distinction between Inclusions I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources "utilize[e] a system designed primarily for aggregating capacity." No change made. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry		

Organization	Yes or No	Question 5 Comment
stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
Pepco Holdings Inc and Affiliates	No	The SDT reworded Inclusion I4 to use the phrase "utilizing a system designed primarily for aggregating capacity". This was to address a concern that the previous definition could ensnare distributed generation or small generators in a distribution system. We agree with the intent of this modification. I4 was intended solely to address wind and solar farms that use a collector system to aggregate their capacity. Therefore, to provide better clarity on the intent of this Inclusion, perhaps it would be better to specifically mention these examples in the wording: "Dispersed power producing resources (such as wind and solar farms, etc.) which utilize a system designed primarily for aggregating capacity, where the capacity is greater than 75MVA (gross aggregate nameplate rating) and the facility is connected at a common point at a voltage of 100kV or above."
Response: Use of the term 'etc.' is not suitable for a definition as it is completely open ended. Inclusion of a list is problematic as it may not be complete especially with regard to future technology enhancements which could force a revision of the definition. The SDT does not believe the suggested change provides any additional clarity. The SDT does not believe further clarification of Dispersed Power Resources is needed. Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources "utilize[e] a system designed primarily for aggregating capacity." No change made.		
Hydro One Networks Inc.	No	Although we agree with the I4 concept, we suggest that the SDT should consider that this category primarily includes wind and solar farms and their collector system. We believe these facilities should not be included

Organization	Yes or No	Question 5 Comment
		as BES elements but rather as supporting elements (see comments under I2) for the following reasons: a) Any additional benefit of classifying these resources as BES is insignificant for the reliability of supply (capacity and energy), considering the intermittent and widely variable nature of these resources. The planning and operational standards and practices make sure that their unavailability or unexpected (sudden) loss, which are significantly more likely due to the natural elements than those due to mechanical or electrical causes, will not jeopardize the reliability of the supply; and b) The reliability of the aspects of the collector system of these resources (their impact on reliability of the bulk transmission system) is not different from that of distribution systems (load serving feeders) which are excluded from the BES. We agree with the revised portion of Inclusion I4 which does indeed clarify that there is no requirement for a contiguous BES path from the dispersed generation resources to the point of interconnection to the BES.
Response: The SDT disagrees with excluding dispersed power producing sources such as wind and solar from the BES definition. These resources comprise a significant share of the North American resource base. No change made. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.		
Western Area Power Administration	No	Need to clarify the systems associated with this inclusion. The phrase "dispersed power producing resources" in inclusion (I4) is confusing and does not clearly communicate the focus of this inclusion. Without reviewing the reference information provided in the 1st draft comment form, it's not clear that dispersed power producing resources refer to wind and solar resources. Recommendation: Include examples after phrase "dispersed power producing resources" for clarification to this

Organization	Yes or No	Question 5 Comment
		inclusion. Change I4 to read - Dispersed power producing resources (i.e. wind and solar resources) with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above.
Response: The SDT does not believe that the suggestion provides any additional clarity. No change made.		
PacifiCorp	No	Setting a dispersed power producing resource limit to 75 MVA at a common point discriminates against single generator owners who own generators between 20 MVA and 75 MVA (inclusion I1), typically connected at a common point and requires such owners to be subject to additional standards that dispersed power producing owners are not required. However, even with this concern, PacifiCorp supports the entire BES definition in its current form based on the timeframe under which the SDT is operating and with an emphasis based on a phase II SAR to address PacifiCorp's objections regarding generation levels. Under the attached scenario, please identify which elements would be considered BES: This response included a drawing. This format will not allow the submission of the drawing. The drawing will be sent separately in an email. Reference "Proj 2010-17 PAC Drawing".
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. All recommendations for modifications to the technical		

Organization	Yes or No	Question 5 Comment
aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System will be considered. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. The examples provided will be reviewed as part of Phase 2.		
Massachusetts Department of Public Utilities	No	The aggregate 75 MVA of connected generation does not appear to be adequately supported by technical analysis and appears, on its face, as too low. Among our concerns is that such a low level will have a potential adverse impact on the development of renewable generation resources. In addition, the inclusion needs to be clarified in order that entities have clear guidance on what is meant by "common point of interconnection."
NESCOE	No	NESCOE continues to disagree with this proposed inclusion. NESCOE is concerned with the potential adverse impact this may have on the development of renewable generation resources. In addition, NESCOE suggests that the aggregate 75 MVA of connected generation is too low and is not adequately supported by technical analysis. The threshold value should be related to the largest contingency the applicable control area is designed to operate to. A level of 300 MVA would be appropriate. Finally, the inclusion needs to be clarified in order that entities have clear guidance on what is meant by "common point of interconnection."
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded		

Organization	Yes or No	Question 5 Comment
the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. The SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. While the SDT does not believe that additional clarification of the term "common point" is needed in the BES definition, the following guidance is provided. The SDT believes the common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system. No change made.		
Idaho Falls Power	No	As drafted, it appears to draw in all generation resources that sum to 75 MVA or higher. We question then if there is value of categorizing every wind turbine on a >75MVA wind farm as a BES asset and, what would be the unintended consequences. Perhaps language delineating the point of aggregation as the demarcation point of a BES asset would better serve.
Response: Inclusion I4 denotes an aggregate threshold. This is clear from the requirement inclusion threshold of "aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)." Once this aggregate threshold is met, all generation resources that comprise the facility would be included. No change made. While the SDT does not believe that additional clarification of the term "common point" is needed in the BES definition, the following guidance is provided. The SDT believes the common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system. No change made.		

Organization	Yes or No	Question 5 Comment
ReliabilityFirst	No	The term "Dispersed Power Producing Resource" is not a defined term and needs further clarification. However, I4 is not needed and is already included in I2. I4 does not add any additional facilities that are not already included in I2. How are "dispersed power producing resources" different from "generating resources" described in I2? If the intent of I4 is to include wind generators but exclude wind farm collector systems in the BES, ReliabilityFirst Staff disagrees. To maintain reliability, the BES cannot have pockets of generation that are not connected to the BES via BES facilities. ReliabilityFirst Staff believes that without including the paths from BES generators in the BES, the reliable operation of the system could be jeopardized if the paths are unavailable due to non-compliance to Reliability Standards. For example, wind farm collector systems at voltages operated at less than 100 kV should be included in the BES for the above reason. I4 could be deleted.
Response: The SDT does not believe further clarification of Dispersed Power Resources is needed. Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources "utilize[e] a system designed primarily for aggregating capacity." No change made. The essential distinction between Inclusions I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made. The contiguous nature of the BES will be discussed as part of Phase 2 of the project. No change made.		
Xcel Energy	No	Xcel Energy believes that this inclusion is still a little vague and could use some clarification. For instance, if a wind farm has an aggregated capacity greater than 75 MVA (and therefore meets Inclusion I4) exactly

Organization	Yes or No	Question 5 Comment
		what facilities are included as part of the BES, every turbine, all distribution transformers and cables, etc. If all equipment is included, what level of detail is required of this BES facility for modeling purposes, and who is responsible for modeling this system. Or, is the intent to only include the facilities at the common point of connection, whereby the facility could be modeled as 1 large facility?
Response: Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.		
Central Maine Power Company	No	The term "common point" needs clarification and/or definition. (e.g., is it intended to apply to the risk of single mode failure, where all the resources could be lost for a single event?) Some northeast industry expert colleagues interpret I2 to mean the collector system itself needs to be 100 kV or above in order to be BES. I2 seems to not include the collector system itself in BES. I4 should be restated as follows: "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system connected at a common point. BES includes the interconnecting substation with the step-up transformer(s) connected at a voltage of 100 kV or above."[alternatively, replace "interconnecting substation with" with, "generator terminals through the high-side of" if the entire collector system is intended to be BES]Also note that some wind collector systems require supplemental dynamic reactive resources or special control system to met reliability standards. As written, these reactive resources or controls may not be considered to be BES.
New York State Dept of Public Service	No	I4 reference to a "common point" lacks clarity that can lead to confusion and required clarifications. Suggested wording change: ... connected at a common point through a dedicated step-up transformer with a high-

Organization	Yes or No	Question 5 Comment
		side voltage of 100 kV or above."
American Electric Power	No	We believe more clarity is needed as to where exactly the "common point" is, for example in the case of a wind farm. This first common point could be interpreted as the output voltage of the wind generator, would be less than the 100kv threshold and thereby could (unintentionally?) exclude the facility as a whole. If this was unintentional, we recommend rewording I4 in a manner similar to I2.
Response: While the SDT does not believe that additional clarification of the term "common point" is needed in the BES definition, the following guidance is provided. The SDT believes the common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system. No change made.		
The Dow Chemical Company	No	It is not clear how "Dispersed power producing resources" differ from "Generating Resource (s)" in I2. Inclusion I4 should clarify this. We suggest that the phrase "Variable Energy Resources" be used instead of "Dispersed power producing resources". Variable Energy Resources should be defined as "Resources producing electricity using wind or solar energy." The following phrase should be added at the end "unless excluded under Exclusion E2".
Response: The essential distinction between Inclusion I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made. The SDT does not believe that the suggestion provides any additional clarity. No change made.		

Organization	Yes or No	Question 5 Comment
The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " An Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.		

Organization	Yes or No	Question 5 Comment
Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition does not provide a definitive determination on whether an Element is classified as BES or non-BES, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made.		
City of St. George	No	This language follows the 75 MVA plant requirements from the Registration Criteria. See comments to question 3 (for I2) above. Additional detail is needed to clarify exactly at what point in the dispersed system the BES starts and what is not BES.
Response: Please see response to Q3. While the SDT does not believe that additional clarification of the term "common point" is needed in the BES definition, the following guidance is provided. The SDT believes the common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system. No change made.		
ISO New England Inc	No	I4 is unclear as to whether or not the collector system (or system designed primarily for aggregating capacity) itself is BES or just the resource."Utilizing a system designed primarily for aggregating capacity" needs to be more clearly defined to account for multiple systems that may exist out of one common point. A suggestion would be to modify the end of the sentence to say "connected at any common point." I4 will allow for significant amounts of dispersed power producing resources to be excluded from the BES. This includes wind resources which are increasing in numbers and having a significant impact on system operations. It does not seem appropriate that having ten 70 MVA (total of 700 MVA) installations each with their own connection to a 115

Organization	Yes or No	Question 5 Comment
		kV bus should fall outside of the BES. As currently written, they would fall outside of the inclusion if they do not utilize the same collector system. It is unclear whether or not supplemental equipment associated with the dispersed power producing resources is included in the BES. As an example, many wind resources are being interconnected utilizing supplemental dynamic and static reactive devices which are crucial to the operation of these resources. The dynamic devices are often controlling themselves and static reactive devices, which may or may not be connected above 100 kV. Leaving these devices out of the BES definition seems to be a potential gap.
Response: The essential distinction between Inclusion I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made. The clustering of dispersed power producing resources and supplemental equipment will be discussed as part of Phase 2 of the project. No change made.		
Rochester Gas and Electric and New York State Electric and Gas	No	The term “common point” needs clarification and/or definition. (e.g., is it intended to apply to the risk of single mode failure, where all the resources could be lost for a single event?) Some northeast industry expert colleagues interpret I2 to mean the collector system itself needs to be 100 kV or above in order to be BES. I2 seems to not include the collector system itself in BES. I4 be restated as follows:”Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system connected at a common point. BES includes the interconnecting substation with the step-up transformer(s) connected at a voltage of 100 kV or above.”[alternatively, replace the bold italics with,

Organization	Yes or No	Question 5 Comment
		"generator terminals through the high-side of"] Also note that some wind collector systems require supplemental dynamic reactive resources or special control system to met reliability standards. As written, these reactive resources or controls may not be considered to be BES.
Response: While the SDT does not believe that additional clarification of the term "common point" is needed in the BES definition, the following guidance is provided. The SDT believes the common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system. No change made. The essential distinction between Inclusion I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made. The inclusion of supplemental equipment will be discussed as part of Phase 2 of the project. No change made.		
LCRA Transmission Services Corporation	No	LCRA TSC suggests consistency between this inclusion criteria and the criteria used in I2 for "generation".
Response: The essential distinction between Inclusion I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.		
Kansas City Power and Light Company	No	It is not clear that it is the injection at the collection point that is the defining point for the injection. Nameplate rating of the generator is not a reflection of what can be actually injected into the transmission system with resulting electrical impacts on transmission loading and behavior. Recommend the BES definition be based on a generating resource(s)

Organization	Yes or No	Question 5 Comment
		established net accredited generating capacity at the common point instead of what it could do by nameplate rating that may not be achievable. Recommend the following language: Dispersed power producing resources utilizing a system designed primarily for aggregating capacity connected through a common point at a voltage of 100 kV or above with aggregate net accredited capacity at the common point of greater than 75 MVA.
Response: For Phase 1, the SDT has used nameplate rating in order to maintain consistency with the ERO Statement of Compliance Registry Criteria. No change made. This can be discussed in Phase 2 of the project. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
Farmington Electric Utility System	No	FEUS feels additional clarity should be added to I4. It appears I4 is not intended to include each individual wind turbine generating unit in a wind farm as a BES element, but rather to include the point at which the aggregation becomes large enough to meet the aggregate capacity threshold of 75MVA.
Response: inclusion I4 denotes an aggregate threshold. This is clear from the requirement inclusion threshold		

Organization	Yes or No	Question 5 Comment
of "aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)." Once this aggregate threshold is met, all generation resources that comprise the facility would be included. No change made.		
South Houston Green Power, LLC	No	Further clarification of "Dispersed power producing resources" is needed. Multiple small resources should not be included. The following phrase should be added at the end of Inclusion I4 "unless excluded under Exclusion E2".
Response: The SDT does not believe that additional clarification is needed. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made. The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " An Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.		

Organization	Yes or No	Question 5 Comment
Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition does not provide a definitive determination on whether an Element is classified as BES or non-BES, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made.		
Westar Energy	No	We believe that the removal of the wording "single site" in I2 would eliminate the need to include dispersed power producing resources in I4. We feel that I4 should be removed to reduce redundancy in the definition, unless there is some other reason to include it. Also, we understand that 75 MVA is retained in I4 because there is no direct link to the ERO Statement of Compliance Registry Criteria, but we have concerns that this number could change in phase two of the project, creating unnecessary work in the future.
Response: The essential distinction between Inclusion I2 and I4 is that I2 may not include generating resources that use lower voltage collection systems while I4 is specifically designed to accomplish this purpose, therefore I4 is needed. No change made.		

Organization	Yes or No	Question 5 Comment
The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. The SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
Hydro-Quebec TransEnergie		Same comment than Q. 3. Also, since the path to connect the dispersed generation is often done at distribution voltage, that lower voltage path should not be included in BES.
Response: Please see response to Q3. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.		
Tacoma Power	Yes	Tacoma Power generally supports the Inclusion I4 as currently written. However, we support further refinement of the aggregate nameplate rating definition and support deferring the appropriate quantitative thresholds to those that will be determined in Phase 2.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders		

Organization	Yes or No	Question 5 Comment
No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. The SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
Ameren	Yes	a)For a consistent application, we suggest that the definition of the terms "Dispersed power producing resources" is included. Consider including some examples also.
Response: The SDT does not believe further clarification of Dispersed Power Resources is needed. Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources "utilize[e] a system designed primarily for aggregating capacity." No change made.		
Cowlitz County PUD	Yes	However, Cowlitz suggests Inclusion 4 be made parallel with Inclusion 2: ...(greater than the gross aggregate name plate rating per the ERO Statement of Compliance Registry Criteria) utilizing...
Response: The SDT believes that Inclusions I2 and I4 do use consistent language and this point has been clarified with the clarifying language changes to Inclusion I2. No change made.		
Long Island Power Authority	Yes	Need to define the term "common point"
Response: While the SDT does not believe that additional clarification of the term "common point" is needed in the BES definition, the following guidance is provided. The SDT believes the common point of connection,		

Organization	Yes or No	Question 5 Comment
which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system.		
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative	Yes	This inclusion should be limited to reactive devices 150 MVAR or greater (gross aggregate nameplate rating) connected through a common point at the 200 kV level or higher level.
Manitoba Hydro	Yes	Manitoba Hydro agrees with I4 but it does create a discrepancy between the BES Definition and the Registration Criteria Document. The Registration Criteria document should be updated and I2 and I4 should be combined into a single Inclusion.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. The SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for		

Organization	Yes or No	Question 5 Comment
modifications to the existing values. Possible revisions to the ERO Statement of Compliance Registry Criteria will be discussed as part of Phase 2 of the project. No change made.		
Consumers Energy	Yes	We agree, but would like further clarification on what wind farm equipment (e.g., collector systems or other equipment) would be considered a part of the BES. Is the system designed for aggregating capacity considered to be part of the dispersed plant or part of the BES.
Response: Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.		
Michigan Public Power Agency Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperatve (CEC) Clearwater Power Company (CPC) Snohomish County PUD Consumer's Power Inc. Douglas Electric Cooperative (DEC) Fall River Rural Electric	Yes	MPPA supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e, "resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," which is discussed in more detail in our response to Question 3. This language, or some equivalent, will preserve the SDT's ability to revise the 75 MVA threshold in Phase 2, with the result of Phase 2 included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have

Organization	Yes or No	Question 5 Comment
Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC) Kootenai Electric Cooperative		unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a LN. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be established by the SDT in Phase 2. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase ". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders		

Organization	Yes or No	Question 5 Comment
No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. The SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. The essential distinction between Inclusions I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. No change made. Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources "utilize[e] a system designed primarily for aggregating capacity." Furthermore, Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. Therefore distribution systems would not be inadvertently included. No change made.		
National Grid	Yes	We agree with Inclusion I4, however we feel that the inclusion could be interpreted in some different ways. This inclusion could be interpreted to exclude dispersed generation greater than 75 MVA if the first common point is less than 100 kV. To eliminate any confusion in the interpretation of this inclusion, we suggest this wording: Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected to a Transmission Element at 100 kV or above, utilizing a system designed primarily for aggregating capacity which includes all transformers between the generator(s) and the Transmission Element.

Organization	Yes or No	Question 5 Comment
MRO NERC Standards Review Forum (NSRF)	Yes	I4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above starting at the point of aggregation to 75 MVA or more through to the point of interconnection at 100 kV or above."
Response: The SDT does not believe that the suggested change provides additional clarity. No change made.		
Electricity Consumers Resource Council (ELCON)	Yes	The term "dispersed power" and "dispersed generation" are often synonymous with distributed generation, which includes behind-the-meter generation (CHP). The Inclusion should be clarified by specifically referencing wind and solar, or adopt the FERC term "Variable Energy Resources." Also, to distinguish this Inclusion from Inclusion I2, the SDT might want to clarify that the collection system (usually at voltage below 100 KV anyway) is not part of the BES-just the resources and any transformers included by I1, if this is indeed the intent of this Inclusion. The following phrase should be added at the end "unless excluded under Exclusion E2."
Response: The SDT believes that inclusion of a list is problematic as it may not be complete especially with regard to future technology enhancements which could force a revision of the definition. Furthermore, the SDT does not believe further clarification of Dispersed Power Resources is needed. Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources "utilize[e] a system designed primarily for aggregating capacity." No change made. The SDT does not believe that additional clarification is needed. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.		

Organization	Yes or No	Question 5 Comment
ACES Power Marketing Standards Collaborators	Yes	Further clarification on what "dispersed power" means would be helpful. How does it compare to distributed generation?
Response: While the SDT believes that further clarity of the terms "dispersed power" and "distributed generation" is not needed, it notes that distributed generation is generally defined as: a generator that is located close to the particular load that it is intended to serve and is interconnected to the utility distribution system. The U.S EIA and FERC generally use this as a basic definition. The language of Inclusion I4 stating "Dispersed power producing resources . . . utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above" was selected so as not to confuse what is traditionally considered distributed generation with the types of systems to be included in Inclusion I4. No change made.		
Texas RE NERC Standards Subcommittee	Yes	To distinguish this Inclusion from Inclusion I2, the SDT might want to clarify that the collection system (usually at voltage below 100 KV anyway) is not part of the BES-just the resources and any transformers included by I1, if this is indeed the intent of this Inclusion.
Response: The SDT does not believe that additional clarification is needed. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.		
ExxonMobil Research and Engineering	Yes	The BES SDT should clarify the difference between "dispersed power producing resources" and "generation resources" in such a manner that it is clear that an industrial plant containing providing the BES with power from ten 7.5MVA machines connected at a common point at a voltage of 100 kV or higher meets the qualifications for generation resources and does not meet the qualifications for a "dispersed power producing resource".
Portland General Electric	Yes	PGE requests additional clarity in the wording of Inclusion 4. Inclusion 4 is not intended to include each individual wind turbine generating unit in a

Organization	Yes or No	Question 5 Comment
Company		wind farm as a BES element, but rather to include the point at which the aggregation becomes large enough to meet the aggregate capacity threshold of 75 MVA. However, the response to comments from the last comment posting and the current wording of Inclusion 4 does not provide sufficient clarity to answer this question.
Bonneville Power Administration	Yes	BPA suggests adding, "Including generating terminals of the high side" as clarifying language to the end of the sentence. (Specifically where the 100kV is to be measured as clarified in I2). BPA believes that Inclusion 4 is not intended to include each individual wind turbine/generator unit in a wind farm as a BES element, but rather to include the point at which the aggregation becomes large enough to meet the aggregate capacity threshold of 75 MVA.
WECC Staff	Yes	WECC seeks further clarification on Inclusion 4. Several comments were submitted in the last round of comments whether each individual wind turbine in a wind farm, will be included in the BES. WECC believes the language change to I4 by the SDT did not address this issue. The current language in I4 could be interpreted as each individual turbine (example 1MW) would be part of the BES. WECC believes that I4 is not intended to include each individual wind turbine in a wind farm as a BES element but rather to include the point at which the aggregation becomes large enough to meet the aggregate capacity threshold of 75 MVA. WECC recommends the SDT modify the language in I4 to clarify this issue.
Response: The SDT does not believe that additional clarification is needed. Inclusion I4 denotes an aggregate threshold. This is clear from the requirement wording of "aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)." Once this aggregate threshold is met, all generation resources that comprise the facility would be included. No change made.		
Transmission Access Policy	Yes	We recommend clarifying that the dispersed power resources covered by

Organization	Yes or No	Question 5 Comment
Study Group		this inclusion do not include generators on the retail side of the retail meter. Specifically, we recommend that the Inclusion read: "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100kV or above, but not including generation on the retail side of the retail meter."
Florida Municipal Power Agency	Yes	We recommend clarifying that the dispersed power resources covered by this inclusion do not include generators on the retail side of the retail meter. Specifically, we recommend that the Inclusion read: "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100kV or above, but not including generation on the retail side of the retail meter."
Response: The SDT does not believe that additional clarification is needed. The SDT further clarifies that generating units on the customer's side of the retail meter are not included under Inclusion I4 since customer-side retail generation typically does not "utilize[e] a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above." No change made.		
Redding Electric Utility	Yes	
City of Redding	Yes	
ATC LLC	Yes	
City of Austin dba Austin Energy	Yes	

Organization	Yes or No	Question 5 Comment
Georgia System Operations Corporation	Yes	
MEAG Power	Yes	
Northern Wasco County PUD	Yes	Northern Wasco County PUD agrees both with the inclusion and with the revised language. The revised language removes the need to provide a separate definition for “Collector System”.
Sacramento Municipal Utility District	Yes	We support using the BES Phase 2 technical analysis to identify and provide technical support for determining the appropriate minimum MVA rating that the aggregation of multiple units must meet to be considered part of the BES. We also support using the Phase 2 studies to identify an appropriate minimum MVA level that a single unit of the aggregation of multiple units must be considered BES.
Oncor Electric Delivery Company LLC	Yes	
Utility Services, Inc.	Yes	
Harney Electric Cooperative, Inc.	Yes	HEC agrees with the inclusions and revised language to the definition
Central Lincoln	Yes	Central Lincoln agrees both with the inclusion and with the revised language. The revised language removes the need to provide a separate definition for “Collector System”.
Independent Electricity	Yes	The revised Inclusion I4 does indeed clarify that there is no requirement

Organization	Yes or No	Question 5 Comment
System Operator		for a contiguous BES path from the dispersed generation resources to the point of interconnection to the BES.
PSEG Services Corp	Yes	
Mission Valley Power	Yes	Mission Valley Power agrees both with the inclusion and with the revised language. The revised language removes the need to provide a separate definition for “Collector System”.
Puget Sound Energy	Yes	
Tillamook PUD	Yes	Tillamook PUD agrees both with the inclusion and with the revised language. The revised language removes the need to provide a separate definition for “Collector System”.
NV Energy	Yes	
Z Global Engineering and Energy Solutions	Yes	
Metropolitan Water District of Southern California	Yes	
Duke Energy	Yes	
Ontario Power Generation Inc.	Yes	

Organization	Yes or No	Question 5 Comment
Central Hudson Gas and Electric Corporation	Yes	
City of Anaheim	Yes	This is OK because the 75 MVA is connected at 100 kV or above.
Chevron U.S.A. Inc.	Yes	
Southern Company	Yes	
FirstEnergy Corp.	Yes	
Texas Industrial Energy Consumers	Yes	
Tri-State GandT	Yes	
Tennessee Valley Authority	Yes	
IRC Standards Review Committee	Yes	The revised Inclusion I4 does clarify that there is no requirement for a contiguous BES path from the dispersed generation resources to the point of interconnection to the BES.
Tri-State Generation and Transmission Assn., Inc. Energy Management	Yes	
Southern Company Generation	Yes	
Dominion	Yes	

Organization	Yes or No	Question 5 Comment
Balancing Authority Northern California	Yes	
SERC Planning Standards Subcommittee	Yes	
SERC OC Standards Review Group	Yes	
NERC Staff Technical Review	Yes	
BGE	Yes	No comment.
Response: Thank you for your support.		

6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: In response to comments, the SDT added further clarification to Inclusion I5 to exclude small generators that would be improperly brought into the BES.

The SDT believes Inclusion I5 incorporates the necessary resources for the reliable operation of the BES, without unintentionally including any distribution devices, or including any of the dedicated transformers which are not identified in the core definition or Inclusion I1.

Additionally, Exclusion E4 will further exclude those non-generator Reactive Power resource devices that were identified through the core definition or through Inclusion I5 which are on the load side of the customer meter solely for the customer's own use.

Using a threshold for inclusion of non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

I5 –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.

Organization	Yes or No	Question 6 Comment

Organization	Yes or No	Question 6 Comment
SERC OC Standards Review Group	No	We feel that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common point.
Tennessee Valley Authority	No	TVA feels that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVAR (gross aggregate nameplate rating) connected through a common point at a voltage of 200kV or above, and requests that the Phase 2 for the project use 75 MVAR connected at 200kV or above or develop a transmission voltage and/or an MVAR threshold that is technically based.
Tri-State GandT	No	There should be a limitation on what reactive components needs to be included. The limits could be based on capacity of the units or on the voltage step that occurs upon switching of the device.
Western Area Power Administration	No	This inclusion should be worded to only include static or dynamic reactive devices which are necessary to meet the NERC Planning Criteria in terms of normal and post-disturbance voltage profiles. We shouldn't have to include smaller shunt cap banks and reactors which are used primarily for voltage support (not voltage collapse). Recommendation: Change I5 to read - Static or dynamic devices dedicated to supplying or absorbing Reactive Power which are necessary to meet the NERC Planning Criteria in terms of normal and post-disturbance voltage profiles that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1
Southern Company	No	We believe that the size of the reactive power resource should be considered as a key factor to be part of BES. When considering generating resources, the size, e.g., greater than 75 MVA, was a key part of criteria to be included or excluded as BES. A similar approach should be applied when considering reactive power resources. We also suggest the removal of static reactive resources from this inclusion.
Response: Using a threshold for inclusion of non-generator Reactive Power resource devices in the BES will be considered in		

Organization	Yes or No	Question 6 Comment
Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
New York State Dept of Public Service	No	I5 - which has been newly added and significantly expands the BES definition - should be dropped due to lack of technical justification.
Northeast Power Coordinating Council	No	Technical studies need to be conducted to confirm reactive resource impacts on the reliability of the BES. The inclusion of reactive resources is a significant expansion of the current BES definition and therefore requires technical justification for inclusion. Inclusion I5 as written is confusing with a reference to Inclusion I1 in the definition. Suggest removing references to reactive resources from Phase 1 until technical justification can be demonstrated (as part of Phase 2).
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects of the definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will provide compelling justification.		

Organization	Yes or No	Question 6 Comment
No change made.		
Southwest Power Pool Standards Review Team	No	We understand that this inclusion is used to capture those devices other than generation resources, but the language leads us to believe that it could include all generators used to supply or absorb reactive power. We would suggest that I5 be changed to read "-Static or dynamic devices specifically used for supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.
Consumers Energy	No	This inclusion appears to pull small generators that have an AVR that are connected to 138 kV into the BES. These generators are primarily intended to provide real power.
Response: The SDT added further clarifications to Inclusion I5 to specifically exclude generators. **I5** –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.		
Dominion	No	The language in the last part of Inclusion I5 "....or through a transformer that is designated in Inclusion I1" introduces ambiguity. Specifically, it is not clear how implememtation of this language would result in the inclusion of any Static or dynamic device that is not already included. Dominion suggests that the language in I5 be revised to read "Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or connected through a dedicated transformer with at least one terminal voltage of 100 kV or higher." Dominion understands that the SDT intended for this Inclusion to not address generators or power producing resources because they are covered elsewhere (I2 and I4) and requests that the SDT confirm this understanding.
Response: The SDT believes these qualifications on non-generator Reactive Power resource devices in Inclusion I5 do include the		

Organization	Yes or No	Question 6 Comment
necessary resources for the reliable operation of the BES, without unintentionally including any distribution devices, or including any of the dedicated transformers which are not identified in the core definition or Inclusion I1. No change made. The SDT confirms that Dominion's understanding of the intent of this inclusion is correct. In response to comments, the SDT added further clarifications to Inclusion I5. **I5** –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.		
Pepco Holdings Inc and Affiliates	No	Agree in principle. However, the last phrase "or through a transformer that is designated in Inclusion I1" is unnecessary, since if the resource were connected through a transformer meeting Inclusion I1 it would by nature be connected at 100kV or higher.
Response: The SDT believes the Inclusion I1 wording is necessary to capture those devices dedicated to supplying or absorbing Reactive Power. No change made.		
MRO NERC Standards Review Forum (NSRF)	No	NSRF recommends the following proposed language for I5 to address the concern:"I5 - Static or dynamic devices which 1) are dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1 and 2) are pertinent to meeting the NERC Planning Criteria in terms of normal and post-disturbance voltage profiles."
Response: The SDT does not believe this change provides additional clarity as it diverts from the bright-line concept. No change made.		
PacifiCorp	No	PacifiCorp recommends the addition of the phrase "...unless excluded under E1 or E3." Otherwise, PacifiCorp believes that I5 is currently acceptable. However, phase II should identify limits and technically justify the appropriate limit(s).

Organization	Yes or No	Question 6 Comment
Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		

Organization	Yes or No	Question 6 Comment
Using a threshold for inclusion of non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
Massachusetts Department of Public Utilities	No	The inclusion of all devices that supply reactive power to the BES is unnecessary and will result in unjustified costs to the ratepayer. Static devices (fixed capacitors) should remain excluded from the BES as they are dispatched by operations personnel, and if one fixed capacitor bank fails, the operator can replace its impact by switching in another fixed bank. This represents routine operation of the system. On the other hand, dynamic devices may be important to maintaining voltage stability of the system. These installations typically are rated to supply or absorb 75 MVA or more to or from the BES. Therefore, the MA DPU suggests that dynamic reactive power devices rated at 75 MVA or more could be included in the BES. Further, revised inclusion I5 is a new inclusion that lacks definition (and appears to be redundant with the general BES definition). NERC should provide technical justification for the additional language under Inclusion I5.
NESCOE	No	NESCOE believes that inclusion of all devices that supply reactive power to the BES is unnecessary and will result in transferring unjustified costs to the ratepayer. Static devices (fixed capacitors) should remain excluded from the BES as they are dispatched by operations personnel, and if one fixed capacitor bank fails, the operator can replace its impact by switching in another fixed bank. This represents routine operation of the

Organization	Yes or No	Question 6 Comment
		system. On the other hand, dynamic devices may be important to maintaining voltage stability of the system. These installations typically are rated to supply or absorb 75 MVA or more to or from the BES. Therefore, NESCOE suggests that dynamic reactive power devices rated at 75 MVA or more be included in the BES. Further, revised inclusion I5 is a new inclusion that lacks definition (and appears to be redundant with the general BES definition). NERC should provide additional technical justification for the additional language under Inclusion I5.
Response: The SDT believes these qualifications on non-generator Reactive Power resource devices in Inclusion I5 do include the necessary resources for the reliable operation of the BES, without unintentionally including any distribution devices, or including any of the dedicated transformers which are not identified in the core definition or Inclusion I1. No change made. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will provide compelling justifications.		
Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperatve (CEC) Clearwater Power Company	No	CLPD has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are “power producing resources” and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses “power producing devices.” Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Finally, CLPD believes the appropriate threshold for inclusion or exclusion of Reactive

Organization	Yes or No	Question 6 Comment
(CPC) Snohomish County PUD Consumer's Power Inc Douglas Electric Cooperative (DEC) Fall River Rural Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC) Kootenai Electric Cooperative Cowlitz County PUD		Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase 2 process.

Organization	Yes or No	Question 6 Comment
Michigan Public Power Agency	No	MPPA has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Finally, MPPA believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase 2 process. Without such analysis either: 1) no threshold except for those connected at 100kV, or: 2) of .95 power factor of a 20 MVA generator, or 6 MVAr and use the fact that most Facility Connection Requirements require a power factor in the range of between 0.85 - 0.9 lagging to 0.9 - 0.95 leading for a generator. Hence, a 20 MVA generator (the smallest to meet the registry criteria) will need to absorb a minimum of 6 MVAr and use that as the technical justification.

Response: The SDT added further clarifications to Inclusion I5 to address your concerns and those of others.

> **I5** –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.

The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical

Organization	Yes or No	Question 6 Comment
aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. .		
Ontario Power Generation Inc.	No	OPG recommends that the wording of this inclusion be made clear that the BES boundary extends to the Low Voltage terminals of the transformer, used in the interface connection, and does not include the static or dynamic reactive power source itself unless it is directly connected to the BES.
Response: The SDT refers the commenter to Inclusion I1 which addresses the situation presented here when used in conjunction with Inclusion I5. No change made.		
Metropolitan Water District of Southern California	No	Inclusion 5 should be changed to be consistent with the core definition and to clarify Reactive Power devices. Under I5, the additional phrase "or through a dedicated transformer with a high side voltage of 100 kV or higher," appears to conflict with the core definition's phrase "and Real Power and Reactive Power resources connected at 100 kV or higher". For example, if you have a device connected to a 69Kv system which is used solely for an end-user's load, but the 69kv system is transformed up to a 115kV system, such device could be included as BES or you would have to define what is meant by "dedicated. If Reactive Power is meant to agree with the definition under NERC's Glossary of Terms, there should be consistency and less verbiage. MWDSC also agrees with WECC's comment that there should be some minimum threshold for Reactive Power devices similar to that identified for generating resources in Inclusion 2. MWDSC recommends that Inclusion 5 be changed as follows: I5 - "Reactive Power devices dedicated to support the BES that are connected at 100kV or higher, or through a transformer that is designated in Inclusion I1."
Response: The SDT does not believe that a contradiction exists. Proper application of the definition and inclusions (see explanation of process immediately following) would seem to preclude the situation described by the commenter. No change		

Organization	Yes or No	Question 6 Comment
made. The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element as defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of		

Organization	Yes or No	Question 6 Comment
the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. The SDT does not believe this change provides additional clarity. No change made.		
LCRA Transmission Services Corporation	No	This inclusion conflicts with exclusion E4. Which one takes priority?
Duke Energy	No	Need to add the exception for exclusions under E1 or E3, and also reword to exclude devices connected to a transformer winding less than 100 kV unless that is the only connection to that winding. Suggested rewording of I5 : “Unless excluded under Exclusions E1 or E3, static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage or 100 kV or higher, or through a transformer winding less than 100 kV that is designated in Inclusion I1 if the winding does not have any circuits or load connected to it.” This would eliminate having to include a capacitor connected to the 69 kV winding of a three winding BES transformer such as 230/138/69 kV if that winding had other connections such as 69 kV circuits. The voltage threshold of 100 kV and above should capture devices connected to 100 kV or

Organization	Yes or No	Question 6 Comment
		higher windings of transformers designated in Inclusion I1.

Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.

Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.

In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either

Organization	Yes or No	Question 6 Comment
include or exclude an Element.		
Tacoma Power	No	Tacoma Power generally supports the intent of Inclusion I5 as currently written. However, we believe the definition of the MVAr threshold level must be included in the Phase 2 evaluation and should be determined in a similar manner to the generator threshold that will be determined for I2.
Farmington Electric Utility System	No	I5 should be modified to identify a minimum Reactive Power threshold for static or dynamic devices. As drafted a 1 MVA device supplying or absorbing Reactive Power that is connected at 100 kV or higher would be included in the BES.
MEAG Power	No	We feel that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common point.
Harney Electric Cooperative, Inc.	No	HEC believes this inclusion should include a technically justified capacity limit on reactive resources to warrant inclusion.
City of St. George	No	A reasonable minimum value for inclusion should be added. As presently written all static or dynamic devices would be included in the BES regardless of size.
Tillamook PUD	No	While we agree that reactive devices of sizable capacity connected at 100 kV or higher are needed for BES reliability, Tillamook PUD fails to see why this inclusion is needed as they are already captured by the 100 kV threshold. We would propose instead to eliminate this inclusion and substitute an exclusion for smaller capacity devices. If the SDT really believes an inclusion for reactive devices is needed, we suggest the SDT provide a technically justified capacity limit within the inclusion. In addition we suggest also including the phrase "...unless excluded under Exclusion E1, E2 or E4" similar to that in I1.

Organization	Yes or No	Question 6 Comment
Mission Valley Power	No	Mission Valley Power - While we agree that reactive devices of sizable capacity connected at 100 kV or higher are needed for BES reliability, Mission Valley Power fails to see why this inclusion is needed as they are already captured by the 100 kV threshold. We would propose instead to eliminate this inclusion and substitute an exclusion for smaller capacity devices. If the SDT really believes an inclusion for reactive devices is needed, we suggest the SDT provide a technically justified capacity limit within the inclusion. In addition we suggest also including the phrase "...unless excluded under Exclusion E1, E2 or E4" similar to that in I1. Please see the answer to Q1 above Q10 below.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
Consolidated Edison Co. of NY, Inc.	No	Normally, static and dynamic devices supply Reactive Power (VARs) to or absorb VARs from the surrounding system. By their nature, VARs do not travel far, e.g., miles. So, VARs by their nature only produce local impacts. Please explain the meaning of the phrase "dedicated to supplying or absorbing Reactive Power," with emphasis on explaining why the term "dedicated" was employed? How does an Entity determine if a particular static or dynamic device is "dedicated" to the BES? What Guidance documents can the BES SDT provide describing "dedicated"

Organization	Yes or No	Question 6 Comment
		static and dynamic devices?
Response: The word 'dedicated' was used to identify those Elements whose sole purpose is supplying or absorbing Reactive Power. The language limits those devices dedicated to voltages at 100 kV and higher (via the core definition or through Inclusion I5), unless it can be excluded via Exclusion E4.		
American Electric Power	No	I5 only specifies voltage limits, and makes no mention of reactive limits. We suggest that the drafting team consider adding reactive capacity to these criteria as well.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
South Houston Green Power, LLC	No	The phrase should be added at the end “unless excluded under Exclusion E4”.
National Grid	No	We see some potential conflicts between this inclusion and the exclusions. Without some additional wording, it seems like some devices that are in a Local Distribution Network would be considered BES. In addition, reference to a transformer in Inclusion I1 is not necessary since the definition includes “all Transmission Elements operated at 100 kV”, thus by definition and I5, those connected to 100 kV and higher are already included. We suggest: Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100kV or higher unless the device is in an area

Organization	Yes or No	Question 6 Comment
		excluded from BES by Exclusion E1 or E3, or through a dedicated transformer with a high-side voltage of 100kV or higher, unless excluded by Exclusion E4.
Orange and Rockland Utilities, Inc.	No	Should also mention "unless excluded under Exclusion E1 or E3".
The Dow Chemical Company	No	The phrase “or through a dedicated transformer with a high-side voltage of 100 kV or higher” is inconsistent with I1 and would bring Reactive Power Equipment that is lower than 100Kv into the BES definition. This phrase should be deleted. The following phrase should be added at the end “unless excluded under Exclusion E4”.

Response: The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the

Organization	Yes or No	Question 6 Comment
exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made.		
Hydro-Quebec TransEnergie	No	
Response: Without specific comments the SDT is unable to respond.		
Northern Wasco County PUD	No	While we agree that reactive devices of sizable capacity connected at 100 kV or higher are needed for BES reliability, Northern Wasco County PUD fails to see why this inclusion is needed as they are already captured by the 100 kV threshold. We would propose instead to eliminate this inclusion and substitute an exclusion for smaller capacity devices. If the SDT really believes an inclusion for reactive devices is needed, we suggest the SDT provide a technically justified capacity limit within the inclusion. In addition we suggest also including the phrase "…unless excluded under Exclusion E1, E2 or E4" similar to that in I1. Please see the answer to Q1 above Q10 below.
Central Lincoln	No	While we agree that reactive devices of sizable capacity connected at 100 kV or higher are needed for BES reliability, Central Lincoln fails to see why this inclusion is needed as they are already captured by the 100 kV threshold. We would propose instead to eliminate this inclusion and substitute an exclusion for smaller capacity devices.If the

Organization	Yes or No	Question 6 Comment
		SDT really believes an inclusion for reactive devices is needed, we suggest the SDT provide a technically justified capacity limit within the inclusion. In addition we suggest also including the phrase "...unless excluded under Exclusion E1, E2 or E4" similar to that in I1. Please see the answer to Q1 above Q10 below.

Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with

Organization	Yes or No	Question 6 Comment
specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made. Please see detailed responses to Q1 and Q10.		
Ameren	No	a)Only those Reactive Power devices applied for the purpose of BES support or BES voltage control should be included. A Reactive Power device connected at >100kV but used for the purpose of voltage support to local load and/or needed to support local networks should be excluded. b)We believe that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common point. c)See the response to question 2: The inclusion is unclear since it includes a certain voltage transformers, but excludes those that have E1 or E3 Exclusion criteria. Each exclusion criteria has multiple stipulations to its applicability, and then has a final inclusive reference to I3. Please make the wording exact and not dependent on

Organization	Yes or No	Question 6 Comment
		clausal statements.

Response: a) The SDT believes that the proper application of the core definition with Inclusion i1 and I5 plus the application of Exclusions E1, E3, and E4 will cover the situation described in most applications. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made.

b) The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

c) The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the

Organization	Yes or No	Question 6 Comment
application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made.		
ExxonMobil Research and Engineering	No	The BES SDT should work on clarifying the differences between Inclusion I5 and Exclusion E4. The phrase "solely for its own use" in Exclusion E4 is vague and open to interpretation. It is unclear whether equipment, such as power factor correction facilities, surge capacitors located in motor terminal boxes and excitation capacitors installed for use by a motor located on the low side of a 138 kV primary transformer would be excluded from the BES. Is the intent of this requirement to capture "reactive resources" that provide VARs to the BES in regions that exhibit voltage stability issues?
Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and		

Organization	Yes or No	Question 6 Comment
non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made. The BES definition is predicated on operations at 100 kV or higher. In the example cited, the equipment in question appears to be below that threshold and thus is not included in the BES. No change made.		
ATC LLC	No	ATC agrees with the inclusion provided the last clause is removed, as noted below.

Organization	Yes or No	Question 6 Comment
		The BES definition is intended to establish a bright line BES definition. The clause "dedicated transformer" is undefined and unclear. Inclusion I5 -Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher (deletion of remainder of clause).
Response: The SDT considered the disposition of the word "dedicated" and determined that retention of this word is necessary to show the SDT's intent that the conditions described by the inclusion are for configurations where the intended device is only going through one transformation. No change made.		
Westar Energy	No	We understand that I5 is being used to capture those devices other than generation resources, but the language used leads us to believe that it could include all generators that supply or absorb reactive power. We also believe the language should be changed to be consistent with I1. We suggest that I5 be changed to read: "Static or dynamic devices specifically used for supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side terminal operated at 100 kV or higher, or through a transformer that is designated in Inclusion I1."
Response: The SDT has clarified the wording of Inclusion I5 to address your concern. **I5** –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1. The SDT does not believe your suggested wording provides additional clarity. No change made.		
Florida Municipal Power Agency		To help clarify and to avoid inclusion of de minimis reactive resources, we propose a size threshold of 6 MVAr consistent with the smallest size generator included in the BES at a 0.95 power factor, which is a common leading power factor used in Facility Connection Requirements for generators. In other words, 6 MVAr is consistent with typically the least amount of MVAr required to be absorbed by the smallest generator

Organization	Yes or No	Question 6 Comment
		meeting the registry criteria.
Redding Electric Utility	Yes	Redding believes that an appropriate MVAr level should be established during Phase 2.
City of Redding	Yes	Redding believes that an appropriate MVAr level should be established in during Phase 2.
City of Austin dba Austin Energy	Yes	Appropriate MVAr level should be established. Reactive resources should be treated similar to generation criteria and included in the technical studies associated with the Phase 2 technical analysis in order to establish the appropriate MVAr level included as BES.
Sacramento Municipal Utility District	Yes	However, appropriate MVAr level should be established. Reactive resources should be treated similar to generation criteria and included in the technical studies associated with the Phase 2 technical analysis in order to establish the appropriate MVAr level included as BES.
Tri-State Generation and Transmission Assn., Inc. Energy Management	No	There should be a limitation on what reactive components needs to be included. The limits could be based on capacity of the units or on the voltage step that occurs upon switching of the device
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power	Yes	This inclusion should be limited to reactive devices 150 MVAR or greater (gross aggregate nameplate rating) connected through a common point at the 200 kV level or higher level.

Organization	Yes or No	Question 6 Comment
Cooperative		
Memphis Light, Gas and Water Division	Yes	We are in general agreement with this inclusion, except that there is no threshold for reactive resources as there is for generators and transformers. We recommend that a minimum level be established for this equipment, such as 100 MVAr, or that studies be conducted to determine an appropriate threshold.
Southern Company Generation	Yes	We believe that the size of the reactive power resource should be considered as a key factor to be part of BES. When considering generating resources, the size, e.g., greater than 75 MVA, was a key part of criteria to be included or excluded as BES. A similar approach should be applied when considering reactive power resources. Moreover, the language at the end of I5, "or through a transformer that is designated in Inclusion I1," appears to be redundant since the reactive power resources are connected to 100 kV or higher already without this additional language. The following language is suggested: I5 - Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, and with an aggregate continuous nameplate rating greater than 30 MVA.
ACES Power Marketing Standards Collaborators	Yes	We understand the SDT's logic behind not setting any threshold values for reactive resources during Phase 1 of this project. Ample time and effort should be given to developing the technical justification behind such values. However, we encourage the SDT to consider adding threshold values in Phase 2 of the project to provide even more clarity to this inclusion.
Balancing Authority Northern California	Yes	However, appropriate MVAr level should be established. Reactive resources should be treated similar to generation criteria and included in the technical studies associated with the Phase 2 technical analysis in order to establish the appropriate MVAr level included as BES.
WECC Staff	Yes	WECC believes I5 should be modified to identify a minimum Reactive Power threshold

Organization	Yes or No	Question 6 Comment
		for static or dynamic devices similar to the threshold identified for generating resources in I2. As worded, any size device dedicated to supplying or absorbing Reactive Power that is conected at 100 kV or higher, no matter how small, would be included in the BES.
Response: Using a threshold for inclusion of non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
Springfield Utility Board	Yes	SUB agrees in general, but does not agree that ALL reactive resources should be automatically included in the BES Definition. For example, is a local network (100 kV or above), which is otherwise excluded, but has a reactive device used for power factor correction (100 kV or above), still excluded? There are a significant number of reactive resources that are used to serve systems that provide service primarily to load, with either no or a minimal amount of generation. If this section is included, the Exclusion language needs to be modified to exclude those reactive resources from the BES that are radial serving only load or local networks that serve load (with less than 75MVa of generation). SUB does not agree with the language referring to only those “retail customer” reactive power devices for Exclusion E.4. This is too narrow and does not accurately reflect the use of reactive power devices installed by registered entities when retail customers do not “fix” their reactive power issues on their own. SUB recommends

Organization	Yes or No	Question 6 Comment
		that the language in I5 and E4 be consistent, and that "retail customer" should include Registered Entities as well as end users. This present language is overly broad and, absent modifications to the BES definition, will generate a significant amount of paperwork. SUB suggests the following language change:I5 -Static or dynamic devices dedicated to supplying or absorbing Reactive Power that:a)are connected at 100 kV or higher and are not part of a radial system or area network that are excluded from the BES, or;b)are connected through a dedicated transformer with a high-side voltage of 100 kV or higher and are not part of a radial system or area network that are excluded from the BES, or;c)are connected through a transformer that is designated in Inclusion I1 and are not part of a radial system or area network that are excluded from the BES .

Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5.

Organization	Yes or No	Question 6 Comment
The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made. The SDT team considered the disposition of the word "retail" in the context of Inclusion I5, and determined that retention of this word is important and correct. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter). No change made.		
FirstEnergy Corp.	Yes	While we do not object to I5, we question its need based on item I2 and believe I2 also covers this item
Response: The SDT added further clarifications to Inclusion I5 to address your concern. **I5** –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.		
Central Maine Power Company	Yes	There is no such thing as "supplying or absorbing Reactive Power" but the intended meaning is sufficiently clear since it is industry 'shorthand'. We suggest an alternative wording of: "Static or dynamic Reactive Power resources that are connected at 100 kV or higher, or..."
Rochester Gas and Electric and New York State Electric and Gas	Yes	There is no such thing as "supplying or absorbing Reactive Power" but the intended meaning is sufficiently clear since it is industry 'shorthand'. Suggest alternative wording:"Static or dynamic Reactive Power resources that are connected at 100 kV or

Organization	Yes or No	Question 6 Comment
		higher, or…"
Response: The SDT elected to also include the word 'dedicated' in front of the quotation listed to identify those Elements whose sole purpose is supplying or absorbing Reactive Power. Re-arranging the words as suggested would not capture the same effect. No change made.		
Portland General Electric Company	Yes	
Georgia System Operations Corporation	Yes	
Kansas City Power and Light Company	Yes	
Oncor Electric Delivery Company LLC	Yes	
Utility Services, Inc.	Yes	
Independent Electricity System Operator	Yes	The provisions of Inclusion I5 fully address the concerns we expressed in our previous comments.
PSEG Services Corp	Yes	
ISO New England Inc	Yes	
Manitoba Hydro	Yes	
Long Island Power Authority	Yes	

Organization	Yes or No	Question 6 Comment
Puget Sound Energy	Yes	
NV Energy	Yes	The SDT has appropriately captured the necessary inclusion of high voltage transmission reactive resources.
Z Global Engineering and Energy Solutions	Yes	
Central Hudson Gas and Electric Corporation	Yes	
City of Anaheim	Yes	
Chevron U.S.A. Inc.	Yes	
Idaho Falls Power	Yes	We have no comments.
ReliabilityFirst	Yes	
Exelon	Yes	
Texas Industrial Energy Consumers	Yes	
Hydro One Networks Inc.	Yes	
IRC Standards Review Committee	Yes	
Transmission Access Policy Study Group	Yes	

Organization	Yes or No	Question 6 Comment
Electricity Consumers Resource Council (ELCON)	Yes	
Bonneville Power Administration	Yes	
Texas RE NERC Standards Subcommittee	Yes	
SERC Planning Standards Subcommittee	Yes	
NERC Staff Technical Review	Yes	
BGE	Yes	No comment.
Response: Thank you for your support.		

7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: Exclusion E1 is an exclusion for the contiguous transmission Elements connected at or above 100 kV. Generation resources connected within the radial system are qualifiers for this exclusion.

The "single point of connection of 100 kV or higher" is where the radial system will begin if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation.

Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify for exclusion under Exclusion E3. The owner always has the option to seek exclusion through the exception process.

The SDT considered the disposition of the word "transmission" in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element".

The SDT has determined that it should be conservative with regard to allowing exclusion for radial systems that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent radial systems without blackstart resources.

Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion.

Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing

threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 development of the BES definition.

Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment.

No changes were made to Exclusion E1 due to received comments.

Organization	Yes or No	Question 7 Comment
NERC Staff Technical Review	No	While we appreciate the improvement in the text for Exclusion E1, but we continue to believe that E1 should require (i) the normally open switch must not be used to make a parallel connection if the normally switch is operated at 100 kV or higher and (ii) an automatic interrupting device that is part of the BES must be provided at the point of interconnection between the radial system and the BES.
American Electric Power	No	AEP supports the concept of the exclusion of radial systems, however further clarification is needed regarding whether or not the source equipment is included as part of the radial system (for example, ring bus or breaker and a half bus configurations). Regarding the following text: "Note - A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion." We interpret this as not including two radial lines which could be tied together through a normally open switch, are we correct? Additional clarity may be needed regarding this note.
Response: Radial systems should be assessed with the normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment. No change made.		

Organization	Yes or No	Question 7 Comment
The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial and the owner of the bus would need to insure the reliability of the substation. No change made.		
Northeast Power Coordinating Council	No	E1 can be simplified by not dividing in three subsets of a, b and c. The end result is that a Radial system is excluded if it does not have more than 75 MVA aggregate non-retail generation. There seems to be an error with reference to I3. Black start unit paths are not designated as BES and were taken out in this version under I3 so E1 and E3 should not reference I3. This contradicts the radial or LN exclusion from I3. Suggest deleting the reference to I3 in E1 and E3 because this reference is in contradiction to I3. I3 does not require a path to be BES, but it implied that a radial cannot be excluded if there is a black start unit on the radial. Further clarification is needed to the language in the Note referring to the "Normally Open switch". The E1 reference Note should be re-worded to state "Radial systems shall be assessed with all normally open switching devices in their open positions." Explanatory figures should be included to illustrate the system configurations addressed. Black start unit paths must be considered in the construction of E1. In E1c, what is meant by "non-retail"?
Response: The SDT believes that the distinction between Load only, generation only, and Load with generation provides a bright-line exclusion for radial systems that is needed to cover all of the possible scenarios. No change made. The SDT appreciates the suggestion that there could be an appearance of an inconsistency between Inclusion I3 and Exclusions E1 and E3. The SDT has determined that it should be conservative with regard to allowing exclusion for radial systems that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent radial systems without Blackstart Resources. No change made.		

Organization	Yes or No	Question 7 Comment
The SDT agrees that the radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment. Non-retail generation is the generation on the system (supply) side of the meter.		
Consumers Energy	No	In general we agree, but believe the word "transmission" should be removed from "A group of contiguous transmission Elements..."
Southwest Power Pool Standards Review Team	No	Why was the defined term for "T"ransmission dropped in this version of the definition? This should be kept in this version of the definition as well.
Response: The SDT team considered the disposition of the word "transmission" in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element". No change made.		
Bonneville Power Administration	No	BPA believes that a system left connected in a network configuration, via use of a normally open switch for temporary network connection, without the protections afforded through the standards that apply to BES should be limited to less than 24 hours. BPA believes that the term "non-retail generation" in E1(c) should be clearly defined. In addition, BPA believes that there needs to be a means to isolate the radial system from the BES during a fault on the radial system by means of a automatic fault interrupting device. Automatic fault interrupting device should be a defined term.
Response: The exclusion for radial systems does not provide requirements in the operating environment. Any attempt to hard code time duration into the exclusion language will create any number of one off situations when applied on a continent-wide basis. It is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment. No change made. Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-		

Organization	Yes or No	Question 7 Comment
retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made. The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. No change made.		
Dominion	No	Dominion does not agree that exclusion of a radial should be based upon the aggregate capacity of generation. A radial serving only generation should be excluded just as it is for load (as proposed by the SDT in 1a). No reliability gaps exist since the owner and/or operator of generation (with an individual with gross individual or gross aggregate nameplate rating per the ERO Statement of Compliance Registry Criteria) must comply with applicable reliability standards. Dominion requests that the SDT provide technical justification for E1a and E1b as it did for E3, and explain the intent of the footnote in E1.
Response: The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the NERC Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made. Exclusion E1.a is a retained exclusion form the existing definition and as such requires no technical justification at this time. As for Exclusion E1.b, the SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical		

Organization	Yes or No	Question 7 Comment
justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. The SDT believe that the radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment.		
Pepco Holdings Inc and Affiliates	No	1) Additional clarification is needed on whether certain bus sections supplying radial systems would be considered part of the BES. It is critical that the BES definition address this issue, since it will define what transmission Protection Systems fall in scope for PRC-004 and 005. One way to address this issue would be to add a qualifier to Exclusion E1 that states, "if a radial system is supplied from a bus section in a substation, then this bus section is considered part of the radial system and is not considered part of the BES if the tripping of this bus section does not result in an interruption to any BES facilities when the station is operating in its normal configuration." 2) Since the SDT deleted the inclusion of Black Start Cranking Paths in I3 then reference to I3 in criteria E1b and E1c should also be removed. Limits on connected generation should only be constrained by the 75MVA limit. In summary, delete the phrase "not identified in Inclusion I3" from both Exclusions E1b and E1c.
Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial and the owner of the bus would need to insure		

Organization	Yes or No	Question 7 Comment
the reliability of the substation. No change made. The SDT appreciates the suggestion that there could be an appearance of an inconsistency between Inclusion I3 and Exclusions E1 and E3. The SDT has determined that it should be conservative with regard to allowing exclusion for radial systems that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent radial systems without Blackstart Resources. No change made.		
Southern Company Generation	No	Subpart (b) uses the term "generation resources" while subpart (c) uses the term "non-retail generation", why are these different terms used? Further, why is it important that the term "non-retail generation" is used in subpart (c)? In addition, the SDT needs to clarify what the term "non-retail generation" means. Is this what is commonly referred to as "customer owned" or "behind-the-meter" generation? The change in version 2 that removed the requirement that an excluded radial system have an automatic interruption device at the single point of connection to the rest of the BES creates a problem. Three-terminal circuits are common below 230 kV. The "tapped portion" should not be left out of the BES since a fault on that portion takes out the whole line. We propose this revised language in the first sentence on E1: "E1 - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher, where the connection has an automatic interruption device,..." Exclusion E1, subpart (c) uses the phrase "an aggregate capacity of ... less than or equal to 75 MVA ...". Exclusion E3. subpart (a) provides that the local networks "do not have an aggregate capacity of ... greater than 75 MVA ...". Why are these phrases stated differently even though they appear to address the same resources?
Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion.		

Organization	Yes or No	Question 7 Comment
The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial and the owner of the bus would need to insure the reliability of the substation. No change made. The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
IRC Standards Review Committee	No	While we support the provisions of E1 in principle, we are seeking clarification to the following issues. Does the connection voltage of generation referred to in E1.b affect whether a radial system could be excluded under E1? Please clarify the meaning of "non-retail" generation used in E1.c.
Response: Exclusion E1 is an exclusion for the contiguous transmission Elements connected at or above 100 kV. Generation resources connected within the radial system are qualifiers for this exclusion. No change made. Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.		
Hydro One Networks Inc.	No	Although we agree with the exclusion of radial systems, we believe that the reliability of the interconnected transmission network should not be determined by the amount of installed generation on the radial system. We believe that the generation limit is restrictive and has little or no technical basis. It is not the size of a unit on the radial system that should determine the reliability impact on the BES but more importantly its location, configuration and system characteristics such as reliability must run unit.

Organization	Yes or No	Question 7 Comment
		We believe that there is no reason to divide E1 in three subsets of a, b and c. The end result is that a radial system is excluded if it does not have more than 75 MW of aggregate non-retail generation. However, consistent with E2 we suggest replacing "an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating)" with "a maximum net capacity of non-retail generation provided to the BES of 75 MVA." We suggest deleting the references to I3 in E1 and E3 because we believe that this reference is in contradiction to I3 and probably an oversight and should be corrected. I3 does not require path to be BES but it implies here that a radial system cannot be excluded if there is a Blackstart unit on it.
Response: The SDT believes that the distinction between Load only, generation only, and Load with generation provides a bright-line exclusion for radial systems that is needed to cover all of the possible scenarios. No change made. Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made. The SDT appreciates the suggestion that there could be an appearance of an inconsistency between Inclusion I3 and Exclusions E1 and E3. The SDT has determined that it should be conservative with regard to allowing exclusion for radial systems that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent radial systems without Blackstart Resources. No change made.		
Southern Company	No	Subpart (b) uses the term "generation resources" while subpart (c) uses the term "non-retail generation", why are these different terms used? Further, why is it important that the term "non-retail generation" is used in subpart (c)? In addition, the SDT needs to clarify what the term "non-retail generation" means. Is this what is commonly referred to as "customer owned" or "behind-the-meter" generation? The change in version 2 that removed the requirement that an excluded radial system

Organization	Yes or No	Question 7 Comment
		have an automatic interruption device at the single point of connection to the rest of the BES creates a problem. Three-terminal circuits are common below 230 kV. The "tapped portion" should not be left out of the BES since a fault on that portion takes out the whole line. We propose this revised language in the first sentence on E1: "E1 - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher, where the connection has an automatic interruption device,..."Exclusion E1, subpart (c) uses the phrase "an aggregate capacity of ... less than or equal to 75 MVA ...". Exclusion E3. subpart (a) provides that the local networks "do not have an aggregate capacity of ... greater than 75 MVA ...". Why are these phrases stated differently even though they appear to address the same resources?
Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made. The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. No change made. The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
ReliabilityFirst	No	The term radial must be specifically defined in this application. ReliabilityFirst Staff believes this to mean a true radial in the sense that an adverse impact by the radial

Organization	Yes or No	Question 7 Comment
		facilities does NOT affect or impact BES facilities. In the first sentence the word "Element" is capitalized but "transmission" is not, we believe both terms should be capitalized. The phrase "single point of connection" should have guidance so that everyone reading this definition reads the single point of interconnection the same. Some have read this phrase to be a single substation, while others have read this phrase to be one and only one line or supply (i.e. interconnection point), which is it? The "Note" we disagree with. In any and all cases if there is any operation or use of the BES, the facilities should be included. By the wording of this exclusion, one cannot determine if taps (sections of line from a BES transmission line to a single substation) are intended to be included in the BES or not. More specifically, where does the radial facility begin and the BES end? This determination was clearer in the previous version of the definition with the use of the language "...originating with an automatic interruption device...".
Response: The SDT team considered the disposition of the word "transmission" in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element". No change made. The "single point of connection of 100 kV or higher" is where the radial will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used		

Organization	Yes or No	Question 7 Comment
in the normal operating environment. No change made.		
Ontario Power Generation Inc.	No	Non-retail generation needs to be properly defined in the text of the exclusion.
Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion.		
City of St. George	No	Radial systems should be excluded as generally outlined in E1, however the generation levels (of 75 MVA) are too restrictive. The primary criteria should be, does power flow into the radial system? If there is always flow into the radial system, generation levels should not prevent exclusion from the BES.
City of Anaheim	No	The City of Anaheim recommends either changing the E1 (b) language back to that of the previous BES definition draft, i.e. 75 MVA or above connected at 100 kV or above, or limit the amount of generation allowed within a Radial Element or Local Network to 300 MVA or less, which is the amount of uncontrolled load loss that constitutes a reportable "disturbance" pursuant to EOP-004 and DOE Form OE-417. If DOE and NERC do not consider a 300 MW uncontrolled loss of load a reportable event, then why would the potential loss of a 75 MVA of non-critical generator connected at 69 kV make a Radial Element or Local Network critical to the reliability of the BES? The current ERO Statement of Compliance Criteria does not require GO/GOP registration for generation connected below 100 kV as long as it's not critical to the reliability of the BES, i.e. black start, etc., even if the amount of generation is greater than 75 MVA. There is good reason for this because the mere loss of 75 MVA generator would not affect the reliability of a system as big as the Western Interconnection, at all, and a fault at say 69 kV would have sufficient impedance not to affect the BES from an electrical perspective.
Response: Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate		

Organization	Yes or No	Question 7 Comment
amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the NERC Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
Xcel Energy	No	Xcel Energy believes that some more definition is required to clarify the intent of the note under Exclusion E1 related to normal open switching device. A direct statement would remove any ambiguity, such as "a normally open switch in a system that could be interconnected or experience loop flows will be considered (BES/non BES)".
Response: Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.		
Northern Wasco County PUD	No	Northern Wasco County PUD notes that a new term has been introduced, "non-retail generation," with no definition provided. The answer to the question on this during the 9/28 webinar indicated that non-retail generation was behind the retail customer's meter. We can see no reason why the net-metered PV systems should count toward the aggregate limit (exceeding the limit means no exclusion) while a non-blackstart thermal plant doesn't (the radial system is excluded if any amount of load is present). We have also heard the SDT meant just the opposite of what was stated in the webinar. We ask that a reasonable definition for non-retail be provided within the BES definition document. We strongly agree that radial systems should be excluded and that the presence of normally open switching devices between radial systems should not cause them to be considered non-radial. Such a result would cause the removal of these devices to the detriment of the local level of service. We note that the singular "A normally open switching device" is used and suggest that an allowance be made for the possibility of multiple devices. "Normally open switching devices..."

Organization	Yes or No	Question 7 Comment
LCRA Transmission Services Corporation	No	The current wording is unclear with respect to the treatment of normally open switching devices. LCRA TSC suggests the following language to replace the existing language on the note to E1: “Two radial systems connected by a normally open, manually operated switching device, as depicted on prints or one-line diagrams for example, may be considered as radial systems under this exclusion.” The current wording is unclear with respect to “non-retail generation”. The sudden loss of large, radial-supplied load may result in reliability deficiencies. LCRA TSC suggests stating a load level or a load capacity in the exclusion.
Tillamook PUD	No	Tillamook PUD notes that a new term has been introduced, “non-retail generation,” with no definition provided. The answer to the question on this during the 9/28 webinar indicated that non-retail generation was behind the retail customer’s meter. We can see no reason why the net-metered PV systems should count toward the aggregate limit (exceeding the limit means no exclusion) while a non-blackstart thermal plant doesn’t (the radial system is excluded if any amount of load is present). We have also heard the SDT meant just the opposite of what was stated in the webinar. We ask that a reasonable definition for non-retail be provided within the BES definition document.We strongly agree that radial systems should be excluded and that the presence of normally open switching devices between radial systems should not cause them to be considered non-radial. Such a result would cause the removal of these devices to the detriment of the local level of service. We note that the singular “A normally open switching device” is used and suggest that an allowance be made for the possibility of multiple devices. “Normally open switching devices...”
Mission Valley Power	No	Mission Valley Power notes that a new term has been introduced, “non-retail generation,” with no definition provided. The answer to the question on this during the 9/28 webinar indicated that non-retail generation was behind the retail customer’s meter. We can see no reason why the net-metered PV systems should count toward the aggregate limit (exceeding the limit means no exclusion) while a non-blackstart thermal plant doesn’t (the radial system is excluded if any amount of

Organization	Yes or No	Question 7 Comment
		load is present). We have also heard the SDT meant just the opposite of what was stated in the webinar. We ask that a reasonable definition for non-retail be provided within the BES definition document. We strongly agree that radial systems should be excluded and that the presence of normally open switching devices between radial systems should not cause them to be considered non-radial. Such a result would cause the removal of these devices to the detriment of the local level of service. We note that the singular "A normally open switching device" is used and suggest that an allowance be made for the possibility of multiple devices. "Normally open switching devices..."
Central Lincoln	No	Central Lincoln notes that a new term has been introduced, "non-retail generation," with no definition provided. The answer to the question on this during the 9/28 webinar indicated that non-retail generation was behind the retail customer's meter. We can see no reason why the net-metered PV systems should count toward the aggregate limit (exceeding the limit means no exclusion) while a non-blackstart thermal plant doesn't (the radial system is excluded if any amount of load is present). We have also heard the SDT meant just the opposite of what was stated in the webinar. We ask that a reasonable definition for non-retail be provided within the BES definition document. We strongly agree that radial systems should be excluded and that the presence of normally open switching devices between radial systems should not cause them to be considered non-radial. Such a result would cause the removal of these devices to the detriment of the local level of service. We note that the singular "A normally open switching device" is used and suggest that an allowance be made for the possibility of multiple devices. "Normally open switching devices..."
Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.		

Organization	Yes or No	Question 7 Comment
Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment. No change made.		
BGE	No	During the previous comment period, BGE asked for clarification regarding the exclusion of "radial facilities". The particular example configuration in question involved two 115 kV lines emanating from two different points of connection and "tied" on the "low side" at 34.5 kV. The SDT responded that this was not a radial facility but would be excluded under the E3-Local Network exclusion. BGE believes that this particular configuration should be excluded under the E1-Radial Systems exclusion. BGE does not beleive that two otherwise radial lines are made "non-radial" because they are tied at a voltage lower than 100 kV.
Orange and Rockland Utilities, Inc.	No	Please clarify on "single point of connection". It seems like less confusion if "single source" is used here instead of "single point of connection".
Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.		
ISO New England Inc	No	The term "single point" is not clear. A better explanation is necessary. For example, the same bus in a bus/branch model should suffice as a "single point". There should not be a requirement to be at the same node as found in a nodal model. The term "a group of contiguous transmission elements" is ambiguous and needs to

Organization	Yes or No	Question 7 Comment
		be clarified. The "Non-retail" qualifier in E1.c) should be deleted. It adds confusion to the exclusion and is not defined.
Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made. The SDT team considered the disposition of the word "transmission" in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element". No change made. Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.		
Kansas City Power and Light Company	No	Nameplate rating of the generator is not a reflection of what can be actually injected into the transmission system with resulting electrical impacts on transmission loading and behavior. Recommend the BES definition be based on a generating resource(s) established net accredited generating capacity instead of what it could do by nameplate rating that may not be achievable. Recommend the following change to the b) and c) parts of E1:b) Only includes generation resources not identified in Inclusion I3 with an aggregate net accredited capacity less than or equal to 75 MVA. Or, c) Where the radial system serves Load and includes generation resources not identified in Inclusion I3 with an aggregate net accredited capacity of non-retail

Organization	Yes or No	Question 7 Comment
		generation less than or equal to 75 MVA.
Hydro-Quebec TransEnergie	No	Even with the modification proposed, it is too much restrictive to refuse exclusion of radial system when they have generator or multiple generating units of aggregate capacity greater than 75 MVA, especially when a system is able to function reliably with the loss of generation much higher than this amount. To count on the exception procedure to exclude radial system with greater generation is risky since no specific criteria have been given to guide such exclusion. In most cases for radial or local system including generation, the path that connects the generation should not be included in the BES. Generators should be allowed to be considered "BES support elements" and reliability standards should apply to them in specific.
Response: Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
Independent Electricity System Operator	No	We support the provisions of E1 in principle but require clarification of some issues and suggest alternative wording in some cases. It is unclear if the connection voltage of generation referred to in E1.b affects whether a radial system could be excluded under E1 although from the context it appears that it would. For clarity we suggest appending “connected at 100 kV or higher.” Please provide in the BES definition document an explanation of “non-retail” and “retail” generation used in E1.c. Additionally, despite the fact the revisions to Inclusion I3 (Blackstart Resources) removed any reference to Cranking Paths, Exclusion 1 (b) and (c) both indicate that the exclusion of a radial system would not be allowed if generation identified in I3 were connected to it. This implies that the Cranking Path for this Blackstart Resource would have to be BES. This appears to be an inconsistency. We suggest removing the

Organization	Yes or No	Question 7 Comment
		phrase “not identified in Inclusion I3” in both instances. We disagree with notion that the capacity of generation connected to a radial system ought to determine whether that radial system should be classified as BES. Firstly, it is a given that the generation connected to the subject radial that meets the registry criteria would already be captured within the core BES definition and Inclusion I2. The function served by a radial that is of importance in the current context is that of delivering surplus power to the rest of the bulk power system and so, the impact on the BES of loss of the radial system or its connected generation needs to be considered. In our view, the “BES-status” of the radial itself is immaterial and so too is the aggregate capacity of generation resources connected to it. Detailed arguments regarding impact on the BES can be made in support of an application for an exclusion under the Exception Process, but it would be beneficial to avoid unnecessarily including a radial merely because it has more than 75 MVA of qualifying generation connected to it, without equal consideration of the connected load. To put a “bright line” on the consideration of impact referred to above, we suggest: In E1 (b): Replace "an aggregate capacity less than or equal to 75 MVA (gross nameplate rating)" with "a net capacity provided to the BES of less than or equal to 75 MVA." In E1 (c): Replace "an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating)" with "a net capacity of non-retail generation provided to the BES of 75 MVA."This wording would be consistent with E2 (i). Finally the word “affect” stated in the note accompanying E1 lends itself to mis-interpretation. We therefore suggest the following revision to achieve greater clarity:”This exclusion applies to radial systems connected by a normally open switch.”
Response: Exclusion E1 is an exclusion for the contiguous transmission Elements connected at or above 100 kV. Generation resources connected within the radial system are qualifiers for this exclusion. No change made. Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in ExclusionE1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to		

Organization	Yes or No	Question 7 Comment
be unfairly biased against obtaining this exclusion. No change made. The SDT appreciates the suggestion that there could be an appearance of an inconsistency between Inclusion I3 and Exclusions E1 and E3. The SDT has determined that it should be conservative with regard to allowing exclusion for radial systems that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent radial systems without Blackstart Resources. No change made. Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.		
Central Maine Power Company	No	E1 needs to be revised to make it less confusing. “Radial systems” leaves the impression that E1 is not simply a “radial line exclusion”, because of the plural and the word “systems.” Northeast industry expert colleagues are not clear what this sentence specifies: “A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher.” o Does E1 apply only to a single radial transmission line (and its associated “group of Elements”)? o Alternatively, does E1 apply to multiple radial lines “emanating from” the same substation regardless of the bus configuration - would a ring bus or a two-bus system that is connected with a tie breaker be considered as “a single point of connection”? o If the radial line is simply tapped off a BES line without any automatic interruption device, should not the radial line be included as part of the BES since a permanent fault on this radial line will take out the BES line it is tapping off of? If the radial line is defined as part of the BES, it could be subject to certain requirements such as vegetation management for overhead lines. o Should not the exclusion include some description of the

Organization	Yes or No	Question 7 Comment
		operational requirements to help resolve the ambiguity? As it is, the exclusion is scenarios-based. When a specific scenario is overlooked, the oversight becomes a source of ambiguity.This definition is not clear. Clarity is imperative.E1(c) should define or replace the term “non-retail”. Industry needs clarity on exactly what generation this clause applies to, in order to properly apply this definition. The Note referring to the “Normally Open switch” needs further clarification. As written, it seems to conflict with FERC order 743, paragraph 55:”While commenters would like to expand the scope of the term “radial” to exclude certain transmission facilities such as tap lines and secondary feeds via a normally open line, we are not persuaded that such categorical exemption is warranted.” E1 should be restated as follows: “Radial systems: A single transmission line or transformer not otherwise identified in the Inclusions above, with a single point of connection of 100 kV or higher and: a) Only serves Load. Or, b) Only includes generation resources, not identified in the Inclusions above. Or, c) Both serves Load and only includes generation resources not identified in the Inclusions above."
Rochester Gas and Electric and New York State Electric and Gas	No	E1 needs to be revised to make it less confusing. “Radial systems” leaves the impression that E1 is not simply a “radial line exclusion”, because of the plural and the word “systems.” Northeast industry expert colleagues are not clear at all what this sentence specifies: “A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher.” o Does E1 apply only to a single radial transmission line (and its associated “group of Elements”)? o Alternatively, does E1 apply to multiple radial lines “emanating from” the same substation regardless of the bus configuration - would a ring bus or a two-bus system that is connected with a tie breaker be considered as “a single point of connection”? This definition is not clear. Clarity is imperative. E1(c) should define or replace the term “non-retail”. Industry needs clarity on exactly what generation this applies to, in order to properly apply this definition. The Note referring to the “Normally Open switch” needs further clarification. As written, it seems to conflict with FERC order 743, paragraph 55:”While commenters

Organization	Yes or No	Question 7 Comment
		would like to expand the scope of the term "radial" to exclude certain transmission facilities such as tap lines and secondary feeds via a normally open line, we are not persuaded that such categorical exemption is warranted." E1 should be restated as follows:"Radial systems: A single transmission line or transformer not otherwise identified in the Inclusions above, with a single point of connection of 100 kV or higher and: a) Only serves Load. Or, b) Only includes generation resources, not identified in the Inclusions above. Or, c) Both serves Load and only includes generation resources, not identified in the Inclusions above.
Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made. Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made. The SDT does not believe that the suggested wording provides any additional clarity. No change made.		
South Houston Green Power, LLC	No	SHGP generally supports with the proposed revisions to Exclusion E1, but suggests several additional clarifying revisions should be made. First, the phrase "a single point

Organization	Yes or No	Question 7 Comment
		of connection" in the introductory sentence should be revised to read "a single point of connection (including multiple connections to the same ring bus or substation where the energy normally flows in the same direction)". This revision is intended to ensure that radial systems which involve multiple parallel lines and are designed to operate as a single radial system, but that nevertheless connect to the grid through more than line for reliability. Second, for this same reason, an additional (i.e., second) note should be added to the end of Exclusion E1 that reads as follows: "Note, a normally closed switching device that enables multiple lines emanating from the same grid ring bus or different grid buses to operate as a single radial system does not affect this exclusion." Third, the phrase "with an aggregate capacity of non-retail generation less than or equal to 75 MVA should be eliminated.
Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made. Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of		

Organization	Yes or No	Question 7 Comment
further review under Phase 2 of the BES definition. No change made.		
Tacoma Power	Yes	Tacoma Power generally supports the Exclusion E1 as currently written. However, the "note" at the end of E1 is confusing and can be interpreted inconsistently. We recommend moving the language from the "note" to part of the exclusion as its own section, as follows:(d) Normally-open switching devices between radial elements as depicted and properly identified on system one-line diagrams should not be used to deny this exclusion. Additionally, we believe it is not appropriate for E1 to state an MVA threshold in Section b) when determining such thresholds is the purpose for Phase 2. We urge the SDT to defer the determination of a MVA threshold in E1 to Phase 2.
Response: Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made. Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
City of Austin dba Austin Energy	Yes	For the E1 reference "Note," we would benefit from additional clarification identifying the treatment of a normally open switch and offer the following: "Radial systems shall be assessed with all normally open switching devices in their open positions." The wording in Exclusion 1-c should more clearly reflect what is intended by using the term "non-retail generation." Also, as with the technical justification for Inclusions I2 and I4, we recommend that the generation threshold, i.e. gross nameplate values, be deferred to Phase 2.

Organization	Yes or No	Question 7 Comment
Response: Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made. Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made. Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
Ameren	Yes	a)We suggest the wording "non-retail generation' should be clarified with an explanation of why it is used in this exclusion. b)This exclusion criterion has multiple stipulations to its applicability, and also has a final inclusive reference to I3. Please make the wording exact and not dependent on clausal statements.
Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made. The SDT believes that the distinction between Load only, generation only, and Load with generation provides a bright-line exclusion for radial systems that is needed to cover all of the possible scenarios. In addition, the SDT has determined that it should be conservative with regard to allowing exclusion for radial systems that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent radial systems		

Organization	Yes or No	Question 7 Comment
without blackstart resources. No change made.		
Utility Services, Inc.	Yes	Utility Services is very concerned that the "single point of connection" lacks clarity and applications need to be identified. Utility Services suggests that the SDT publish illustrative one-line diagrams to aid the industry in determining when the designations are best applied.
Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made. Publishing diagrams will be considered in Phase 2.		
PSEG Services Corp	Yes	1. If a 50 MVA generator that is included per I2 is connected to an excluded radial system, would the generator be excluded or included per E1b)? If yes, then the language "unless excluded under Exclusion E1 and E3" in I1 needs to be added to I2, I4, and I5. 2. Non-retail generation in E1c) was described behind-the-meter generation in the Webinar. The term "non-retail generation" should be defined because one could infer that generation defined by E2 is "retail generation." Also, is the 75 MVA limit intended apply to the generator (as stated) or its net capacity as defined in E2? If it means the generator MVA, does that mean that generation excluded in E2 cannot exceed 75 MVA when connected to an excluded radial system?3. In general, the definition needs to better define the impact that "exclusion" has on a different "inclusion" or "exclusion."

Organization	Yes or No	Question 7 Comment
Response: Exclusion E1 is an exclusion for the contiguous transmission Elements connected at or above 100 kV. Generation resources connected within the radial system are qualifiers for this exclusion. No change made. Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made. Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
Massachusetts Department of Public Utilities	Yes	The aggregate 75 MVA of connected generation appears too low and would benefit from additional technical justification.
Response: Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
The Dow Chemical Company	Yes	Dow generally agrees with the proposed revisions to Exclusion E1, but believes that several additional clarifying revisions should be made. First, the phrase "a single point of connection" in the introductory sentence should be revised to read "a single point of connection (including multiple connections to the same ring bus or different buses where the energy normally flows in the same direction)". This revision is intended to ensure that radial systems include arrangements involving multiple parallel lines that are designed to operate as a single radial system, but that nevertheless connect at the grid ring bus or different buses on the grid for reliability.

Organization	Yes or No	Question 7 Comment
		Second, for this same reason, an additional (i.e., second) note should be added to the end of Exclusion E1 that reads as follows: "Note, a normally closed switching device that enables multiple lines emanating from the same grid ring bus or different grid buses to operate as a single radial system does not affect this exclusion." Third, in "c)," the phrase "with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating)" is confusing and potentially inconsistent to the extent that "non-retail generation" may be different from "gross nameplate rating." The apparent intent of the clause is to exclude radial systems that serve both load and generation, provided the generation capacity made available to the transmission grid does not exceed 75 MVA. Dow would recommend that the phrase be revised to read "where the net capacity provided to the transmission grid does not exceed 75 MVA." This revision would provide greater clarity and is consistent with the language used in Exclusion E2.

Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.

Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.

Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail

Organization	Yes or No	Question 7 Comment
generation to be unfairly biased against obtaining this exclusion. No change made.		
ExxonMobil Research and Engineering	Yes	The removal of the requirement for an automatic fault interrupting device from this requirement is a welcomed change from the first posting. This Exclusion helps preserve the current NERC Registry and explicitly excludes many facilities used in the distribution of electric power.
Long Island Power Authority	Yes	Need to clarify what is a "single point of interconnection" e.g. is it a bus section or a substation
Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.		
Manitoba Hydro	Yes	Manitoba Hydro agrees with E1 but the wording of the note regarding 'normally open switching devices' is unclear. In the Industry Webinar on September 28th, the Drafting Team made it clear that the note means that if an element can be connected to the BES from multiple points but under normal operating conditions it is only connected to the BES at a single point by means of normally open switches, then the element is still excluded from the BES provided it meets either the E1 a, b, or c criteria. The team also noted that the discretion to operate the normally open switching devices in the best interests of reliability rests with the operating entity. Suggested wording:"Note: The ability to connect a group of contiguous transmission Elements from multiple connection points of 100kV or higher through normally open switching devices does not negate this Exclusion. "

Organization	Yes or No	Question 7 Comment
		As well, part c) of E1 should be changed to "c) Only serves Load and includes..."
Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.		
ATC LLC	Yes	Unless there is a specific reason to the contrary, ATC suggests that Exclusion E1b include the qualification of "aggregate capacity of non-retail generation less than or equal to 75 MVA" to be consistent with the wording in E1c.
Puget Sound Energy	Yes	The language addressing generation resources in sections b and c of E1 could be more clear (an example of clearer language is section a of E3). At the least, the language in these two sections should be revised to read "... includes generation resources that are not identified in Inclusion I3 and that do not have an aggregate capacity exceeding 75 MVA ...".
Response: Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		

Organization	Yes or No	Question 7 Comment
NV Energy	Yes	There may be an opportunity to consolidate the sub-items of E1 into a single inclusion statement in order to simplify this exclusion designation. We propose the following replacement option: "E1 - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher and serves any combination of load and/or generation, provided that the generation resources are not identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating)."
Response: The SDT believes that the distinction between Load only, generation only, and Load with generation provides a bright-line exclusion for radial systems that is needed to cover all of the possible scenarios. No change made.		
Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperatve (CEC) Clearwater Power Company (CPC) Snohomish County PUD Consumer's Power Inc. Douglas Electric Cooperative (DEC) Fall River Rural Electric Cooperative (FALL) Lane Electric Cooperative	Yes	CLPD continues to support the radial system exclusion, which is necessary as a legal matter, because, for example, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term "transmission Elements" in the initial paragraph should be changed to "Elements." Radial systems are not transmission systems and including the word "transmission" in the Radial System exclusion is therefore unnecessary and confusing. (2) Subparagraph (b) of Exclusion 1 refers to"generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). We urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation

Organization	Yes or No	Question 7 Comment
(LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC) Kootenai Electric Cooperative		Resources," discussed in more detail in our response to Question 3. This language, or some equivalent, will preserve the SDT's ability to revise the 75 MVA threshhold in Phase 2, with the result of Phase 2 included in the BES Definition by operation rather than requiring further revision of the Definition. (3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshhold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC's Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted. (4) The "Note" as drafted by the SDT indicates that "a normally open switching device between radial systems" will not serve to disqualify the Radial from exclusion under Exclusion 1. As noted above, CLPD strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d), rather than a note, because treatment as a "note" suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: (d) Normally-open switching devices between radial elements as depicted and properly identified on system one-line diagrams does not affect this exclusion.This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.
Response: 1) The SDT team considered the disposition of the word "transmission" in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element". No change made. 2) Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent		

Organization	Yes or No	Question 7 Comment
with the existing threshold in the NERC Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made. 3) See response to Q9. 4) Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.		
Michigan Public Power Agency	Yes	MPPA and its members continue to support the radial system exclusion, which is necessary as a legal matter, because, for example, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. But we believe that further clarification is necessary. First, the deletion of "originating with an automatic interruption device" is a step in the right direction. However, "emanates from a single point of connection" could be too narrowly interpreted (i.e., multiple buses within a single substation could be viewed as multiple points of connection). MPPA and its members proposes the following modification: "emanates from a single substation connected to the BES at 100 kV or higher ...". Entities whose only connection emanates from a single substation and otherwise meet the BES definition should not be denied exclusion under E1 solely because they connect to multiple buses within a single substation. Additionally, adoption of "E3- Local Networks" renders specious any argument that clams that connecting to multiple buses within a single suvstation makes a material difference for reliability purposes since local networks would have multiple connections anyway. Additionally, it is not clear why it is necessary to include the note at the end of the revised definition. ("A normally open switching device between radial systems, as

Organization	Yes or No	Question 7 Comment
		depicted on prints or one-line diagrams for example, does not affect this exclusion.") This rasies questions as to what "normally open" means, and wheither the only evidence demonstrating what "normally open" means will be prints or one-line diagrams. Further, it is not entirely clear what is meant by the language "does not affect this exclusion". If the note remains, it should be modified to read something like, "a normally open switching device between radial systems does not prevent application of this exclusion." Finally, the generation threshold limit in E1(b) and E1(c) should be revised as discussed in response to Q1. Specifically, the proposed threshold of 75 MVA for this exclusion should be raised to not lessd than 300 MVA in both E1(b) and E1 (c).

Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.

Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.

Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.

Organization	Yes or No	Question 7 Comment
NESCOE	Yes	NESCOE suggests that the aggregate 75 MVA of connected generation is too low and would benefit from additional technical justification. The threshold value should be related to the largest contingency to which the applicable control area is designed to operate. A level of 300 MVA would be appropriate. This 300 MVA limit represents 25% of the 1200 MVA loss of source that is typically assumed for operation of the Northeast portion of the Eastern Interconnection. Depending on system conditions, this number may be as high as 1500 MVA. Therefore, the suggested value of 300 MVA has a technical basis and falls well within typical loss of source expectations for the Northeast.
Response: The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
Z Global Engineering and Energy Solutions	Yes	As stated in comment one. I recommend the Note is rewritten: "Note - A normally open switching device between radial systems, as depicted on prints or oneline diagrams, for example, does not classify the two or more radial lines as a loop line. The exclusion will still apply."
Harney Electric Cooperative, Inc.	Yes	HEC strongly agrees that radial systems should be excluded from the BES and that the presence of a normally open switching device between radial systems should not cause them to be considered non-radial
PacifiCorp	Yes	: The note in E1 as written is ambiguous and requires clarification. PacifiCorp assumes the note means that two radial systems separated by a normally open switching device allows for the exclusion of both radial systems. PacifiCorp recommends that the SDT revise the note to serve as a paragraph clarifying E1 that, “Radial systems separated by normally open switching device(s) as depicted on prints or one-line diagrams for example, and operated in the normally open position, except during

Organization	Yes or No	Question 7 Comment
		abnormal operating conditions, qualifies both radial systems under this exclusion."
Response: Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.		
Texas Industrial Energy Consumers	Yes	As noted in response to Question 3, above, Exclusion E1 would only allow exclude radial systems with "aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating)." The reference to "non-retail" generation in subsection (c) indicates that the SDT may have intended to preserve the "netting" approach set forth in the Statement of Registry Compliance, but this should be made clearer. The description in subsection (c) should be revised to exclude "Where the radial system serves Load and includes generation resources not identified in Inclusions I2 or I3," and the remainder of that sentence referencing a 75 MVA gross nameplate rating should be removed. This will provide a reference back to the Statement of Registry Compliance and clarify that only net capacity is considered for customer-owned facilities.
Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
Holland Board of Public Works	Yes	Holland BPW supports the exclusion of radial systems from the BES definition, but believes that further clarification is necessary. First, the deletion of "originating with an automatic interruption device" is a step in the right direction. However,

Organization	Yes or No	Question 7 Comment
		"emanates from a single point of connection" could be too narrowly interpreted (i.e., multiple buses within a single substation could be viewed as multiple points of connection). Holland BPW proposes the following modification: "emanates from a single substation connected to the BES at 100 kV or higher..." Entities whose only connection emanates from a single substation and otherwise meet the BES definition should not be denied exclusion under E1 solely because they connect to multiple buses at that single substation. Additionally, adoption of "E3 - Local Networks" renders specious any argument that claims that connecting to multiple buses within a single substation makes a material difference for reliability purposes since local networks would have multiple connections anyway. Additionally, it is not clear why it is necessary to include the note at the end of the revised definition. ("A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.") This raises questions as to what "normally open" means, and whether the only evidence demonstrating what "normally open" means will be prints or one-line diagrams. Further, it is not entirely clear what is meant by the language "does not affect this exclusion". If the note remains, it should be modified to read something like, "a normally open switching device between radial systems does not prevent application of this exclusion." Finally, the generation threshold limit in E1(b) and E1(c) should be revised as discussed in response to Q1. Specifically, the proposed threshold of 75 MVA for this exclusion should be raised to not less than 300 MVA in both E1(b) and E1(c).
Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner		

Organization	Yes or No	Question 7 Comment
always has the option to seek exclusion through the exception process. No change made. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made. The threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative	Yes	Remove “non-retail” because it is irrelevant to reliability. In general, we agree with the remaining concepts. However transformer voltage threshold should be 200 kV or higher, the power thresholds should be 150 MVA or greater.
Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made. The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the NERC Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
Electricity Consumers	Yes	ELCON supports the changes made from the first posting for both E1 and E3 (which complements E1), as this will help maintain the status quo referred to in the

Organization	Yes or No	Question 7 Comment
Resource Council (ELCON)		introductory text. We seek one clarification: Some large industrial customers that operate in remote, rural locations provide distribution services to third parties (usually on a pro bono basis) where the local utility (LSE) is unable or unwilling to serve. These transactions, which are akin to "border-line sales" in utility parlance, are typically de minimis relative to the Load of the entity that delivers the power. While the distribution is at low voltages (less than 100 kV), the power may have been received by the entity at a higher voltage. We seek affirmation by the SDT that such situations are not precluded by Exclusion E1.
Response: This is a bright-line definition for the BES and Exclusion E1 can be used to exclude radial systems for the contiguous transmission Elements connected at or above 100 kV and lower voltage systems are already excluded from the BES. The definition does not draw a distinction between ownership or connection arrangements. Without an exact configuration it is impossible for the SDT to comment further but if this situation somehow slips through the cracks, there is always the option to seek an exception. No change made.		
ACES Power Marketing Standards Collaborators	Yes	The term "non-retail generation" used in Exclusion E1 (item c) and again in E3 (item a) should be clarified (see comments for question 8 below). The Note after item c should also be clarified to indicate that closing a normally open switch doesn't affect this exclusion.
Response: Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made. Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.		
Sacramento Municipal Utility	Yes	For the E1 reference "Note," we would benefit from additional clarification identifying

Organization	Yes or No	Question 7 Comment
District		the treatment of a normally open switch and offer the following: "Radial systems shall be assessed with all normally open switching devices in their open positions." The wording in Exclusion 1-c should more clearly reflect what is intended by using the term "non-retail generation." Also, as with the technical justification for Inclusions I2 and I4, it is recommended that the generation threshold, i.e. gross nameplate values, be deferred to Phase 2.
Balancing Authority Northern California	Yes	For the E1 reference "Note," we would benefit from additional clarification identifying the treatment of a normally open switch and offer the following: "Radial systems shall be assessed with all normally open switching devices in their open positions." The wording in Exclusion 1-c should more clearly reflect what is intended by using the term "non-retail generation." Also, as with the technical justification for Inclusions I2 and I4, it is recommended that the generation threshold, i.e. gross nameplate values, be deferred to Phase 2.

Response: Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.

Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.

The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.

Organization	Yes or No	Question 7 Comment
Florida Municipal Power Agency Transmission Access Policy Study Group	Yes	FMPA supports the exclusion of radial systems from the BES Definition. Such systems are generally not "necessary for operating an interconnected electric transmission network," the standard in Orders 743 and 743-A. We have several suggestions to clarify the proposed language for this Exclusion. Proposed Exclusion E1 refers to "[a] group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher." We appreciate the SDT's clarification of the point of connection requirement, but the term "a single point of connection" should be further defined (more clearly than just by voltage), and should be generic enough to encompass the various bus configurations. It is not the case, for example, that each individual breaker position in a ring bus is a separate point of connection for this purpose; in that situation, a bus at one voltage level at one substation should be considered "a single point of connection." Some examples of configurations that should be considered a single point of connection for this purpose are at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf, Examples 1-6. Although the core definition (appropriately) refers to "Transmission Elements" (with a capital "T"), proposed Exclusion E1 refers to "transmission Elements" (with a lowercase "t"). To avoid confusion, either "Transmission" should be capitalized in both locations, or the word "transmission" should simply be deleted from Exclusion E1, leaving a "group of contiguous Elements." We understand that the lack of capitalization may have been a deliberate choice by the SDT in an attempt to avoid confusion that SDT members believe exists in the Glossary definition. If the Glossary definition of Transmission is unclear-which FMPA does not necessarily believe is the case-the answer is not to simply abandon the Glossary definition in favor of an entirely undefined term; it is to submit a SAR to improve the Glossary definition. Exclusion E1(c) refers to "an aggregate capacity of non-retail generation less than or equal to 75 MVA." "Non-retail generation" is potentially ambiguous, because it could be read as distinguishing between generation that will be sold at wholesale and generation that is used by the retail provider to meet retail load. On the

Organization	Yes or No	Question 7 Comment
		understanding that the intent is in fact to describe generation behind the end-user meter, sometimes referred to as "behind-the-second-meter generation," we suggest the following revision: "an aggregate generation capacity less than or equal to 75 MVA, not including generation on the retail customer's side of the retail meter." Exclusion E1 concludes with a "Note": "A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion." The Note should not specify the types of evidence required to prove a normally open switch, and the phrase "as depicted on prints or one-line diagrams" should be deleted. This phrase is equivalent to a "Measure" in a standard and should not be embedded in the equivalent of a "Requirement." Since the phrase only gives an "example," it does not in fact add anything to the Note, but may lead to confusion over what sort of evidence is required.

Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100kV or higher. Networks that have multiple connections at 100kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.

The SDT team considered the disposition of the word "transmission" in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element". No change made.

Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.

Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent

Organization	Yes or No	Question 7 Comment
the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment. No change made.		
MRO NERC Standards Review Forum (NSRF)	Yes	Unless there is a specific reason to the contrary the NSRF suggests that E1b include the qualification of "aggregate capacity of non-retail generation less thatn or equal to 75 MVA" be added to be consistent with the wording in E1c.
MEAG Power	Yes	We suggest the wording "non-retail generation' should be clarified with an explanation of why it is used in this exclusion.
SERC OC Standards Review Group	Yes	We suggest the wording "non-retail generation' should be clarified with an explanation of why it is used in this exclusion.
Consolidated Edison Co. of NY, Inc.	Yes	Please define the term "non-retail generation."
Tennessee Valley Authority	Yes	TVA suggests the wording "non-retail generation' should be clarified with an explanation of why it is used in this exclusion.
SERC Planning Standards Subcommittee	Yes	The SDT needs to clarify what is meant by "non-retail generation." Is this what is commonly referred to as "customer owned" or "behind-the-meter" generation?
Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.		
WECC Staff	Yes	The use of the word "affect" in the note may cause problems with interpretation by users. WECC suggests replacing the term "affect" with "alter".
Response: The SDT considered your comments and chose to leave the existing wording unchanged as it does not provide any		

Organization	Yes or No	Question 7 Comment
additional clarity. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment. No change made.		
Westar Energy	Yes	
Redding Electric Utility	Yes	
City of Redding	Yes	
Portland General Electric Company	Yes	
Farmington Electric Utility System	Yes	
Georgia System Operations Corporation	Yes	
Oncor Electric Delivery Company LLC	Yes	
National Grid	Yes	
Cowlitz County PUD	Yes	
Memphis Light, Gas and Water Division	Yes	

Organization	Yes or No	Question 7 Comment
Springfield Utility Board	Yes	SUB supports a radial system exclusion.
Oregon Public Utility Commission Staff	Yes	
Metropolitan Water District of Southern California	Yes	
Duke Energy	Yes	
Chevron U.S.A. Inc.	Yes	This is very important exclusion for an entity operating in remote areas of the country that provides distribution service to third parties where utilities are unable or unwilling to serve. While the distribution is at a low voltage, the power was initially received by the operating entity at a high voltage.
Central Hudson Gas and Electric Corporation	Yes	
Idaho Falls Power	Yes	We support the exclusion as drafted.
FirstEnergy Corp.	Yes	
Exelon	Yes	
Tri-State GandT	Yes	
Western Area Power Administration	Yes	
Tri-State Generation and Transmission Assn., Inc.	Yes	

Organization	Yes or No	Question 7 Comment
Energy Management		
Texas RE NERC Standards Subcommittee	Yes	This is a much needed change from the first posting, as this will maintain the status quo referred to in the introduction text.
Response: Thank you for your support.		

8. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2 (behind-the-meter generation)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: The majority of commenters are in agreement with Exclusion E2 but there were some requests for additional clarification and the SDT responded by clarifying the language as shown below.

There were also questions raised about threshold levels in the exclusion. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

Some commenters have questioned the reasoning behind Exclusion E2 (ii). Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR §292.101 and §292.305(b) for the requirements specific to the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. This is not new ground and is simply clarifying language that has been present in the ERO Statement of Compliance Registry Criteria for quite some time. The SDT believes that the meaning of the definition will be understood in Balancing Authority Areas where it is applicable as it reflects existing practice. Therefore, the SDT has declined to delete condition (ii).

E2 - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail ~~customer~~ Load with electric energy ~~on the customer's side of the retail meter~~ if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.

Organization	Yes or No	Question 8 Comment
MEAG Power	No	Clarification needs to be provided for what is meant by E2 (ii), regarding generation on the customer's side of the retail meter; otherwise we have trouble developing a position on this question.
SERC OC Standards Review Group	No	Clarification needs to be provided for what is meant by E2 (ii), regarding generation on the customer's side of the retail meter; otherwise we have trouble developing a position on this question.
Tennessee Valley Authority	No	Clarification needs to be provided for what is meant by E2 (ii), regarding generation on the customer's side of the retail meter; otherwise we have trouble developing a position on this question.
ReliabilityFirst	No	It is not clear why "ii" is needed. If the net generation exceeds 75 MVA, then it is included in the BES whether or not there are ancillary services provided for that generation. Would customer owned generation less than a net of 75 MVA but greater than 20 MVA be included in the BES if item ii was not met?
FirstEnergy Corp.	No	We suggest striking item "ii"
Dominion	No	Dominion supports exclusion for behind-the-meter generation, (if connected at >100 kV) if the load behind the meter (to which that generation is intended to support) does not rely on generation outside that metered point for purposes of back-up energy or any type of ancillary services at any time. The proposed language appears to suggest that standby, back-up, and maintenance power services are always required. There are alternative means to provide these services, such as reducing load to match 'reliability services' provided by the available behind-the-meter generation. Further, even if standby, back-up, and maintenance power services are always required, the exclusion criteria obligation should be placed on the retail load, not the generation outside the metered point
Response: Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying cogeneration and		

Organization	Yes or No	Question 8 Comment
small power production facilities. For example, see 18 CFR §292.101 and §292.305(b) for the requirements specific to the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. This is not new ground and is simply clarifying language that has been present in the ERO Statement of Compliance Registry Criteria for quite some time. The SDT believes that the meaning of the definition will be understood in Balancing Authority Areas where it is applicable. No change made.		
Northeast Power Coordinating Council	No	Why are references to Balancing Authority, Generator Owner, and Generator Operator included in E2 which is part of the BES definition? The wording of Exclusion E2 should be consistent with the Statement of Compliance Registry Criteria in Section III.c.4.
Response: The roles of the Balancing Authority, Generator Owner, and Generator Operator are implied in the ERO Statement of Compliance Registry Criteria and the terms were added as the result of industry requests for clarification. No change made.		
Southern Company	No	We suggest that clarification is needed for what is meant by E2 (ii), regarding generation on the customer's side of the retail meter. Also, we would like for a clarification of the difference between the terms "retail load" and "retail customer load" as used in exclusions E2 and E3.
Response: Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR §292.101 and §292.305(b) for the requirements specific to the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. This is not new ground and is simply clarifying language that has been present in the ERO Statement of Compliance Registry Criteria for quite some time. The SDT believes that the meaning of the definition will be understood in Balancing Authority Areas where it is applicable. No change made. The SDT accepts your recommendation regarding "retail Load" and has clarified Exclusion E2 to read: **E2** - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail ~~customer~~ Load with electric energy ~~on the customer's side of the retail meter~~ if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator		

Organization	Yes or No	Question 8 Comment
Owner or Generator Operator, or under terms approved by the applicable regulatory authority.		
Southwest Power Pool Standards Review Team	No	This number could change in phase two of the project which would create unnecessary work in the future.
Farmington Electric Utility System	No	E2 should be modified to include a size and threshold for individual generating units, similar to that identified in I2. As currently worded E2 places the same threshold (75 MVA) on a single generating unit as is placed on multiple generating units.
Westar Energy	No	As expressed in our comment to question 5, we have concerns that the 75 MVA number could change in phase two of the project, creating unnecessary work in the future.
American Electric Power	No	It appears an entity with less than 75 MVA would not have been included as part of the earlier inclusions. Is it necessary to note this threshold once again in the exclusion section? Might it be possible to add some of the "behind the meter load" to the inclusion section to reduce the amount of both the inclusions and exclusions? Doing so would likely provide more clarity to the standard.
City of Anaheim	No	Again, 75 MVA should be increased to 300 MVA in E2 for the reasons stated in response to Question 7.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values		

Organization	Yes or No	Question 8 Comment
and provide compelling justification for modifications to the existing values. No change made.		
City of St. George	No	Same basic comments and concerns as question #7.
Response: See response to Q7.		
ISO New England Inc	No	Exclusion E2 is confusing as written and seems counter intuitive. As an example, a 400 MW generator which is behind the meter with a 400 MW load could be excluded. This generator could have a significant impact on the performance of the system and yet it is excluded. As a simple example, loss of the 400 MW generator would require that the 400 MW load be supplied from the system, possibly leading to low voltages and thermal overloads. Additionally, a machine of this size could adversely impact the dynamic response of the system, leading to damping concerns or unit instability. If E2 is to be retained, it is not clear under what load conditions should the load at the facility be measured. Load levels, and resulting net flows to the system, can be significantly different between seasons, time of day, and the status of end user equipment at large industrial/manufacturing sites. The term "Retail Customer Load" needs to be defined. The Balancing Authority should not be included as an entity providing this service. In general the Statement of Compliance Registry has provided the preferred language to use here (Page 9, [Exclusions: second paragraph).
Response: The SDT believes that Exclusion E2 should be dedicated to the situation faced by behind-the-meter (i.e., retail customer owned) generation that are PURPA qualifying facilities (in the US) (e.g., see 18 CFR Part 292 for the regulations that are applicable in the US), and similarly situated generators in Canada. Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying facilities. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. No change made. The roles of the Balancing Authority, Generator Owner, and Generator Operator are implied in the ERO Statement of Compliance Registry Criteria and the terms were added to Exclusion E2 as the result of industry requests for clarification.		

Organization	Yes or No	Question 8 Comment
The SDT has clarified Exclusion E2 to read: **E2** - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail ~~customer~~ Load with electric energy ~~on the customer's side of the retail meter~~ if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.		
Central Maine Power Company	No	E2 should be consistent with the Statement of Compliance Registry Criteria. References to Balancing Authority, Generator Owner, and Generator Operator should not be included in the BES definition. "Net capacity" is unclear - must flow never exceed 75 MVA on an instantaneous or integrated hourly energy basis per either design or operating experience? There is a potential for hundreds of MW to be interconnected at a customer facility, with the "net capacity" (= flow into the transmission system? Instantaneous? Annual average? On an integrated hourly basis at any hour?) being less than 75 MVA - are hundreds of MW of generation "not material" to BES reliability? The conditions under which direction of flow (i.e., "net capacity") is assessed are critical, but E2(i) is silent on this.In E2(ii), the "and", "or", and "or" are not clear - what are the necessary terms of the referenced "binding obligation" and what is an "applicable regulatory authority"? Are "standby" and "back-up" and "maintenance" power services independently defined and provided by a GOP, GO, or BA? Northeast industry expert colleagues do not understand the relevance of E2(ii) to BES reliability.E2 should be restated as follows:"A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the meter if the flow to or from the BES can never exceeds 75 MVA."
Rochester Gas and Electric and New York State Electric and Gas	No	E2 should be consistent with the Statement of Compliance Registry Criteria. References to Balancing Authority, Generator Owner, and Generator Operator should not be included in the BES definition.

Organization	Yes or No	Question 8 Comment
		"Net capacity" is unclear - must flow never exceed 75 MVA on an instantaneous or integrated hourly energy basis per either design or operating experience? There is a potential for hundreds of MW to be interconnected at a customer facility, with the "net capacity" (= flow into the transmission system? Instantaneous? Annual average? On an integrated hourly basis at any hour?) being less than 75 MVA - are hundreds of MW of generation "not material" to BES reliability? The conditions under which direction of flow (i.e., "net capacity") is assessed are critical, but E2(i) is silent on this. In E2(ii), the "and", "or", and "or" are not clear - what are the necessary terms of the referenced "binding obligation" and what is an "applicable regulatory authority"? Are "standby" and "back-up" and "maintenance" power services independently defined and provided by a GOP, GO, or BA? Northeast industry expert colleagues do not understand the relevance of E2(ii) to BES reliability.E2 should be restated as follows:"A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the meter if the flow to or from the BES never exceeds 75 MVA"

Response: The wording of (ii) is essentially the same as the wording on this topic in the ERO Statement of Registry Criteria which has been in existence for several years and is well understood in the industry. Qualifying for Exclusion E2 will be determined the same as every other inclusion or exclusion; there is nothing special about Exclusion E2 that separates it from the rest of the definition. The roles of the Balancing Authority, Generator Owner, and Generator Operator are implied in the ERO Statement of Compliance Registry Criteria and the terms were added to Exclusion E2 as the result of industry requests for clarification.

The SDT believes that Exclusion E2 should be dedicated to the situation faced by behind-the-meter (i.e., retail customer owned) generation that are PURPA qualifying facilities (in the US) (e.g., see 18 CFR Part 292 for the regulations that are applicable in the US), and similarly situated generators in Canada. Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying facilities. The primary purpose of retail customer owned generation in the context of Exclusion E2 is the integrity of steam production that supports a manufacturing process. The electrical load of that process does not exist without steam.

The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves (i.e., standby, backup and maintenance power), is essential for the integrity of the exclusion. These reserves maintain steam generation

Organization	Yes or No	Question 8 Comment
and the load to sustain the manufacturing process. In the US, the terms and conditions of standby, backup and maintenance services are defined and administered by State PSCs (i.e., the "applicable regulatory authority" in the US) subject to FERC oversight. These services are provided under contract or tariff with GOs, GOPs or BAs in regions that do not have ISOs or RTOs, and provided by ISOs and RTOs where so-called "organized markets" operate. The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated, and the residual ("net") amount exported to the BES that was deemed relevant to the exclusion and reliability, not the nameplate rating. The export is subject to the 75 MVA threshold; the requirement for reserves under a "binding obligation" (standby, backup and maintenance power) matches part or all of the on-site load and is not subject to the threshold. No change made.		
LCRA Transmission Services Corporation	No	
Response: Without any specific comment, the SDT is unable to respond.		
Kansas City Power and Light Company	No	Any facilities that are customer owned regardless of size or configuration are not under the jurisdiction or responsibility of the Registered Entity and should not be considered as included with a Registered Entity.
Response: Exclusion E2 was based on the ERO Statement of Compliance Registry Criteria. No change made.		
Ameren	No	a)If retail generation fails to meet (i) or (ii) it appears that the retail generation would be included. The wording of (ii) is complex. Who will police this with retail behind-the-meter generators? b)Clarification needs to be provided for what is meant by E2 (ii), regarding generation on the customer's side of the retail meter; otherwise we have trouble developing a position on this question.
Response: The wording of (ii) is essentially the same as the wording on this topic in the ERO Statement of Registry Criteria which has been in existence for several years and is well understood in the industry. Qualifying for the E2 Exclusion will be determined the same		

Organization	Yes or No	Question 8 Comment
as every other inclusion or exclusion; there is nothing special about Exclusion E2 that separates it from the rest of the definition. Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying facilities. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. No change made.		
Nebraska Public Power District	Yes	However the exclusion needs to be noted in I2, so as to non conflict with I2. (See comment on #2 above.)
Response: Any retail generation that meets the criteria in Exclusion E2 is not in the BES so there is no conflict. No change made.		
National Grid	Yes	We agree with this exclusion, but the intention of point (i), the net capacity provided to the BES does not exceed 75 MVA, is not clear. We suggest this wording:"the net capacity provided to the BES for 90% of the hours of the year does not exceed 75 MVA".
Response: The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. The threshold level for generators will be considered in the Phase 2 review. No change made.		
Utility Services, Inc.	Yes	Utility Services supports the comments offered by others suggesting that the language be revised to be identical to the language in the SCRC.
Response: The SDT modified the language in response to industry requests for clarification. For example, the terms Balancing Authority, Generator Owner, and Generator Operator are implied in the ERO Statement of Compliance Registry Criteria. No change made.		
South Houston Green Power, LLC	Yes	SHGP generally agrees with the proposed revisions to Exclusion E2, but believes that a clarifying revision should be made. Substitute "transmission grid" for "BES" in the phrase "provided to the BES" to insure that the metering is to the grid.

Organization	Yes or No	Question 8 Comment
The Dow Chemical Company	Yes	Dow generally agrees with the proposed revisions to Exclusion E2, but believes that a clarifying revision should be made. Substitute “transmission grid” for “BES” in the phrase “provided to the BES” to insure that the measurement is to the grid.
Response: The SDT believes that BES is the appropriate point of measurement because Exclusion E2 is defined in relation to the BES. No change made.		
Manitoba Hydro	Yes	Manitoba Hydro agrees with E2 but suggests that the phrase ‘A generating unit or multiple generating units’ be replaced with ‘Generating resource(s)’ for clarity and consistency.
Response: The SDT does not see where the suggested change will add any additional clarity. No change made.		
Michigan Public Power Agency Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperatve (CEC) Clearwater Power Company (CPC) Snohomish County PUD Consumer's Power Inc. Douglas Electric Cooperative (DEC)	Yes	MPPA and its members support the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, MPPA and its members urge the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term “Qualifying Aggregate Generation Resources” or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe

Organization	Yes or No	Question 8 Comment
Fall River Rural Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC) Cowlitz County PUD Kootenai Electric Cooperative		the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the		

Organization	Yes or No	Question 8 Comment
technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. The thresholds in Exclusions E1 and E3 apply only to non-retail generators (i.e., generation on the system (supply) side of the retail meter) and are not affected by presence of retail generation. No change made.		
Massachusetts Department of Public Utilities	Yes	While the MA DPU generally supports Exclusion E2, no information has been provided by NERC demonstrating that the 75 MVA rating is based on any sound technical analysis.
NESCOE	Yes	While NESCOE generally supports Exclusion E2, no information has been provided by NERC demonstrating that the 75 MVA rating is based on any sound technical analysis.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
Texas Industrial Energy Consumers	Yes	Please see the response to Question 3, above. Unlike exclusions E1 and E3, this exclusion refers specifically to the “net capacity” provided, which is consistent with existing treatment for generation that is netted against internal load under the Statement of Registry Compliance.
Response: See response to Q3.		

Organization	Yes or No	Question 8 Comment
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative	Yes	E2 "retail meter" should read "retail meter(s)". (i) Should be reworded as "the maximum net impact to the BES does not exceed 150 MVA, connected at 200 kV or higher." (ii) if we understand this clause correctly, we believe our proposed (i) wording will handle the issue. Also, all load's inclusion, within a BA, is dictated within the BAL standards and so remove entirely or additional clarification is needed.

Response: It is accepted use in NERC Reliability Standards that singular words and terms apply to plural conditions as well. No change made.

The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR §292.101 and §292.305(b) for the requirements specific to the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. This is not new ground and is simply clarifying language that has been present in the ERO Statement of Compliance Registry Criteria for quite some time. The SDT believes that the meaning of the definition will be understood in Balancing Authority Areas where it is applicable. No change made.

Organization	Yes or No	Question 8 Comment
Southern Company Generation	Yes	Some editing is needed. The second part, (ii), of the and logic provided for the exclusion criteria E2 is confusing. The initial criteria, (i), seems to be adequate regarding impact to the BES. The criteria listed after "(ii)" does not seem to be relevant to the impact on the BES. What does it mean to provide standby, back-up, and maintenance power services to a generating unit or multiple generating units? It is unclear who is providing the power service. If this is needed, the statement needs to be simplified so it can be understood. What is the difference between the terms "retail Load" and "retail customer Load" as used in Exclusions E2 and E3?
Response: Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR §292.101 and §292.305(b) for the requirements specific to the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. This is not new ground and is simply clarifying language that has been present in the ERO Statement of Compliance Registry Criteria for quite some time. The SDT believes that the meaning of the definition will be understood in Balancing Authority Areas where it is applicable. The SDT accepts your recommendation regarding "retail Load" and hasl clarified Exclusion E2 to read: **E2** - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail ~~customer~~ Load with electric energy ~~on the customer's side of the retail meter~~ if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.		
ACES Power Marketing Standards Collaborators	Yes	"A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter" sounds a lot like "non-retail generation" that is used in E1 and E3 which was described in the webinar as generation that resides on the customer side of the retail meter and is used to supply energy to that customer's load and is owned by the customer. Is E2 assuming that this generation is not owned by the customer?

Organization	Yes or No	Question 8 Comment
		Also, part ii) adds to the confusion. Conceptually we agree with this exclusion but further clarification is preferred.
Response: Exclusion E2 does not apply to non-retail generation, which the SDT defines as generation on the system (supply) side of the retail meter. Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR §292.101 and §292.305(b) for the requirements specific to the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. This is not new ground and is simply clarifying language that has been present in the ERO Statement of Compliance Registry Criteria for quite some time. The SDT believes that the meaning of the definition will be understood in Balancing Authority Areas where it is applicable. No change made.		
Bonneville Power Administration	Yes	BPA believes that if E2 is intended to exclude behind-the-meter generation, the phrase "on the customer's side of the retail meter" should immediately follow "generating units" in the first line. Otherwise, the phrase could be seen as modifying "retail customer Load."
Response: The SDT has clarified Exclusion E2 as suggested. **E2** - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail ~~customer~~ Load with electric energy ~~on the customer's side of the retail meter~~ if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.		
WECC Staff	Yes	E2 is inconsistent with Section III.c. of the NERC Statement of Compliance Registry Criteria and is in conflict with I2. As written, E2 uses a net capacity threshold of 75MVA, which does not distinguish between a single generating unit and multiple generating units. The threshold in the NERC Statement of Compliance Registry Criteria for a single generating unit is 20MVA. As a result, E2 would appear to exclude generators from 20MVA to 75MVA that serve any amount of retail load behind the

Organization	Yes or No	Question 8 Comment
		meter. WECC recommends replacing "(i) the net capacity provided to the BES does not exceed 75 MVA" with "(i) the net capacity provided to the BES does not exceed the individual or gross nameplate ratings provided in the NERC Statement of Compliance Registry Criteria." WECC's recommended change makes E2 consistent with I2 and the SDT's plan to address generator thresholds in Phase 2.
Response: Comments received on Inclusion I2 made it clear that industry did not want circular references in the definition so the SDT has refrained from using the wording suggested here both in Inclusion I2 and Exclusion E2. The threshold levels of generators and the relationship between the ERO Statement of Compliance Registry Criteria and the BES definition will be considered in the Phase 2 review. However, the SDT believes that a value was needed for Phase 1 and decided to proceed with the single 75 MVA threshold. No change made.		
ATC LLC	Yes	
Portland General Electric Company	Yes	
City of Austin dba Austin Energy	Yes	
ExxonMobil Research and Engineering	Yes	
Northern Wasco County PUD	Yes	
Georgia System Operations Corporation	Yes	
Oncor Electric Delivery Company LLC	Yes	

Organization	Yes or No	Question 8 Comment
Central Lincoln	Yes	
Harney Electric Cooperative, Inc.	Yes	
PSEG Services Corp	Yes	
Independent Electricity System Operator	Yes	
Long Island Power Authority	Yes	
Mission Valley Power	Yes	
Puget Sound Energy	Yes	
Tillamook PUD	Yes	
NV Energy	Yes	
Oregon Public Utility Commission Staff	Yes	
Z Global Engineering and Energy Solutions	Yes	
Consumers Energy	Yes	
Metropolitan Water District of Southern California	Yes	

Organization	Yes or No	Question 8 Comment
Duke Energy	Yes	
Chevron U.S.A. Inc.	Yes	This is a very important exclusion for Combined Heat and Power facilities that utilize large amounts of steam and power, and secure and/or provide their own operating reserves.
Ontario Power Generation Inc.	Yes	
Central Hudson Gas and Electric Corporation	Yes	
Idaho Falls Power	Yes	We support the exclusion as drafted.
Exelon	Yes	
PacifiCorp	Yes	
Hydro One Networks Inc.	Yes	
Tri-State GandT	Yes	
Western Area Power Administration	Yes	
Tri-State Generation and Transmission Assn., Inc. Energy Management	Yes	
MRO NERC Standards Review Forum (NSRF)	Yes	

Organization	Yes or No	Question 8 Comment
IRC Standards Review Committee	Yes	
Pepco Holdings Inc and Affiliates	Yes	
Transmission Access Policy Study Group	Yes	
Electricity Consumers Resource Council (ELCON)	Yes	ELCON supports the proposed revisions to Exclusion E2.
Texas RE NERC Standards Subcommittee	Yes	
Florida Municipal Power Agency	Yes	
SERC Planning Standards Subcommittee	Yes	
Redding Electric Utility	Yes	
City of Redding	Yes	
Tacoma Power	Yes	Tacoma Power supports the Exclusion E2 as currently written.
BGE	Yes	No comment.
NERC Staff Technical Review	Yes	

Organization	Yes or No	Question 8 Comment
Response: Thank you for your support. Due to other comments received, the SDT has made a slight clarifying change to Exclusion E2 as shown: **E2** - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail ~~customer~~ Load with electric energy ~~on the customer's side of the retail meter~~ if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.		

9. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3 (local network)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: Commenters were generally supportive of the concept of the local network Exclusion E3 as proposed in the second posting of the BES definition. The most prevalent comments, and the SDT's response to those comments, were as follows:

Several commenters suggested that the requirement under Exclusion E3.b should apply only during normal operating conditions. In other words, commenters felt that some power flow should be allowed to flow from the candidate local network back into the BES as long as it only occurred under abnormal conditions. To address this suggestion, the SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, but determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. . However, the SDT believes that, in circumstances where a local network is unable to utilize the local network exclusion solely because, under abnormal system conditions power flows out of the network, the same network could be a suitable candidate for exclusion under the Exception Process.

Numerous comments were received that either challenged the generator thresholds in Exclusion E3.a or suggested that the Exclusion for local networks should be silent on generator thresholds until the question of appropriate generation thresholds is addressed in Phase 2 of Project 2010-17. The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort. However, to satisfy to the Commission's directives in Orders 743 and 743-A743-A in a timely fashion, the SDT believes it is necessary to use a generation threshold that is consistent with the in-force ERO Statement of Compliance Registry Criteria.

The SDT introduced the term "non-retail generation" in the E3 Exclusion, and a number of commenters questioned the SDT's understanding of the term. For the purpose of Exclusion E3 (and Exclusion E1), the SDT intends "non-retail generation" to mean generation that is on the system (supply) side of the retail meter.

Numerous commenters suggested that the word "transmission" be removed from the phrase in the first paragraph of Exclusion E3. The SDT considered the disposition of the word "transmission" in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element".

Several commenters expressed some confusion about Exclusion E3.b. Commenters felt that two separate and distinct ideas were being addressed in Exclusion E3.b, and that the expression following the colon is expected to clarify the expression preceding the colon. The SDT agrees that these two ideas are separate, but related. The SDT decided to revise Exclusion E3.b to provide this clarity, as follows:

> **E3.b**: Power flows only into the LN~~:~~ and ~~T~~the LN does not transfer energy originating outside the LN for delivery through the LN;

This minor revision is clarifying only, and does not represent any material change to the Exclusion provision.

Organization	Yes or No	Question 9 Comment
SERC OC Standards Review Group	No	We would agree with the exclusion if the wording of the exclusion includes the following phrase (in quotation marks) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN "under normal operating conditions".
Tennessee Valley Authority	No	TVA would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): "Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN under normal operating conditions; and"
MEAG Power	No	We would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN "under normal operating conditions".
Response: The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.		
NERC Staff Technical Review	No	While we appreciate the improvement in the text of Exclusion E3, but we continue to believe that E3 should require automatic interrupting devices that are part of the BES must be provided at the points of interconnection between the Local Network and the BES.
Response: The SDT considered the suggested requirement for separation of the LN via automatic fault interrupting devices during the		

Organization	Yes or No	Question 9 Comment
development of the language for the second posting, and determined that such a qualifier could not be enforced for facilities that are not essential for the reliable operation of an interconnected transmission network. No change made.		
Northeast Power Coordinating Council	No	What is the technical justification for 300kv and higher? Local Network is capitalized (network not capitalized at the beginning of E3) throughout E3, yet it is not defined in the NERC Glossary. The installed generation limit in a Local Network should be addressed in Phase 2. Any studies supporting E3 should be made available.
Response: The threshold of 300 kV is used as a cap, not a minimum. Please refer to the companion document in the second posting of the BES Definition under Project 2010-17 for a description of the technical justification for local network exclusion. The term "local network" is not capitalized anywhere in the Exclusion E3 section of the definition except where it is placed as a section title, and when abbreviated. The SDT understands that "local network" is not a NERC Glossary term. The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort; however, to satisfy the Commission's directives in Order 743 and 743-A in a timely fashion, it is necessary to use a generation threshold that is consistent with the in-force Statement of Compliance Registry Criteria. No change made. Please refer to the companion document in the second posting of the BES Definition under Project 2010-17 for a description of the technical justification for local network exclusion.		
Bonneville Power Administration	No	BPA has several concerns regarding Exclusion E3. First, BPA strongly believes that Exclusion E3 must retain the requirement that the local network (LN) be separable from the BES by an automatic fault interrupting device wherever the LN interconnects with the BES. BPA believes that this is necessary in order to protect both the BES and the LN during faults, especially if there is any possibility that backfeed could occur. BPA recommends retaining the original language: Separable by automatic fault interrupting devices: Wherever connected to the BES, the LN must be connected through automatic fault interrupting devices. In addition, as stated in our comments in May, 2011, "automatic fault interrupting device" should be a defined term.

Organization	Yes or No	Question 9 Comment
		BPA strongly believes that Exclusion E3 should not be allowed for any facilities above 200kV instead of the 300kV limit in shown in the current proposal. Networks operated above 200kV have significant fault duties, carry much more power, and have a greater potential for cascading if something does not operate properly than networks operated below 200kV. Therefore, BPA believes that these networks should be part of the BES. BPA believes the term "non-retail generation" in E3(a) should also be defined.
Response: The SDT considered the suggested requirement for separation of the LN via automatic fault interrupting devices during the development of the language of the second posting, and determined that such a qualifier could not be enforced for facilities that are not essential for the reliable operation of an interconnected transmission network. No change made. As the SDT does not propose the inclusion of the requirement for an automatic fault interrupting device, the definition of the term is not necessary. The threshold cap of 300 kV was a modification added for the second posting of the definition. The prior version of the definition had no upper bound on operating voltage for the local network, and the SDT has now adopted a 300 kV upper limit pursuant to comments received. Please refer to the technical justification document for local networks that accompanied the second posting under Project 2010-17 for details about the selection of 300kV as the cap for local networks. No change made. Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. This is a well understood interpretation which the SDT took from official literature and does not need to be officially defined.		
ACES Power Marketing Standards Collaborators	No	The term "non-retail generation" used in Exclusion E1 (item c) and again in E3 (item a) should be clarified. The following applies to E3 (item c): A flowgate should not be used to limit applicability of E3. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an

Organization	Yes or No	Question 9 Comment
		example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the "permanent" adjective applied to flowgates probably limits the applicability from the “temporary” flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First, flowgates are created to manage congestion. The IDC is more of a congestion management tool than a reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve IROLs that have been violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The characteristics of the flowgate make it a good proxy for estimating how much contractual use has been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROLs, many simply are not.
Response: Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. The SDT believes that the language in Exclusion E3.c prohibiting “Flowgates” from qualifying for definitional exclusion is appropriate and necessary. As a definitional exclusion characteristic, Exclusion E3.c must follow the principle of being a bright-line and easily identifiable, and as such, the SDT feels that the definition cannot allow some types of Flowgates and disallow others. Flowgates must continue to be a prohibiting characteristic under Exclusion E3, since these facilities are more likely to be used in the transfer of bulk power than not. An entity who wishes to make a case for exclusion of a unique type of Flowgate facility can do so through the exception process. The SDT believes that the continued qualifier of “permanent” associated with the term “Flowgate” addresses the majority of the concern in this comment. No change made.		
Dominion	No	Dominion could support if E3a were eliminated.
Response: The SDT continues to believe that it is necessary to establish a limit on the allowable quantity of generation that may be significant to the reliable operation of the surrounding interconnected transmission system. Please note that the issues surrounding the appropriate generation threshold, among other topics, will be taken up in Phase 2 of this BES definition effort. No change made.		

Organization	Yes or No	Question 9 Comment
Pepco Holdings Inc and Affiliates	No	1) In the Drafting Teams Consideration of Comments on the previous version, it was stated, "....It is not the SDT's intent to specifically exclude any facilities in major metropolitan areas; it expects that the specific examples mentioned (NYC, Washington DC) would not qualify for exclusion under the revised Exclusion E3." The currently proposed E3 will result in specific exclusion of major local networks in major metropolitan areas. These major LNs qualify for exclusion under proposed E3, and its qualifiers, in that they distribute power to the local load rather than act as facilities to transfer bulk power across the interconnected system. However, the LNs that supply large amounts of load in very dense load areas should have some transmission reliability considerations. To capture the appropriate LNs in question, consideration should be given to limiting the amount of load supplied by a LN to some load level. For example if an LN has a peak load level of less than 1,000MVA it would qualify for LN exclusion and if it exceeds 1,000MVA it would not qualify for exclusion. There are certainly many LNs that supply relatively small amounts of load, just as radial facilities. They should be excluded. It is important to develop a load level that would provide the proper balance between the small LNs and the major LNs. 2) Since the SDT deleted the inclusion of Black Start Cranking Paths in I3 then reference to I3 in criteria E3a should also be removed. Limits on connected generation should only be constrained by the 75MVA limit. Therefore E3a should then read "Limits on connected generation: The LN and its underlying Elements do not include generation resources with an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating);"
Response: The SDT appreciates your concern about the possible exclusion of large metropolitan load centers through the exclusion for local networks in Exclusion E3. However, the SDT feels that it has accurately captured the characteristics of facilities that are used in the local distribution of electric energy within Exclusion E3 (and Exclusion E1), which the Commission's Order specifically targeted for exclusion. To the suggestion of a 1,000 MW demand cap on the exclusion for local networks, the SDT sees no technical basis upon which to make such a change. Also, the SDT is unaware of any situations of a network of facilities serving a load of that size that would not be precluded in some way under at least one of the three characteristics of Exclusion E3. Finally, an Exception Process will exist in the event that an entity seeks an inclusion of such facilities. No change made. The SDT appreciates the suggestion that the elimination of the inclusion for Cranking Paths, while maintaining the qualifier prohibiting blackstart resources from existing in a qualifying local network could be viewed as an inconsistency. Given that the concept of		

Organization	Yes or No	Question 9 Comment
exclusion of 'local networks' is already an issue requiring careful technical justification, the SDT has determined that it should be conservative with regard to allowing such an exclusion for facilities that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent networks without blackstart resources. It is nevertheless possible to achieve exclusion through the Exception Process. No change made.		
Tri-State Generation and Transmission Assn., Inc. Energy Management	No	1. b) should be reworded to "Normally there is power flow only into the LN: The LN is not normally used to transfer power originating outside of the LN for delivery through the LN." There could be conditions inside the LN, such as large loads shut down for maintenance, which would allow the parallel transmission Elements to allow power to flow through the LN. Those conditions would have no negative or adverse effect on the BES. 2. Capitalize "Network" at the beginning of the Exclusion
Tri-State GandT	No	1. b) should be reworded to "Normally there is power flow only into the LN: The LN is not normally used to transfer power originating outside of the LN for delivery through the LN." There could be conditions inside the LN, such as large loads shut down for maintenance, which would allow the parallel transmission Elements to allow power to flow through the LN. Those conditions would have no negative or adverse effect on the BES.2. Capitalize "Network" at the beginning of the Exclusion.
Response: The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made. The word "network" as used in "local network" is not intended as a defined term; therefore, it is not capitalized. When expressed in abbreviation, "LN" is properly capitalized. No change made.		
MRO NERC Standards Review Forum (NSRF)	No	THE NSRF suggestion considering a different approach for the power flow criteria in [E]3b. [E]3b: No [Firm] Power Transfers are scheduled out of, or [through], the LN in the operating horizon [for BES designations applicable to the operating horizon] and [no] Firm Power Transfers are reserved to flow out of, or through, the LN in the planning horizon [for BES designations applicable to the planning horizon].

Organization	Yes or No	Question 9 Comment
Response: The SDT believes it is vital to ensure both that power flow is always in the direction from the BES toward the LN at all points of connection, and that the LN facilities not be used for "wheeling" type transactions. The SDT believes the existing language accomplishes this. The suggested language in this comment touches on an important aspect, the scheduled use of the facilities, but the SDT believes that the existing language is more appropriate to express this point. No change made.		
Hydro One Networks Inc.	No	We agree with the exclusion concept of LN. However, the reliability of the interconnected transmission network should not be determined by the amount of installed generation in the local network. We believe that the generation limit is restrictive and has little or no technical basis. It is not the size of a unit in the LN that will determine the reliability impact on the BES but more importantly its location, configuration and system characteristics such as reliability must run unit. We suggest that the SDT should address this in phase 2 to increase the installed generation limit in a LN. We suggest deleting the references to I3 in E1 and E3 because we believe that this reference is in contradiction to I3 and probably an oversight and should be corrected. I3 does not require a path to be BES but it implies here that a radial system cannot be excluded if there is a Blackstart unit on it.
Response: The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort; however, to satisfy the Commission's directives in Order 743 and 743-A in a timely fashion, it is necessary to use a generation threshold that is consistent with the in-force Statement of Compliance Registry Criteria. No change made. The SDT appreciates the suggestion that the elimination of the inclusion for Cranking Paths, while maintaining the qualifier prohibiting blackstart resources from existing in a qualifying local network could be viewed as an inconsistency. Given that the concept of exclusion of 'local networks' is already an issue requiring careful technical justification, the SDT has determined that it should be conservative with regard to allowing such an exclusion for facilities that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent networks without blackstart resources. It is nevertheless possible to achieve exclusion through the Exception Process. No change made.		
Holland Board of Public Works	Yes	Holland BPW supports the exclusion of Local Networks (LN) from the definition of BES. Such systems are generally not necessary for the reliable operation of the interconnected transmission network. However, some revisions are necessary. Holland BPW believes that E3(a) and E3(b) can and should be eliminated, provided E3(c) remains. E3(c) provides that an LN is BES if it is classified as a Flow Gate or Transfer Path. The bases for removing E3(a) and E3(b) are as follows: (1) Provision E3(a) establishes a

Organization	Yes or No	Question 9 Comment
		75 MVA limit on connected generation. This is inconsistent with the concept of a LN and should be removed. If not removed, it should be increased to not less than 300 MVA, consistent with the discussion in response to Q1. If an LN does not accommodate bulk power transfer across the interconnected system, the amount of generation that exists and is distributed within that system is immaterial for purposes of the reliable operation of the interconnected transmission system. During the NERC Webinar, NERC representatives suggested that placing an upper limit on generation within a LN might be desirable based upon an assumption that if that entity's internal generation is lost, then replacement generation would have to come from the BES, and could therefore affect reliability. This assumption has not been substantiated. In most instances, generation resources are dispersed throughout the LN - it is unlikely an event would result in the loss in the amount of the aggregate generation. Additionally, LNs have local load shedding and system restoration plans for such contingencies. (2) E3(b) is unnecessary and should be removed. The proposed language in E3(b) appears to be concerned with flows originating from outside of the LN, coming into the LN, and then exiting the LN to loads outside of the LN. As noted above, E3(c) appears to address this concern. If E3(b) is maintained, then the introductory clause ("Power flows only into the LN:") should be deleted, because it is inconsistent with the second clause ("The LN does not transfer energy originating outside the LN for delivery through then LN.") If E3(b) is retained, Holland BPW supports the second clause ("The LN does not transfer energy originating outside the LN for delivery through then LN") because it appears to be the portion of the provision that addresses the concern about flows into, through, and then out of, the LN. (3) E3(b) should also be removed or modified because it fails to recognize typical municipal system operations. An LN may have internal generation that is less than its peak load but in excess of off-peak or holiday load levels. The language "Load flows only into the LN" does not recognize this situation and prevents an LN from making the most economic use of surplus generation. There are no reliability reasons to discourage such sales since with or without such transactions, this generation is not necessary for the reliable operation of the interconnected transmission system.
Response: The SDT believes that a limit on the amount of connected (non-retail) generation within the LN is necessary to ensure that		

Organization	Yes or No	Question 9 Comment
there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the NERC Statement of Compliance Registry Criteria, and this threshold is a subject of further review under the Phase 2 development of the BES definition. The SDT believes that Exclusion E3.b continues to be necessary to ensure that qualifying LN's do not participate in "wheel-through" transactions, and that power always flows in a direction from the BES toward the LN. The SDT has clarified Exclusion E3.b as follows due to your comments and those of others. **E3.b**: Power flows only into the LN~~:~~ and ~~T~~the LN does not transfer energy originating outside the LN for delivery through the LN;		
Texas Industrial Energy Consumers	Yes	As noted in response to Question 3, above, subsection (a) of Exclusion E3 would only exclude Local Networks with "aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating)." The reference to "non-retail" generation in subsection (a) indicates that the SDT may have intended to preserve the "netting" approach set forth in the Statement of Registry Compliance, but this should be made clearer. The description in subsection (a) should be revised to exclude "Where the radial system serves Load and includes generation resources not identified in Inclusions I2 or I3," and the remainder of that sentence referencing a 75 MVA gross nameplate rating should be removed. This will provide a reference back to the Statement of Registry Compliance and clarify that only net capacity is considered for customer-owned facilities. TIEC also disagrees with the 300 kV upper limitation on transmission elements within a Local Network. Consistent with TIEC's comments to FERC, if these facilities are serving a distribution function, their voltage level is irrelevant. The transmission versus distribution distinction should be based on function, not voltage level. The remainder of this exclusion clarifies what constitutes a distribution function, so the 300 kV limit is unnecessary and should be removed.
Response: The SDT evaluated this comment and has concluded that the exclusion must necessarily be based on the gross aggregate nameplate of the generation connected within the candidate systems. The approach that is suggested in your comment could result in significant amounts of generation existing within the excluded area. No change made. The SDT does not agree with the removal of the 300 kV cap that limits the qualification of a group of facilities for local network exclusion. The SDT feels that an upper bound is essential to prevent inappropriate exclusions of facilities that may be important to the reliable operation of the interconnected transmission system. The Exception Process is available for specific circumstances where a 300 kV cap is problematic. No change made.		

Organization	Yes or No	Question 9 Comment
PacifiCorp	Yes	PacifiCorp strongly supports the categorical exclusion of Local Networks ("LNs") from the BES. PacifiCorp believes the exclusion is necessary to ensure that the BES definition complies with FERC's statutory jurisdictional requirements. PacifiCorp recommends the following modifications: o Change "contiguous transmission Elements" to "contiguous Elements". o Modify item b to state, "Power flows only into the LN during normal operating conditions: The LN does not transfer energy originating outside the LN for delivery to loads located outside the LN..." o Add an item (may be included in item b) to provide as follows: "The LN is not critical (or is not relied upon) to maintain the reliability of the interconnected system during abnormal operating conditions."
Response: The SDT considered the disposition of the word "transmission" in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element". No change made. The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made. The SDT does not believe that the statement "The LN is not critical (or is not relied upon) to maintain the reliability of the interconnected system during abnormal operating conditions" lends itself to determination by inspection; hence, it is not an appropriate "bright-line" characteristic for ExclusionE3. No change made.		
Southern Company	No	We would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): "Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN "under normal operating conditions". What does the term "non-retail generation" mean? Can the term "non-retail generation in E3a be changed to simply "generation"?
Response: The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition.		

Organization	Yes or No	Question 9 Comment
For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made. Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E3.a in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.		
ReliabilityFirst	No	ReliabilityFirst Staff proposes to use the LN exclusion as part of the definition of what elements make up the facilities used in the local "distribution" of electric energy and could be included in the Exception Process as a criterion for exclusion.
Response: The SDT believes that Exclusion E3 has sufficient clarity and that its provisions can be readily demonstrated without the need to be handled through the Exception Process. Therefore, it is more appropriately handled within the definition. No change made.		
Ontario Power Generation Inc.	No	Non-retail generation needs to be properly defined in the text of the exclusion.
Mission Valley Power	No	Mission Valley Power - : We strongly agree that local networks should be excluded, since they act much like the radial systems excluded in E1 while providing a higher level of service to customers. These networks should not be discouraged in the name of reliability. We again object to the introduction of the new confusing term "non-retail generation" with no definition provided.
Tillamook PUD	No	We strongly agree that local networks should be excluded, since they act much like the radial systems excluded in E1 while providing a higher level of service to customers. These networks should not be discouraged in the name of reliability.

Organization	Yes or No	Question 9 Comment
		We again object to the introduction of the new confusing term "non-retail generation" with no definition provided.
Central Lincoln	No	We strongly agree that local networks should be excluded, since they act much like the radial systems excluded in E1 while providing a higher level of service to customers. These networks should not be discouraged in the name of reliability. We again object to the introduction of the new confusing term "non-retail generation" with no definition provided.
Northern Wasco County PUD	No	We strongly agree that local networks should be excluded, since they act much like the radial systems excluded in E1 while providing a higher level of service to customers. These networks should not be discouraged in the name of reliability. We again object to the introduction of the new confusing term "non-retail generation" with no definition provided.
Response: Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.		
Central Hudson Gas and Electric Corporation	No	Under the proposed definition, clause E3.b. stipulates that 'power only flows into the Local Network (LN): The LN does not transfer energy originating outside the LN for delivery through the LN.' Clearly, this is a bright line. The Local Network Exclusion document, however, describes that 'power flow "shifts"' of 'negligible fraction' are acceptable. Further, the document acknowledges that parallel flows through the LN, 'as governed by the fundamentals of parallel circuits' will occur. Finally, the document goes on to exhibit that flows through the LN, however minimal, will result from both power transfer distribution factor (PTDF) and line outage distribution factor (LODF) analysis. If this is the case, what bright line criterion should be applied for this Exclusion Principal if no maximum PTDF and/or LODF are specified?
Response: Exclusion E3.b does in fact prohibit power flow at the BES interface points of the LN from entering the BES. The accompanying technical justification document merely addresses the insignificance of the power flow shifts that will occur in an example system. Clearly, in the example system of the technical justification document, power flow is shown to always be in a direction from the BES toward the LN, albeit with only a slight magnitude shift in the PTDF and LODF analyses. The technical justification document does not attempt to set any threshold on the magnitude of this shift; it merely is a demonstration on a sample		

Organization	Yes or No	Question 9 Comment
system. The only bright-line criterion that is applicable to this question is that power flow shall always be from the BES toward the LN.		
City of Anaheim	No	Again, 75 MVA should be increased to 300 MVA in E2 for the reasons stated in response to Question 7.
Response: The SDT has determined that it must retain the 75 MVA threshold on generation allowed within a qualifying LN in order to remain consistent with the existing ERO Statement of Compliance Registry Criteria. There has not been sufficient technical justification to this point that would support a change from this threshold; however, such threshold will be considered in Phase 2 of this Project 2010-17. No change made.		
Consumers Energy	No	In general we agree, but believe the word "transmission" should be removed from "A group of contiguous transmission Elements..."
Response: The SDT considered the disposition of the word “transmission” in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word “Element”. This is meant to eliminate the generation that would otherwise be included in the term “Element”. No change made.		
Manitoba Hydro	No	Manitoba Hydro agrees with the Local Network Exclusion but disagrees with the drafting team’s removal of the requirement to have protective devices protecting the BES from the LN. We suggest that the following requirement is re-inserted into E3 to meet the LN Exclusion:”a) Wherever connected to the BES, the LN must be connected with a Protection System.”
Response: The SDT considered the suggested requirement for separation of the LN via automatic fault interrupting devices during the development of the language of the second posting, and determined that, consistent with Order 743 and 743a, such a qualifier could not be enforced for facilities that are not essential for the reliable operation of an interconnected transmission network. No change made.		
Long Island Power Authority	No	Main paragraph and items E3b and E3c adequately define a Local Network. It seems like the intent to exclude non bulk distribution systems would still be included because of E3a. E3a should be eliminated. If not eliminated, need to define the term "underlying Elements".

Organization	Yes or No	Question 9 Comment
Response: The SDT continues to believe that it is necessary to establish a limit on the allowable quantity of generation that may be significant to the reliable operation of the surrounding interconnected transmission system. Please note that the issues surrounding the appropriate generation threshold, among other topics, will be taken up in Phase 2 of this BES definition effort. No change made. The SDT believes that the existing phrase in ExclusionE3.a "and its underlying Elements" has sufficient clarity and meets the intent of the exclusion with brevity. No change made.		
City of St. George	No	The exclusion of Local Networks should be provided, however the generation level limits are too restrictive. As long as the power flow is into the system the generation level of the local network shouldn't matter as long as it is being used to serve local load. E3a should be deleted from the definition, or at least some higher level of allowed generation should be included. Another possibility would be a ratio of local load to local generation. Areas with local generation serving local load will have similar characteristics or affects to the BES system as were used in the Local Network justification paper (Appendix 1) included with the documents. If some reasonable level of local generation was added to the example system it is unlikely that the affects to the BES flows would change from what was presented in the example.
Response: The SDT has determined that it must retain the 75 MVA threshold on generation allowed within a qualifying LN in order to remain consistent with the existing ERO Statement of Compliance Registry Criteria. There has not been sufficient technical justification to this point that would support a change from this threshold; however, such threshold will be considered in Phase 2 of this Project 2010-17. The SDT continues to believe that it is necessary to establish an upper limit on the allowable quantity of generation that may be included in the local network since generation in a local network may be significant to the reliable operation of the surrounding interconnected transmission system. Please note that the issues surrounding the appropriate generation threshold, among other topics, will be taken up in Phase 2 of this BES definition effort.		
Orange and Rockland Utilities, Inc.	No	We know that N-1 is assumed when power-flow study is performed, however, N-1 should be mentioned here for clarification.

Organization	Yes or No	Question 9 Comment
Response: The SDT understands this comment to be in reference to the technical justification document that accompanied the definition in its second posting. This technical justification document was merely intended to be illustrative of the insignificance of the interaction of a sample local network on its surrounding interconnected transmission system. The "LODF" values were for a single element taken out of service. No change made.		
ISO New England Inc	No	E3 could result in many large load pockets being excluded from the BES definition and should be deleted. Assuming that it is retained, we offer the following additional comments. The term "a group of contiguous transmission elements" is ambiguous and needs to be clarified. Please clarify in the exclusion if the flows into the LN as described in E3.b) are pre-contingency flows only. Please clarify the system conditions (time of year, peak or off-peak) that should be considered in determining of flow is only into the LN. The "Non-retail" qualifier in E3.a) should be deleted.
Response: The SDT appreciates your concern about the possible exclusion of large metropolitan load centers through the exclusion for local networks in Exclusion E3. However, the SDT feels that it has accurately captured the characteristics of facilities that are used in the local distribution of electric energy within Exclusion E3 (and Exclusion E1), which the Commission's Order specifically targeted for exclusion. No change made. The SDT considered the disposition of the word "transmission" in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element". No change made. The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made. There are no specified conditions applicable to item Exclusion E3.b. In order to qualify for exclusion under this item, this characteristic must be demonstrated under all conditions. This exclusion has been re-stated as follows for additional clarity:		

Organization	Yes or No	Question 9 Comment
E3.b: Power flows only into the LN~~:~~ and ~~T~~the LN does not transfer energy originating outside the LN for delivery through the LN; The SDT has intentionally utilized the term "non-retail generation" in Exclusion E3.a in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.		
Texas Reliability Entity	No	There should be language that includes UFLS, UVLS, or load fully removable for Reserves even in a local network to avoid a lapse in reliability in operation of the BES. Even if it is to be included in any Phase 2 work, it should be mentioned here to avoid gaps.
Response: The SDT is uncertain whether this comment suggests that facilities used in UFLS, UVLS, or as interruptible load for reserve, should be prohibited from exclusion from the BES under Exclusion E3. At any rate, even a facility that is excluded under Exclusion E3 may continue to have obligations under the reliability standards for UFLS, UVLS or other load shedding requirements.		
Independent Electricity System Operator	No	Consistent with our comments in response to Q7, we propose removing E3 (a) since, as explicitly described in E3 (b), one of the characteristic of the LN is that power flows only into the LN. The level of generation contained within the LN is therefore immaterial, particularly where the most onerous contingency or system operating condition occurring within the LN, results in acceptable BES performance as defined by the applicable criteria of the NERC transmission planning standards. The generation connected within the LN that meets the registry criteria would already be captured within the definition of the BES as provided for in Inclusion I2.
Response: The SDT continues to believe that it is necessary to establish a limit on the allowable quantity of generation that may be significant to the reliable operation of the surrounding interconnected transmission system. Please note that the issues surrounding the appropriate generation threshold, among other topics, will be taken up in Phase 2 of this BES definition effort. No change made.		
Rochester Gas and Electric and New York State Electric and Gas	No	"Local Network" is capitalized (network not capitalized at the beginning of E3) throughout E3, yet it is not defined in the NERC Glossary. This exclusion is vague. This exclusion applies to a network with "multiple points of connection" with the purpose "to improve the level of service to retail customer load" - this phrase is intent-based and not reliability-based - most/all transmission "improves service" compared to it not being there. In

Organization	Yes or No	Question 9 Comment
Central Maine Power Company		essence, this exclusion can be obtained if a portion of the network:1. Doesn't have significant generation (again, "non-retail" phrase is unclear)2. Power only flows "into" this portion of the network, and not (ever? Even under any TPL design contingencies?) "out." Is this considering only pre-contingency steady state conditions? During contingency conditions and for the period following a contingency the LN could supply power to other parts of the network depending on the nature of the contingency. The conditions under which direction of flow is assessed are critical, but E3(b) is silent on this.3. This portion of the network is not part of a monitored transmission interfaceThis "Local Network Exclusion" is supported by a technical analysis which relied on transfer distribution factors (see http://www.nerc.com/docs/standards/sar/bes_definition_technical_justification_local_network_20110819.pdf on the NERC BES Definition standard page http://www.nerc.com/filez/standards/Project2010-17_BES.html). This transfer distribution factor (TDF) method was rejected by FERC in Order 743. Paragraph 85 of the Order states: "Given the questionable and inconsistent exclusions of facilities from the bulk electric system by the material impact assessment and the variable results of the Transmission Distribution Factor test proposed in NPCC's compliance filing in Docket No. RC09-3, there are no grounds on which to reasonably assume that the results of the material impact assessment are accurate, consistent, and comprehensive.93 Additionally, we have noted how the results of multiple material impact tests can vary depending on how the test is implemented."Unless E3 is made more specific and clear, it should be stricken.

Response: The term "local network" is not capitalized anywhere in the Exclusion E3 section of the definition except where it is placed as a section title, and when abbreviated. The SDT understands that "local network" is not a NERC Glossary term. No change made.

The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.

The SDT recognizes that the TDF methodology suggested by various entities as a threshold for determining inclusion in the BES was not favored by the Commission. However, as used in the technical justification document, the transfer distribution factors for power flow transfer as well as line outage factors are merely illustrative of the de minimis impact that a sample local network has on its

Organization	Yes or No	Question 9 Comment
surrounding interconnected transmission system. The SDT does not propose the use of TDF as a threshold for determination of BES.		
Kansas City Power and Light Company	No	Although the Technical Justification Local Network guidance document is helpful in explaining the principles and concepts involved with determination of what constitutes a Local Network, criteria needs to be established regarding the impacts of LODF and PTDF that will clearly define what constitutes a Local Network to avoid debate and controversy.
Response: As used in the technical justification document, the transfer distribution factors for power flow transfer as well as line outage factors are merely illustrative of the de minimis impact that a sample local network has on its surrounding interconnected transmission system. The SDT does not propose the use of TDF as a threshold for determination of BES. No change made.		
Nebraska Public Power District	No	In E3 (a): please define "non-retail generation" as usued in E3(a). Also, what is the criterion that makes this genertion BES generation? The MVA rating only, or is there other criteria? A generator may have a 75 MVA gross nameplate rating, but may be limited physically or electrically to below the 75 MVA. Is this a basis for exclusion for this generator?
Response: Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. Consistent with the ERO Statement of Compliance Registry Criteria, the SDT has used language in describing generation thresholds in Exclusion E3.a as being gross aggregate nameplate ratings.		
Ameren	No	a) The exclusion should also be extended to reactive resources needed to support the local area network (see response to Q10). It is also suggested that "local network" be renamed to "local area network" to better describe or distinguish itself from a wide-area network such as the BES. b) We would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN "under normal operating conditions".

Organization	Yes or No	Question 9 Comment
Response: If a candidate local network is granted exclusion under Exclusion E3, the exclusion would apply to the reactive resources within that network as well. No change made. The SDT believes that renaming the local network to "local area network" (LAN) will lead to industry confusion with the identical term used to refer to communications infrastructure. No change made. The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.		
Georgia System Operations Corporation	No	Item (b) is unclear: Although the first sentence says "Power flows only into the LN," which suggests there will be no exports, the second sentence says "The LN does not transfer energy originating outside the LN for delivery through the LN," which suggests it could deliver power originating within the LN. This would seem to be reasonable by comparison to E-2, so long as no more than 75 MVA is exported (which is indeed the limitation on the quantity of "non-retail generation" in the LN). On a related point, if the limit on connected generation is not intended to be a limit on possible exports, and therefore any power from interconnected non-retail generation must be sold within the LN, why does the limit need to be so low; why should the aggregate quantity of such internally-consumed generation be an issue? Also, is the "non-retail" designation intended to exclude customer-owned generation from the 75 MVA calculation?
Response: The SDT has re-stated item Exclusion E3.b for additional clarity. **E3.b**: Power flows only into the LN~~.~~ and ~~T~~the LN does not transfer energy originating outside the LN for delivery through the LN; The limit placed on the aggregate generation within the local network only applies to non-retail generation. To clarify, in order to qualify under Exclusion E3, exports are not permissible from the local network. Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.		

Organization	Yes or No	Question 9 Comment
ATC LLC	No	ATC agrees in general with the exclusions for E3 pending the following changes: Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN under normal operating conditions (n-0 contingency); and ATC suggests considering a different approach for the power flow criteria in Exclusion E3b:Inclusion E3b - No Firm Power Transfers are scheduled to flow out of, or through, the LN in the operating horizon [for BES designations applicable to the operating horizon] and no Firm Power Transfers are reserved to flow out of, or through, the LN in the planning horizon [for BES designations applicable to the planning horizon).
Response: The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made. The SDT believes it is vital to ensure both that power flow is always in the direction from the BES toward the LN at all points of connection, and that the LN facilities not be used for "wheeling" type transactions. The SDT believes the existing language accomplishes this. This suggested language in this comment touches on an important aspect, the scheduled use of the facilities, but the SDT believes that the existing language is more appropriate to express this point. No change made.		
Tacoma Power	No	Tacoma Power does not support the Exclusion E3 as currently written. We strongly believe that Section c) of E3 must replace the term "transfer path" with "Major Transfer Path" to distinguish these paths from any common ATC path. This revision is consistent with the existing language used in the form, Detailed Information to Support an Exception Request. Additionally, we believe it is not appropriate for E3 to state an MVA threshold in Section a) when determining such thresholds is the purpose for Phase 2. We urge the SDT to defer the determination of a MVA threshold in E3 to Phase 2. Finally, the term "non-retail generation" is not a universally understood term in the industry. We suggest that the SDT replace the phrase "non-retail generation" with "generation located on the retail

Organization	Yes or No	Question 9 Comment
		customer's side of the meter."
Response: The existing language posted in the second draft of the BES definition does include the word "major" as a modifier of transfer paths in the Western Interconnection. The definition cannot have this word "major" capitalized, as it is not part of the NERC Glossary of Terms. Accordingly, the SDT believes that there is no need to make the suggested change to Exclusion E3.c. The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort; however, to satisfy the Commission's directives in Order 743 and 743-A in a timely fashion, it is necessary to use a generation threshold that is consistent with the in-force Statement of Compliance Registry Criteria. No change made. Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. The exclusion language of Exclusion E3.a intends to consider only the non-retail (supply side) generation; whereas your comment suggests that the generation to be counted is on the retail side of the meter. With the clarification of the use of the term "non-retail generation", the SDT believes that Exclusion E3.c is appropriate. No change made.		
MEAN	No	MEAN does not agree with the language of E3, b). This language is arbitrary and could be represented in several ways, dependent on the entity making their case. As we all know, electricity doesn't always take the shortest path. MEAN would recommend eliminating E3, b) due to its subjective language and rely on the current E3, c) to evaluate reliability and system impacts. If the language does not change, MEAN would argue to any applicable RE that the language intent was to address facilities that have documentation stating that the facilities are used for transferring energy across (e.g. joint ownership, contribution in aid of construction, etc.) and have an E3 exception denied based on power flow models or other transmission modeling.
Response: The SDT has reviewed the language of Exclusion E3.b, and does not find it to be subjective or arbitrary. However, the SDT does propose a minor revision to re-state E3.b for additional clarity: **E3.b**: Power flows only into the LN~~:~~ and ~~T~~the LN does not transfer energy originating outside the LN for delivery through the LN;		
South Houston Green Power, LLC		SHGP would like to broaden the scope of Local Networks. If a Local Network does not allow transfer of Bulk Power across the Interconnected System, then the Local Network should be excluded regardless of the amount of generation behind the meter. Often, large industrial sites install large combined Heat and Power cogeneration units due to a hefty steam load. Subjecting industrial facilities to additional reporting and coordination efforts [other than those already required by the TO

Organization	Yes or No	Question 9 Comment
		and RTO] may have little, if any, increase in grid reliability. The 75 MVA (gross nameplate rating) needs to be eliminated. To date, none of the Regional Entities has suggested that SHGP or its affiliates register as a Transmission Owner or Transmission Operator with respect to any SHGP or affiliated delivery facilities.
Response: The SDT has determined that it must retain the 75 MVA threshold on generation allowed within a qualifying LN in order to remain consistent with the existing ERO Statement of Compliance Registry Criteria. There has not been sufficient technical justification to this point that would support a change from this threshold; however, such threshold will be considered in Phase 2 of this Project 2010-17. No change made.		
Hydro-Quebec TransEnergie		Same comment than Q7.
Response: See response to Q7.		
ExxonMobil Research and Engineering	Yes	Exclusion E1 and E3 aid in the delineation of distribution and transmission facilities. However, we request that the BES SDT review paragraphs 108 and 109 of FERC Order 743. In order to meet reliability target requirements to safely and economically operate manufacturing and production facilities, many industrial facilities are fed by two or more utility transmission lines that originate at independently fed utility substations. Due to the magnitude of an industrial site's load, these transmission lines are typically designed to operate at levels in excess of 100 kV at the request of the utility company. These transmission lines typically terminate into an interconnection facility, owned by the industrial facility, that spot networks the transmission lines via a ring buss or breaker and a half substation within the industrial facility's private use network in order to serve the load of the facility's private use network. These private use networks typically satisfy the requirements set forth in the definition of a Local Network (power flows in, not a flowgate, etc.); however, the term "non-retail generation" is not a term that is implicitly defined or consistent with this documents use of "net capacity provided..." phrasing in similar exclusions.
Response: Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.		

Organization	Yes or No	Question 9 Comment
Sacramento Municipal Utility District	Yes	It is preferred to hold reference to gross nameplate rating/threshold values until generation technical justification is completed as part of Phase 2; these studies should apply to any real or reactive power threshold reference. For Exclusion E3-b using the phrase "[p]ower flows only into the LN" is too restrictive. An allowable MW threshold of LN power producing resources should be deferred to the Phase 2 BES technical analysis. Where no generation is present in the LN, it is recommended that an allowance for residual flow through the LN.
City of Austin dba Austin Energy	Yes	We prefer to hold reference to gross nameplate rating/threshold values until generation technical justification is completed as part of Phase 2; these studies should apply to any real or reactive power threshold reference. For Exclusion E3-b using the phrase "[p]ower flows only into the Local Network" is too restrictive. An allowable MW threshold of Local Network power producing resources should be deferred to the Phase 2 BES technical analysis. Where no generation is present in the Local Network, it is recommended that an allowance for residual flow through the Local Network.
Response: The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort; however, to satisfy the Commission's directives in Order 743 and 743-A in a timely fashion, it is necessary to use a generation threshold that is consistent with the in-force Statement of Compliance Registry Criteria. No change made. The SDT feels strongly that in order for a network to qualify for exclusion under the Exclusion E3 section of the definition, there must be strict bounds and limits placed on the characteristics of the candidate facilities. Allowances for minor "out-flow" from the local network, or "minimal" flow, as suggested in this comment, will lead to an inconsistent application of the definition and therefore, a lack of bright-line quality in the definition. Situations such as what is proposed in this comment can be referred to the Exception Process for possible exclusion from the BES. No change made.		
Portland General Electric Company	Yes	PGE agrees with Exclusion E3, but believes additional clarification is necessary to facilitate a complete understanding and application of the exclusion criteria. First, there is no specific definition of "non-retail" generation provided. Additionally, E3 b) states "Power flows only into the LN: The LN does not transfer energy originating

Organization	Yes or No	Question 9 Comment
		outside the LN for delivery through the LN." PGE believes that a local network should still qualify for the LN exclusion if power may flow out of the LN at a discrete point or certain discrete points during abnormal operating conditions, but power still flows into the LN on an aggregate basis during all operating conditions, and power flows only into the LN at all discrete points during normal operating conditions.
Response: Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.		
Cowlitz County PUD	Yes	Cowlitz strongly supports the categorical exclusion of Local Networks ("LNs") from the BES. This exclusion will allow conversion of radial systems to LNs without compliance impact, and should be encouraged rather than discouraged as networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. The decision of whether to network radial systems should be made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers will ultimately benefit from the path chosen by the SDT. Cowlitz believes that the word "transmission" does not add clarity to the Exclusion; simply stating "Elements" is sufficient. This will allow for a gradual acceptance that transmission is not defined by a certain voltage, but more a medium in which electrical power is efficiently transported from power resources to load centers where it is distributed. The old convention of transmission versus distribution no longer fits in the current regulatory environment, and as such should be retired. Cowlitz also believes that subparagraphs (a) and (b) are redundant; subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. However, Cowlitz also believes that removing (a) will complicate FERC's acceptance of this exclusion. Therefore this should be addressed in Phase 2. Cowlitz is confused by the use of the term "non-retail generation" in subparagraph (a). From context,

Organization	Yes or No	Question 9 Comment
		we believe the SDT considers "non-retail generation" to mean generation that is not connected through a dedicated step-up transformer to voltages at or above 100 kV, is consumed by the retail customer's load, or consumed within the LN rather than being physically exported and sold to markets outside the LN. Cowlitz suggests that the SDT rewrite subparagraph (a) to read "Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusion I3 and does not have any generation net power flow greater than 75 MVA across any single retail revenue metering point into an Element operated at or greater than 100 kV."
Response: The SDT considered the disposition of the word "transmission" in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element". The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort; however, to satisfy the Commission's directives in Order 743 and 743-A in a timely fashion, it is necessary to use a generation threshold that is consistent with the in-force Statement of Compliance Registry Criteria. No change made. Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. The SDT appreciates the suggested language change for item Exclusion E3.a. The SDT considered this language, and has determined that retention of the existing (non-retail) generation limit of 75 MVA is essential to meet the Commission's order in the first phase of Project 2010-17. No change made.		
National Grid	Yes	We agree with Exclusion E3 on local networks, however we suggest this clarification to the first sentence: A group of contiguous transmission Elements operated at or above 100kV but less than 300kV that distribute power to Load rather than transfer bulk power across the interconnected system under normal ("all-lines-in") configuration and conditions. We also suggest the following clarification to part c, so that the IROLs don't get overlooked: Not part of Flowgate, transfer path, or an Interconnected Reliability Operating Limit (IROL). The LN does not contain a monitored Facility of a permanent Flowgate in the Easter Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec

Organization	Yes or No	Question 9 Comment
		Interconnection, and is not a monitored Facility included in an IROL.
Response: The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made. The SDT believes it has adequately and concisely addressed the IROL characteristic with Exclusion E3.c. No change made.		
Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative	Yes	PNGC strongly supports the exclusion of Local Networks ("LNs") from the BES. The conversion of radial systems to local networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers would ultimately benefit.PNGC also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, PNGC supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." PNGC supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. PNGC believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making

Organization	Yes or No	Question 9 Comment
(CCEC) Central Electric Cooperatve (CEC) Clearwater Power Company (CPC) Consumer's Power Inc. Douglas Electric Cooperative (DEC) Fall River Rural Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (LEC) Northern		a "group of contiguous transmission Elements operated at or above 100kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. PNGC also believes that subparagraphs (a) and (b) are redundant, because whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system - power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the

Organization	Yes or No	Question 9 Comment
Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Umatilla Electric Cooperative (UEC)		system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to be the equivalent of generation that is located behind the retail meter, usually but not always owned by the customer and used to serve the customer's own load. We therefore suggest that the SDT replace the term "non-retail generation" with "generation located behind the retail customer's meter." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. PNGC also believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable

Organization	Yes or No	Question 9 Comment
		transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity - the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is

Organization	Yes or No	Question 9 Comment
		interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours, a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN." Finally, we note that the LN exclusion must not operate in any way as a substitution for the statutory prohibition on including "facilities used in the local distribution of electric energy" in the BES. Therefore, even with the LN exclusion, the SDT must retain this statutory language in the core definition of the BES, as discussed in our answer to Question One. If a certain piece of equipment is a "facility used in the local distribution of electric energy," then it is not part of the BES in the first instance, and so consideration of the LN Exclusion, or of any other Exclusion, any Inclusion, or any Exception, would be both unnecessary and uncalled for.
Response: The SDT considered the disposition of the word "transmission" in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element". The SDT continues to believe that it is necessary to establish a limit on the allowable quantity of generation that may be significant to the reliable operation of the surrounding interconnected transmission system. Please note that the issues surrounding the appropriate generation threshold, among other topics, will be taken up in Phase 2 of this BES definition effort. No change made. The intent of the SDT in structuring the language of Exclusion E3.b was to ensure two things: first that power flow is always in the direction from the BES toward the LN, and second that the LN is not used for "wheel-through" transactions. The suggestion in your comment places an unnecessary qualifier on the "wheel-through" whereby it would only apply if the transaction were serving "loads". The SDT believes this qualifier would inadvertently allow a wholesale transaction to be scheduled through the subject facilities, and this is contrary to the intent of the exclusion provision of Exclusion E3.b. Given the high degree of certainty and assurances regarding the high priority of the Phase 2 efforts on this Project 2010-17, for the purpose of completing the posting of the definition in the first		

Organization	Yes or No	Question 9 Comment
phase of the Project, the SDT believes that it is preferable to continue to use the specific value of 75 MVA within item Exclusion E3.a. No change made. Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. The SDT believes that the existing phrase in Exclusion E3.a "and its underlying Elements" has sufficient clarity and meets the intent of the exclusion with brevity. No change made. The SDT acknowledges the work of Project 2010-07 "GO-TO" task force in identification of various NERC Standard requirements that would promote reliability of the generator-to-transmission interface. This Project 2010-17 SDT believes that the body of work in Project 2010-07 is most pertinent to generator lead-line facilities, rather than the looped and parallel-operated facilities contemplated in Exclusion E3, and therefore, the SDT finds it necessary to continue to require all of the characteristics of Exclusion E3 to be met in order to qualify for exclusion from the BES. No change made. The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made. The SDT has retained the statutory language "facilities used in the local distribution of electric energy" in the core definition section.		
Massachusetts Department of Public Utilities	Yes	The MA DPU generally supports this exclusion but believes it is too narrow. As noted in the response to question 7, Exclusion E3 should likely allow a higher level of aggregate generation MVA on a Local Network. In addition, local networks should not necessarily be ineligible for Exclusion E3 simply because an amount of power may transfer out of the network at times. NERC's draft technical network exclusions document should be amended such that local networks would be permitted to qualify for network exclusions under E3 if power flowing out of the network is minimal and would not likely adversely impact the BES.
Response: The SDT has determined that it must retain the 75 MVA threshold on generation allowed within a qualifying LN in order to remain consistent with the existing ERO Statement of Compliance Registry Criteria. There has not been sufficient technical justification to this point that would support a change from this threshold; however, such threshold will be considered in Phase 2 of		

Organization	Yes or No	Question 9 Comment
this Project 2010-17. No change made. The SDT feels strongly that in order for a network to qualify for exclusion under the Exclusion E3 section of the definition, there must be strict bounds and limits placed on the characteristics of the candidate facilities. Allowances for minor "out-flow" from the local network, or "minimal" flow, as suggested in this comment, will lead to an inconsistent application of the definition and therefore, a lack of bright-line quality in the definition. Situations such as what is proposed in this comment can be referred to the Exception Process for possible exclusion from the BES. No change made.		
The Dow Chemical Company	Yes	Dow is uncertain whether end user-owned, behind-the-meter delivery facilities of the sort it has described above would fall within the scope of the core BES definition proposed by NERC. To date, none of the Regional Entities has suggested that Dow should register as a Transmission Owner or Transmission Operator with respect to any of these Dow-owned delivery facilities. If a literal application of the proposed BES Definition would, because of their voltage level or for any other reason, include such facilities, then Dow has an interest in assuring that the E3 exclusion for "local network" facilities is structured to embrace them. To that end, Dow would propose, first, the elimination of the 300 Kv cap for these facilities. Dow has systems that operate above 300 Kv due solely to the capacity of the lines to supply power over the distance required at our large manufacturing sites. Second, for the same reasons discussed above (in response to question #7), the phrase "do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating)" in "a)" should be changed to "the net capacity provided to the transmission grid does not exceed 75 MVA." Third, the introductory phrase in "b)" -- "Power flows only into the LN" -- is inconsistent with the recognition in "a)" (as amended pursuant to Dow's above suggestion) that power may flow out of an LN and into the transmission grid if there is generation connected to the LN and the 75 MVA limit is observed. Dow recommends either deleting the introductory clause or correcting it to read "Power is not transferred through the LN."
Response: The SDT does not agree with the removal of the 300 kV cap that limits the qualification of a group of facilities for local network exclusion. The SDT feels that an upper bound is essential to prevent inappropriate exclusions of facilities that may be important to the reliable operation of the interconnected transmission system. The Exception Process is available for specific		

Organization	Yes or No	Question 9 Comment
circumstances where a 300kV cap is problematic. The SDT evaluated your comment in regard to Question 7 (Radial) as well as to the local network exclusion, and has concluded that both exclusions must necessarily be based on the gross aggregate nameplate of the generation connected within the candidate systems. The approach that is suggested in your comment could result in significant amounts of generation existing within the excluded area. It remains the intent of the SDT to uphold a 75 MVA limit on the connected (non-retail) generation within a qualifying LN and, at the same time, reinforcing that power flow is always from the BES toward the LN at all points of connection. We believe these characteristics are essential in order to ensure that qualifying LN facilities are not being relied upon for reliable operation of the interconnected transmission system.		
Springfield Utility Board	Yes	SUB strongly supports the exclusion of Local Networks from the BES. SUB particularly agrees with the addition of, "LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to customer Load and not to accommodate bulk power transfer across the interconnected system." language to the draft E3 Exclusion, as well as the LN characterization being more clearly defined.SUB is concerned that the E3 Exclusion does not specify that these power flows would be "under normal operating conditions" and specify if all power flow is considered. SUB recommends that unscheduled power flow should not be considered, but that it is applicable only to scheduled power flow. While SUB supports the exclusion of LNs from the BES, we believe there is additional work that needs to done regarding the Local Network Exclusion Technical Justification. Without specific parameters, determining inclusions and exclusions will be left to the discretion of too many. This will create ambiguity and inconsistency of application.
Response: The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made. The suggestion that only the "scheduled" portion of flow be considered under Exclusion E3.b would ignore the physical impact that the		

Organization	Yes or No	Question 9 Comment
candidate network has on the surrounding interconnected transmission system; therefore, the SDT must retain the provisions of Exclusion E3.b. However, the SDT has made a clarifying change to the exclusion language to address various comments that were received. **E3.b**: Power flows only into the LN~~:~~ and ~~T~~the LN does not transfer energy originating outside the LN for delivery through the LN; The SDT does not intend to perform additional work on the technical justification document at this time. It was not intended to have any specific thresholds or parameters from which exclusions would be granted; it merely illustrates the negligible effects that a sample local network has upon the flows in the surrounding transmission network. No change made.		
Michigan Public Power Agency Clallam County PUD No.1 Snohomish County PUD Kootenai Electric Cooperative	Yes	MPPA and its members strongly supports the categorical exclusion of Local Networks ("LNs") from the BES. We believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement, discussed in our response to Question 1, to exclude all facilities used in the local distribution of electric power. LNs are, of course, probably the most common form of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers will ultimately benefit from the path chosen by the SDT.MPPA and its members also support specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, MPPA supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." Snohomish supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either

Organization	Yes or No	Question 9 Comment
		the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. MPPA believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making a "group of contiguous transmission Elements operated at or above 100 kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100 kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. MPPA also believes that subparagraphs (a) and (b) are redundant in the sense that whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LDN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system - power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN.

Organization	Yes or No	Question 9 Comment
		While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to mean generation that is used by retail customers located within a LN rather than being exported and sold on wholesale markets outside the LN. We therefore suggest that the SDT replace the phrase "non-retail generation" with the phrase "generation sold in wholesale markets and transmitted outside the LN." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. Finally, MPPA believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer

Organization	Yes or No	Question 9 Comment
		Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity - the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and

Organization	Yes or No	Question 9 Comment
		unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN."

Response: The SDT considered the disposition of the word "transmission" in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element".

The SDT continues to believe that it is necessary to establish a limit on the allowable quantity of generation that may be significant to the reliable operation of the surrounding interconnected transmission system. Please note that the issues surrounding the appropriate generation threshold, among other topics, will be taken up in Phase 2 of this BES definition effort. No change made.

The intent of the SDT in structuring the language of Exclusion E3.b was to ensure two things: first that power flow is always in the direction from the BES toward the LN, and second that the LN is not used for "wheel-through" transactions. The suggestion in your comment places an unnecessary qualifier on the "wheel-through" whereby it would only apply if the transaction were serving "loads". The SDT believes this qualifier would inadvertently allow a wholesale transaction to be scheduled through the subject facilities, and this is contrary to the intent of Exclusion E3.b. Given the high degree of certainty and assurances regarding the high priority of the Phase 2 efforts on Project 2010-17, for the purpose of completing the posting of the definition in the first phase of the Project, the SDT believes that it is preferable to continue to use the specific value of 75 MVA within ExclusionE3.a. No change made.

Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.

The SDT believes that the existing phrase in ExclusionE3.a "and its underlying Elements" has sufficient clarity and meets the intent of

Organization	Yes or No	Question 9 Comment
the exclusion with brevity. No change made. The SDT acknowledges the work of the Project 2010-07 "GO-TO" task force in identification of various NERC Reliability Standard requirements that would promote reliability of the generator-to-transmission interface. The Project 2010-17 SDT believes that the body of work in Project 2010-07 is most pertinent to generator lead-line facilities, rather than the looped and parallel-operated facilities contemplated in the Exclusion E3, and therefore, the SDT finds it necessary to continue to require all of the characteristics of Exclusion E3 to be met in order to qualify for exclusion from the BES. No change made. The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.		
NESCOE	Yes	NESCOE generally supports this exclusion but believes it is too narrow. As noted in the response to question 7, Exclusion E3 should allow a higher level of aggregate generation MVA on a Local Network (at least 300 MVA). In addition, NESCOE believes that local networks should not necessarily be ineligible for Exclusion E3 simply because an amount of power may transfer out of the network at times. NERC's draft technical network exclusions document should be amended such that local networks would be permitted to qualify for network exclusions under E3 if power flowing out of the network is minimal and would not likely adversely impact the BES. For example, transfers of less than or equal to 100 MVA should not have any adverse impact on the BES. The draft technical network exclusions document should be amended to state that transfers of 100 MVA MVA into the BES from the local distribution network are acceptable. The 100 MVA limit suggested here represents 25% of the rated value of a typical 345/115 substation (typically on the order of 400 MVA). Rarely does more than a fraction of the rated MVA flow from the low voltage side to the high voltage side. An allowance of 100 MVA represents a flow level will have no significant impact to the interconnected bulk power network.
Response: The SDT feels strongly that in order for a network to qualify for exclusion under the Exclusion E3 section of the definition, there must be strict bounds and limits placed on the characteristics of the candidate facilities. Allowances for minor "out-flow" from the local network, or "minimal" flow, as suggested in this comment, will lead to an inconsistent application of the definition and therefore, a lack of bright-line quality in the definition. Situations such as what is proposed in this comment can be referred to the		

Organization	Yes or No	Question 9 Comment
Exception Process for possible exclusion from the BES. No change made.		
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative	Yes	We would agree in principle with the LN exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN "under normal operating conditions". Also, the correct BES threshold level should be 200 kV rather than 100 kV. Finally, the nomenclature of Flowgate (FG) components appears to be confused. AECI believes E3 c) should be changed to read "contingent Facility" rather than "monitored Facility". Although unspecified within the NERC Glossary, we believe FG monitored Facilities are typically the impacted facilities in danger of overload, while the contingent facilities are those which, if lost, would cause the monitored Facility to become overloaded. As currently written, a formerly qualified LN could later become disqualified due to an external entity's ill-designing a parallel EHV line, thereby causing one or more potential (N-1) overloaded Facility within that LN. Further, operational FG loading conditions are often relieved by opening-up LN elements near the monitored Facility, with little impact upon BES reliability, yet with lesser reliability to the underlying LN loads. This implies that the monitored elements of Flowgates are typically non-essential to the BES reliability. AECI can support "contingent" FG Facilities disqualifying a LN claim, but it cannot support "monitored" Facilities as disqualifying factors for rejecting a LN claim.
Response: The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made. The SDT appreciates the suggestion of an alternate BES threshold level of 200 kV rather than 100 kV; however, in the absence of a strong technical justification, the SDT must retain the 100 kV threshold in the core definition. No change is being made at this time		

Organization	Yes or No	Question 9 Comment
but all threshold values will be examined in Phase 2. The SDT continues to believe that “monitored” is the most appropriate modifier of “Flowgate” in the text of Exclusion E3.c. Exclusion E3.c is intended to identify the elements that are part of these Flowgates, not necessarily those whose contingency can affect the Flowgate. The elements comprising Flowgates (and major transfer paths in the West) must continue to be prohibited from exclusion via Exclusion E3.c, since these facilities are more likely to be used in the transfer of bulk power than not; therefore, they are more characteristic of serving an interconnected transmission function than distribution. No change made.		
Southern Company Generation	Yes	What does the term "non-retail generation" mean? Can the term "non-retail generation" in E3a be changed to simply "generation."
Response: Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. The SDT has intentionally utilized the term “non-retail generation” in Exclusion E3.a in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.		
Electricity Consumers Resource Council (ELCON)	Yes	This Exclusion and Exclusion E1 aid in the delineation of local distribution versus transmission. We suggest three clarifying revisions. First, the phase “but less than 300 kV” should be deleted. Many large industrial facilities have on-site distribution systems that operate above 300 kV due solely to the capacity of the lines to supply power over the distance required at the manufacturing sites. Second, for the same reasons discussed above (in response to question #7), the phrase “do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating)” in “a)” should be changed to “the net capacity provided to the transmission grid does not exceed 75 MVA.” Third, the introductory phrase in “b)” -- “Power flows only into the LN” -- is inconsistent with the recognition in “a)” that power may flow out of an LN and into the transmission grid if there is generation connected to the LN and the 75 MVA limit is observed. We recommend either deleting the introductory clause or correcting it to read “Power is not transferred through the LN.”
Response: The SDT does not agree with the removal of the 300 kV cap that limits the qualification of a group of facilities for local		

Organization	Yes or No	Question 9 Comment
		network exclusion. The SDT feels that an upper bound is essential to prevent inappropriate exclusions of facilities that may be important to the reliable operation of the interconnected transmission system. The Exception Process is available for specific circumstances where a 300 kV cap is problematic. No change made. The SDT evaluated your comment in regard to Question 7 as well as to the local network exclusion, and has concluded that both exclusions must necessarily be based on the gross aggregate nameplate of the generation connected within the candidate systems. The approach that is suggested in your comment could result in significant amounts of generation existing within the excluded area. No change made. It remains the intent of the SDT to uphold a 75 MVA limit on the connected (non-retail) generation within a qualifying LN and, at the same time, reinforcing that power flow is always from the BES toward the LN at all points of connection. The SDT believes these characteristics are essential in order to ensure that qualifying LN facilities are not being relied upon for reliable operation of the interconnected transmission system. However, the SDT has clarified Exclusion E3.b in response to industry comments: **E3.b**: Power flows only into the LN~~:~~ and ~~T~~the LN does not transfer energy originating outside the LN for delivery through the LN;
Transmission Access Policy Study Group	Yes	TAPS supports the exclusion of Local Networks from the BES. Such systems are generally not "necessary for operating an interconnected electric transmission network," the standard in Orders 743 and 743-A. We have several suggestions to clarify the proposed language for this Exclusion. TAPS' comments in response to Question 7 above regarding "points of connection at 100kV or higher" and "non-retail generation" are applicable to Exclusion E3 as well. The term "bulk power," which occurs twice in Exclusion E3, is vague and could be read incorrectly as a reference to the statutorily-defined "bulk-power system," which is not, we think, the SDT's intent. The word "bulk" should be deleted, so that the Exclusion simply refers to transferring "power" across the interconnected system. TAPS raised this concern in response to the last posting of the BES Definition. In response, the SDT removed some instances of "bulk power" but left the remaining two, stating that "the SDT believes it provides conceptual value to the exclusion principle." The SDT does not state what conceptual value the term is intended to provide; on the assumption that it relates to a distinction between transferring power from local generation to serve local load, and transferring power over longer distances, TAPS suggests, as an alternative to simply deleting the word "bulk," that the Exclusion be revised to refer to "transfers of power from non-LN generation to non-LN load."Exclusion E3(c) states: "Power flows only into the LN: The LN does not transfer energy

Organization	Yes or No	Question 9 Comment
		originating outside the LN for delivery through the LN." This statement is unclear because the two parts mean different things. TAPS proposes rewriting this sentence to state: "Power flows only into the LN, that is, at each individual connection at 100 kV or higher, the pre-contingency flow of power is from outside the LN into the LN for all hours of the previous 2 years" to help clarify the intent. Two years is suggested because it is the time period set out in the draft exception application form for which an applicant should state whether power flows through an Element to the BES.
Response: See response to Q7. The SDT prefers to continue the use of the word "bulk" in the core paragraph of Exclusion E3. The SDT believes this clarifies an important conceptual idea to the industry, and the term "bulk" is not intended to be definitional in this context. This paragraph merely provides an introduction to the concept of the local network, and retaining the term "bulk" conveys the concept effectively. The lettered sub-items under the core paragraph are the prescriptive and precise characteristics that the industry will use to determine qualification for exclusion under Exclusion E3. No change made. The SDT prefers not to add demonstration criteria, such as the suggestion to provide a minimum of 2 years worth of data, within the text of the BES definition. The SDT believes the language, particularly the word "always" adds sufficient clarity. No change made.		
Florida Municipal Power Agency	Yes	: FMPA supports the exclusion of Local Networks from the BES. Such systems are generally not "necessary for operating an interconnected electric transmission network," the standard in Orders 743 and 743-A. However, we have several suggestions to clarify the proposed language for this Exclusion. Exclusion E3(c) states: "Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN." This statement is unclear because the two parts mean different things. FMPA proposes rewriting this sentence to state: "Power flows only into the LN, that is, at each individual connection at 100 kV or higher, the pre-contingency flow of power is from outside the LN into the LN for all hours of the previous 2 years" to help clarify the intent. Two years is suggested because it is the time period set out in the draft exception application form for which an applicant should state whether power flows through an Element to the BES. FMPA' comments in response to Question 7 above regarding "points of connection at 100kV or higher" and "non-retail generation" are applicable to Exclusion E3 as well. The term "bulk power," which occurs twice in Exclusion E3, is vague and could be read incorrectly as a

Organization	Yes or No	Question 9 Comment
		reference to the statutorily-defined "bulk-power system," which is not, we think, the SDT's intent. The word "bulk" should be deleted, so that the Exclusion simply refers to transferring "power" across the interconnected system. FMPA raised this concern in response to the last posting of the BES Definition. In response, the SDT removed some instances of "bulk power" but left the remaining two, stating that "the SDT believes it provides conceptual value to the exclusion principle." The SDT does not state what conceptual value the term is intended to provide; on the assumption that it relates to a distinction between transferring power from local generation to serve local load, and transferring power over longer distances, FMPA suggests, as an alternative to simply deleting the word "bulk," that the Exclusion be revised to refer to "transfers of power from non-LN generation to non-LN load."
Response: Exclusion E3.b was intended to be a combination of two similar properties when it was drafted for the second posting of the BES definition. The SDT has received a number of comments indicating that these are two separate and distinct concepts, and has revised Exclusion E3.b to provide more clarity. **E3.b**: Power flows only into the LN~~:~~ and ~~T~~the LN does not transfer energy originating outside the LN for delivery through the LN; The SDT prefers not to add demonstration criteria, such as the suggestion to provide a minimum of 2 years worth of data, within the text of the BES definition. The SDT believes the language, particularly the word "always" adds sufficient clarity. No change made. See response to Q7. The SDT prefers to continue the use of the word "bulk" in the core paragraph of Exclusion E3. The SDT believes this clarifies an important conceptual idea to the industry, and the term "bulk" is not intended to be definitional in this context. This paragraph merely provides an introduction to the concept of the local network, and retaining the term "bulk" conveys the concept effectively. The lettered sub-items under the core paragraph are the prescriptive and precise characteristics that the industry will use to determine qualification for exclusion under Exclusion E3. No change made.		
SERC Planning Standards Subcommittee	Yes	The term "non-retail generation" in E3a should be changed to simply "generation."
Response: The SDT has intentionally utilized the term "non-retail generation" in Exclusion E3.a in order to specifically isolate that		

Organization	Yes or No	Question 9 Comment
generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation from obtaining this exclusion. No change made.		
Balancing Authority Northern California	Yes	It is preferred to hold reference to gross nameplate rating/threshold values until generation technical justification is completed as part of Phase 2; these studies should apply to any real or reactive power threshold reference. For Exclusion E3-b using the phrase "[p]ower flows only into the LN" is too restrictive. An allowable MW threshold of LN power producing resources should be deferred to the Phase 2 BES technical analysis. Where no generation is present in the LN, it is recommended that an allowance for residual flow through the LN.
Response: The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort; however, to satisfy the Commission's directives in Order 743 and 743-A in a timely fashion, it is necessary to use a generation threshold that is consistent with the in-force Statement of Compliance Registry Criteria. No change made. The SDT feels strongly that in order for a local network to qualify for exclusion under the Exclusion E3 section of the definition, there must be strict bounds and limits placed on the characteristics of the candidate facilities. Allowances for minor "out-flow" from the local network, or "minimal" flow, as suggested in this comment, will lead to an inconsistent application of the definition and therefore, a lack of bright-line quality in the definition. Situations such as what is proposed in this comment can be referred to the Exception Process for possible exclusion from the BES. No change made.		
Westar Energy	Yes	
Redding Electric Utility	Yes	
City of Redding	Yes	
Farmington Electric Utility	Yes	

Organization	Yes or No	Question 9 Comment
System		
Oncor Electric Delivery Company LLC	Yes	
Utility Services, Inc.	Yes	
LCRA Transmission Services Corporation	Yes	
Memphis Light, Gas and Water Division	Yes	
Harney Electric Cooperative, Inc.	Yes	HEC believes that local networks should be excluded from the BES and agrees with exclusions to the definition.
PSEG Services Corp	Yes	
Puget Sound Energy	Yes	
American Electric Power	Yes	

Organization	Yes or No	Question 9 Comment
NV Energy	Yes	
Oregon Public Utility Commission Staff	Yes	
Z Global Engineering and Energy Solutions	Yes	
Chevron U.S.A. Inc.	Yes	This provision complements E1 in defining the difference between distribution and transmission
Metropolitan Water District of Southern California	Yes	
Duke Energy	Yes	
Idaho Falls Power	Yes	We support the exclusion as drafted.
FirstEnergy Corp.	Yes	
Exelon	Yes	
Western Area	Yes	

Organization	Yes or No	Question 9 Comment
Power Administration		
IRC Standards Review Committee	Yes	
Texas RE NERC Standards Subcommittee	Yes	This Exclusion and Exclusion E1 aid in the delineation of distribution versus transmission.
WECC Staff	Yes	
Southwest Power Pool Standards Review Team	Yes	
BGE	Yes	No comment.
Response: Thank you for your support.		

10. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E4 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices. The comments received identified overwhelming support of Exclusion E4 as written.

Some commenters questioned the use of the word 'retail' in Exclusion E4. The SDT determined that retention of this word is important and correct. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the Load side of a customer meter) and would otherwise be included via the core definition and/or Inclusion I5.

Other commenters proposed adding the same threshold qualification language contained in other exclusions. Using a threshold for inclusion of non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

No changes were made to the definition as a result of these comments.

Organization	Yes or No	Question 10 Comment
Westar Energy	No	This particular Exclusion doesn't address the qualifier as to the impact to the BES. We believe the qualification language in E2, in regards to behind the meter generation, should also be included in Exclusion E4 for clarification purposes.

Organization	Yes or No	Question 10 Comment
Southwest Power Pool Standards Review Team	No	This particular Exclusion doesn't address the qualifier as to the impact to the BES. We request that it emulate the language provided for E2 (behind the meter gen) and classified for this specific exclusion.
Response: Using a threshold for inclusion of non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
ISO New England Inc	No	The term "retail customer" is unclear and will lead to confusion. This exclusion should be removed as there are many instances where a generator may be using the reactive power device to meet other interconnection requirements and the reactive device should be held to the same BES requirements as the generator.
Response: The SDT team considered the disposition of the word "retail" in the context of E4, and determined that retention of this word is important and correct. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter). No change made. Exclusion E4 is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter) and would otherwise be included via the core definition and/or Inclusion I5. No change made.		
Central Maine Power Company	No	Consider using other wording to replace "retail"

Organization	Yes or No	Question 10 Comment
Response: The SDT team considered the disposition of the word “retail” in the context of E4, and determined that retention of this word is important and correct. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter). No change made.		
Metropolitan Water District of Southern California	No	Exclusion 4 appears to limit the devices just to retail customers. However, any end-user load, including wholesale or retail, should be included. NERC's Glossary of Terms uses the phrase "end-use customer", not retail customers to describe loads. MWDSC recommends that Exclusion 4 be changed as follows: E4 - Reactive Power devices owned and operated by an end-use customer solely for its own use.
Response: The SDT team considered the disposition of the word “retail” in the context of E4, and determined that retention of this word is important and correct. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter). No change made.		
The Dow Chemical Company	No	The term “solely” should be replaced by the term “primarily”. All devices to control Reactive power behind-the-meter arguably provide some benefit to the transmission grid.
Response: The SDT does not believe these changes provide additional clarity. No change made.		
LCRA Transmission Services Corporation	No	This exclusion conflicts with inclusion item I5. Which one takes priority?
Response: The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: “Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit		

Organization	Yes or No	Question 10 Comment
breaker, bus section, or transmission line. An element may be comprised of one or more components. “ Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
Ameren	No	a)Reactive Power devices connected 100 kV and above applied for the purpose of voltage support to local load and/or local area network should also be excluded.
Response: Reactive Power devices connected at 100kV and above are included in the core definition. Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner.		

Organization	Yes or No	Question 10 Comment
The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element as defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind-the-retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		

Organization	Yes or No	Question 10 Comment
An entity can always request an exception through the Exception Process. No change made.		
Tillamook PUD	No	Any device that might be excluded under E4 has already been included per I5. Unless I5 is removed, or rewritten as suggested above; this exclusion will exclude nothing.
Central Lincoln	No	Please see Central Lincoln's answers to Q1 and Q6. Any device that might be excluded under E4 has already been included per I5. Unless I5 is removed, or rewritten as suggested above; this exclusion will exclude nothing.
Northern Wasco County PUD	No	Please see Northern Wasco County PUD's answers to Q1 and Q6. Any device that might be excluded under E4 has already been included per I5. Unless I5 is removed, or rewritten as suggested above; this exclusion will exclude nothing.

Response: Please see responses to Q1 and Q6.

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element as defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion

Organization	Yes or No	Question 10 Comment
language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind-the-retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices. No change made.		
Northeast Power Coordinating Council	No	Consider using other wording to replace "retail". The statement "owned or operated by the retail customer" is confusing and arguably inaccurate and should be revised. Refer to comments related to reactive resources for Question 6 regarding Inclusion I5. Retail and non-retail generation should be defined.
Response: The SDT team considered the disposition of the word "retail" in the context of E4, and determined that retention of this word is important and correct. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter). No change made. Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.		
American Electric Power	No	Does this refer to distribution level or reactive power resources? If so, it would appear these are not included as part of I5. Or instead, does this refer to customer equipment at BES voltages? If it is the latter, we recommend E4 be reworded to state "Reactive

Organization	Yes or No	Question 10 Comment
		Power devices that meet the Inclusion criteria of I5 that are owned and operated by the retail customer solely for its own use..."

Response: Distribution devices are not included.

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.

Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.

In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the

Organization	Yes or No	Question 10 Comment
interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative	Yes	Ownership is irrelevant, so "owned and operated by the retail customer solely for its own use", should be replaced by "owned and operated solely in conjunction with specific industrial customer loads."
Response: The SDT does not believe this change provides additional clarity. No change made.		
NESCOE	Yes	While we are generally supportive of this exclusion, the term "retail" needs to be clarified (i.e., are retail customers of all sizes intended to be excluded?).
Massachusetts Department of Public Utilities	Yes	While we are generally supportive of this exclusion, the term "retail" needs to be clarified (i.e., are retail customers of all sizes intended to be excluded?).
Response: The SDT reviewed your comment and believes that 'retail' is the correct terminology. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter. No change made. Using a threshold for non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort.		
Long Island Power Authority	Yes	Exclusion should identify a maximum value.
Response: Using a threshold for non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort. No change made.		

Organization	Yes or No	Question 10 Comment
ExxonMobil Research and Engineering	Yes	The BES SDT should work on clarifying the differences between Inclusion I5 and Exclusion E4. The phrase "solely for its own use" in Exclusion E4 is vague and open to interpretation. It is unclear whether equipment, such as power factor correction facilities, surge capacitors located in motor terminal boxes and excitation capacitors installed for use by a motor located on the low side of a 138 kV primary transformer would be excluded from the BES.

Response: It is the intent of the SDT that distribution devises are not included in the BES.

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element as defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion

Organization	Yes or No	Question 10 Comment
I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind-the-retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made.		
Springfield Utility Board	Yes	Reactive power devices used to serve radial networks or Local Networks are often owned and operated by the registered entity (not the "retail customer") to address Area Network - wide reactive power issues. This language should read:"E4. Reactive power devices that are within a radial system excluded under E1 or within a local network excluded under E3" If the current draft language is left as it is, there will likely be a lot of unnecessary paperwork to exclude reactive power devices within radial system or local networks from the BES through the exclusion process. SUB suggests that the language in the E4 Exclusion be consistent with that in the I5 Inclusion.
Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "		

Organization	Yes or No	Question 10 Comment
Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
SERC OC Standards Review Group	Yes	
NERC Staff Technical Review	Yes	
SERC Planning Standards Subcommittee	Yes	
Florida Municipal Power	Yes	

Organization	Yes or No	Question 10 Comment
Agency		
WECC Staff	Yes	
Bonneville Power Administration	Yes	
Texas RE NERC Standards Subcommittee	Yes	This is a needed exception to Inclusion I5 as these reactive power resources are used by retail customers for power factor correction at their own facilities in order avoid imposed power factor penalties.
Balancing Authority Northern California	Yes	
ACES Power Marketing Standards Collaborators	Yes	
Dominion	Yes	
Pepco Holdings Inc and Affiliates	Yes	
Transmission Access Policy Study Group	Yes	
Electricity Consumers Resource Council (ELCON)	Yes	This is a needed exception to Inclusion I5 as these reactive power resources are used by retail customers for power factor correction at their own facilities in order avoid imposed power factor penalties.
Southern Company Generation	Yes	

Organization	Yes or No	Question 10 Comment
Tri-State Generation and Transmission Assn., Inc. Energy Management	Yes	
MRO NERC Standards Review Forum (NSRF)	Yes	
IRC Standards Review Committee	Yes	
Tennessee Valley Authority	Yes	
Hydro One Networks Inc.	Yes	
Tri-State GandT	Yes	
Western Area Power Administration	Yes	
Texas Industrial Energy Consumers	Yes	
PacifiCorp	Yes	
Southern Company	Yes	
FirstEnergy Corp.	Yes	
Exelon	Yes	
Michigan Public Power Agency	Yes	Yes, MPPA and its members support the revised language because retail reactive

Organization	Yes or No	Question 10 Comment
		devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Idaho Falls Power	Yes	We have no comments.
ReliabilityFirst	Yes	
Ontario Power Generation Inc.	Yes	
Central Hudson Gas and Electric Corporation	Yes	
City of Anaheim	Yes	
Chevron U.S.A. Inc.	Yes	
Duke Energy	Yes	
Clallam County PUD No.1	Yes	Yes, CLPD supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
NV Energy	Yes	
Z Global Engineering and Energy Solutions	Yes	
Consumers Energy	Yes	

Organization	Yes or No	Question 10 Comment
Puget Sound Energy	Yes	
Manitoba Hydro	Yes	
City of St. George	Yes	
Orange and Rockland Utilities, Inc.	Yes	
Blachly-Lane Electric Cooperative (BLEC)	Yes	BLEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Coos-Curry Electric Cooperative (CCEC)	Yes	CCEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Central Electric Cooperatve (CEC)	Yes	CEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Clearwater Power Company (CPC)	Yes	CPC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Snohomish County PUD	Yes	Yes, SNPD supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the

Organization	Yes or No	Question 10 Comment
		interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Consumer's Power Inc.	Yes	CPI supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Douglas Electric Cooperative (DEC)	Yes	DEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Fall River Rural Electric Cooperative (FALL)	Yes	FALL supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Lane Electric Cooperative (LEC)	Yes	LEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Lincoln Electric Cooperative (LEC)	Yes	LEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Northern Lights Inc. (NLI)	Yes	NLI supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from

Organization	Yes or No	Question 10 Comment
		the BES definition.
Okanogan County Electric Cooperative (OCEC)	Yes	OCEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Pacific Northwest Generating Cooperative (PNGC)	Yes	PNGC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Raft River Rural Electric Cooperative (RAFT)	Yes	RAFT supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
West Oregon Electric Cooperative	Yes	WOEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
PSEG Services Corp	Yes	
Hydro-Quebec TransEnergie	Yes	
Independent Electricity System Operator	Yes	
Umatilla Electric Cooperative (UEC)	Yes	UEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the

Organization	Yes or No	Question 10 Comment
		interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Memphis Light, Gas and Water Division	Yes	
Harney Electric Cooperative, Inc.	Yes	HEC agrees with E4.
Cowlitz County PUD	Yes	
Utility Services, Inc.	Yes	
National Grid	Yes	
Kansas City Power and Light Company	Yes	
Oncor Electric Delivery Company LLC	Yes	
Sacramento Municipal Utility District	Yes	
Georgia System Operations Corporation	Yes	
MEAG Power	Yes	
Farmington Electric Utility System	Yes	

Organization	Yes or No	Question 10 Comment
South Houston Green Power, LLC	Yes	
Portland General Electric Company	Yes	
City of Austin dba Austin Energy	Yes	
Kootenai Electric Cooperative	Yes	KEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
ATC LLC	Yes	
Redding Electric Utility	Yes	
City of Redding	Yes	
Tacoma Power	Yes	Tacoma Power supports the Exclusion E4 as currently written.
BGE	Yes	No comment.
Response: Thank you for your support.		

11. Are there any other concerns with this definition that haven't been covered in previous questions and comments remembering that the exception criteria are posted separately for comment?

Summary Consideration: Comments received for Question 11 were mostly re-statements of comments expressed in the previous questions. No changes were made to the core definition or Inclusions or Exclusions based solely on question 11 comments. However, changes were made to the Implementation Plan to clarify the compliance obligation date of the revised definition as shown below.

Some commenters have expressed frustration over the lack of high level guidance for the exception process. The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by

either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication.

Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result ofa sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved."

The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Finally, the SDT would point to the draft SAR for Phase 2 of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase 1 of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

Some comments were received about the lack of a cost benefit analysis with regard to revision to the definition. The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.

Several comments were received questioning how to apply the definition with the inclusions and exclusions. The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.

Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.

In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.

Finally, there were comments on the lack of a technical basis for the threshold values employed in the definition. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

Implementation Plan - Compliance obligations for all newly identified Elements included by the definition shall begin 24 months after the applicable effective date of the definition.

Organization	Yes or No	Question 11 Comment
SERC OC Standards Review Group	Yes	The definition of the BES is referenced in several existing standards and the Statement of Compliance Registry Criteria. The SERC OC standards Review Group is concerned how this revised definition will impact entity registration, i.e., how will the revised definition be integrated into the Compliance Registry Criteria. The implementation plan should include how the integration is going to occur. The Rules of Procedure exception process should be further defined or referenced in this definition."The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review Group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."
Southern Company	Yes	The definition of the BES is referenced in several existing standards and the Statement of Compliance Registry Criteria. Southern Companies are concerned how this revised definition will impact entity registration, i.e., how will the revised definition be integrated into the Compliance Registry Criteria. The implementation plan should include how the integration is going to occur. The Rules of Procedure exception process should be further defined or referenced in this definition.

Response: The revised definition of Bulk Electric System will be applied in the same manner as it is today. This is based on language contained in FERC Order No. 693, which states: "…the Commission will rely on the NERC definition of bulk electric system and NERC's registration process to provide as much certainty as possible regarding the applicability to and the responsibility of specific entities to comply with the Reliability Standards in the start-up phase of a mandatory Reliability Standard regime". As the SDT progresses through Phase 2 of the project, it is envisioned that the technical aspects contained in the definition and in the ERO Statement of Compliance Registry will be merged and ultimately incorporated into the definition of the Bulk Electric System. At that time the ERO Statement of Compliance Registry Criteria will be revised to point to the BES definition for the technical aspects in regards to BES Elements. No change made.

The Rules of Procedure exception process is referenced in the current draft version of the BES definition in a note which states: "Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process". No change made.

Organization	Yes or No	Question 11 Comment
Northeast Power Coordinating Council	Yes	Technical bases have not been provided for the proposed definition of the BES. Additionally, the cost impacts have not been assessed and weighed against thepotential benefits of this proposal. There is confusion arising from the construction and interactions of the Inclusion, and Exclusion sections. System diagrams, put in a separate guidance document, would help in understanding. The situation of using Exceptions to understand Exclusions must be avoided. Suggest consider incorporating Inclusions directly, and leave the Exclusions as is format wise. The Implementation period discusses a 24 month timeframe (the Order suggests 18) from when the standard becomes effective to begin Compliance obligations. If construction is required to become compliant or meet performance requirements with standards, or CIP Version 5 standards increase the amount of BES assets this will be insufficient when considering budgeting, designing, siting requirements, and permitting. Concern exists over the paradigm that the definition should “mirror” the NERC Compliance Registry Criteria regarding who is registered. Some RSC members believe the definition should drive any changes to the registry criteria and not the criteria perpetuating the thresholds in the definition. However, there is a need to confirm that Phase 2 of this project will address this. The Inclusions and Exclusions listed need clarifications and perhaps diagrams and accompanying guidelines to clarify and explain the intent.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These		

Organization	Yes or No	Question 11 Comment
		and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. The technical aspects of the definition have remained identical to the current definition and identical to the application of the ERO Statement of Compliance Registry Criteria and therefore do not require a technical justification to support maintaining the status-quo. The SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission. The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit

Organization	Yes or No	Question 11 Comment
		breaker, bus section, or transmission line. An element may be comprised of one or more components. “ Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. The development of a guidance document which contains generic diagrams is a portion of the overall project that the SDT feels is necessary to ensure the consistent application of the BES definition going forward. Therefore the SDT has determined that such a document will be developed during Phase 2 of the project. The SDT agrees that a potential reformatting of the definition (core, Inclusions and Exclusions) would improve the understanding of the application of the definition. However, these types of changes would require a significant amount of revisions to the current draft and could be seen as substantive in nature and prevent the SDT from moving forward with a recirculation ballot. This scenario would require a successive ballot which would place the project schedule in jeopardy of achieving a successful filing by January 25, 2012. The

Organization	Yes or No	Question 11 Comment
SDT will be exploring the reformatting of the definition (core, Inclusions and Exclusions) during Phase 2 of the project. In proposing a 24 month period in the Implementation Plan before the definition is applied in assessing compliance obligations, the SDT considered several activities that may require additional time to complete for an entity to become fully compliant. One of these activities is the development of transition plans in cases where significant issues may have been identified as potentially preventing an entity from meeting the compliance obligations within the 24 month period. These transition plans are to be developed by the Regional Entity and the Registered Entity in a cooperative manner to best address the identified concerns and establish an agreed to mitigation plan which results in full compliance by the Registered Entity. Phase 1 of the project, as explained above, is addressing Commission directives established in Order No. 743 within a relatively short time period. The SDT has decided to maintain the status quo with respect to applicability and the technical aspects contained in the ERO Statement of Compliance Registry Criteria as the prudent path to take to ensure a successful conclusion to Phase 1 of the project. The status quo was established in FERC Order No. 693, which states: "…the Commission will rely on the NERC definition of bulk electric system and NERC's registration process to provide as much certainty as possible regarding the applicability to and the responsibility of specific entities to comply with the Reliability Standards in the start-up phase of a mandatory Reliability Standard regime". As the SDT progresses through Phase 2 of the project, it is envisioned that the technical aspects contained in the definition and in the ERO Statement of Compliance Registry will be merged and ultimately incorporated into the definition of the Bulk Electric System. At which time the ERO Statement of Compliance Registry Criteria will be revised to point to the BES definition for the technical aspects in regards to BES Elements.		
Westar Energy	Yes	We believe a reference should be made to the ROP changes which also provide a mechanism whereby Elements may be excluded or included in the BES. Without that reference, the proposed definition is not all inclusive of all means for exclusions or inclusions. We would suggest the definition be expanded to say "Unless modified by the lists shown below or as provided by Appendix 5C of the NERC Rules of Procedure, all Transmission..." This comment was submitted in response to the original posting and the response received was that it was inadvertently left out and that it would be placed back in, but we don't see the reference in this draft of the definition.
Southwest Power Pool Standards Review Team	Yes	A reference needs to be made to the ROP changes which also provide a mechanism whereby Elements may be excluded/included in the BES. Without that reference the proposed definition does not completely include all means for exceptions/inclusions.

Organization	Yes or No	Question 11 Comment
		We would suggest the definition be expanded to say '...modified by the list shown below or as provided by Appendix 5C of the NERC Rules of Procedure. We submitted this in the original posting and the response received was that it was inadvertently left out and that it would be placed back in. We don't see the reference in this draft of the definition.
Response: The Rules of Procedure exception process is referenced in the current draft version of the BES definition in a note which states: "Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process". No change made.		
WECC Staff	Yes	Following are additional comments not covered in previous questions: o Under the section "Effective Dates": There may be confusion with the statement "Compliance Obligations for Elements included by definition shall begin 24 months after the applicable effective data of the definition." The phrase "included by definition" can be interpreted broadly. o WECC notes that a generation threshold of 75MVA is specified in Exclusions E1, E2, and E3. WECC believes that generation thresholds for Exclusions should be addressed in Phase 2 when generation thresholds for Inclusions are being considered.
Response: The complete statement from the Implementation Plan states: "Compliance obligations for all newly identified Elements included by the definition shall begin 24 months after the applicable effective date of the definition." The SDT's intent with this language is to identify newly identified BES Elements based on the revised definition. In other words, Elements that were not considered to be BES Elements based on the exiting definition of BES in the NERC Glossary of Terms, but are now included as a result of revising the exiting definition. The Implementation Plan has been clarified as shown: **Implementation Plan** - Compliance obligations for all newly identified Elements included by the definition shall begin 24 months after the applicable effective date of the definition. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a		

Organization	Yes or No	Question 11 Comment
change from the current values that exist through the application of the definition today. Phase 1 of the project is addressing Commission directives established in Order No. 743 within a relatively short time period. Therefore the decision to maintain the status quo as far as application of the definition and the technical aspects contained in the ERO Statement of Compliance Registry Criteria is the prudent path to take to ensure a successful conclusion to Phase 1 of the project. The status quo was established in FERC Order No. 693, which states: "…the Commission will rely on the NERC definition of bulk electric system and NERC's registration process to provide as much certainty as possible regarding the applicability to and the responsibility of specific entities to comply with the Reliability Standards in the start-up phase of a mandatory Reliability Standard regime". These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
ExxonMobil Research and Engineering	Yes	It would be worthwhile to explain the relationship (timeline) between the BES Definition implementation plan and the compliance implementation plan proposed in the BES RoP team's new Appendix 5C for the NERC Rules of Procedure.
Texas RE NERC Standards Subcommittee	Yes	It might be worthwhile to explain the relationship (timeline) between the BES Definition implementation plan and the compliance implementation plan proposed in the BES RoP team's new Appendix 5C for the NERC Rules of Procedure.
Response: For a newly identified Element(s) under the revised BES definition, the time period to be in full compliance with all applicable Reliability Standards is 24 months from the effective date of the definition. If the entity wishes to file for an exception of a newly identified Element(s) under the revised BES definition through the Rules of Procedure Exception Process, the entity will have 12 months from the effective date of the revised BES definition in which to file such a request. If the exception request is rejected or disapproved and the classification of the Element(s) remains as a BES Element, the Regional Entity and the owner of such a BES Element(s) shall agree to an Implementation Plan for full compliance obligations, which will establish an implementation date no earlier than the date established by the definition Implementation Plan (24 months from the effective date of the definition).		
Dominion	Yes	As a general policy, Dominion believes that attempting to precisely refine the definition of the BES may not be the best way to insure BES reliability. Instead,

Organization	Yes or No	Question 11 Comment
		industry effort should be focused on developing specific reliability standard requirements targeted toward solving problems that need to be addressed. Stated differently, every Element that could have an impact on the BES does not need to be included in the definition of the BES. NERC's Functional Model addresses the broad range of functions performed by the electric utility industry. When reliability concerns are identified and can best be addressed via a standard, modifying the requirements in that standard as applicable to that functional model should occur rather than attempting to modify the BES definition. Effort spent on developing specific reliability standard requirements mentioned above is superior to the industry engaging in definitional debates that do not address to the underlying reliability drivers. It is not essential that each reliability standard explicitly apply to each registered entity. The existing reliability requirements, as applied to the various functional entities require communication of information necessary to insure there are no reliability gaps, either directly or indirectly among the various entities. The existing standards typically have a hierarchy wherein: o Planners (PA, TP) receive information predominately from the owners (GO, DP, TO) and those that represent end-use customers (LSE and PSE); o Reliability entities (BA, RC and TOP) receive information predominately from operating entities (GOP, TOP) and those that represent end-use customers (LSE and PSE); o Planners provide reliability assessments to Reliability entities (BA, RC and TOP) and receive feedback on these reliability assessments (including validity of assumptions and result); and o Reliability entities (BA, RC and TOP) give instructions (including when necessary directives) to operating entities (GOP, TOP) and those that represent end-use customers (LSE and PSE). This is how the industry has historically operated, how it operates today and why the standards in place today are structured as they are. Reliability is best served when the standards themselves contain the appropriate requirements and are applied to either an Element or Facility or to the appropriate functional entity (DP, GO, GOP, LSE, TO, TOP, etc.). Definitional boundaries can create the potential for false positives in reliability and, in fact, may be detrimental to reliability in the longer term if they impose additional compliance burdens without closing a reliability gap.

Organization	Yes or No	Question 11 Comment
Response: The SDT acknowledges and appreciates the comments and recommendations associated with concepts for alternatives to the revision of the exiting definition of BES. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, and is bound to answering those directives in a manner that achieves industry consensus while remaining responsive to the language contained in the Orders. No change made.		
Pepco Holdings Inc and Affiliates	Yes	1) From the proposed BES definition and Exclusion E1 it is very clear that a 138-12kV distribution transformer serving radial load would not be considered part of the BES. However, suppose this transformer was connected to a position in a ring-bus or a breaker-and-a-half arrangement. Would the physical bus between the transformer high side terminals and the two breakers in the ring-bus, or breaker-and-a-half-bus, be considered part of the BES? They would be contiguous transmission elements (bus) operating at 138kV and supplying a radial distribution transformer. Also, tripping of this "radial" bus section would not interrupt any BES facilities, due to the station bus arrangement. As such, by definition and Exclusion E1 this 138kV bus section (element) would not be part of the BES, and no special exclusion filing would be required. Is this correct? However, take the same 138-12kV transformer but this time connected in a typical line-bus arrangement. The transformer by definition is not a BES element. As was the case above, the bus section between the transformer and the two breakers in the line-bus would be contiguous elements (bus) operating at 138kV and supplying a radial distribution transformer. Again, by definition and Exclusion E1 this bus section (element) would not be part of the BES. However, in this case tripping of the "radial" bus section would result in an interruption to the through path of the station, and could therefore interrupt the through flow on BES facilities. Does this make either the transformer, or its associated bus section, or both part of the BES? Based on the above examples, if the type of bus connection could influence whether an element is included in the BES or not, then additional language needs to be added to the definition (either as an Inclusion or Exclusion) to make this point clear. The BES definition needs to be specific enough to eliminate any confusion as to what is included, and what is not included, and thereby greatly minimize, if not eliminate, the need to request interpretations. A sample FAQ document, with examples, would be

Organization	Yes or No	Question 11 Comment
		extremely helpful, but should not be a substitute for a BES description which leaves little room for interpretation. 2) As seen from the above attempt to describe issues that need clarification, without a diagram to show specific situations, it is difficult to fully explain the concerns on ensuring that the BES definition stands on its own. Since the commenting process does not accommodate diagrams, PHI is sending separately a white paper with diagrams in an attempt to clarify the definition and make it as unambiguous as possible, leaving little room for interpretation. This paper may be helpful in developing a FAQ document. 3) The definition should state that it applies to a system "normal" configuration. It does not include maintenance or N-1 or any abnormal configurations. 4) There was no place on the comment forms to comment on the proposed Implementation Plan for the BES definition. So comments are included here. The proposed plan states "compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition." This is fine for most applications; however, there is an effect with PRC-005 compliance. PRC-005 (Protection System Maintenance Standard) requires that evidence for the last two maintenance intervals, in order to demonstrate that you are following the prescribed intervals in your maintenance plan. If additional facilities are brought into scope by the new BES definition, and the protection systems associated with these facilities were not previously maintained on the same interval as other BES facilities, then it may not be possible within the allotted 24 months to demonstrate the facilities were maintained within the prescribed intervals for BES facilities. An implementation plan at least as long as one full maintenance cycle would be required to assure compliance. This issue needs to be addressed or coordinated with PRC-005.
Response: 1) Exclusion E1 identifies a Radial system as "a group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher" (with additional criteria identified in parts E1a, b and c). The SDT interprets the language 'single point of connection' as a tapped point where the radial system originates. Therefore in a ring-bus, a breaker-and-a-half or a		

Organization	Yes or No	Question 11 Comment
typical line bus arrangement, the bus between the breakers and the breakers themselves are considered to be BES Elements. Under these circumstances the bus position is the 'single point of connection', not a contiguous group of Elements as suggested in the comment. 2) The development of a guidance document which contains generic diagrams is a portion of the overall project that the SDT feels is necessary to ensure the consistent application of the BES definition going forward. Therefore the SDT has determined that such a document will developed during Phase 2 of the project. 3) The SDT does not believe that system state affects the definition and therefore there is no need to declare that the definition only applies to normal state. No change made. 4) The BES definition Implementation Plan addresses the implementation of the revised definition. The SDT is not in a position to comment on compliance obligations associated with the Reliability Standards. However, in circumstances where data may not be available due to the revised definition requirements, the SDT expects an entity to work with its Regional Entity to come up with a plan to satisfy the obligation.		
Southern Company Generation	Yes	1) On page 1, the year of the anticipated date for the BOT adoption is correctly 2012. 2) We believe that the last two sentences of the first paragraph of the Background Information section of the 2nd draft of the definition document is incorrect. The statements read: " It should be noted that the revised definition does not address functional entity registration or standards requirements applicability. Those are separate issues." The definition of the BES that is approved will govern the scope of the equipment that is relevant to many of the reliability standards. This issue cannot be separated from the applicability of the requirements of the reliability standards. What is the purpose of creating a continent wide definition of the BES if is is not to provide instruction the enetties subject to the requirements of the standards? Refer to these sample standard requirements to see that this definition already plays a major part in the applicability of the requirements: EOP-005-2 R1, R4; EOP-006-2 R1; EOP-008-1 R1; FAC-008-1 R1.2; and PRC-005-1a for example - there are many others.
Response: 1) The SDT has made the revision to the BOT adoption date to correctly identify the year as 2012.		

Organization	Yes or No	Question 11 Comment
2) The SDT acknowledges that the linkage between the BES definition and the Reliability Standards may have been understated in the *Background Information* contained in the comment form. However, the goal of the SDT in addressing the Commission directives is to develop modifications to the definition in response to the directives without significantly expanding or contracting the scope of the BES and not drive registration changes in the industry. The SDT believes that they have met these goals, as evidenced by a detailed review of the NERC Reliability Standards. The SDT determined that potentially the scope of applicability of certain requirements may change due to the establishment of a bright-line definition. However, this potential change did not dictate a need for modification of the language contained in the requirements.		
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative	Yes	: AECI supports the bright-line concept, but believes the SDT should adopt a core voltage threshold of "200 kV or higher", and MVA capacity of "150 MVA or greater". A proper threshold is critical, because an inappropriately low threshold will divert significant industry attention and resource away from what truly benefits the BES reliability. (The number of facilities tend to rise more geometrically than linearly as the voltage threshold drops.)We believe that an evaluation of the transmission-line Surge Impedance Loading (SIL), at various kV levels, could provide technical insight as to why many industry planning engineers believe sub-230kV Facilities, in general do not belong within the BES. AECI suggests that the SDT consider a more consistent bright-line facility threshold of 150 MVA capability for all equipment. This would include transmission lines as well, where an Surge Impedance Loading analysis demonstrates that lines below 230 kV, can support 150 MVA flow up to 280 miles (applying 1.1 p.u. line-loadability of SIL, IEEE Transactions on Power Apparatus and Systems, Vol.PAS-98, No.2 March/April 1979, p 609, Figure 7),without additional reactive compensation. In comparison, single-conductor 138 kV lines, in same table, can support 150 MVA transfers no more than 50 miles, while 345 kV lines are capable of supporting 150 MVA transfers well over 600 miles.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These		

Organization	Yes or No	Question 11 Comment
and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
MRO NERC Standards Review Forum (NSRF)	Yes	NSRF recommends that the following statement be added after I5. If an element is not included based upon the core definition or I1 - I5, the elements is not consider to be a part of the BES.
Response: The SDT is attempting through the BES definition to identify facilities that should be classified as BES Elements. Adding a statement that emphasizes the opposite of what the definition is intending to accomplish would be redundant and would negate the efforts of the SDT to improve clarity and remove the ambiguity that currently exists the definition today. No change made.		
IRC Standards Review Committee	Yes	(1) We support a phased approach proposed in the draft supplemental SAR. Development of the revised BES definition is an important and complex undertaking. The product of this work is fundamental to establishing the applicability of NERC Reliability Standards. The issues identified for attention in Phase 2 of this project warrant careful investigation and as such allowing additional time to properly research and provide for stakeholders to vett them is justified. Specific to the assessment of raising the generator rating threshold from 20 MVA to 75 MVA per unit, we would point out that this needs to be looked at from a different perspective. Industry debates so far have been on the apparent lack of reliability contribution and economic benefits for keeping the threshold at 20 MVA. The former point implies that any negative reliability impact that could be contributed by a generator higher than 20 MVA but lower than 75 MVA could be negligible. Some examples of the standards that the 20-75 MVA units may need to comply with to ensure reliability are: o Voltage and frequency ride through capability o Voltage control (AVR, etc.) o Underfrequency trip setting o Protection relay setting coordination o Data submission for modeling; verification of capability and model A Venn diagram developed by an industry group shows that generators at 20 to 74.99 MVA account for about 13.8% of the total

Organization	Yes or No	Question 11 Comment
		installed capacity in the US. Out of this, 3.0% are currently deemed non-BES whereas the other 10.8% are BES. We do not know how the BES reliability may be affected if these 10.8% generators are no longer deemed BES facilities (after an increase of threshold to 75 MVA) and subject to compliance with NERC standards, including those mentioned above. An assessment from both a positive contribution and a negative impact viewpoints are thus required to aid the determination of the merit of raising the rating threshold. (2) The draft Implementation Plan for the BES definition states "Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition." We are concerned that the stated implementation period may be insufficient time to complete transition plans for newly identified BES Elements and Facilities, where those plans require procurement, installation and commissioning of additional equipment. We believe a period of 24 months may be more appropriate.
Response: 1) The SDT agrees with the commenter that the best opportunity to address the industry concerns associated with the technical aspects of the definition is through Phase 2 of the project. The SDT also agrees with the commenter in that any assessment utilized to determine the correct threshold for generating resources should be accomplished without any preconceived threshold value as a target for justification. The full scope of the assessments will be determined through a joint effort between the SDT and the appropriate NERC Technical Committee. 2) In proposing a 24 month period in the Implementation Plan before the definition is applied in assessing compliance obligations, the SDT considered several activities that may require additional time to complete for an entity to become fully compliant. One of these activities is the development of transition plans in cases where significant issues may have been identified as potentially preventing an entity from meeting the compliance obligations within the 24 month period. These transition plans are to be developed by the Regional Entity and the Registered Entity in a cooperative manner to best address the identified concerns and establish an agreed to mitigation plan which results in full compliance by the Registered Entity.		
Tennessee Valley Authority	Yes	The definition of the BES is referenced in several existing standards and the Statement of Compliance Registry Criteria. TVA is concerned with this revised definition's impact on entity registrations, i.e., how will the revised definition be integrated into the

Organization	Yes or No	Question 11 Comment
		Compliance Registry Criteria. The implementation plan should include how the integration is going to occur. The 24 month period for new facilities that are to become BES elements as a result of this definition is very important to successful implementation of the definition. An period shorter that 24 months would be very problematic for the industry.
Response: Phase 1 of the project, as explained above, is addressing Commission directives established in Order No. 743 within a relatively short time period. The SDT has decided to maintain the status quo with respect to applicability and the technical aspects contained in the ERO Statement of Compliance Registry Criteria as the prudent path to take to ensure a successful conclusion to Phase 1 of the project. The status quo was established in FERC Order No. 693, which states: "…the Commission will rely on the NERC definition of bulk electric system and NERC's registration process to provide as much certainty as possible regarding the applicability to and the responsibility of specific entities to comply with the Reliability Standards in the start-up phase of a mandatory Reliability Standard regime". As the SDT progresses through Phase 2 of the project, it is envisioned that the technical aspects contained in the definition and in the ERO Statement of Compliance Registry will be merged and ultimately incorporated into the definition of the Bulk Electric System. At which time the ERO Statement of Compliance Registry Criteria will be revised to point to the BES definition for the technical aspects in regards to BES Elements. The SDT agrees with the commenter in regards to the implementation time period of 24 months. In proposing a 24 month period in the Implementation Plan before the definition is applied in assessing compliance obligations, the SDT considered several activities that may require additional time to complete for an entity to become fully compliant. One of these activities is the development of transition plans in cases where significant issues may have been identified as potentially preventing an entity from meeting the compliance obligations within the 24 month period. These transition plans are to be developed by the Regional Entity and the Registered Entity in a cooperative manner to best address the identified concerns and establish an agreed to mitigation plan which results in full compliance by the Registered Entity.		
Hydro One Networks Inc.	Yes	o The definition of the Bulk Electric System (BES) is a foundational construct for the North American Electric Reliability Corporation (NERC). FERC Orders 743 and 743-A do not mandate a 100 kV approach. Instead, it states that a 100 kV bright line threshold is one approach to defining the BES. It further states that only "some" 115/138 kV facilities are necessary for the reliable operation of the bulk system. We believe that if one subset issue (such as 20 MVA vs. 75 MVA) of the entire definition, requires more

Organization	Yes or No	Question 11 Comment
		time and resources to arrive at the correct answer, the much larger and more fundamental issue of how to define BES should not have been dismissed without the appropriate analysis before another definition is proposed to be adopted by the ERO. o The proposed definition, in combination with other new and/or modified Reliability Standards such as newly modified and approved TPL Standards will require significant system upgrades with high dollar investments. We are deeply concerned that a) no such assessment has been undertaken by the SDT and/or the ERO and b) the proposed definition of the BES is not based on a technical analysis that will enhance the reliability of the interconnected transmission network. o The NERC as the ERO should at least undertake a cost and incremental reliability benefit analysis for its proposed definition of BES. Furthermore, cost impacts and reliability benefit assessments of the BES definition coupled with other new and modified reliability standards (such as the TPL Standards) must also be undertaken and weighed against the potential benefits, if any, of this or any proposal. Not providing such an assessment but using the 100 kV level as a starting point for the BES definition, gives no assurances of benefits for any stakeholder including respective governmental and regulatory authorities and rate payers in Canada or the USA. o The proposed definition would significantly increase the population of BES elements. Many of the standards requirements for these new elements will introduce administrative burden and operating expenses. This would impose significant costs, costs that ratepayers will have to bear, with little or no gain in reliability benefits for the interconnected transmission system. We suggest that the resulting BES definition must identify incremental reliability benefits by the ERO for the interconnected transmission network based on sound technical analysis to justify the change to those who will pay for any required system upgrades - the ratepayer. o The draft Implementation Plan for the BES definition states “Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition.” We are concerned that the stated implementation period will give insufficient time to complete transition plans for newly identified BES

Organization	Yes or No	Question 11 Comment
		Elements and Facilities, where those plans require approval, procurement, installation and commissioning of additional equipment. We believe a period of 60 months at a minimum is more appropriate. Finally, we believe that the SDT proposed approach for exception criteria is reasonable recognizing that one method/criteria can not be applicable to everyone and every situation within the ERO footprint. However, we believe that there is a huge gap and lack of any transparency on how the exception application will be evaluated and processed. We strongly suggest that the SDT develop a reference or a guidance document as part of the RoP that should provide guidance to Registered Entities, Regional Entities and the ERO on how an exception application should be processed. Else, (a) it will pose a challenge for each of the entities including ERO, and (b) may introduce Regional discretion and be perceived as having no transparency for the registered entities.

Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System including the 100 kV bright-line level. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.

The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to

Organization	Yes or No	Question 11 Comment
		improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. The technical aspects of the definition have remained identical to the current definition and identical to the application of the ERO Statement of Compliance Registry Criteria and therefore do not require a technical justification to support maintaining the status-quo. In proposing a 24 month period in the Implementation Plan before the definition is applied in assessing compliance obligations, the SDT considered several activities that may require additional time to complete for an entity to become fully compliant. One of these activities is the development of transition plans in cases where significant issues may have been identified as potentially preventing an entity from meeting the compliance obligations within the 24 month period. These transition plans are to be developed by the Regional Entity and the Registered Entity in a cooperative manner to best address the identified concerns and establish an agreed to mitigation plan which results in full compliance by the Registered Entity. The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one

Organization	Yes or No	Question 11 Comment
		has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result ofa sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or

Organization	Yes or No	Question 11 Comment
disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase 2 of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase 1 of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.		
Western Area Power Administration	Yes	Yes, the definition should also provide clarification on mobile equipment installed to support maintenance or equipment failures. Adding mobile equipment is a common practice for our industry and should be addressed in the definition to bring a general awareness and common understanding of the practice regarding the NERC standards. Recommendation: Add the following Exclusion to BES definition for mobile equipment. Exclude all mobile equipment on stand-by that has not been placed into service as well as all components of mobile equipment that does not meet the inclusion criteria for the primary function of the device being installed (e.g. ,battery bank on mobile transformer installed on radial feed would also be excluded)
Response: The SDT acknowledges the commenter's concern and has determined that the need for an exclusion identifying mobile equipment is not appropriate. The SDT believes that the BES definition is identifying Elements that support the reliable operation of the interconnected transmission grid. This premise implies that the Element is electrically connected to the system and is performing a reliability related service. The SDT believes that the time the mobile equipment is placed in service is when the equipment would be classified as a BES Element and subject to compliance obligations. No change made.		
NESCOE	Yes	NESCOE offers the following additional comments: 1) Phased Approach. While well-intentioned, separating the BES definition project into two separate phases is

Organization	Yes or No	Question 11 Comment
		problematic from both a procedural and substantive perspective. While we recognize that the filing due date is rapidly approaching, the BES definition cannot be considered in a vacuum, divorced from the concerns raised by a number of parties in response to past postings of the BES definition. The issues NERC has identified for consideration during the proposed "Phase 2" are inseparable from the development of the BES definition and should be squarely addressed before a definition is adopted. In particular, the development of criteria for determining what facilities are "necessary for the reliable operation" of the interconnected system cannot be put off for a second phase. Contrary to FERC's direction, NERC's proposal will force ratepayers to incur costs related to compliance with mandates that may or may not be revised through the second phase of the project. The importance of considering and resolving such concerns before adopting a definition is heightened by the proposed two-year implementation requirement. This short implementation period almost guarantees that entities will commit resources shortly after adoption of the definition to ensure compliance within the mandated period. In other words, ratepayers will bear costs related to compliance irrespective of any change resulting from the Phase 2 process or the exception process. Expediency, while understandable given the filing deadline, must be balanced against the risk that a multi-phased approach could lead to significant consumer costs without attendant meaningful reliability benefits. 2) Cost-Benefit Analysis. A cost impact analysis should be performed as part of developing any reliability standard. However, the development of the BES definition has failed to consider the cost impacts of the definition (and its inclusions and exclusions) and weigh these impacts against identified benefits that the definition would achieve. NESCOE stated in its May 21, 2011 comments on the last posting of the BES definition that "any new costs a revised definition imposes - which fall ultimately on consumers - should provide meaningful reliability benefits." A cost-benefit analysis should be integral to the development of a BES definition and, indeed, any reliability standard. This analysis should include a probabilistic risk assessment examining the likelihood of an event and the costs and risks resulting from such event, which should be weighed against the costs of complying with the proposed reliability

Organization	Yes or No	Question 11 Comment
		measures. 3) Technical Justification. In addition to performing a cost-benefit analysis, a technical basis must be provided to justify a proposed reliability standard. However, as we state above, the proposed BES definition does not provide a technical justification for the 100 kV threshold. Nor does it provide a technical justification for the threshold for generation resources or other elements of the definition. As stated above, while well-intentioned and understandable, deferring this technical justification to a later and separate phase of the project is a flawed and potentially costly approach. Providing a technical justification for a reliability standard is a core function of standards development and should be addressed at the forefront of the process rather than relegated to a separate phase largely undertaken after a standard is filed.
Response: 1) The SDT acknowledges the commenter's concerns; however the SDT (and the ERO) has an obligation to respond to the Commission directives established in Order No. 743 within the time frame allotted by the Order. The narrow scope of the directives and the limited timeframe for project completion has prevented the SDT from fully vetting the concerns of the industry as expressed through the development process. To best address the Commission directives and stakeholder concerns, the SDT has opted to separate the project into phases. The revised project plan has been fully endorsed by the NERC Members Representative Committee and the Board of Trustees. Additionally the NERC Standards Committee has committed to the continued development of a revised definition by retaining the project as a high priority project and by dedicating the resources necessary to fully vet the issues raised by stakeholders. 2) The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition		

Organization	Yes or No	Question 11 Comment
any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission. 3) The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. The technical aspects of the definition have remained identical to the current definition and identical to the application of the ERO Statement of Compliance Registry Criteria and therefore do not require a technical justification to support maintaining the status-quo.		
ReliabilityFirst	Yes	This definition needs to be clear and easy enough for anyone to pickup, read, understand, apply and arrive at the same conclusion on whether the facility or element is included or excluded. This definition leaves room for continued debate and interpretation. To help make this definition clearer, ReliabilityFirst Staff has provided a redline version of the core definition under a separate cover (file titled "Bulk Electric System definition by RFC Staff 10-4-2011").
Response: The SDT believes that the revised definition of the BES has provided the necessary clarity to allow for consistent application on a continent-wide basis. The issues identified in the commenter's redline (provided following the responses to question 11) have been fully vetted by the SDT and addressed in the responses to the comments for the applicable question related to the specific issue.		
Ontario Power Generation Inc.	Yes	Further to comments submitted in Question #1, OPG disagrees in general with proceeding to implement a 100 kV brightline definition in the absence of a properly quantified cost/benefit analysis. Entities are being asked to incur a high cost for no demonstrated benefit in wide-area reliability.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has		

Organization	Yes or No	Question 11 Comment
pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.		
Central Hudson Gas and Electric Corporation	Yes	Due to the movement to a phased BES definition development process and assuming the definition is approved as proposed, there is an urgent need for NERC to provide clear guidance to Registered Entities regarding how to proceed with facilities and address changes to the NERC Compliance Registry registration obligations brought in/on by the application of the new definition. The problem stems from a likely scenario whereby the affected Registered Entities may be faced with an Implementation Plan and an Exception Request Procedure which must be completed prior to the completion of the Phase 2 definition development process. If that is the case, many Registered Entities will be confronted with either (1) spending large amounts of human and financial resources, not yet acquired, to address facilities/procedures necessary to address possible new compliance obligations only to find their efforts rendered unnecessary by the results produced in Phase 2 or, (2) waiting until the results of Phase 2 are provided and risking being found non-compliant and subject to substantial penalties in the future. Neither option can be viewed as a desirable, or for that matter, an acceptable position to be placed in.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has		

Organization	Yes or No	Question 11 Comment
pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Therefore, the SDT believes that best opportunity to address cost and resources issues will be through the development of Regional transition plans once the definition has been approved by the Commission. The SDT recommends that the commenter pursue achieving full compliance with the revised definition in the appropriate time period (see Implementation Plan) while utilizing the Rules of Procedure exception process to specific exceptions from the BES definition.		
Springfield Utility Board	Yes	When submitting BES Definition comments, SUB would suggest a “not-applicable”, “no-impact” or “abstain” option in addition to “yes” or “no”. In some cases, the draft language has no impact on an entity’s system, yet that entity’s selection of “yes” or “no” may imply agreement or disagreement rather than expressing lack of applicability. This could skew the perception of agreement or disagreement, and create a potential issue for those who are directly impacted by the changes.
Response: The SDT understands the commenter’s concern; however the formatting of the comment form (including the electronic version) is governed by the ERO and beyond the control of the SDT. Your comment will be forwarded to the NERC Standards staff for consideration.		
Mission Valley Power	Yes	Mission Valley Power - In order to help meet the fast approaching target date, Mission Valley Power will be voting affirmative in this ballot, with the hope these comments will be addressed in Phase 2. If the ballot should fail, please address these comments in this phase. Thanks to the team for their good work.
Response: The SDT acknowledges and appreciates the continued support of the project. The SDT will consider all recommendations for modifications to the technical aspects of the definition for project inclusion at the appropriate time during Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing		

Organization	Yes or No	Question 11 Comment
values.		
Consolidated Edison Co. of NY, Inc.	Yes	Con Edison shares the concerns raised by the State of New York Department of Public Service (NYPSC) in its September 12, 2011 letter to NERC Chairman Anderson. The NYPSC expressed concern that the proposed BES Definition "would impose significant costs, costs that New York ratepayers will be expected to bear, with little or no increase in reliability benefits." The BES definition is being revised without an assessment of costs or benefits. The SDT is encouraged to work with NERC Staff to perform such an assessment prior to providing the revised BES definition to the NERC Board. Regional Entities share this concern with cost effectiveness. In NPCC, the Board of Directors directed NPCC Staff to develop a methodology to assess the cost and benefit of Standards. This NPCC Cost Effectiveness Analysis Procedure (CEAP) establishes a process to address those concerns. The CEAP introduces two assessments of the estimated industry-wide costs of requirements into that Standard's development process. The procedure adds supporting information and background for the NPCC stakeholders, ballot body and the NPCC Board of Directors. Moreover, during a 2010 FERC technical conference the Commission recognized that "reliability does not come without cost." As a result, significant interest was expressed in development of a process to identify the costs for draft reliability Standards and the ability of the proposed standards to achieve the reliability objective(s) sought in a cost effective manner. We understand that it is a NERC priority to define adequate level of reliability and use it as the basis for determining the cost effectiveness of a proposed rule. While this has not yet been finalized, NERC could use this proposed standard as a test case for determining the relationship between costs and benefits.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES		

Organization	Yes or No	Question 11 Comment
definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.		
Northern Wasco County PUD	Yes	In order to help meet the fast approaching target date, Northern Wasco County PUD will be voting affirmative in this ballot, with the hope these comments will be addressed in Phase 2. If the ballot should fail, please address these comments in this phase. Thanks to the team for their good work.
Tillamook PUD	Yes	If Tillamook PUD had signed up to ballot in time, we would be voting yes with the hope that these comments would be addressed in Phase 2. If the ballot fails, please address these comments in this phase.
Response: The SDT acknowledges and appreciates the continued support of the project. The SDT will consider all recommendations for modifications to the technical aspects of the definition for project inclusion at the appropriate time during Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
American Electric Power	Yes	There needs to be some clarification regarding the default status of an asset, as well as the order and priority of the inclusion and exclusion classifications within the definition. First, prior to any evaluation by virtue of the definition, is an asset by default excluded from the BES, or rather, it is included? In addition, once the definition is used to evaluate an asset which has both inclusion attributes and exclusion attributes, which of the two classifications has greater weight? For example, if an asset is first included by the BES definition inclusion criteria can it then be excluded by BES

Organization	Yes or No	Question 11 Comment
		definition exclusion criteria? Or instead, if an asset is first excluded by BES definition exclusion criteria can it then be included by the BES definition inclusion criteria? AEP's recommendation is that an asset, by default, not be considered part of the BES. Next, the asset would be evaluated by the inclusion criteria as specified within the definition. Next, any asset explicitly included by the inclusion criteria is then evaluated using the exclusion criteria. Once the entity has made their determination based on the definition, exception requests could then be made to include or exclude assets as appropriate. We believe our interpretation is what is implied by the draft definition, however, this needs to be explicitly communicated within the definition itself.

Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be

Organization	Yes or No	Question 11 Comment
applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
City of St. George	Yes	The small utility exclusion issues discussed in the first draft of the documents are not included (draft 1 proposed E4) nor addressed in the draft 2 documentation. Under the present definition many small utilities with local generation to serve its own local load will be required to register for additional functions, or at a minimum go through a long, expensive, time consuming process to get an individual exclusion from the BES. The topics that have been postponed to Phase 2 of the project are critical to and will have a direct impact to many utilities. Phase 2 needs to have specific shorter than normal timelines established, similar to what Phase 1 has had. The present definition and standards in general makes little or no consideration for the actual impact of an entity or facility on the bulk system. As such small utilities with a few miles of 115 kV or 138 kV lines and some generation are required to meet the same requirements as large utilities with 100's or 1,000's of miles of 345 kV or 500 kV lines and that operate very large generation plants of several hundred MVA of capacity. All utilities support reliability improvement, but the requirements and associated costs need to match their actual impact to the overall system.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., potential small utility exclusion) of the BES definition. However, it is important to emphasize the fact that the SDT is developing a definition to identify the Elements that support the reliable operation of the interconnected transmission network regardless of ownership or operational responsibility. Small utility issues are very similar to the issues raised through the GOTO project and are best addressed through the applicability of the individual reliability standards, not through the definition of the BES.		

Organization	Yes or No	Question 11 Comment
No change made.		
ISO New England Inc	Yes	There are a number of possible scenarios where an element falls under both an inclusion and exclusion. The definition is unclear as to whether or not this would have the element be BES or not. During the webinar an example was given about a static shunt device meeting the requirements of I5, but is part of a radial network. The response during the webinar was that this would be excluded. If this is correct, it means that an exclusion takes precedence over an inclusion. Is this always the case? This needs to be clarified and stated somewhere in this document. To be consistent with regard to the terms "Operated at 100 kV" and "Connected at 100 kV ", we suggest that reference to generators should state, "Connected at a transmission element operated at 100 kV". This will avoid confusion in cases where a generator is connected to a transmission element rated at 100 kV but operated at a lower voltage.
Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.		

Organization	Yes or No	Question 11 Comment
Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. The BES definition refers to operating voltage (as emphasized in FERC Order No. 743-A) and the SDT does not feel that the language "connected at a voltage of 100kV or above" creates any confusion on the intent of the Inclusion. No change made.		
NBPT	Yes	o When an exclusion and inclusion principles overlap which takes precedence? For example I5 may be excluded if in a LN (E3) o The Local Network Exclusion criterion does not appear to consider voltage support and the effects of shifting of load or impacts due to a loss of load. The 75 MW generation threshold has no technical basis. The LN exclusion should allow for studies demonstrating no through flow benefit regardless if there is. o 75 MW Generation has no technical justification. o Black Start resources should not be included in all GO/GOP standards except for those standards specific to black start units.
Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will		

Organization	Yes or No	Question 11 Comment
identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. The local network exclusion has established a bright-line with specific characteristics that must be met to be eligible for exclusion.		

Organization	Yes or No	Question 11 Comment
Exclusion E3b states: "Power flows only into the LN and the LN does not transfer energy originating outside the LN for delivery through the LN". This characteristic applies under all operating conditions including any variations in network load. It is not clear to the SDT what the commenter is referring to in regards to voltage support. Exclusion E3 addresses transmission Elements and does not exclude Real Power or Reactive Power resources from the BES. The concept of the 75 MVA threshold is based on the generation inclusion criteria for plant/facility arrangements by carrying through the concept of the reliability impact that the aggregated loss of 75 MVA or greater would have on the overall reliability of the interconnected transmission grid. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. The SDT has determined that Blackstart Resources serve a reliability benefit to the interconnected transmission grid and therefore have been included in the scope of the BES. This is consistent with current practice and specifically with the registration requirements that identify the owner, operators, and users of Blackstart Resources be registered as Generator Owner/Generator Operator. Specific concerns with the applicability of individual standards should be addressed through the Standard Development Process for the individual Reliability Standards in question.		
Texas Reliability Entity	Yes	(1) It is unclear exactly what is intended by "non-retail generation" in Exclusion E1(c). We suggest that the term be explained or defined in the BES definition or in a collateral document. This term does not have a commonly understood unambiguous meaning in our Region. (2) Phase 2 has to be completed or explicitly defined/scoped to fully capture all of the components necessary for reliable operation of the BES.

Organization	Yes or No	Question 11 Comment
Response: (1) Non-retail generation is the generation on the system (supply) side of the retail meter. (2) The supplemental SAR for Phase 2 of the project will be posted for industry comment at which time the SDT will be accepting recommendations for specific issues to be addressed by the SDT during phase 2 of the project.		
New York State Dept of Public Service	Yes	o Per NERC's obligations under the Energy Power Act of 2005 to provide FERC technical advice, no technical justification has been provided for basing the BES definition on the 100 kV and MVA thresholds. o No cost analysis on either the reliability benefits of the overall definition or on the implementation plan has been performed to determine whether the likely high cost of the definition to ratepayers is justified. o The definition of the BES should be the driver for the application of all other NERC reliability standards and criteria. The definition uses the Statement of Compliance Registry Criteria as a driver of the definition when the reverse should be taking place; contents of the Statement should be driven by the BES definition.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the definition has not been altered in regards to the bright-line or the generation thresholds and therefore does not require the development of technical justification to maintain the status quo. SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission		

Organization	Yes or No	Question 11 Comment
grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission. The SDT has revised the language in Inclusion I2 to eliminate the circular reference to the ERO Statement of Compliance Registry Criteria. Inclusion I2 has been revised to read: **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.		
Hydro-Quebec TransEnergie	Yes	In the Implementation plan, it is given only 24 months for compliance after applicable regulatory approval. Considering the possibility that a proposed transition plan may involve commissioning of long term projects, a provision for such situation should be made with longer delay.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. With that being said, the SDT believes that an implementation time period of 24 months is sufficient time to address the development of regional transition plans, address any necessary registration changes, file for exceptions through the Rules of Procedure exception process and address any required training. The SDT also acknowledges that the potential exists for extenuating circumstances that will need to be addressed through the regional transition plans.		
Independent Electricity System Operator	Yes	We wish to also express our support for phased approach proposed in the draft supplemental SAR. Development of the revised BES definition is an important and

Organization	Yes or No	Question 11 Comment
		complex undertaking. The product of this work is fundamental to establishing the applicability of NERC Reliability Standards. The issues identified for attention in Phase 2 of this project warrant careful investigation and as such allowing additional time to properly research and stakeholder them is justified. The draft Implementation Plan for the BES definition sates "Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition." We are concerned that the stated implementation period may be insufficient time to (1) prepare and file exception requests and have these assessed; and (2) in cases where these exception requests are not approved, to develop and complete transition plans for newly identified BES Elements and Facilities, particularly where those plans require major investments for the procurement, installation and commissioning of additional equipment. We therefore propose the following alternative wording for the Implementation Plan: "Compliance obligations for elements included by the definition shall be evaluated and an implementation schedule established within 24 months." Throughout the document various phrases are used to describe generating units/resource, viz. "generation resources", "generating resources", "generating unit" and "power producing resources". Please review these to identify and address any possible inconsistencies.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. With that being said, the SDT believes that an implementation time period of 24 months is sufficient time to address the development of regional transition plans,		

Organization	Yes or No	Question 11 Comment
address any necessary registration changes, file for exceptions through the Rules of Procedure exception process and address any required training. The SDT also acknowledges that the potential exists for extenuating circumstances that will need to be addressed through the regional transition plans. The SDT has reviewed the applicable documents for inconsistencies related to the terms generating units/resource, viz. “generation resources”, “generating resources”, “generating unit” and “power producing resources”. The SDT has made the appropriate modifications to address any issues resulting from the inconsistencies.		
Central Lincoln	Yes	We note that the SAR for Phase 2, like that for Phase 1, does not include all entity types. We see no reason to maintain dual definitions for the different entity types, and the resulting confusion. In order to help meet the fast approaching January target date, Central Lincoln will be voting affirmative in this ballot, with the hope these comments will be addressed in Phase 2. If the ballot should fail, please address these comments in this phase. Thanks to the team for their good work.
Response: The draft SAR developed for Phase 2 of Project 2010-17 Definition of the Bulk Electric System, similar to the SAR for Phase 1 has purposefully omitted the Interchange Authority and the Purchase Selling Entity functional entities because these entities do not own or operate BES Elements. This conclusion does not necessitate the need for dual definitions; the definition of the BES does not impact the functional responsibilities of these entities. The SDT acknowledges and appreciates the continued support of the project. The SDT will consider all recommendations for modifications to the technical aspects of the definition for project inclusion at the appropriate time during Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
Utility Services, Inc.	Yes	Utility Services would like to raise the question of whether SCRC III.3.d (the so-called "Generator Materiality" clause) is incorporated within the BES Inclusion Designations. One theory suggests that given that I2 is designed to deal with III.3.a and III.3.b and I3 reflects the need to incorporate black start generation; then generators under the materiality clause are not identified with the inclusion criteria. However, the second theory suggests that resources identifed through I2 reflect the entire III.c.1-4 language

Organization	Yes or No	Question 11 Comment
		of the SCRC, then the generators in the material clause are captured under I2. But if this is the case, then I3 is redundant to I2 and does not need to separately addressed.
Response: The SDT has revised the language in Inclusion I2 to clearly identify the applicability of generating resources. The revised language is as follows: **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.		
FirstEnergy Corp.	Yes	FE supports the SDT's phased project approach which was well articulated in the NERC BES Definition Fact Sheet
LCRA Transmission Services Corporation	Yes	LCRA TSC supports the direction the standards drafting team taking with this project on the BES Definition and encourages further clarification as noted in these comments for proper application.
Response: The SDT acknowledges and appreciates the continued support of the project.		
National Grid	Yes	The proposed implementation period in the draft definition is too short. The new BES definition will likely result in increased operational costs during the implementation period that will ultimately be borne by customers. Implicit in the Commission's directive to change the BES definition is the Commission's determination that the benefits of this change, including consistency among the regions, outweigh the ratepayer impacts. However, National Grid remains concerned that the ratepayer impacts have not been fully taken into account. The implementation period is a tool that can allow NERC to meet the Commission's directive while softening any resulting ratepayer impacts. Implementation can and should be staged in order to mitigate and even out rate increases. National Grid suggests that the implementation period be flexible to allow entities who anticipate that large and/or expensive upgrades to the BES will be necessary to meet compliance can submit an alternate implementation plan to spread compliance and the associated rate changes over a longer period; we

Organization	Yes or No	Question 11 Comment
		would suggest a minimum of 7 years. This time period was also recognized as a reasonable implementation time period in the recent TPL-001-2 for those portions of the standard that would also result in plans that would require siting, permitting and construction activities. This BES definition is likely to have similar impacts for some entities and allowing for an implementation timeline with the definition change enables achievement of the goals while recognizing the realities of constructing facilities in today's environment.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. With that being said, the SDT believes that an implementation time period of 24 months is sufficient time to address the development of regional transition plans, address any necessary registration changes, file for exceptions through the Rules of Procedure exception process and address any required training. The SDT also acknowledges that the potential exists for extenuating circumstances that will need to be addressed through the regional transition plans. In proposing a 24 month period in the Implementation Plan before the definition is applied in assessing compliance obligations, the SDT considered several activities that may require additional time to complete for an entity to become fully compliant. One of these activities is the development of transition plans in cases where significant issues may have been identified as potentially preventing an entity from meeting the compliance obligations within the 24 month period. These transition plans are to be developed by the Regional Entity and the Registered Entity in a cooperative manner to best address the identified concerns and establish an agreed to mitigation plan which results in full compliance by the Registered Entity.		
Rochester Gas and Electric	Yes	If the definition and inclusions and exclusions are not sufficiently specific and clear,

Organization	Yes or No	Question 11 Comment
and New York State Electric and Gas		stakeholders will flood NERC and RROs with interpretation requests and/or apply the definition and its inclusions or exclusions incorrectly. Explanatory figures with one-line diagrams should be developed and shared to illustrate the system configurations included and excluded in this BES Definition. This would be very helpful for definition clarity. This should be done as part of an "Application Guide" for the BES Definition - this has precedence in CIP-002 version 5. Attached is a sample set of one-line diagrams with interpretations based upon the inclusions and exclusions developed by Northeast Power Coordinating Council members for discussion purposes as an example, but note that there is not a uniform agreement on these diagrams based on the BES Definition as written, due to lack of clarity.
Response: The development of a guidance document which contains generic diagrams is a portion of the overall project that the SDT feels is necessary to ensure the consistent application of the BES definition going forward. Therefore the SDT has determined that such a document will be developed during Phase 2 of the project. The SDT thanks Rochester for the appended drawings but wishes to point out that the SDT does not agree with some of the depictions shown on the drawings thus pointing out the need for an eventual guidance document.		
Central Maine Power Company	Yes	If the definition and inclusions and exclusions are not sufficiently specific and clear, stakeholders will flood NERC and RROs with interpretation requests and/or apply the definition and its inclusions or exclusions incorrectly. Explanatory figures with one-line diagrams should be developed and shared to illustrate the system configurations included and excluded in a BES Definition. This would be very helpful for definition clarity. This should be done as part of an "Application Guide" for the BES Definition - there is precedence for an "Application Guide" with graphical support in CIP-002 version 5. A sample set of one-line diagrams with interpretations based upon the inclusions and exclusions developed by Northeast Power Coordinating Council members for discussion purposes is available as an example, but note that there is not a uniform agreement on these diagrams based on the BES Definition as written, due to lack of clarity.

Organization	Yes or No	Question 11 Comment
Nebraska Public Power District	Yes	Regarding the Local Network: Can there be some additional technical documents or examples provided for the most common configurations? The LN document is a good document to provide guidance, however the supply of common configuration examples would be very helpful in determining LN applicability. Examples where technical document with examples would be helpful: 1. If a breaker and a half source substation provides two parallel 115 kV lines feeding a load only substation from separate breaker and a half legs at the source substation, would the two parallel lines feeding the load be a LN distribution network feed since they are from the same source substation? 2. if there is a radial feed from a ring bus or a breaker and a half configuration to a radial load on a single line can the portion of the ring bus or breaker and a half bus between the line breakers and the breakers themselves at the source substation be excluded from the BES? 3. Can some legs of a 115kV breaker and a half substation be disgnated BES and the other legs be non BES depending on how the BES lines and loads tie in to the breaker and half legs? 4. In determining if elements are BES is there any consideration to fault locations and if these faults would interrupt BES flow on ring bus or breaker and a half configurations to help determine what is BES? If so, how many contingencies would be considered to interrupt BES flow?
Response: The development of a guidance document which contains generic diagrams is a portion of the overall project that the SDT feels is necessary to ensure the consistent application of the BES definition going forward. Therefore the SDT has determined that such a document will be developed during Phase 2 of the project.		
Ameren	Yes	a) We believe this revised definition is an improvement over the previous posting, a step in the right direction. b) The definition of the BES is referenced in several existing standards and the Statement of Compliance Registry Criteria. Our concern is how this revised definition will impact entity registration, i.e., how will the revised definition be integrated into the Compliance Registry Criteria. The implementation plan should include how the integration is going to occur. The Rules of Procedure exception process should be further defined or referenced in this definition.

Organization	Yes or No	Question 11 Comment
		c) See Question 1 response: The general concept is sound, but the Inclusion and Exclusion sections create so many circular references it is virtually impossible to take a definitive stance on whether an asset is included or excluded to the BES definition. Please revise the inclusion and exclusion criteria to give pinpointed statements that are final and do not reference other criteria, that then again reference other criteria
Response: a) The SDT acknowledges and appreciates the continued support of the project. b) The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. The BES definition will be utilized in conjunction with the ERO Statement of Compliance Registry Criteria to determine how entities will be registered. As the SDT progresses through phase 2 of the project, consideration will be given to establish a definition that will eventually be the definitive document to determine registration requirements. The Rules of Procedure exception process is referenced in the current draft version of the BES definition in a note which states: "Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process". c) The SDT has made several revisions that the address the clarity issues raised by commenter's. For a detailed response concerning the specific clarifications made by the SDT, see the individual responses for the appropriate question. The application of the bright-line definition of the BES is explained in the detail in the Summary Consideration at the beginning of this question.		
MEAG Power	Yes	The definition of the BES is referenced in several existing standards and the Statement of Compliance Registry Criteria. We are concerned how this revised definition will impact entity registration, i.e., how will the revised definition be integrated into the Compliance Registry Criteria. The implementation plan should include how the integration is going to occur.

Organization	Yes or No	Question 11 Comment
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. The BES definition will be utilized in conjunction with the ERO Statement of Compliance Registry Criteria to determine how entities will be registered. As the SDT progresses through phase 2 of the project, consideration will be given to establish a definition that will eventually be the definitive document to determine registration requirements. The current Implementation Plan is determining the effective dates of the revised definition and the extended time period for meeting compliance obligations. The revised definition and the current ERO Statement of Compliance Registry Criteria will continue to be utilized in the same manner as today for registration determinations. In proposing a 24 month period in the Implementation Plan before the definition is applied in assessing compliance obligations, the SDT considered several activities that may require additional time to complete for an entity to become fully compliant. One of these activities is the development of transition plans in cases where significant issues may have been identified as potentially preventing an entity from meeting the compliance obligations within the 24 month period. These transition plans are to be developed by the Regional Entity and the Registered Entity in a cooperative manner to best address the identified concerns and establish an agreed to mitigation plan which results in full compliance by the Registered Entity.		
Redding Electric Utility	Yes	
City of Redding	Yes	Redding is concerned that phase 2 will not produce significant rules or criteria that further define the BES; the desire to dedicate adaquate resourses is currently high since FERC has a looming deadline upon NERC, however without deadlines Redding believes that NERC will find it difficult to find the expertise or desire to finish the Project.
Response: The NERC Standards Committee (SC) has approved Phase 2 of Project 2010-17 Definition of the Bulk Electric System as a 'high priority' project. Additionally, the SC has retained the existing SDT and committed to providing the necessary resources through the NERC Technical Committees in providing analysis of technical issues to be addressed in Phase 2 of the project. Furthermore, the		

Organization	Yes or No	Question 11 Comment
SDT will be developing a project schedule for Phase 2, subject to approval by the SC, which will identify the appropriate deadlines throughout the project.		
Indeck Energy Services	Yes	As acknowledged in the response to Question 12 comments on the previous BES definition, the BES definition is expansive compared to the definition of the BPS in the FPA Section 215. The inclusion of the limited Exclusions is an attempt to remedy the situation. However, the Exclusions need to include a fifth one that if, based on studies or other assessments, it can be shown that any tranmission or generator element otherwise identified as part of the BES is not important to the reliability of the BPS, then that element should be excluded from the mandatory standards program. There has never been a study to show that elements, such as a 20 MW wind farm, 60 MW merchant generator (which operates infrequently in the depressed market) in a large BA (eg NYISO) or a radial transmission line connecting a small generator are important to the reliability of the BPS. They are covered by the mandatory standards program through the registration criteria. The BES Definition is the opportunity to permit an entity to demonstrate that an element is unimportant to reliability of the BPS. The SDT has identified a small subset of elements that it is willing to exclude. By their very nature, these exclusions dim the bright line that is the stated goal of this project. However, the SDT's foresight seems limited in its selections. Analytical studies are used to evaluate contingencies that could lead to the Big Three (cascading outages, instability or voltage collapse). Such a study showing that a transmission or generation element is bounded by the N-1 or N-2 contingency would exclude it from the BES definition. For example, in a BA with a NERC definition Reportable Disturbance of approximately 400 MW (eg NYISO), a 20 MW wind farm, 60 MW merchant generator or numerous other smaller facilities would be bounded by larger contingencies. It would take more than six 60 MW merchant generators with close location and common mode failure to even be a Reportable Disturbance, much less become the N-1 contingency for the Big Three. Exclusion E5 should be "E5 - Any facility that can be demonstrated to the Regional Entity by analytical study or other assessment to be unimportant to the reliability of the BPS (with periodic reports by

Organization	Yes or No	Question 11 Comment
		the Regional Entity to NERC of any such assessments)."
Response: The concerns of the commenter are addressed by the implementation of the Rules of Procedure exception process, which establishes the exclusion methods described by the commenter. The commenter's suggested language leaves Regional discretion in the process, which is a cited concern requiring elimination by the Commission, in the Orders No. 743 and 743-A. The SDT has provided a reference to the Rules of Procedure exception process in the definition with the following language: "Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process."		
Kootenai Electric Cooperative Michigan Public Power Agency Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperatve (CEC) Clearwater Power Company (CPC) Snohomish County PUD Consumer's Power Inc. Douglas Electric Cooperative (DEC) Fall River Rural Electric Cooperative (FALL) Lane Electric Cooperative	No	KEC extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. KEC strongly supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, KEC is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that KEC specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. KEC supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to

Organization	Yes or No	Question 11 Comment
(LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC)		come into compliance with newly-applicable Reliability Standards. KEC also supports the 24-month transition period for the reasons laid out by the SDT.
Response: The SDT acknowledges and appreciates the continued support of the project.		
PacifiCorp	No	It is absolutely imperative that phase II continue as proposed by the STD. If phase II was not proposed PacifiCorp would vote no on this proposal.
Response: Phase 2 will start as soon as Phase 1 is completed and the SDT resources are freed up. .		
Farmington Electric Utility System	No	
Portland General Electric Company	No	

Organization	Yes or No	Question 11 Comment
City of Austin dba Austin Energy	No	
Georgia System Operations Corporation	No	
Kansas City Power and Light Company	No	
Oncor Electric Delivery Company LLC	No	
Memphis Light, Gas and Water Division	No	We appreciate the work the drafting team has done in preparing this document.
Harney Electric Cooperative, Inc.	No	
Cowlitz County PUD	No	Cowlitz appreciates the opportunity to comment, and the hard work of the SDT.
PSEG Services Corp	No	
Massachusetts Department of Public Utilities	No	
Manitoba Hydro	No	
Long Island Power Authority	No	
The Dow Chemical Company	No	

Organization	Yes or No	Question 11 Comment
Puget Sound Energy	No	
NV Energy	No	
Z Global Engineering and Energy Solutions	No	
Consumers Energy	No	
City of Anaheim	No	
Chevron U.S.A. Inc.	No	
Metropolitan Water District of Southern California	No	
Duke Energy	No	
Idaho Falls Power	No	
Exelon	No	
Texas Industrial Energy Consumers	No	
Tri-State GandT	No	
ATC LLC	No	
Tacoma Power	No	Tacoma Power does not have any other concerns at this time. Thank you for consideration of our comments.

Organization	Yes or No	Question 11 Comment
Arizona Public Service Company	No	
Tri-State Generation and Transmission Assn., Inc. Energy Management	No	
Electricity Consumers Resource Council (ELCON)	No	
ACES Power Marketing Standards Collaborators	No	
Bonneville Power Administration	No	
SERC Planning Standards Subcommittee	No	The comments expressed herein represent a consensus of the views of the above-named members of the SERC EC Planning Standards Subcommittee only and should not be construed as the position of SERC Reliability Corporation, its board, or its officers"
NERC Staff Technical Review	No	
BGE	No	No comment.
Response: Thank you for your support.		

RFC Suggested changes to definition:

Bulk Electric System (BES): Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. ~~This does not include facilities used in the local distribution of electric energy.~~ The BES includes:

~~**Inclusions:**~~

- I1 - Transformers with primary and secondary terminals operated at 100 kV or higher. ~~unless excluded under Exclusion E1 or E3~~for local distribution or retail customers~~.~~
- I2 - Generating resources as described in the ERO Statement of Compliance Registry Criteria including the generator terminals through the high-side of the step-up transformer(s), connected at a voltage of 100 kV or above.
- I3 - Blackstart Resources and associated designated ~~blackstart~~ Cranking Paths operated at 100 kV or higher, identified in the Transmission Operator's restoration plan. ~~regardless of voltage level.~~
- ~~I4 - Dispersed power producing resources as described in the ERO Statement of Compliance Registry Criteria utilizing a system designed primarily for aggregating capacity, connected at common point at a voltage of 100 kV or above.~~
- **I4~~5~~** –Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in ~~Inclusion~~ I1.

This definition does not include facilities used in the local distribution of electric energy or retail customers, which are:~~-~~

~~**Exclusions:**~~

- E1 - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher from a single transmission source originating with a single~~n~~ automatic interruption device and:
    a) Only serves Load. Or,
    b) Only includes generation resources not identified in ~~Inclusion~~ I3, with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,
    c) Where the radial system serves Load and includes generation resources, not identified in ~~Inclusion~~ I3,~~-~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

  Note - A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

- E2 - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if:
  - (i) the net capacity provided to the BES does not exceed 75 MVA, and
  - (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.
- E3 - Local Network (LN): A group of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the interconnected system. LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The LN is characterized by all of the following:

  a) Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in ~~Inclusion~~ I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating);
  b) Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN; and;
  c) Not part of a Flowgate or transfer path: The LN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
- **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

Pacificorp additional comments:

5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

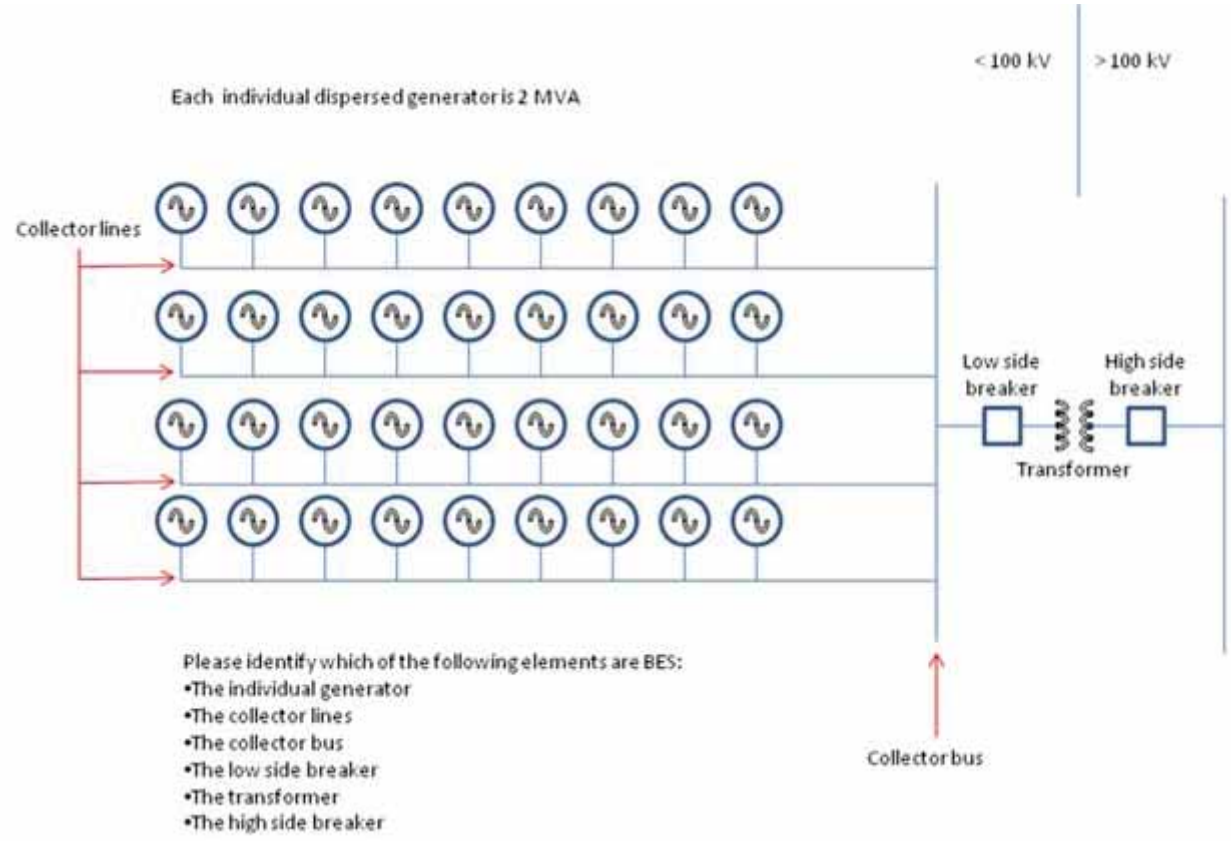
Yes:

No: X

Comments: Setting a dispersed power producing resource limit to 75 MVA at a common point discriminates against single generator owners who own generators between 20 MVA and 75 MVA (inclusion I1), typically connected at a common point and requires such owners to be subject to additional standards that dispersed power producing owners are not required.

However, even with this concern, PacifiCorp supports the entire BES definition in its current form based on the timeframe under which the SDT is operating and with an emphasis based on a phase II SAR to address PacifiCorp's objections regarding generation levels.

Under the attached scenario, please identify which elements would be considered BES:


< 100 kV
> 100 kV
Each individual dispersed generator is 2 MVA
Collector lines
Low side breaker
High side breaker
Transformer
Collector bus
Please identify which of the following elements are BES:
•The individual generator
•The collector lines
•The collector bus
•The low side breaker
•The transformer
•The high side breaker

Rochester Diagrams: These diagrams were supplied by Rochester as examples and do not reflect the SDT's opinion of what is and isn't a BES Element.

Figure 1 (Inclusion I1):

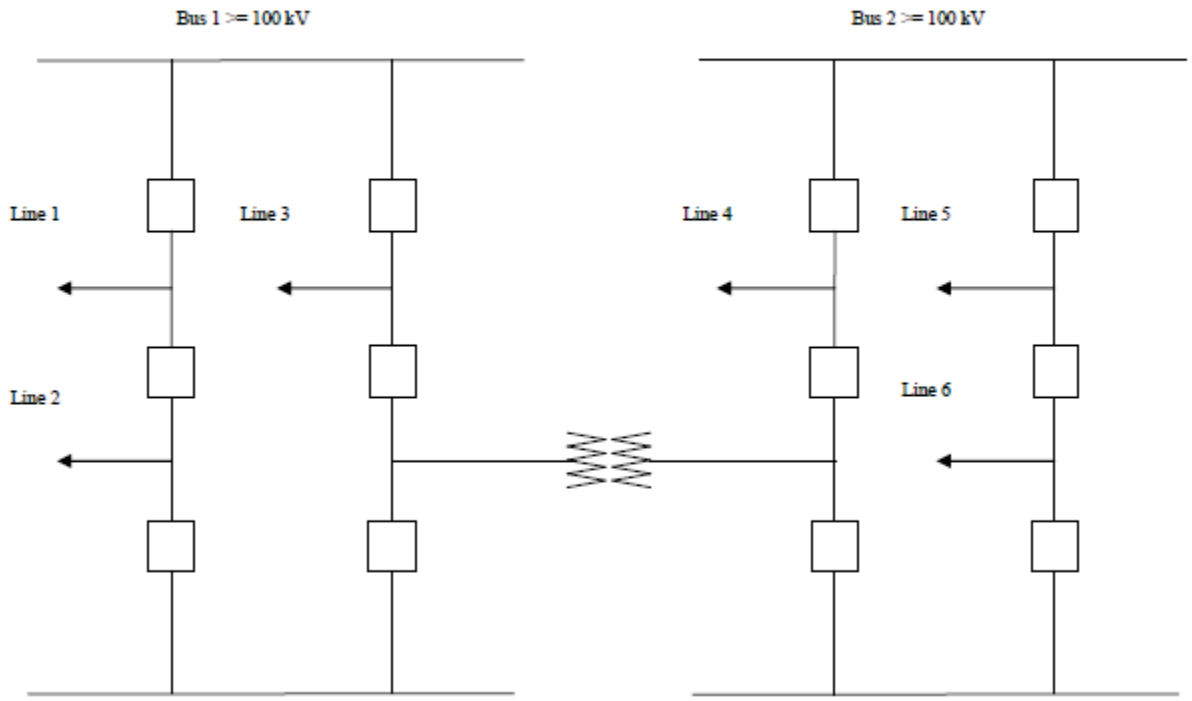


Figure 2 (Inclusion I1): **Non-BES in Red (Exclusions E1a, E1b, E1c)**

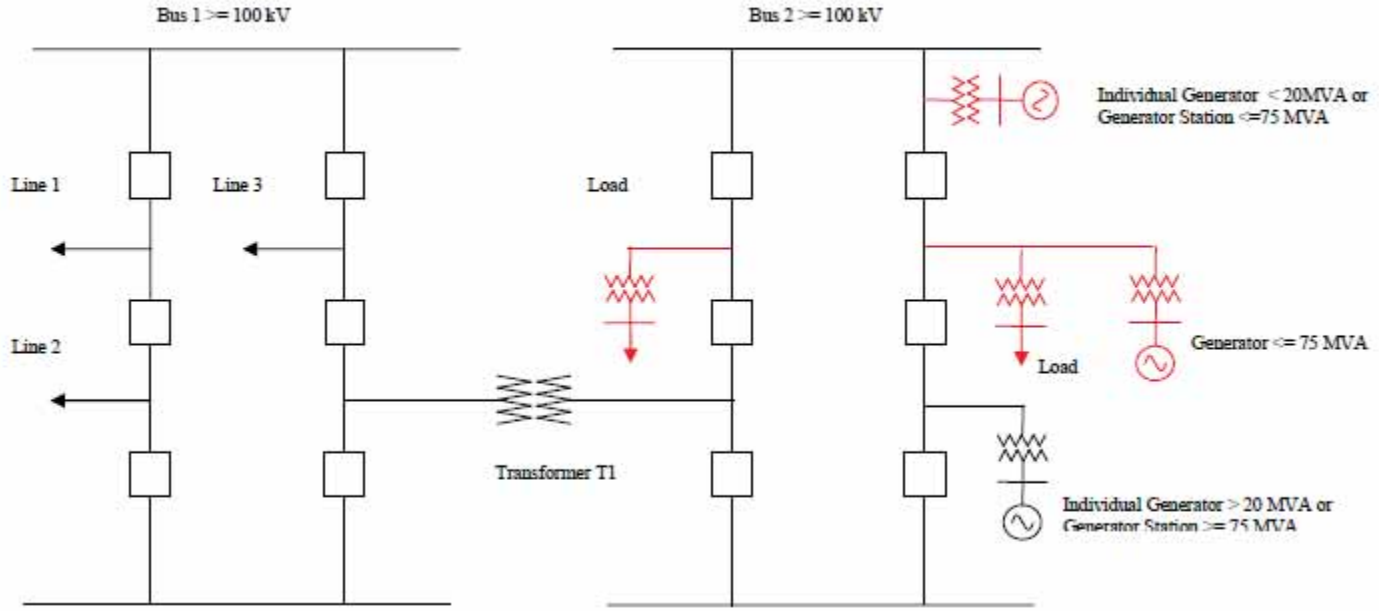


Figure 3 (Inclusion I2): **Non-BES in Red**

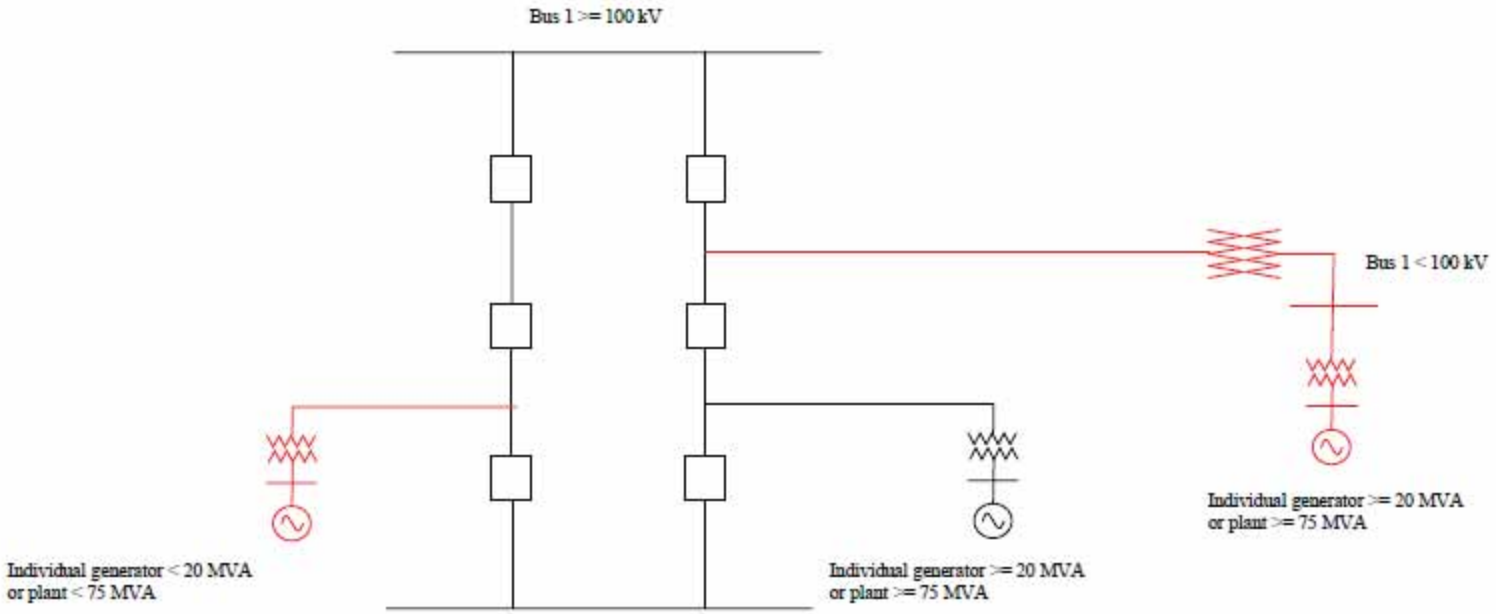


Figure 4 (Inclusion I3):Non-BES in Red

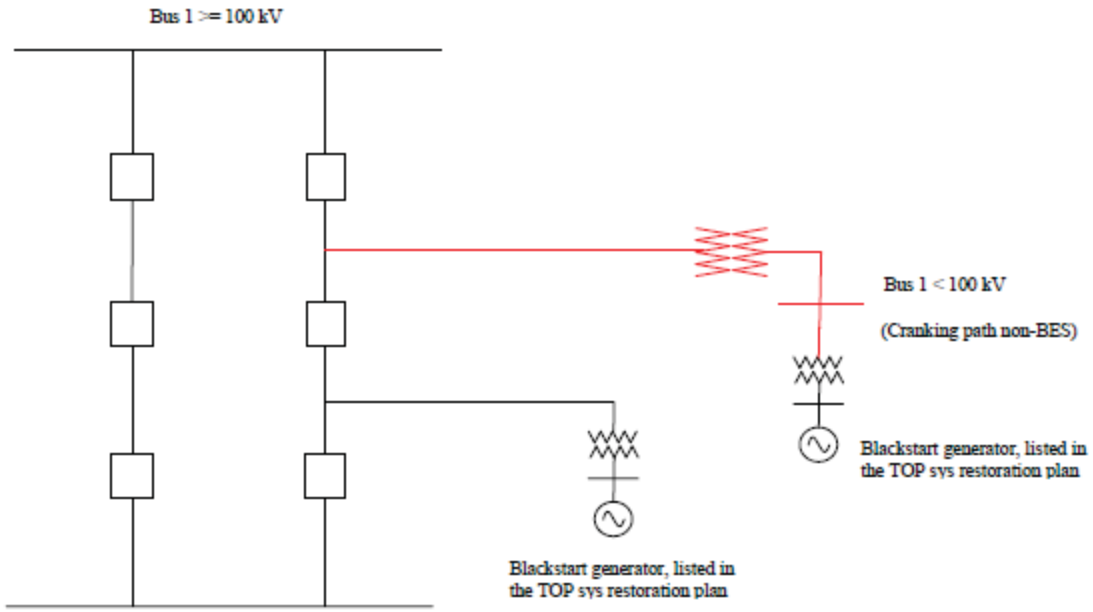


Figure 5 (Inclusion I4):Non-BES in Red

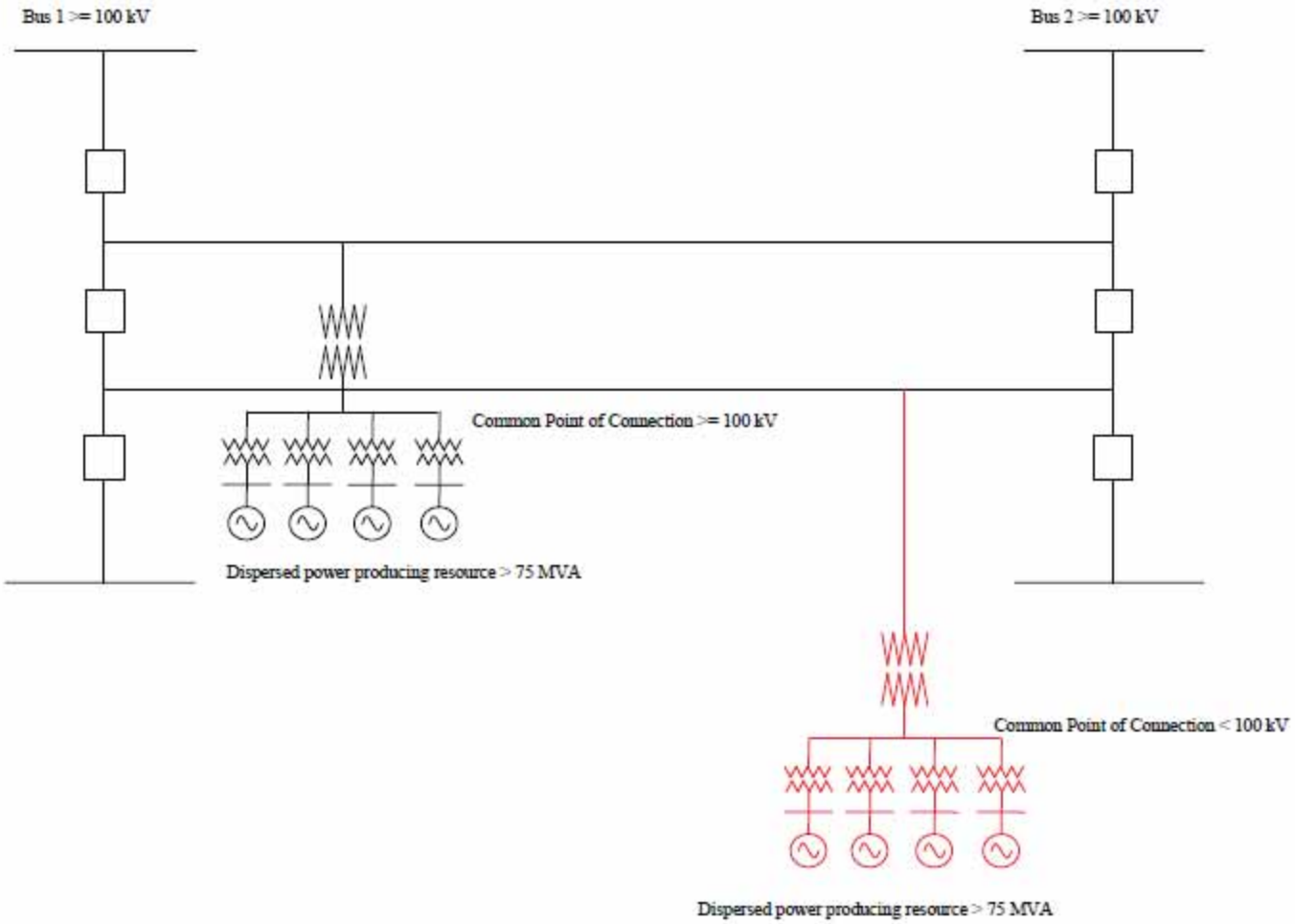


Figure 6 (Inclusion I5):**Non-BES in Red**

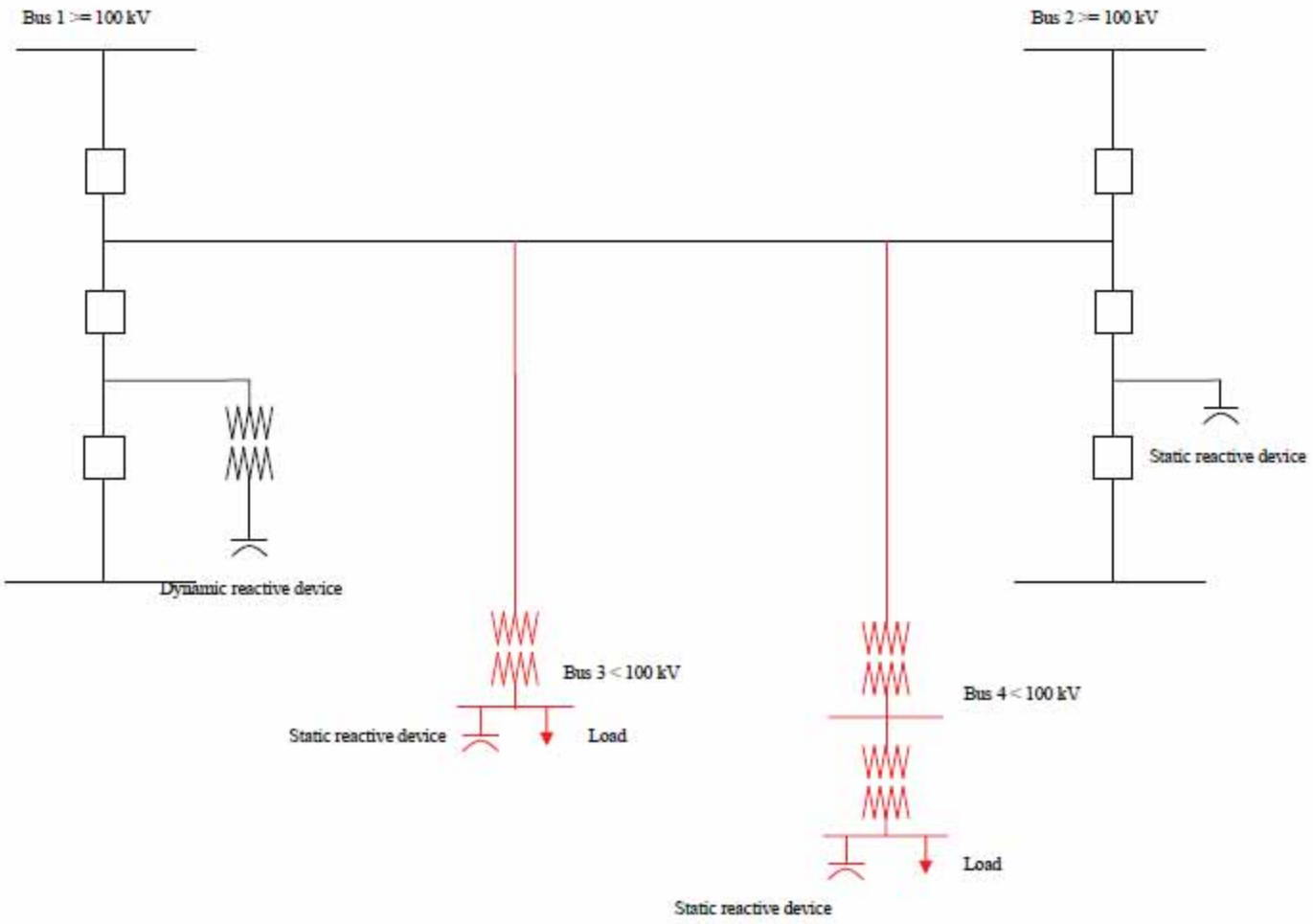


Figure 7 (Exclusion E1):Non-BES in Red

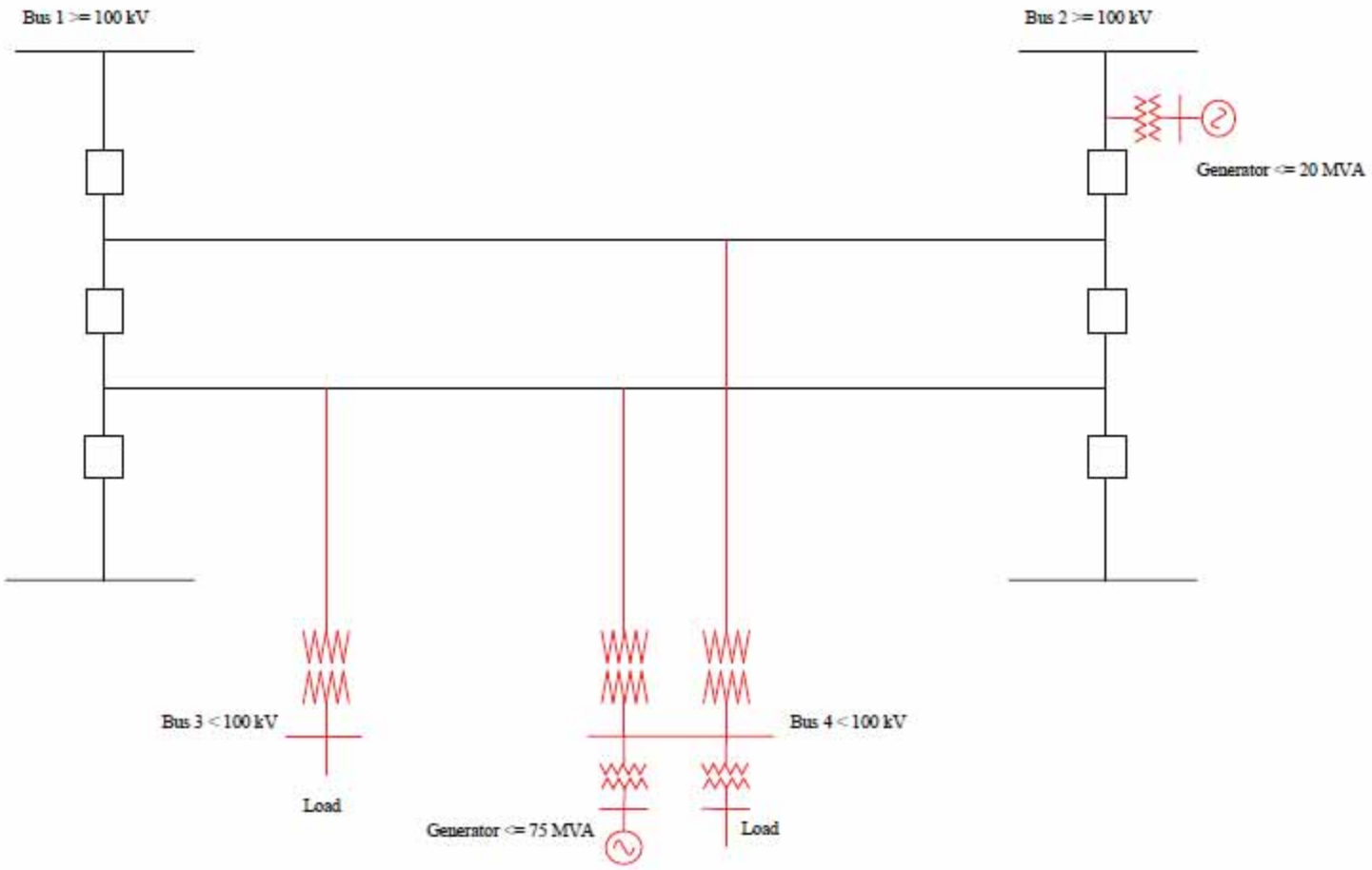


Figure 8b (Exclusion E1):
Single Point of Connection
Non-BES in Red

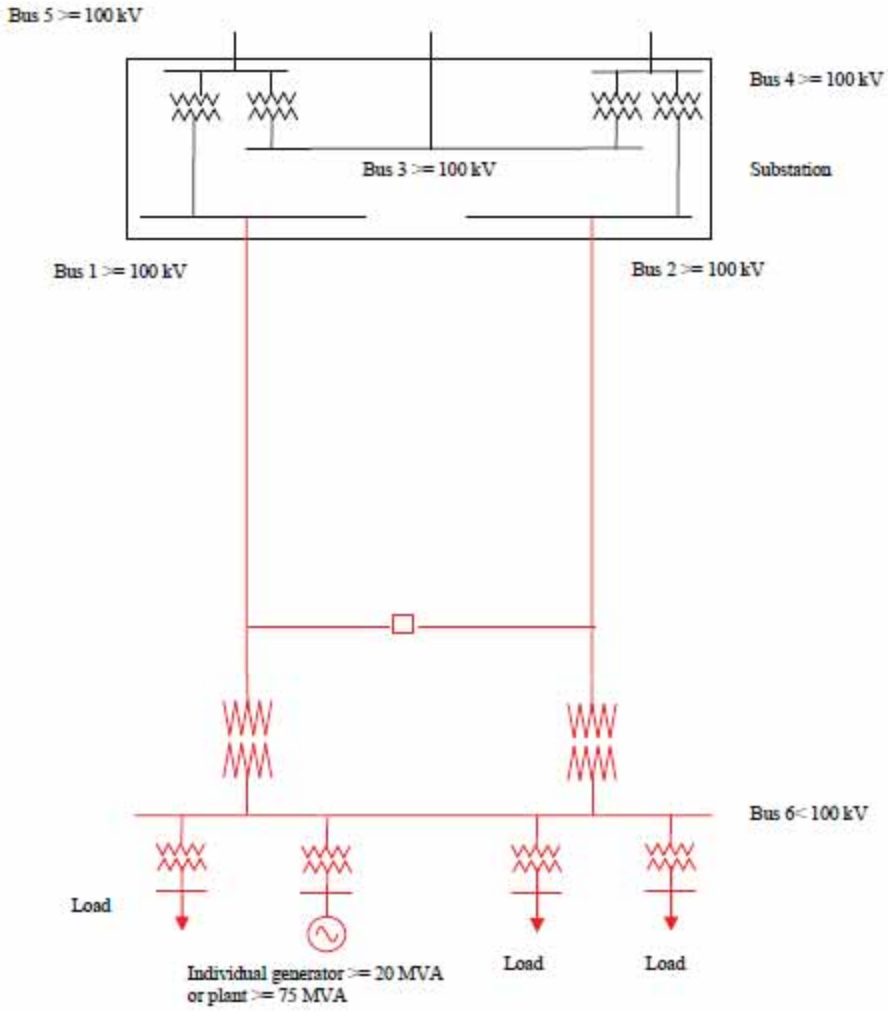


Figure 9 (Exclusion E2):Non-BES in Red

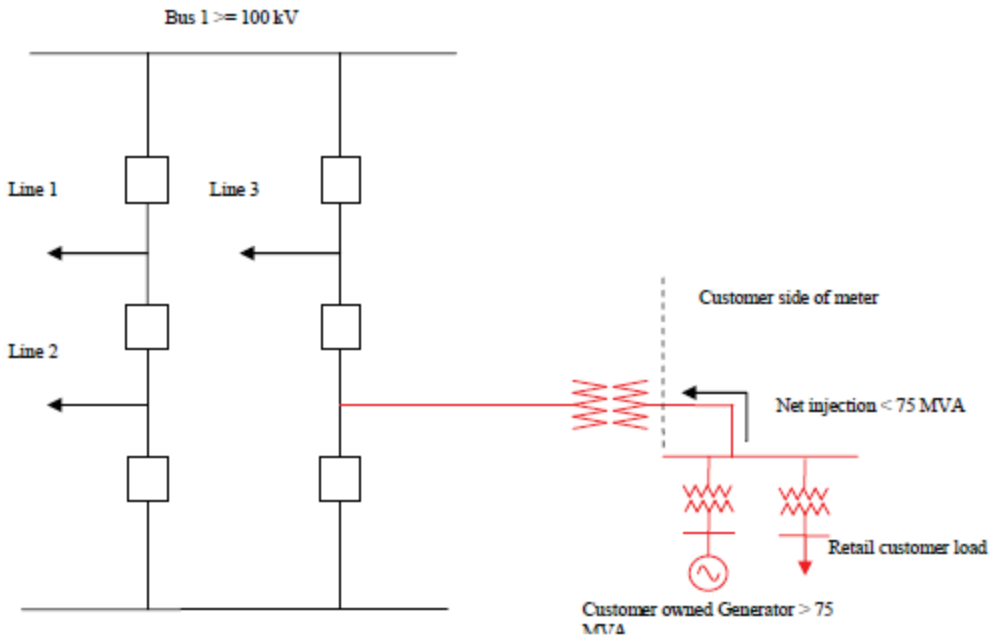
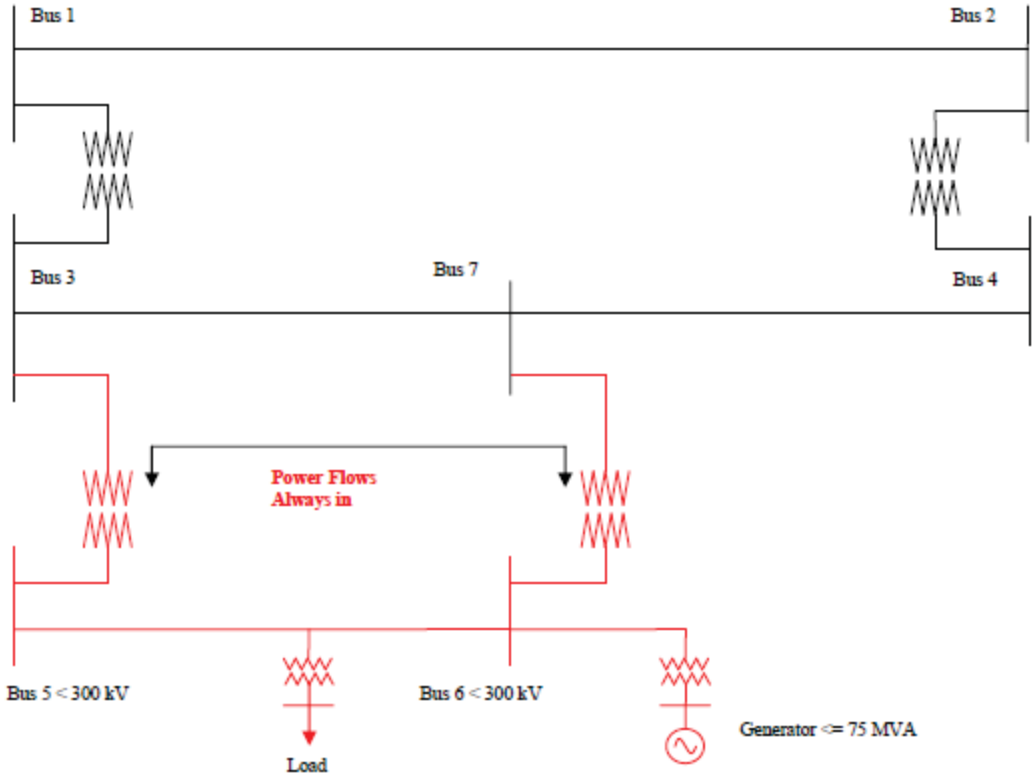


Figure 10 (Exclusion E3):**Non-BES in Red**



Consideration of Comments on Initial Ballot — Definition of BES (Project 2010-17)
Date of Initial Ballot: September 30, 2011 - October 10, 2011

Summary Consideration: Many commenters followed instructions and cast their ballot while simply pointing to their detailed comments in the posted comment report. The SDT thanks those commenters as this greatly reduces the administrative workload on the SDT. Those who decided to place comments in the ballot report for the most part echoed comments that had already been seen by the SDT in the posted comment report which was administered first by the SDT. As a result, there were no changes to the definition due to comments received in the ballot report. However, for ease of reference, the changes to the definition made as a result of those comments are repeated here.

The SDT made the following changes to the definition due to industry comments received:

- Clarified the wording in Inclusion I1 to indicate that at least one secondary terminal must be at 100 kV or higher to accommodate multiple terminal transformers.
- Removed the reference to the ERO Statement of Compliance Registry Criteria in Inclusion I2 so that there is no chance of the registry values being changed and affecting the definition prior to resolution of threshold values in Phase II of this project.
- Clarified that generators were not part of Inclusion I5 to avoid improperly pulling in small generators.
- Clarified the language of Exclusion E2 by re-ordering the text as suggested.
- Clarified the language of Exclusion E3.b as suggested.

The SDT feels that it is important to remind the industry that Phase II of this project will begin immediately after the conclusion of Phase I as SDT resources clear up. The same SDT will follow through with Phase II.

The SDT is recommending that this project be moved forward to the recirculation ballot stage.

There were two comments that were repeated multiple times throughout the various documents. The first topic was about how to sort through the definition inclusions and exclusions, i.e., which takes precedence. The SDT offers this guidance on that issue:

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.

Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.

In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.

The second item is about providing specific guidance on how the information on the exception request form will be used in making decisions on inclusions/exclusions in the exception process. While not technically part of this document which is about the definition, since the question did come up in these comments, the SDT provides the following information:

The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication.

Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of

Procedure that states “No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved.”

The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

If you feel that the drafting team overlooked your comments, please let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 404-446-2560 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

Voter	Entity	Segment	Vote	Comment
Kirit Shah	Ameren Services	1	Negative	Please refer to Ameren comments submitted using the Comment Form.
Andrew Z Pusztai	American Transmission Company, LLC	1	Negative	Comments submitted.
John Bussman	Associated Electric Cooperative, Inc.	1	Negative	comments posted on comment form
Michael S Crowley	Dominion Virginia Power	1	Negative	Please see Dominion’s submitted comments

[1] The appeals process is in the Standards Processes Manual: http://www.nerc.com/docs/standards/sc/Standard_Processes_Manual_Approved_May_2010.pdf.

Voter	Entity	Segment	Vote	Comment
Bernard Pelletier	Hydro-Quebec TransEnergie	1	Negative	Please see our comments on the BES Definition
Terry Harbour	MidAmerican Energy Co.	1	Negative	See the MidAmerican submitted comments. The BES definition needs additional specific inclusion or exclusion provisions that clearly exclude variable resource generation collector circuits rated below 100 kV and generators less than 20 MVA connected to those collector circuits in accordance with the registration criteria.
Tracy Sliman	Tri-State G & T Association, Inc.	1	Negative	Comments submitted by electronic form.
Kathleen Goodman	ISO New England, Inc.	2	Negative	please refer to detailed comments submitted for this project.
Charles Yeung	Southwest Power Pool, Inc.	2	Negative	SPP's comments on this concurrent ballot/comment period have been submitted and provide support for our Negative vote. In addition, SPP is a member of the IRC SRC and is in support of those comments on this standard. Please refer to these sets of comments for our recommendations.
Chris W Bolick	Associated Electric Cooperative, Inc.	3	Negative	Please see comments of AECI.
Linda Jacobson	City of Farmington	3	Negative	FEUS appreciates the SDT work in defining the BES. While the proposed definition is an improvement over the current definition, FEUS feels there is some additional clarification necessary before approval. Seperate comments have been submitted.
Richard Blumenstock	Consumers Energy	3	Negative	See Consumers Energy's comments on the official submittal form.
Michael F. Gildea	Dominion Resources Services	3	Negative	See Dominion's submitted comments.
David Kiguel	Hydro One Networks, Inc.	3	Negative	After careful analysis of the proposed documents, Hydro One Networks Inc. is casting a negative vote. We commend the SDT for the effort in facing the challenge. However, we believe that the proposed definition and the exception request criteria still need further work. Some issues need to be resolved before a

Voter	Entity	Segment	Vote	Comment
				final approval is granted. Please see our detailed comments as provided in the on-line system.
Tony Eddleman	Nebraska Public Power District	3	Negative	Comments were submitted through the Nebraska Public Power District comment form.
Janelle Marriott	Tri-State G & T Association, Inc.	3	Negative	Tri-State G&T Load Serving Entity comments were submitted via electronic comment process.
David Frank Ronk	Consumers Energy	4	Negative	See Comments provided by Consumers Energy Company
Brock Ondayko	AEP Service Corp.	5	Negative	AEP believes the drafting team is on the correct path, and the concepts expressed appear to be appropriate. However, AEP has a number of questions and recommended refinements that if addressed by the drafting team, will make the definition more clear to industry. These comments are being submitted via electronic form by Thad Ness on behalf of American Electric Power.
Francis J. Halpin	Bonneville Power Administration	5	Negative	Please refer to formal BPA Comments submitted on 10/7/2011.
David C Greyerbiehl	Consumers Energy Company	5	Negative	See Consumers Energy's comments on the official comment submittal forms.
Mike Garton	Dominion Resources, Inc.	5	Negative	See comments filed on this project.
Dan Roethemeyer	Dynegy Inc.	5	Negative	Comments will be included with those to be submitted with the SERC OC Standards Review Group.
Christopher Schneider	MidAmerican Energy Co.	5	Negative	See the MidAmerican submitted comments. The BES definition needs additional specific inclusion or exclusion provisions that clearly exclude variable resource generation collector circuits rated below 100 kV and generators less than 20 MVA connected to those collector circuits in accordance with the registration criteria.

Voter	Entity	Segment	Vote	Comment
Don Schmit	Nebraska Public Power District	5	Negative	Please see comments submitted by Nebraska Public Power District on 10/10/2011.
Mahmood Z. Safi	Omaha Public Power District	5	Negative	see Doug Peterchuck's comments
Bo Jones	Westar Energy	5	Negative	Please see comments submitted electronically.
Edward P. Cox	AEP Marketing	6	Negative	AEP believes the drafting team is on the correct path, and the concepts expressed appear to be appropriate. However, AEP has a number of questions and recommended refinements that if addressed by the drafting team, will make the definition more clear to industry. These comments are being submitted via electronic form by Thad Ness on behalf of American Electric Power.
Louis S. Slade	Dominion Resources, Inc.	6	Negative	See comments submitted by Dominion.
David Ried	Omaha Public Power District	6	Negative	See Doug Peterchucks comments from OPPD.
Donald G Jones	Texas Reliability Entity, Inc.	10	Negative	See comment form submitted separately.
John C. Allen	Rochester Gas and Electric Corp.	1	Negative	Comments to be submitted separately.
Paul B. Johnson	American Electric Power	1	Negative	AEP believes the drafting team is on the correct path, and the concepts expressed appear to be appropriate. However, AEP has a number of questions and recommended refinements that if addressed by the drafting team, will make the definition more clear to industry. These comments are being submitted via electronic form by Thad Ness on behalf of American Electric Power.
Ajay Garg	Hydro One Networks, Inc.	1	Negative	After careful analysis of the proposed documents, Hydro One Networks Inc. is casting a negative vote. We commend the SDT for the effort in facing the challenge. However, we believe that the proposed definition and the exception

Voter	Entity	Segment	Vote	Comment
				request criteria still need further work. Some issues need to be resolved before a final approval is granted. Please see our detailed comments as provided in the on-line system.
Steven L. Rueckert	Western Electricity Coordinating Council	10	Affirmative	Comments Submitted
Robert Smith	Arizona Public Service Co.	1	Affirmative	Comments submitted
Christopher L de Graffenried	Consolidated Edison Co. of New York	1	Affirmative	See Con Edison's comments on the BES Definition submitted separately by electronic survey form.
Stuart Sloan	Consumers Power Inc.	1	Affirmative	Please see CPI's separate comment form.
William J Smith	FirstEnergy Corp.	1	Affirmative	FirstEnergy supports the proposed BES definition and offers comments and suggestions through the formal comment period.
Gordon Pietsch	Great River Energy	1	Affirmative	Please see MRO NSRF comments.
Joe D Petaski	Manitoba Hydro	1	Affirmative	Please see comments provided by Manitoba Hydro in formal commenting period
David Thorne	Potomac Electric Power Co.	1	Affirmative	Comments submitted
Denise M Lietz	Puget Sound Energy, Inc.	1	Affirmative	See comments of Denise Lietz.
Rich Salgo	Sierra Pacific Power Co.	1	Affirmative	Comments submitted.

Voter	Entity	Segment	Vote	Comment
Richard Burt	Minnkota Power Coop. Inc.	1	Affirmative	While MPC is voting affirmative, we ask that you see the comments submitted by the MRO NERC Standards Review Forum (NSRF).
Tim Reed	Muscatine Power & Water	1	Affirmative	MPW agrees with the comments submitted by the MRO NERC Standards Review Forum (NSRF).
David Boguslawski	Northeast Utilities	1	Affirmative	NU contributed to and joins with NPCC comments.
Larry Akens	Tennessee Valley Authority	1	Affirmative	TVA has submitted comments through the Comment Form for 2nd Draft of Definitions of BES (Project 2010-17)
Charles B Manning	Electric Reliability Council of Texas, Inc.	2	Affirmative	ERCOT ISO has joined the IRC SRC comments submitted.
Bud Tracy	Blachly-Lane Electric Co-op	3	Affirmative	Please see BLEC's separate comment form.
Dave Markham	Central Electric Cooperative, Inc. (Redmond, Oregon)	3	Affirmative	Please see Central's separate comment form.
Steve Alexanderson	Central Lincoln PUD	3	Affirmative	Comments previously submitted.
Dave Hagen	Clearwater Power Co.	3	Affirmative	Please see Clearwater Power's separate comment form.
Peter T Yost	Consolidated Edison Co. of New York	3	Affirmative	Con Edison comments have been submitted separately.

Voter	Entity	Segment	Vote	Comment
Roman Gillen	Consumers Power Inc.	3	Affirmative	Please see CPI's separate comment form.
Roger Meader	Coos-Curry Electric Cooperative, Inc	3	Affirmative	Please see CCEC's separate comment form.
Russell A Noble	Cowlitz County PUD	3	Affirmative	Comments submitted.
Dave Sabala	Douglas Electric Cooperative	3	Affirmative	Please see DEC's separate comment form.
Bryan Case	Fall River Rural Electric Cooperative	3	Affirmative	Please see FREC's separate comment form.
Stephan Kern	FirstEnergy Energy Delivery	3	Affirmative	FirstEnergy supports the proposed BES definition and offers comments and suggestions through the formal comment period.
Joe McKinney	Florida Municipal Power Agency	3	Affirmative	Please see comments submitted through the formal comments
William N. Phinney	Georgia Systems Operations Corporation	3	Affirmative	See electronic comment form from Georgia System Operations Corporation
William Bush	Holland Board of Public Works	3	Affirmative	Please see comment form.
Dave Kahly	Kootenai Electric Cooperative	3	Affirmative	Reference the comments of KEC in response to the SDT comment form.

Voter	Entity	Segment	Vote	Comment
Rick Crinklaw	Lane Electric Cooperative, Inc.	3	Affirmative	Please see LEC's separate comment form.
Michael Henry	Lincoln Electric Cooperative, Inc.	3	Affirmative	Please see Lincoln's separate comment form.
Greg C. Parent	Manitoba Hydro	3	Affirmative	Please see comments provided by Manitoba Hydro in formal commenting period
Jeff Franklin	Mississippi Power	3	Affirmative	"Comments Submitted"
John S Bos	Muscatine Power & Water	3	Affirmative	MPW agrees with the comments submitted by the MRO NERC Standards Review Forum (NSRF)
Jon Shelby	Northern Lights Inc.	3	Affirmative	Please see NLI's separate comment form.
Ray Ellis	Okanogan County Electric Cooperative, Inc.	3	Affirmative	Please see Okanogan's separate comment form.
Heber Carpenter	Raft River Rural Electric Cooperative	3	Affirmative	Please see RREC's separate comment form.
Jeff Nelson	Springfield Utility Board	3	Affirmative	Please refer to SUB's comments on the BES Definition.
Ian S Grant	Tennessee Valley Authority	3	Affirmative	My company has submitted comments via the comment form.
Steve Eldrige	Umatilla Electric Cooperative	3	Affirmative	Please see UEC's separate comment form.

Voter	Entity	Segment	Vote	Comment
Marc Farmer	West Oregon Electric Cooperative, Inc.	3	Affirmative	Please see WOEC's separate comment form.
James R Keller	Wisconsin Electric Power Marketing	3	Affirmative	Comments submitted.
Shamus J Gamache	Central Lincoln PUD	4	Affirmative	See Central Lincoln PUD comments (CLPUD) Posted by Steve Alexanderson.
John Allen	City Utilities of Springfield, Missouri	4	Affirmative	City Utilities of Springfield, Missouri supports the comments from SPP.
Frank Gaffney	Florida Municipal Power Agency	4	Affirmative	Please see comments through the formal comments
Guy Andrews	Georgia System Operations Corporation	4	Affirmative	See electronic comment form submitted by Georgia System Operations Corp
Joseph DePoorter	Madison Gas and Electric Co.	4	Affirmative	Please see the MRO NSRF comments concerning this project.
Douglas Hohlbaugh	Ohio Edison Company	4	Affirmative	FirstEnergy supports the proposed BES definition and offers comments and suggestions through the formal comment period.
Aleka K Scott	Pacific Northwest Generating Cooperative	4	Affirmative	Please see PNGC's separate comment form.
Wilket (Jack) Ng	Consolidated Edison Co. of New York	5	Affirmative	See Con Edison's comments on the BES Definition submitted separately by electronic survey form.

Voter	Entity	Segment	Vote	Comment
David Schumann	Florida Municipal Power Agency	5	Affirmative	Please see comments submitted through the formal comments
Preston L Walsh	Great River Energy	5	Affirmative	Please see the comments submitted by the MRO / NSRF
James M Howard	Lakeland Electric	5	Affirmative	Refer to comments from FMPA.
Gary Carlson	Michigan Public Power Agency	5	Affirmative	Comments submitted separately
William D Shultz	Southern Company Generation	5	Affirmative	Comments from Southern Company Generation are being submitted via the electronic comment form available on the project web page.
Linda Horn	Wisconsin Electric Power Co.	5	Affirmative	Comments submitted.
Nickesha P Carrol	Consolidated Edison Co. of New York	6	Affirmative	Con Edison comments have been submitted separately.
Kevin Querry	FirstEnergy Solutions	6	Affirmative	FirstEnergy supports the proposed BES definition and offers comments and suggestions through the formal comment period.
Richard L. Montgomery	Florida Municipal Power Agency	6	Affirmative	Please see comments submitted through the formal comments
Thomas Washburn	Florida Municipal Power Pool	6	Affirmative	See FMPA's comments
Daniel Prowse	Manitoba Hydro	6	Affirmative	Please see comments provided by Manitoba Hydro in formal commenting period

Voter	Entity	Segment	Vote	Comment
Margaret Ryan	Pacific Northwest Generating Cooperative	8	Affirmative	Please see PNGC's separate comment form.
Bruce Lovelin	Central Lincoln PUD	9	Affirmative	I support the comments sent in by Steve Alexanderson of Central Lincoln PUD
Alan Adamson	New York State Reliability Council	10	Affirmative	The New York State Reliability Council will be separately submitting a commemt form.
Guy V. Zito	Northeast Power Coordinating Council, Inc.	10	Affirmative	NPCC will be submitting comments regarding concerns expressed by our members through the formal comment process along with suggestions to address those comments.
Anthony E Jablonski	ReliabilityFirst Corporation	10	Affirmative	Comments submitted
Response: The SDT thanks you for following the instructions on submitting comments. This greatly decreases the amount of administrative work for the SDT and will help accelerate the process.				
Mike Ramirez	Sacramento Municipal Utility District	4	Negative	SMUD believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although SMUD in balloting "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. SMUD recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SMUD agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. That said, SMUD is prepared to support the BES definition as proposed by the SDT going forward. SMUD has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are

Voter	Entity	Segment	Vote	Comment
				encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. Detailed Comments submitted separately.
James Leigh-Kendall	Sacramento Municipal Utility District	3	Negative	SMUD believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although SMUD in balloting "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. SMUD recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SMUD agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. That said, SMUD is prepared to support the BES definition as proposed by the SDT going forward. SMUD has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. Detailed Comments submitted separately.
Terry L Baker	Platte River Power Authority	3	Negative	Platte River believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although Platte River ballots "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. Platte River recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, Platte River agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification. That said, Platte River is prepared to support the BES definition as proposed by the SDT going forward. Platte River has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded

Voter	Entity	Segment	Vote	Comment
				another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far.
Jeanie Doty	City of Austin dba Austin Energy	5	Negative	AE believes the SDT has made substantial progress towards a clear and workable definition of the BES. Although AE voted "Negative," we strongly support the approach to defining the Bulk Electric System as proposed here. AE recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, AE agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as detailed in our comments. That said, AE is prepared to support the BES definition as proposed by the SDT going forward. AE has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far.
Lisa L Martin	City of Austin dba Austin Energy	6	Negative	AE believes the SDT has made substantial progress towards a clear and workable definition of the BES. Although AE voted "Negative," we strongly support the approach to defining the Bulk Electric System as proposed here. AE recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, AE agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as detailed in our comments. That said, AE is prepared to support the BES definition as proposed by the SDT going forward. AE has taken the opportunity to provide this industry feedback, as it is our understanding that we

Voter	Entity	Segment	Vote	Comment
				will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far.
Andrew Gallo	City of Austin dba Austin Energy	3	Negative	Austin Energy (AE) believes the SDT has made substantial progress toward a clear and workable definition of the BES. Although AE votes "Negative," we strongly support the approach to defining the BES as proposed here. AE recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, AE agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, we believe the second draft would benefit from further clarification or modification in a number of respects, as detailed in our comments (filed separately). That said, AE is prepared to support the BES definition as proposed by the SDT going forward. AE has taken the opportunity to provide this industry feedback, as it is our understanding that we will have another ballot opportunity (on a recirculation ballot). If this were to be our sole opportunity to vote, we would vote "Affirmative" at this time. We are encouraged by the work completed to date and commend the SDT for their commitment and extensive work thus far.
Kevin Smith	Balancing Authority of Northern California NCR11118	1	Negative	BANC believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although BANC in balloting "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. BANC recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, BANC agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. That said, BANC is prepared to support the BES definition as proposed by the SDT going forward. BANC has taken the opportunity to provide this industry feedback, as it is our understanding

Voter	Entity	Segment	Vote	Comment
				that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. Detailed Comments submitted separately.
Carol Ballantine	Platte River Power Authority	6	Negative	Platte River believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although Platte River ballots "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. Platte River recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, Platte River agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification. That said, Platte River is prepared to support the BES definition as proposed by the SDT going forward. Platte River has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far.
John C. Collins	Platte River Power Authority	1	Negative	Platte River believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although Platte River ballots "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. Platte River recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, Platte River agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification. That said, Platte River is prepared to support the BES definition as proposed by the SDT going forward. Platte River has taken the opportunity to

Voter	Entity	Segment	Vote	Comment
				provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far.
Bethany Hunter	Sacramento Municipal Utility District	5	Negative	SMUD believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although SMUD in balloting "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. SMUD recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SMUD agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. That said, SMUD is prepared to support the BES definition as proposed by the SDT going forward. SMUD has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. Detailed Comments submitted separately.
Claire Warshaw	Sacramento Municipal Utility District	6	Negative	SMUD believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although SMUD in balloting "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. SMUD recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SMUD agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. That said, SMUD is

Voter	Entity	Segment	Vote	Comment
				prepared to support the BES definition as proposed by the SDT going forward. SMUD has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. Detailed Comments submitted separately.
Tim Kelley	Sacramento Municipal Utility District	1	Negative	SMUD believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although SMUD in balloting "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. SMUD recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SMUD agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. That said, SMUD is prepared to support the BES definition as proposed by the SDT going forward. SMUD has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. Detailed Comments submitted separately.
Response: Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up. The first step in Phase II will be the posting of the Phase II draft SAR for comment. At that time, you will have the opportunity to submit comments for the inclusion of items and issues to be considered by the SDT in Phase II.				
Philip Riley	Public Service Commission of South Carolina	9	Negative	The Public Service Commission of South Carolina does not believe adequate technical evaluations have been done for basing the BES definition on the 100 kV and 20 MVA thresholds as proposed. In addition, the Public Service Commission of South Carolina does not believe adequate cost benefit studies have been done to justify the proposal for the 100

Voter	Entity	Segment	Vote	Comment
				kV and 20 MVA thresholds. Lack of cost benefit analyses has been a recurring comment of the Public Service Commission of South Carolina on proposed NERC standards.
Response: Both the 20 MVA and 100 kV thresholds are items for consideration in Phase II. At that time, technical evaluations and studies will be performed to provide the details the SDT needs to have to adequately address the issues. The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 & 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 & 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.				
Dale Bodden	CenterPoint Energy Houston Electric	1	Negative	Inclusion I5 provides for the inclusion of static devices dedicated to supplying or absorbing Reactive Power based upon their connection to the transmission system. The wording concerning their connection to the transmission system appears reasonable; however, CenterPoint Energy believes the size of a static reactive device should be taken into consideration. Static reactive devices are more widely distributed across a transmission system than generation resources. We recommend that only static reactive devices that are greater than 150 MVAR be included. CenterPoint Energy could support Draft 2 if a reasonable size threshold is established for static reactive devices.

Voter	Entity	Segment	Vote	Comment
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.				
Robert Ganley	Long Island Power Authority	1	Negative	LIPA has voted NO to the proposed definition of Bulk Electric System as posted and offers the following comments with our vote: 1. The SDT needs to provide clarifying language for the following terms so that facilities can be adequately addressed in determining whether they are BES elements or not: a. "local distribution" as used in the BES core definition b. "common point" as used in Inclusion I4 c. "single point of interconnection" as used in Exclusion E1 d. "underlying Elements" as used in Exclusion E3a 2. The core definition and exclusion E3b and E3c adequately define a Local Network. It seems like the intent to exclude non bulk distribution systems would still be included because of E3a. (limits on connected generation) We believe E3a should be eliminated in defining a Local Network.
Response: a) The SDT believes that the wording in the core definition plus Exclusions E1 and E3 provide the basis for defining local distribution. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. b) While the SDT has determined no additional clarification of the term "common point" is needed in the BES definition, the following guidance is provided. The SDT believes the common point of connection, which is the point from where generation is				

Voter	Entity	Segment	Vote	Comment
aggregated to determine if the 75 MVA threshold is met, to be the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system. c) The "single point of connection of 100 kV or higher" is where the radial system will begin if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. d) The SDT believes that the existing phrase in ExclusionE3.a "and its underlying Elements" has sufficient clarity and meets the intent of the exclusion with brevity. No change made. e) The SDT continues to believe that it is necessary to establish a limit on the allowable quantity of generation that may be significant to the reliable operation of the surrounding interconnected transmission system. Please note that the issues surrounding the appropriate generation threshold, among other topics, will be taken up in Phase 2 of this BES definition effort. No change made.				
Martyn Turner	Lower Colorado River Authority	1	Negative	1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: LCRA TSC supports the inclusion of transformers (with both the primary and secondary windings operated at 100-kV or higher) in the BES definition; however, additional clarification is suggested. The term transformers needs to be further defined with respect to function (auto transformers, phase angle regulators, generator step-up transformers, etc.). Similarly, a separate definition for "Transformer" could be developed and included

Voter	Entity	Segment	Vote	Comment
				in the NERC Glossary of Terms. 3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: 4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: 5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: LCRA TSC suggests consistency between this inclusion criteria and the criteria used in I2 for "generation". 6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: This inclusion conflicts with exclusion E4. Which one takes priority? 7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The current wording is unclear with respect to the treatment of normally open switching devices. LCRA TSC suggests the following language to replace the existing language on the note to E1: "Two radial systems connected by a normally open, manually operated switching

Voter	Entity	Segment	Vote	Comment
				device, as depicted on prints or one-line diagrams for example, may be considered as radial systems under this exclusion." The current wording is unclear with respect to "non-retail generation". The sudden loss of large, radial-supplied load may result in reliability deficiencies. LCRA TSC suggests stating a load level or a load capacity in the exclusion. 8. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2 (behind-the-meter generation)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: 9. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3 (local network)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: 10. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E4 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: This exclusion conflicts with inclusion item I5. Which one takes priority? 11. Are there any other concerns with this definition that haven't been covered in previous questions and comments remembering that the exception criteria are posted separately for comment? Yes: X No: Comments: LCRA TSC supports the direction the standards drafting team taking with this project on the BES Definition and encourages further clarification as noted in these comments for proper application.
Response: The SDT refers LCRA to the individual comment responses in the definition comment form as the comments expressed here are exactly identical to the comments submitted by LCRA on that form.				
Danny Dees	MEAG Power	1	Negative	MEAG believes that a Yes vote for the draft BES Definition will result in minimal or no changes. We have identified a few changes that if made will secure a Yes vote on the next ballot.

Voter	Entity	Segment	Vote	Comment
				The most important change is needed in I5 reactive resources noted below. I5 reactive resources - We feel that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common point. E1 - Non-retail generation needs to be defined to clarify why it is used in this exclusion. E2 (ii) The reference to generation on the customer's side of the retail meter needs to be clarified to provide a better understanding as to what is intended with this phrase. E3 b - We would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN "under normal operating conditions".
Response: The SDT refers MEAG to the individual comment responses in the definition comment form as the comments expressed here are exactly identical to the comments submitted by MEAG on that form.				
Ernest Hahn	Metropolitan Water District of Southern California	1	Affirmative	MWDSC generally supports the core definition of the Bulk Electric System as proposed. However, some of the proposed Inclusions and Exclusions need to be clarified as identified below. Inclusion 5 should be changed to be consistent with the core definition and to clarify Reactive Power devices. Under I5, the additional phrase "or through a dedicated transformer with a high-side voltage of 100 kV or higher," appears to conflict with the core definition's phrase "and Real Power and Reactive Power resources connected at 100 kV or higher". For example, if you have a device connected to a 69Kv system which is used solely for an end-user's load, but the 69kv system is transformed up to a 115kV system, such device could be included as BES or you would have to define what is meant by "dedicated. If Reactive Power is meant to agree with the definition under NERC's Glossary of Terms, there should be consistency and less verbiage. MWDSC also agrees with WECC's comment that there should be some minimum threshold for Reactive Power devices similar to that identified for generating resources in Inclusion 2. MWDSC recommends that Inclusion 5 be changed as follows: I5 - "Reactive

Voter	Entity	Segment	Vote	Comment
				Power devices dedicated to support the BES that are connected at 100kV or higher, or through a transformer that is designated in Inclusion I1." Exclusion 4 appears to limit the devices just to retail customers. However, any end-user load, including wholesale or retail, should be included. NERC's Glossary of Terms uses the phrase "end-use customer", not retail customers to describe loads. MWDSC recommends that Exclusion 4 be changed as follows: E4 - Reactive Power devices owned and operated by an end-use customer solely for its own use.
Response: The SDT refers MWDSC to the individual comment responses in the definition comment form as the comments expressed here are exactly identical to the comments submitted by MWDSC on that form.				
William Palazzo	New York Power Authority	6	Negative	1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: In general NYPA agrees with the definition. However, NYPA believes that clarifying revisions need to be made as described in the responses to Questions 2 -11 below. 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The wording of Inclusion I1 is not clear. The term transformers needs to be further defined with respect to auto transformers, phase angle regulators and generator step-up transformers. Recommend the following wording: "All transformers (including auto-transformers, voltage regulators, and phase angle regulators) with primary and secondary terminals operated at or above 100kV, and generator step-up transformers (GSU) with one terminal operated at or above 100KV, unless excluded by E1 or E3." 3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language

Voter	Entity	Segment	Vote	Comment
				would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Recommend removing the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document and provide the details of what generating resources should be included. The current language induces circular arguments without a true governing document. The definition should drive what appears in the Registry Criteria. Inclusion I2 should be revised to read: "Generating resources with a gross nameplate rating of 20MVA or greater, or generating plant/facility connected at a common bus, with an aggregate nameplate rating of 75MVA or greater and is directly connected to a BES Element." This is consistent with proposed Inclusion I2 and the current Compliance Registry Criteria. 4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Recommend that the concept and the words "material to and designated as part of" be included in Inclusion I3. Recommend rewording Inclusion I3 as follows "Blackstart resources material to and designated as part of the Transmission Operator's restoration plan." 5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The term "common point" needs clarification with respect to connection to the BES. Recommend the following wording: "connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 KV or above." 6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Technical studies need to be conducted to

Voter	Entity	Segment	Vote	Comment
				confirm reactive resource impacts on the reliability of the BES. The inclusion of reactive resources is a significant expansion of the current BES definition and therefore requires technical justification for inclusion. Inclusion I5 as written is generally confusing with multiple references to other inclusions and exclusions in the definition. Recommend removing references to reactive resources from Phase 1 until technical justification can be demonstrated (as part of Phase 2). 7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The wording in E1c should more clearly reflect what is intended by using the term "non-retail". The E1 reference Note should be re-worded to state "Radial systems shall be assessed with all normally open switching devices in their open positions." The current wording is unclear with respect to the treatment of normally open switching devices. Recommend that load bus tie-breakers be excluded from the BES as these devices apply to the users of the BES. Recommend that the potential inclusion in the BES of protective relay systems which protect radial lines emanating from a ring bus or breaker and a half bus design be confirmed in Phase 2 pursuant to technical studies. 8. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2 (behind-the-meter generation)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The wording of Exclusion E2 should be consistent with the Statement of Compliance Registry Criteria in Section III.c.4. 9. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3 (local network)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: It is our understanding that a sub-team of the SDT performed a technical study to support the limits outlined in Exclusion E3.

Voter	Entity	Segment	Vote	Comment
				This study should be made available. Recommend removing the sentence in the definition that states: "This does not include facilities used in the local distribution of electric energy." This sentence leads to confusion as it overlaps with language in Exclusion E3. 10. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E4 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The statement "owned or operated by the retail customer" is confusing and arguably inaccurate and should be revised. Refer to comments related to reactive resources for Question 6 regarding Inclusion I5. 11. Are there any other concerns with this definition that haven't been covered in previous questions and comments remembering that the exception criteria are posted separately for comment? Yes: X No: Comments: Recommend integrating the Inclusions into the base definition wording to eliminate confusion. Format of the definition is confusing by referencing both Inclusions and Exclusions. NYPA supports many of the comments
Marilyn Brown	New York Power Authority	3	Negative	1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: In general NYPA agrees with the definition. However, NYPA believes that clarifying revisions need to be made as described in the responses to Questions 2 -11 below. 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The wording of Inclusion I1 is not clear. The term transformers needs to be further defined with respect to auto transformers, phase angle regulators and generator step-up transformers. Recommend the

Voter	Entity	Segment	Vote	Comment
				following wording: "All transformers (including autotransformers, voltage regulators, and phase angle regulators) with primary and secondary terminals operated at or above 100kV, and generator step-up transformers (GSU) with one terminal operated at or above 100KV, unless excluded by E1 or E3." 3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Recommend removing the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document and provide the details of what generating resources should be included. The current language induces circular arguments without a true governing document. The definition should drive what New York Power Authority's Comments Final: October 05, 2011 Comment Form for 2nd Draft of Definition of BES (Project 2010-17) Page 4 of 6 appears in the Registry Criteria. Inclusion I2 should be revised to read: "Generating resources with a gross nameplate rating of 20MVA or greater, or generating plant/facility connected at a common bus, with an aggregate nameplate rating of 75MVA or greater and is directly connected to a BES Element." This is consistent with proposed Inclusion I2 and the current Compliance Registry Criteria. 4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Recommend that the concept and the words "material to and designated as part of" be included in Inclusion I3. Recommend rewording Inclusion I3 as follows "Blackstart resources material to and designated as part of the Transmission Operator's restoration plan." 5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language

Voter	Entity	Segment	Vote	Comment
				would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The term "common point" needs clarification with respect to connection to the BES. Recommend the following wording: "connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 KV or above." 6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Technical studies need to be conducted to confirm reactive resource impacts on the reliability of the BES. The inclusion of reactive resources is a significant expansion of the current BES definition and therefore requires technical justification for inclusion. Inclusion I5 as written is generally confusing with multiple references to other inclusions and exclusions in the definition. Recommend removing references to reactive resources from Phase 1 until technical justification can be demonstrated (as part of Phase 2). New York Power Authority's Comments Final: October 05, 2011 Comment Form for 2nd Draft of Definition of BES (Project 2010-17) Page 5 of 6 7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The wording in E1c should more clearly reflect what is intended by using the term "non-retail". The E1 reference Note should be re-worded to state "Radial systems shall be assessed with all normally open switching devices in their open positions." The current wording is unclear with respect to the treatment of normally open switching devices. Recommend that load bus tie-breakers be excluded from the BES as these devices apply to the users of the BES. Recommend that the potential inclusion in the BES of protective relay systems which protect radial lines emanating from a ring bus or breaker and a half bus design be confirmed in Phase 2 pursuant to technical studies. 8. The SDT has revised the specific exclusions to the core definition in response

Voter	Entity	Segment	Vote	Comment
				to industry comments. Do you agree with Exclusion E2 (behind-the-meter generation)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The wording of Exclusion E2 should be consistent with the Statement of Compliance Registry Criteria in Section III.c.4. 9. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3 (local network)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: It is our understanding that a sub-team of the SDT performed a technical study to support the limits outlined in Exclusion E3. This study should be made available. Recommend removing the sentence in the definition that states: "This does not include facilities used in the local distribution of electric energy." This sentence leads to confusion as it overlaps with language in Exclusion E3. New York Power Authority's Comments Final: October 05, 2011 Comment Form for 2nd Draft of Definition of BES (Project 2010-17) Page 6 of 6 10. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E4 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The statement "owned or operated by the retail customer" is confusing and arguably inaccurate and should be revised. Refer to comments related to reactive resources for Question 6 regarding Inclusion I5. 11.Are there any other concerns with this definition that haven't been covered in previous questions and comments remembering
Arnold J. Schuff	New York Power Authority	1	Negative	You do not have to answer all questions. Enter All Comments in Simple Text Format. Insert a "check" mark in the appropriate boxes by double-clicking the gray areas. The SDT has asked one specific question for each specific aspect of the definition. 1. The SDT has made clarifying changes to the core definition in response to

Voter	Entity	Segment	Vote	Comment
				industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: In general NYPA agrees with the definition. However, NYPA believes that clarifying revisions need to be made as described in the responses to Questions 2 -11 below. 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The wording of Inclusion I1 is not clear. The term transformers needs to be further defined with respect to auto transformers, phase angle regulators and generator step-up transformers. Recommend the following wording: "All transformers (including auto-transformers, voltage regulators, and phase angle regulators) with primary and secondary terminals operated at or above 100kV, and generator step-up transformers (GSU) with one terminal operated at or above 100KV, unless excluded by E1 or E3." 3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Recommend removing the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document and provide the details of what generating resources should be included. The current language induces circular arguments without a true governing document. The definition should drive what appears in the Registry Criteria. Inclusion I2 should be revised to read: "Generating resources with a gross nameplate rating of 20MVA or greater, or generating plant/facility connected at a common bus, with an aggregate nameplate rating of 75MVA or greater and is directly connected to a BES Element." This is consistent with proposed Inclusion I2 and the current Compliance Registry Criteria.

Voter	Entity	Segment	Vote	Comment
				4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Recommend that the concept and the words "material to and designated as part of" be included in Inclusion I3. Recommend rewording Inclusion I3 as follows "Blackstart resources material to and designated as part of the Transmission Operator's restoration plan." 5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The term "common point" needs clarification with respect to connection to the BES. Recommend the following wording: "connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 KV or above." 6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Technical studies need to be conducted to confirm reactive resource impacts on the reliability of the BES. The inclusion of reactive resources is a significant expansion of the current BES definition and therefore requires technical justification for inclusion. Inclusion I5 as written is generally confusing with multiple references to other inclusions and exclusions in the definition. Recommend removing references to reactive resources from Phase 1 until technical justification can be demonstrated (as part of Phase 2). 7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The wording in E1c should more clearly reflect

Voter	Entity	Segment	Vote	Comment
				what is intended by using the term "non-retail". The E1 reference Note should be re-worded to state "Radial systems shall be assessed with all normally open switching devices in their open positions." The current wording is unclear with respect to the treatment of normally open switching devices. Recommend that load bus tie-breakers be excluded from the BES as these devices apply to the users of the BES. Recommend that the potential inclusion in the BES of protective relay systems which protect radial lines emanating from a ring bus or breaker and a half bus design be confirmed in Phase 2 pursuant to technical studies. 8. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2 (behind-the-meter generation)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The wording of Exclusion E2 should be consistent with the Statement of Compliance Registry Criteria in Section III.c.4. 9. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3 (local network)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: It is our understanding that a sub-team of the SDT performed a technical study to support the limits outlined in Exclusion E3. This study should be made available. Recommend removing the sentence in the definition that states: "This does not include facilities used in the local distribution of electric energy." This sentence leads to confusion as it overlaps with language in Exclusion E3. 10. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E4 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The statement "owned or operated by the retail customer" is confusing and arguably inaccurate and should be revised. Refer to comments related to reactive resources for Question 6 regarding

Voter	Entity	Segment	Vote	Comment
				Inclusion I5. 11. Are there any other concerns with this definition that haven't been covered in previous questions and comments remembering that the exception criteria are posted separately for

Response: 1. The SDT refers NYPA to the responses below for Q2 – Q10.
2. The SDT believes the existing language is clear and the proposed additional language would be redundant. No change made.
3. The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.
4. The SDT believes that adding language such as "material to" does not provide clarity and remains immeasurable. No change made.
5. The "single point of connection of 100 kV or higher" is where the radial system will begin if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation.
6. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects of the definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will provide compelling justification. No change made.
7. "Non-retail generation" means that generation which is on the system (supply) side of the retail meter. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator

Voter	Entity	Segment	Vote	Comment
from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment. The "single point of connection of 100 kV or higher" is where the radial system will begin if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Treatment of protection systems is but one of many items to be studied and clarified in Phase II. 8. The threshold levels of generators and the relationship between the ERO Statement of Compliance Registry Criteria and the BES definition will be considered in the Phase 2 review. However, the SDT believes that a value was needed for Phase I and decided to proceed with the single 75 MVA threshold. No change made. 9. No study was run by the SDT concerning the limits in E3. The SDT does not see any conflict between the cited statement and the language in E3. 10. The SDT believes the wording is clear and absent any concrete suggestions has not made a change in this regard.				
Doug Peterchuck	Omaha Public Power District	1	Negative	We believe that this version of the definition and associated Inclusion and Exclusion criteria will again create regional inconsistency in identifying BES facilities. We believe the best way to address this is to condense the definition by applying a bright-line threshold within the definition itself that uses the defined inclusions to describe transmission and generation facilities operating or connecting at 100 kV or above as BES facilities. Further, the definition should include existing registration criteria for generation facilities (including real and reactive resources), which includes both single units at or above 20 MVA and aggregate units at 75 MVA or above that are directly connected to facilities at 100kV or higher. The proposed Exception Process should only allow Registered Entities to remove facilities from BES designation based on technical justification (i.e. perform system impact studies to show facility not impacting reliable operation of BES). If the BES definition is properly created and defined, there should not be a need

Voter	Entity	Segment	Vote	Comment
				to have an exception process for a registered entity to add a facility to the BES. With coordination led by NERC, the RE should have the final approval of any registered entity requesting a facility exemption. Exemptions should be granted based on result of the system impact study performed. Saying this, the proposed exclusion list should actually be listed as "Typical Exceptions to be considered by Regional Entities and NERC".
Response: The SDT strived to create a bright-line as requested in the comment. The inclusions and exclusions are seen as necessary clarifications to the core definition and every attempt was made to make them bright-line as well. The SDT has reverted to specific numeric thresholds consistent with the ERO Statement of Compliance Registry Criteria for Phase I. The exception process has been designed with maximum flexibility in mind to allow for all possible conditions. Therefore, it is set up to allow for both deletion and inclusion requests. Order 743 directs that the ERO be the final arbiter of exception requests.				
Robert Kondziolka	Salt River Project	1	Negative	Definition of Bulk Electric System (BES) The Blackstart "Cranking Path" has been deleted from Inclusion 3 of the BES definition. However, NERC standards EOP-005 and CIP-002, R1.2.4 require documenting the Cranking Path. In addition, CIP-002-4 identifies the Cranking Path as a Critical Asset in Attachment 1. Compliance to the NERC Standards needs to be an exact science whenever possible. SRP does not argue the inclusion or exclusion of Cranking Path. However, if it is excluded, guidance must be provided on whether or not a Cranking Path is subject to the previously mentioned Standards. Detailed Information to Support BES Exceptions Request SRP agrees with the WECC Staff recommendation on the "Detailed Information to Support BES Exceptions Request." "WECC Staff believes that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to

Voter	Entity	Segment	Vote	Comment
				each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO."
John T. Underhill	Salt River Project	3	Negative	Definition of Bulk Electric System (BES) The Blackstart "Cranking Path" has been deleted from Inclusion 3 of the BES definition. However, NERC standards EOP-005 and CIP-002, R1.2.4 require documenting the Cranking Path. In addition, CIP-002-4 identifies the Cranking Path as a Critical Asset in Attachment 1. Compliance to the NERC Standards needs to be an exact science whenever possible. SRP does not argue the inclusion or exclusion of Cranking Path. However, if it is excluded, guidance must be provided on whether or not a Cranking Path is subject to the previously mentioned Standards. Detailed Information to Support BES Exceptions Request SRP agrees with the WECC Staff recommendation on the "Detailed Information to Support BES Exceptions Request." "WECC Staff believes that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be

Voter	Entity	Segment	Vote	Comment
				submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO."

Response: Cranking Paths are subject to any standard in which they are specifically spelled out.
The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the

Voter	Entity	Segment	Vote	Comment
proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result ofa sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.				

Voter	Entity	Segment	Vote	Comment
Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.				
Barbara Constantinescu	Independent Electricity System Operator	2	Negative	This is our response to Question 4 in the comment form: We thank the SDT for excluding the cranking paths from the BES definition, a point we had raised in our comments to the previous posting. However, we had also disagreed with the inclusion of Blackstart Resources and reiterate our view that their inclusion is superfluous given there is already a designation specific for system restoration covered by an existing standard, to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. We therefore suggest removing Inclusion I3 entirely.

Voter	Entity	Segment	Vote	Comment
				We support the provisions of E1 in principle but require clarification of some issues and suggest alternative wording in some cases. It is unclear if the connection voltage of generation referred to in E1.b affects whether a radial system could be excluded under E1 although from the context it appears that it would. For clarity we suggest appending "connected at 100 kV or higher." Please provide in the BES definition document an explanation of "non-retail" and "retail" generation used in E1.c. Additionally, despite the fact the revisions to Inclusion I3 (Blackstart Resources) removed any reference to Cranking Paths, Exclusion 1 (b) and (c) both indicate that the exclusion of a radial system would not be allowed if generation identified in I3 were connected to it. This implies that the Cranking Path for this Blackstart Resource would have to be BES. This appears to be an inconsistency. We suggest removing the phrase "not identified in Inclusion I3" in both instances. We disagree with notion that the capacity of generation connected to a radial system ought to determine whether that radial system should be classified as BES. Firstly, it is a given that the generation connected to the subject radial that meets the registry criteria would already be captured within the core BES definition and Inclusion I2. This is our response to Question 7 in the comment form: The function served by a radial that is of importance in the current context is that of delivering surplus power to the rest of the bulk power system and so, the impact on the BES of loss of the radial system or its connected generation needs to be considered. In our view, the "BES-status" of the radial itself is immaterial and so too is the aggregate capacity of generation resources connected to it. Detailed arguments regarding impact on the BES can be made in support of an application for an exclusion under the Exception Process, but it would be beneficial to avoid unnecessarily including a radial merely because it has more than 75 MVA of qualifying generation connected to it, without equal consideration of the connected load. To put a "bright line" on the consideration of impact referred to above, we suggest: In E1 (b): Replace "an aggregate capacity less than or equal to 75 MVA (gross

Voter	Entity	Segment	Vote	Comment
				nameplate rating)" with "a net capacity provided to the BES of less than or equal to 75 MVA." In E1 (c): Replace "an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating)" with "a net capacity of non-retail generation provided to the BES of 75 MVA." This wording would be consistent with E2 (i). Finally the word "affect" stated in the note accompanying E1 lends itself to mis-interpretation. We therefore suggest the following revision to achieve greater clarity: "This exclusion applies to radial systems connected by a normally open switch." This is our response to Question 9 of the comment form: Consistent with our comments in response to Q7, we propose removing E3 (a) since, as explicitly described in E3 (b), one of the characteristic of the LN is that power flows only into the LN. The level of generation contained within the LN is therefore immaterial, particularly where the most onerous contingency or system operating condition occurring within the LN, results in acceptable BES performance as defined by the applicable criteria of the NERC transmission planning standards. The generation connected within the LN that meets the registry criteria would already be captured within the definition of the BES as provided for in Inclusion I2.
Response: The SDT refers IESO to the individual comment responses in the definition comment form as the comments expressed here are exactly identical to the comments submitted by IESO on that form.				
Marie Knox	Midwest ISO, Inc.	2	Negative	While we agree with the changes to the definition of the Bulk Electric System (BES), there are a few key refinements left to be addressed. The BES drafting team needs to clarify that facilities below 100 kV are defined "local distribution facilities", are beyond NERC jurisdiction, and are excluded from the NERC BES. Facilities below 100 kV are used for the local distribution of electric energy. We fear that equipment that is connected to the BES, would be considered a part of the BES as well, and we disagree.

Voter	Entity	Segment	Vote	Comment
Response: The SDT points the commenter to the core definition which clearly states that the BES is 100 kV and above unless modified by the inclusions/exclusions and also clearly states that local distribution facilities are not included. The inclusions/exclusions were carefully developed to try to avoid bringing in any equipment that is truly local distribution. The SDT would also point out that the way the definition has been framed that it would not bring in local distribution facilities simply because they were connected to the BES at some location.				
Alden Briggs	New Brunswick System Operator	2	Negative	Please see comments submitted by the Reliability Standards Committee. The draft definition will significantly increase the number of BES elements. Many elements and connected facilities will be added to the BES and subject to NERC standards under the draft definition. Most of these requirements for elements will unnecessary introduce administrative burden and operating expenses. As a NPCC study identifies, this would impose significant costs to the ratepayer, with little or no increase in reliability benefits to the Bulk Power System (BPS) as currently defined by NPCC.
Response: The SDT refers NBSO to the individual comment responses in the definition comment form as the comments expressed here are identical to the comments submitted by NBSO on that form.				
Jack W Savage	Modesto Irrigation District	3	Negative	MID is voting No with the following comments. Inclusions and exclusions are based upon the ERO Statement of Compliance Registry Criteria - currently 75MVA. What is the SDT's technical justification for using this generation level? If 75MVA is the criteria for including facilities as part of the BES, why is that same criteria not applied at voltages below 100kv? Is 75MVA of generation within an area whose load far exceeds that 75MVA cause to classify that entire area as part of the BES and not exclude it as a Local Network? Why are customer owned generators treated differently than other generators? Where is "non-retail generation" defined? As worded, I5 will make any and all reactive devices connected at 100kv or higher part of the BES. Is is intended that capacitors attached to the tertiary of a 115/69kv transformer for local voltage support be included as part of the BES? By implication, if they are, then the 115/69kv transformer should also be included. Is that the intent? Did the SDT consider and attempt to include and reconcile the WECC BES Task

Voter	Entity	Segment	Vote	Comment
				Force's definition of the BES and their technical basis for defining exclusions? Please explain.

Response: As has been previously stated in the first posting consideration of comments, the SDT is using the existing thresholds for generation due to the scope limitations of the FERC Order. Phase II of this project will include a thorough investigation of, and a technical justification for, any threshold values used in the definition.

The SDT is using the same criteria that exists in today's definition for generation threshold values and will be exploring all issues associated with these threshold values in Phase II of this project when more time will be available for technical analysis of the issues.

The SDT recognizes that some candidate local networks will have far in excess of 75 MVA of load demand, yet it believes that the 75 MVA threshold value given in Exclusion E3.a is an appropriate level regardless of the amount of load. This value is consistent with the existing threshold of aggregate generation in the ERO Statement of Compliance Registry Criteria. The generation values used in the BES definition will receive more attention and refinement as part of phase 2 of this Project 2010-17.

Customer owned generation has traditionally been treated differently and the SDT is retaining this important distinction.

Non-retail generation is a widely used and understood term and is not defined here.

The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.

The SDT considered all of the previous work done by several of the regional entities in the revision of the definition. WECC is well represented on the SDT.

Voter	Entity	Segment	Vote	Comment
Steven M. Jackson	Municipal Electric Authority of Georgia	3	Negative	MEAG believes that a Yes vote for the draft BES Definition will result in minimal or no changes. We have identified a few changes that if made will secure a Yes vote on the next ballot. The most important change is needed in I5 reactive resources noted below. I5 reactive resources - We feel that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common point. E1 - Non-retail generation needs to be defined to clarify why it is used in this exclusion. E2 (ii) The reference to generation on the customer's side of the retail meter needs to be clarified to provide a better understanding as to what is intended with this phrase. E3 b - We would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN *"under normal operating conditions"*.
Steven Grego	MEAG Power	5	Negative	MEAG believes that a Yes vote for the draft BES Definition will result in minimal or no changes. We have identified a few changes that if made will secure a Yes vote on the next ballot. The most important change is needed in I5 reactive resources noted below. I5 reactive resources - We feel that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common point. E1 - Non-retail generation needs to be defined to clarify why it is used in this exclusion. E2 (ii) The reference to generation on the customer's side of the retail meter needs to be clarified to provide a better understanding as to what is intended with this phrase. E3 b - We would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN *"under normal operating conditions"*.
Response: The SDT refers MEAG to the individual comment responses in the definition comment form as the comments expressed here are identical to the comments submitted by MEAG on that form.				

Voter	Entity	Segment	Vote	Comment
Spencer Tacke	Modesto Irrigation District	4	Negative	The choice of 75 MVA as the determining generating capacity seems to have been an arbitrary choice with no technical basis. We strongly support the E3 (Local Networks) exception, if it were not for the 75 MVA generation requirement. So I believe a technical basis for selecting 75 MVA as the generator size needs to be developed before the definition would be acceptable. Thank you.
Response: Comments were received that either posed a challenge to the generator thresholds in Exclusion E3.a or suggested that the Exclusion for local networks should be silent on generator thresholds until such time as the additional consideration of appropriate generation thresholds is addressed in Phase 2 of Project 2010-17. The SDT agrees that the threshold(s) for generation throughout the BES definition are appropriately addressed in Phase 2 of this effort; however, in the meantime and for the purpose of satisfying the Commission's Order in 743 and 743a in a timely fashion, the SDT believes it is necessary to use a generation threshold that is consistent with the in-force ERO Statement of Compliance Registry Criteria.				
Chifong Thomas	BrightSource Energy, Inc.	5	Negative	BrightSource Energy supports the core definition of the Bulk Electric System as proposed. However, we believe the following clarification will be needed. For Inclusion 3 we agree that Blackstart units should be considered vital to the overall operation of the BES, and therefore included in the definition of the BES. However, we do not agree with the deletion of the cranking path from Inclusion 3. The cranking path should be included in the definition since NERC standards EOP-005 and CIP-002, R1.2.4 require documenting the cranking path and the revised CIP-002-4 identifies the cranking path as a critical asset. To be able to count on a Blackstart unit to perform as designed in the Blackstart Restoration Plan, it must be ensured that the cranking path is available. We believe that additional clarity is needed in the wording of Inclusion 4. It is our understanding, for example, that Inclusion 4 is not intended to include each individual wind turbine generating unit in a wind farm, or each PV panel as a BES element, but rather to include the point at which the aggregated capacity reaches the threshold of 75 MVA. However, the current wording of Inclusion 4 does not provide sufficient clarity. We believe that the wording of Inclusion 4 could be modified to add clarity on this topic. We believe that Inclusion 5 should be modified to identify some minimum Reactive Power threshold for static or dynamic devices similar to that identified for generating sources in Inclusion 2. As worded a 1 MVA device supplying or

Voter	Entity	Segment	Vote	Comment
				absorbing Reactive Power that is connected at 100 kV or higher would be included in the BES. We believe that Exclusion 2 should be modified to include a size threshold for individual generating units, similar to that identified in Inclusion 2. As currently worded Exclusion 2 places the same threshold (75 MVA) on a single generating unit as is placed on multiple generating units.
Response: Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system Elements. The Transmission Operator's restoration plans identify a number of possible system restoration scenarios to address the uncertainty of the actual requirements needed to address a particular restoration event including Cranking Paths. Therefore, the SDT maintains that Cranking Paths are not required to be included in the BES definition as they are essentially a moving target and could include distribution Elements. The Cranking Paths issue will be discussed anew in Phase II of this project. No change made. Inclusion I4 denotes an aggregate threshold. This is clear from the requirement inclusion threshold of "aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)." The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. The threshold levels of generators and the relationship between the ERO Statement of Compliance Registry Criteria and the BES definition will be considered in the Phase 2 review. However, the SDT believes that a value was needed for Phase I and decided to proceed with the single 75 MVA threshold. No change made.				
Rex A Roehl	Indeck Energy Services, Inc.	5	Negative	As acknowledged in the response to Question 12 comments on the previous BES definition, the BES definition is expansive compared to the definition of the BPS in

Voter	Entity	Segment	Vote	Comment
				the FPA Section 215. The inclusion of the limited Exclusions is an attempt to remedy the situation. However, the Exclusions need to include a fifth one that if, based on studies or other assessments, it can be shown that any tranmission or generator element otherwise identified as part of the BES is not important to the reliability of the BPS, then that element should be excluded from the mandatory standards program. There has never been a study to show that elements, such as a 20 MW wind farm, 60 MW merchant generator (which operates infrequently in the depressed market) in a large BA (eg NYISO) or a radial transmission line connecting a small generator are important to the reliability of the BPS. They are covered by the mandatory standards program through the registration criteria. The BES Definition is the opportunity to permit an entity to demonstrate that an element is unimportant to reliability of the BPS. The SDT has identified a small subset of elements that it is willing to exclude. By their very nature, these exclusions dim the bright line that is the stated goal of this project. However, the SDT's foresight seems limited in its selections. Analytical studies are used to evaluate contingencies that could lead to the Big Three (cascading outages, instability or voltage collapse). Such a study showing that a transmission or generation element is bounded by the N-1 or N-2 contingency would exclude it from the BES definition. For example, in a BA with a NERC definition Reportable Disturbance of approximately 400 MW (eg NYISO), a 20 MW wind farm, 60 MW merchant generator or numerous other smaller facilities would be bounded by larger contingencies. It would take more than six 60 MW merchant generators with close location and common mode failure to even be a Reportable Disturbance, much less become the N-1 contingency for the Big Three. Exclusion E5 should be "E5 - Any facility that can be demonstrated to the Regional Entity by analytical study or other assessment to be unimportant to the reliability of the BPS (with periodic reports by the Regional Entity to NERC of any such assessments)."
Response: The SDT refers Indeck to the individual comment responses in the definition comment form as the comments expressed here are identical to the comments submitted by Indeck on that form.				

Voter	Entity	Segment	Vote	Comment
Gerald Mannarino	New York Power Authority	5	Negative	Comments: For Question 2 on page 2, recommend that the specific types of studies to be provided are defined to add consistency and transparency to the Exception request process. Recommend that the concept and the words "material to" be included as part of the question as follows "Is the facility material to permanent Flowgates in the Eastern Interconnection....." For Question 4 on page 2, recommend that single contingency analysis be performed and submitted to demonstrate impacts to the BES. For Question 6 on page 3, recommend that "Cranking Path" be removed to be consistent with the draft BES Definition. Recommend that the concept and the words "material to and designated as part of" be included as part of the question. Recommend rewording Question 6 as follows "Is the facility a Blackstart resource material to and designated as part of the Transmission Operator's restoration plan?" For Question 7 on page 3, facilities less than two years old or under construction would not be able to provide SCADA data for the most recent consecutive two calendar year period. Facility rating changes and the magnitude of such changes which trigger application or reapplication of the exception process are not addressed. Recommend that Question 7 be revised to address these issues. Comments: For Question 2 on page 4, recommend that the specific generator ancillary service products be defined to add consistency and transparency to the Exception Request process. For Question 3 on page 4, recommend that confirmation of must-run generation be provided by the Reliability Coordinator, Reliability Planner, or the Balancing Authority as a clarification to the "appropriate reference".
Response: These questions have been provided to those members of the SDT who are working on responses to the criteria posting questions. They will be responded to in detail in those documents.				
Colin Anderson	Ontario Power Generation Inc.	5	Negative	OPG continues to question the need for the changes required (and costs imposed) as a result of this new definition. This is particularly true in the NPCC region where an impact based methodology is being used to determine the set of BES elements. A very clear 100kV bright line, as proposed in this draft, will dramatically increase the list of generation elements that must meet reliability standards, without a corresponding increase in wide-area reliability.

Voter	Entity	Segment	Vote	Comment
				OPG recommends that the work planned for phase II, technical justification of the generation and voltage thresholds, should be completed before implementing the new definition of BES. OPG does not agree that the question of the 20 MVA (single) versus 75 MVA (aggregate) threshold should be deferred until a subsequent phase of the standard development process ("Phase II"). This question should be resolved now. In general, key elements of the development process should not be parsed out into multiple phases, in hopes that "Standard Development Fatigue" will eliminate critics of the approach. Further, selecting the generator terminals as the boundary for BES within the generating station means that the Isolated Phase Bus (IPB), which connects the generator terminals to the Low Voltage (LV) terminals of the generator step-up (GSU) transformer, is now included as a BES element. The IPB is operated at low voltage, no more than 22kV, so including it as a BES element is going beyond the FERC order 743 and 743a. OPG strongly recommends that the BES boundary be moved to the LV terminals of the GSU transformer. To assure availability of the generation blackstart resources identified in the Transmission Operator's Power System Restoration Plan the generators are tested according to the requirements of reliability standard EOP-009. Blackstart resources are only required post LOBES (Loss of Bulk Electric System) and in many cases do not contribute to the reliability of the BES under normal operating conditions. OPG recommends that this inclusion be removed from the new definition of BES. OPG disagrees in general with proceeding to implement a 100 kV brightline definition in the absence of a properly quantified cost/benefit analysis. Entities are being asked to incur a high cost for no demonstrated benefit in wide-area reliability.
Response: The SDT refers OPG to the individual comment responses in the definition comment form as the comments expressed here are identical to the comments submitted by OPG on that form.				
Roland Thiel	Platte River Power Authority	5	Negative	Definition of BES Platte River believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although Platte River ballots "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. Platte River recognizes that, given the deadlines imposed by

Voter	Entity	Segment	Vote	Comment
				FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, Platte River agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification. That said, Platte River is prepared to support the BES definition as proposed by the SDT going forward. Platte River has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. Detailed Information to Support BES Exceptions Requests Platte River believes that a Yes vote for the Technical Principles for Demonstrating BES Exceptions Request will result in minimal changes to today's process under the current definition which includes the language "as defined by the Regional Reliability Organization." While the proposed Technical Principles for Demonstrating BES Exceptions Request includes a checklist that must be submitted with exception requests, a yes vote will still require each region to develop their own methods and criteria for assessing materials submitted with exemption requests. We believe that a No vote with guidance to the drafting team that objective methods and criteria must be developed and applied continent-wide will result in the desired uniformity and consistency among regions in their assessment of exception requests.
Response: Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up. The first step in Phase II will be the posting of the Phase II draft SAR for comment. At that time, you will have the opportunity to submit comments for the inclusion of items and issues to be considered by the SDT in Phase II. The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT				

Voter	Entity	Segment	Vote	Comment
would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables				

Voter	Entity	Segment	Vote	Comment
to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result ofa sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.				

Voter	Entity	Segment	Vote	Comment
Steven Grega	Public Utility District No. 1 of Lewis County	5	Negative	The bright line definition makes the BES too inclusive. Many smaller facilities are cought in the definition that are NOT BES facilities. Would suggest only the major transmission cranking paths, in our area, as defined by WECC, should be included. Why subject so many to these regulation when there is no or little return on reliability to the system. We worry about compliance not reliability. In our case, our small public utility has a run-of-river 70MW hydro (29MWave), non-dispatchable, similar to wind. We made the mistake of connection to BPA's 230kV system rather than our 69kV system. Our portion of the 230kV is uncontrolled by a SCADA system. In our utility, we rely on phone calls for all outage reporting. Since the 230kV line our feeds our utility substation and we have an alternitive 69kV connection, many time it is not a concern if the 230kV line is out. The definition of the BES should be limited to truly only the major transmission paths and major generation plants. I beleive it is good utility practce to make sure right of ways are clear and relays are tested, but a number of Standards go way too far with little or no benefit to the system, especially for smaller utilities. I think it is time that we step back and evaluate what is truly important in making the BES more reliable. Limiting the BES definition would be a good start.
Response: The bright-line definition is a continent-wide definition. In these instances, there will always be one off situations where the bright-line might not apply. With the changes to the ERO Rules of Procedure for exception requests, an entity will have the right to request exception from the definition even if the application of the bright-line would have brought them into the fold.				
Dennis Kimm	MidAmerican Energy Co.	6	Negative	The BES definition needs additional specific inclusion or exclusion provisions that clearly exclude variable resource generation collector circuits rated below 100 kV and generators less than 20 MVA connected to those collector circuits in accordance with the registration criteria.
Response: Inclusion I4 denotes an aggregate threshold. This is clear from the requirement inclusion threshold of "aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)."				
Steven J Hulet	Salt River Project	6	Negative	The Blackstart "Cranking Path" has been deleted from Inclusion 3 of the BES definition. However, NERC standards EOP-005 and CIP-002, R1.2.4 require documenting the Cranking Path. In addition, CIP-002-4 identifies the Cranking Path as a Critical Asset in Attachment 1. Compliance to the NERC Standards needs to be an exact science whenever possible. SRP does not argue the

Voter	Entity	Segment	Vote	Comment
				inclusion or exclusion of Cranking Path. However, if it is excluded, guidance must be provided on whether or not a Cranking Path is subject to the previously mentioned Standards.
Response: Cranking Paths are subject to any standard in which they are specifically spelled out.				
Donald Nelson	Commonwealth of Massachusetts Department of Public Utilities	9	Negative	Please refer to our detailed comments filed today. As described further in our comments, the MA DPU is primarily concerned with the substance of the definition and the process for developing this standard as follows: 1) Phased Approach. While well-intentioned, separating the BES definition project into two separate phases is problematic from both a procedural and substantive perspective. While we recognize that the filing due date is rapidly approaching, the BES definition cannot be considered in a vacuum, divorced from the concerns raised by a number of parties in response to past postings of the BES definition. The issues NERC has identified for consideration during the proposed "Phase 2" are inseparable from the development of the BES definition (e.g., generation thresholds, technical justification for the 100 kV threshold) and should be squarely addressed before a definition is adopted and ratepayers incur costs related to compliance with mandates that may or may not be revised through the second phase of the project. The importance of considering concerns before adopting a definition is heightened by the proposed two-year implementation requirement. This short implementation period almost guarantees that entities will commit resources shortly after adoption of the definition to ensure compliance within the mandated period. In other words, ratepayers will bear costs related to compliance irrespective of any change resulting from the Phase 2 process or the exception process. Expediency, while understandable given the filing deadline, must be balanced against the risk that a multi-phased approach could lead to significant consumer costs without attendant meaningful reliability benefits. 2) Cost-Benefit Analysis. A cost impact analysis should be performed as part of developing any reliability standard. However, the development of the BES definition has failed to consider the cost impacts of the definition (and its inclusions and exclusions) and has not weighed these impacts against identified

Voter	Entity	Segment	Vote	Comment
				benefits that the definition would achieve. The MA DPU supported the May 21, 2011 comments from the New England States Committee on Electricity ("NESCOE") on the last posting of the BES definition. In these comments, NESCOE stated that "any new costs a revised definition imposes - which fall ultimately on consumers - should provide meaningful reliability benefits." A cost-benefit analysis should be integral to the development of a BES definition and, indeed, any reliability standard. This analysis should include a probabilistic risk assessment examining the likelihood of an event and the costs and risks resulting from such event, which should be weighed against the costs of complying with the proposed reliability measures. 3) Technical Justification. In addition to performing a cost-benefit analysis, a technical basis must be provided to justify a proposed reliability standard. However, the proposed BES definition does not provide a technical justification for the 100 kV threshold, the threshold for generation resources, or other elements of the definition. As stated above, while well-intentioned and understandable, deferring this technical justification to a later and separate phase of the project is a flawed and potentially costly approach. Providing a technical justification for a reliability standard is a core function of standards development and should be addressed at the forefront of the process rather than relegated to a separate phase largely undertaken after a standard is filed.
Response: 1. Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up. The first step in Phase II will be the posting of the Phase II draft SAR for comment. At that time, you will have the opportunity to submit comments for the inclusion of items and issues to be considered by the SDT in Phase II. Since the revised definition relies heavily on the status quo of the current definition, the SDT does not anticipate that many entities will be burdened with additional costs. 2. The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 & 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the				

Voter	Entity	Segment	Vote	Comment
current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 & 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes the best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission. 3. Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up. The first step in Phase II will be the posting of the Phase II draft SAR for comment. At that time, you will have the opportunity to submit comments for the inclusion of items and issues to be considered by the SDT in Phase II. Technical justifications for all variables involved in the definition will be done in Phase II.				
Diane J Barney	National Association of Regulatory Utility Commissioners	9	Negative	There is a lack of clarity as to how the information is to be used and by what weight in the exception process.
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at				

Voter	Entity	Segment	Vote	Comment
as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result ofa sudden disturbance, including a cyber				

Voter	Entity	Segment	Vote	Comment
security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.				
Thomas Dvorsky	New York State Department of Public Service	9	Negative	The currently proposed definition of the BES is based neither on a technical analysis nor on a cost impact study.
Response: Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up. The first step in Phase II will be the posting of the Phase II draft SAR for comment. At that time, you will have the opportunity to submit comments for the inclusion of items and issues to be considered by the SDT in Phase II. Technical justifications for all variables involved in the definition will be done in Phase II.				

Voter	Entity	Segment	Vote	Comment
The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 & 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 & 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.				
Larry Nordell	Montana Consumer Counsel	8	Abstain	The BES definition must be cognizant of costs and benefits. At the very least it needs to have an exclusion for elements whose failure would have no consequential impacts on the bulk system, and an exclusion for elements for which the costs inclusion are clearly in excess of the benefits of inclusion.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 & 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 & 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition				

Voter	Entity	Segment	Vote	Comment
coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.				
John D Varnell	Tenaska Power Services Co.	6	Abstain	Which part of this definition has the highest priority inclusions or exclusions.
Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.				

Voter	Entity	Segment	Vote	Comment
				Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.
William M Chamberlain	California Energy Commission	9	Affirmative	While we are voting in favor of this definition as an improvement over the current status quo, we agree with WECC that additional improvements are necessary as set forth below. For Inclusion 3 we agree that Blackstart units should be considered vital to the overall operation of the BES, and therefore included in the definition of the BES. However, we do not agree with the deletion of the cranking path from Inclusion 3. The cranking path should be included in the definition since NERC standards EOP-005 and CIP-002, R1.2.4 require documenting the cranking path and the revised CIP-002-4 identifies the cranking path as a critical asset in Attachment 1. To be able to count on a Blackstart unit to perform as designed in the Blackstart Restoration Plan, it must be ensured that the cranking path is available. We believe that additional clarity is needed in the wording of Inclusion 4. It is our understanding, for example, that Inclusion 4 is not intended to include each individual wind turbine generating unit in a wind farm as a BES element, but

Voter	Entity	Segment	Vote	Comment
				rather to include the point at which the aggregation becomes large enough to meet the aggregate capacity threshold of 75 MVA. However, the response to comments from the last comment posting and the current wording of Inclusion 4 do not provide sufficient clarity to answer this question. We believe that the wording of Inclusion 4 could be modified to add clarity on this topic. We believe that Inclusion 5 should be modified to identify some minimum Reactive Power threshold for static or dynamic devices similar to that identified for generating sources in Inclusion 2. As worded a 1 MVA device supplying or absorbing Reactive Power that is connected at 100 kV or higher would be included in the BES. We believe that Exclusion 2 should be modified to include a size threshold for individual generating units, similar to that identified in Inclusion 2. As currently worded Exclusion 2 places the same threshold (75 MVA) on a single generating unit as is placed on multiple generating units.

Response: Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system Elements. The Transmission Operator's restoration plans identify a number of possible system restoration scenarios to address the uncertainty of the actual requirements needed to address a particular restoration event including Cranking Paths. Therefore, the SDT maintains that Cranking Paths are not required to be included in the BES definition as they are essentially a moving target and could include distribution Elements. The Cranking Paths issue will be discussed anew in Phase II of this project. No change made.
Inclusion I4 denotes an aggregate threshold. This is clear from the requirement inclusion threshold of "aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)."
The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction

Voter	Entity	Segment	Vote	Comment
with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. The threshold levels of generators and the relationship between the ERO Statement of Compliance Registry Criteria and the BES definition will be considered in the Phase 2 review. However, the SDT believes that a value was needed for Phase I and decided to proceed with the single 75 MVA threshold. No change made.				
Claston Augustus Sunanon	Orlando Utilities Commission	6	Affirmative	Orlando Utilities Commission supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date.
Response: The exceptions process and the definition are being worked on in parallel and will b efiled as one document. Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up. The first step in Phase II will be the posting of the Phase II draft SAR for comment. At that time, you will have the opportunity to submit comments for the inclusion of items and issues to be considered by the SDT in Phase II.				
Brenda Powell	Constellation Energy Commodities Group	6	Affirmative	While we support the proposed definition to satisfy the FERC Order, we also support continued work on the threshold questions slated for "Phase II", in particular the refinement of the generation thresholds.
Response: Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up. Thresholds will be analyzed at that time.				
Michelle R DAntuono	Occidental Chemical	5	Affirmative	1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X Comments: However, one of the FERC directives in Order 743 charged NERC with delineating the difference between transmission and distribution. The Inclusions and Exclusions are a step in that direction, but this subject will need more consideration in Phase II.

Voter	Entity	Segment	Vote	Comment
				2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X Comments: 3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. No: X Comments: Since an aggregate of 75 MVA is allowed at a single site, there is no basis for maintaining the 20 MVA for a single generator. The proposed MOD-026 assigns thresholds by region that are much higher than 20 MVA for modeling purposes. Since modeling generally would require more granularity than what is necessary for the reliable operation of the interconnected transmission system (BES), the SDT might want to review the threshold basis for NERC Project 2007-09 (Generator Verification). It is understood that the threshold will be reconsidered in Phase II of the BES Definition Project; however, a modest change from 20 to 75 MVA seems appropriate in the interim period justified by the current 75f MVA aggregate per site. For clarity purposes the following should be added at the end "unless excluded under Exclusion E2". 4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X Comments: 5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X Comments: To distinguish this Inclusion from Inclusion I2, the SDT might want to clarify that the collection system (usually at voltage below 100

Voter	Entity	Segment	Vote	Comment
				KV anyway) is not part of the BES-just the resources and any transformers included by I1, if this is indeed the intent of this Inclusion. 6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X Comments: 7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X Comments: A much needed change from the first posting, as this will maintain the status quo referred to in the introduction text. 8. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2 (behind-the-meter generation)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X Comments: 9. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3 (local network)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X Comments: This Exclusion and Exclusion E1 aid in the delineation of distribution versus transmission. 10. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E4 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X Comments: This is a needed exception to Inclusion I5 as these reactive power resources are used by retail customers for power factor correction at their own facilities in order avoid imposed power factor penalties. 11. Are there any other concerns with this definition that haven't been covered in

Voter	Entity	Segment	Vote	Comment
				previous questions and comments remembering that the exception criteria are posted separately for comment? Yes: X Comments: It might be worthwhile to explain the relationship (timeline) between the BES Definition implementation plan and the compliance implementation plan proposed in the BES RoP team's new Appendix 5C for the NERC Rules of Procedure.

Response: 1. Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up. The first step in Phase II will be the posting of the Phase II draft SAR for comment. At that time, you will have the opportunity to submit comments for the inclusion of items and issues to be considered by the SDT in Phase II.
2. Thank you for your support.
3. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. Correlation to MOD standards would be included in Phase II.
4. Thank you for your support.
5. The essential distinction between Inclusions I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2.
6. – 10. Thank you for your support.
11. For a newly identified Element(s) under the revised BES definition, the time period to be in full compliance with all applicable Reliability Standards is 24 months from the effective date of the definition. If the entity wishes to file for an exception of a newly

Voter	Entity	Segment	Vote	Comment
identified Element(s) under the revised BES definition through the Rules of Procedure Exception Process, the entity will have 12 months from the effective date of the revised BES definition in which to file such a request. If the exception request is rejected or disapproved and the classification of the Element(s) remains as a BES Element, the Regional Entity and the owner of such a BES Element(s) shall agree to an Implementation Plan for full compliance obligations, which will establish an implementation date no earlier than the date established by the definition Implementation Plan (24 months from the effective date of the definition).				
Gary Ofner	North Carolina Electric Membership Corp.	1	Affirmative	In general, we support the proposed definition of the BES. However, we have identified a few concerns that warrant the SDT's consideration. We'd prefer to see the language from the ERO Statement of Compliance Registry Criteria repeated within the BES Definition itself instead of referencing an outside document. As it stands right now, the Compliance Registry Criteria needs to stay intact for Phase I of this project. That makes the Compliance Registry Criteria reliant on the BES Definition and vice versa. We understand that the Statement of Compliance Registry Criteria may be reviewed/revised at the same time Phase 2 of this project is being developed, therefore we agree with Inclusion I2 of this draft. Blackstart Resources can actually be on the distribution system. There is still the question of whether the distribution system would then be subjected to the enforceable standards. If so, there would most likely be a significant cost increase associated with tracking compliance for these distribution systems without a commensurate increase in reliability since Blackstart Resources are rarely used. This could very well cause entities to un-designate Blackstart Resources on distribution systems to avoid these distribution systems from becoming part of the BES. The same rationale that was used for eliminating cranking paths could also be applied to Blackstart Resources. A flowgate should not be used to limit applicability of E3. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a

Voter	Entity	Segment	Vote	Comment
				problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the "permanent" adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First, flowgates are created to manage congestion. The IDC is more of a congestion management tool than a reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve IROLs that have been violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The characteristics of the flowgate make it a good proxy for estimating how much contractual use has been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROLs, many simply are not. The term "non-retail generation" used in Exclusion E1 (item c) and again in E3 (item a) should be clarified (see comments for question 8 below). The Note after item c should also be clarified to indicate that closing a normally open switch doesn't affect this exclusion.
Jeffrey S Brame	North Carolina Electric Membership Corp.	5	Affirmative	In general, we support the proposed definition of the BES. However, we have identified a few concerns that warrant the SDT's consideration. We'd prefer to see the language from the ERO Statement of Compliance Registry Criteria repeated within the BES Definition itself instead of referencing an outside document. As it stands right now, the Compliance Registry Criteria needs to stay intact for Phase I of this project. That makes the Compliance Registry Criteria reliant on the BES Definition and vice versa.

Voter	Entity	Segment	Vote	Comment
				We understand that the Statement of Compliance Registry Criteria may be reviewed/revised at the same time Phase 2 of this project is being developed, therefore we agree with Inclusion I2 of this draft. Blackstart Resources can actually be on the distribution system. There is still the question of whether the distribution system would then be subjected to the enforceable standards. If so, there would most likely be a significant cost increase associated with tracking compliance for these distribution systems without a commensurate increase in reliability since Blackstart Resources are rarely used. This could very well cause entities to un-designate Blackstart Resources on distribution systems to avoid these distribution systems from becoming part of the BES. The same rationale that was used for eliminating cranking paths could also be applied to Blackstart Resources. A flowgate should not be used to limit applicability of E3. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the "permanent" adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First, flowgates are created to manage congestion. The IDC is more of a congestion management tool than a

Voter	Entity	Segment	Vote	Comment
				reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve IROLs that have been violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The characteristics of the flowgate make it a good proxy for estimating how much contractual use has been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROLs, many simply are not. The term "non-retail generation" used in Exclusion E1 (item c) and again in E3 (item a) should be clarified (see comments for question 8 below). The Note after item c should also be clarified to indicate that closing a normally open switch doesn't affect this exclusion.

Response: The SDT has reverted to specific numeric thresholds consistent with the ERO Statement of Compliance Registry Criteria for Phase I.

Thank you for your support.

The SDT disagrees that Blackstart Resources should not be included in the BES Definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES elements. No change made.

The SDT believes that the language in Exclusion E3.c prohibiting "Flowgates" from qualifying for definitional exclusion is appropriate and necessary. As a definitional exclusion characteristic, Exclusion E3.c must follow the principle of being a bright-line and easily identifiable, and as such, the SDT feels that the definition cannot allow some types of Flowgates and disallow others. Flowgates must continue to be a prohibiting characteristic under Exclusion E3, since these facilities are more likely to be used in the transfer

Voter	Entity	Segment	Vote	Comment
of bulk power than not. An entity who wishes to make a case for exclusion of a unique type of Flowgate facility can do so through the exception process. The SDT believes that the continued qualifier of "permanent" associated with the term "Flowgate" addresses the majority of the concern in this comment. No change made. "Non-retail generation" means that generation which is on the system (supply) side of the retail meter. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment.				
Paul Cummings	City of Redding	5	Affirmative	An affirmative vote is conditional on NERC's dedication to phase 2 of the Project.
Response: Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up.				
Pawel Krupa	Seattle City Light	1	Affirmative	Comments: 1. Core Definition: Yes Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. We strongly support the approach to defining the Bulk Electric System as proposed here. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. 2. I1 - Transformer inclusions: No Comments: The wording of Inclusion I1 is not clear. The term transformers needs to be further defined with respect to multiphase transformers and generator step-up transformers. Recommend the following wording: "All transformers with at least two primary and secondary terminals operated at or above 100kV, and generator step-up transformers (GSU) with one terminal operated at or above 100kV, unless excluded by E1 or E3." 3. I2 - Generation Thresholds: Yes Comments: Recommend removing the

Voter	Entity	Segment	Vote	Comment
				reference to the Statement of Compliance Registry Criteria. The definition should be the governing document and provide the details of what generating resources should be included. The current language induces circular arguments without a true governing document. The definition should drive what appears in the Registry Criteria. Inclusion I2 should be revised to read: "Generating resources with a gross nameplate rating of 20MVA or greater, or generating plant/facility connected at a common bus, with an aggregate nameplate rating of 75MVA or greater and is directly connected to a BES Element." This is consistent with proposed Inclusion. 4. I3 - Blackstart Units: Yes Comments: None 5. I4 - Dispersed Power: No Comments: The term "common point" needs clarification with respect to connection to the BES. Recommend the following wording: "connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 KV or above." 6. I5 - Reactive Power devices: No Comments: Technical studies need to be conducted to confirm reactive resource impacts on the reliability of the BES. The inclusion of reactive resources is a significant expansion of the current BES definition and therefore requires technical justification for inclusion. Inclusion I5 as written is generally confusing with multiple references to other inclusions and exclusions in the definition. Recommend removing references to reactive resources from Phase 1 until technical justification can be demonstrated (as part of Phase 2). 7. E1 - Radial System: Yes Comments: (1) The E1 Reference Note should be re-worded to state "Radial systems shall be assessed with all normally open switching devices in their open positions." The current wording is unclear with respect to the treatment of normally open switching devices. (2) Recommend that load bus tie-breakers be excluded from the BES as these devices apply to the users of the BES. (3) Recommend that the potential inclusion in the BES of protective relay systems which reach beyond a load network or ring bus should be confirmed in Phase 2 pursuant to technical studies. 8. E2 - Behind-the-Meter-Generation: Yes Comments: The wording of Exclusion E2 should be consistent with the Statement of Compliance Registry Criteria in

Voter	Entity	Segment	Vote	Comment
				Section III.c.4. 9. E3 - Local Network: Yes Comments: Defining characteristic b) "Power flows only into the LN" is confusing. For example, is this condition meant as an absolute, that power never under any circumstances flows out? Are exceptions allowed, such as during a switching operation or a catastrophic outage? Does power flow through a local net load sink, as might be determined by superposition of supply sources over time, negate that sink from exclusion as a LN? Recommend additional clarity for this characteristic. 10. E4 - Customer Reactive Power devices: No Comments: Refer to comments related to reactive resources for Question 6 regarding Inclusion I5. 11. Other concerns: No Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. We strongly support the approach to defining the Bulk Electric System as proposed here. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments.
Dana Wheelock	Seattle City Light	3	Affirmative	Comments: 1. Core Definition: Yes Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. We strongly support the approach to defining the Bulk Electric System as proposed here. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. 2. I1 - Transformer inclusions: No Comments: The wording of Inclusion I1 is not

Voter	Entity	Segment	Vote	Comment
				clear. The term transformers needs to be further defined with respect to multiphase transformers and generator step-up transformers. Recommend the following wording: "All transformers with at least two primary and secondary terminals operated at or above 100kV, and generator step-up transformers (GSU) with one terminal operated at or above 100kV, unless excluded by E1 or E3." 3. I2 - Generation Thresholds: Yes Comments: Recommend removing the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document and provide the details of what generating resources should be included. The current language induces circular arguments without a true governing document. The definition should drive what appears in the Registry Criteria. Inclusion I2 should be revised to read: "Generating resources with a gross nameplate rating of 20MVA or greater, or generating plant/facility connected at a common bus, with an aggregate nameplate rating of 75MVA or greater and is directly connected to a BES Element." This is consistent with proposed Inclusion. 4. I3 - Blackstart Units: Yes Comments: None 5. I4 - Dispersed Power: No Comments: The term "common point" needs clarification with respect to connection to the BES. Recommend the following wording: "connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 KV or above." 6. I5 - Reactive Power devices: No Comments: Technical studies need to be conducted to confirm reactive resource impacts on the reliability of the BES. The inclusion of reactive resources is a significant expansion of the current BES definition and therefore requires technical justification for inclusion. Inclusion I5 as written is generally confusing with multiple references to other inclusions and exclusions in the definition. Recommend removing references to reactive resources from Phase 1 until technical justification can be demonstrated (as part of Phase 2). 7. E1 - Radial System: Yes Comments: (1) The E1 Reference Note should be re-worded to state "Radial systems shall be assessed with all normally open switching devices in their open positions." The current wording is unclear with respect to the treatment of normally open switching devices. (2) Recommend that

Voter	Entity	Segment	Vote	Comment
				load bus tie-breakers be excluded from the BES as these devices apply to the users of the BES. (3) Recommend that the potential inclusion in the BES of protective relay systems which reach beyond a load network or ring bus should be confirmed in Phase 2 pursuant to technical studies. 8. E2 - Behind-the-Meter-Generation: Yes Comments: The wording of Exclusion E2 should be consistent with the Statement of Compliance Registry Criteria in Section III.c.4. 9. E3 - Local Network: Yes Comments: Defining characteristic b) "Power flows only into the LN" is confusing. For example, is this condition meant as an absolute, that power never under any circumstances flows out? Are exceptions allowed, such as during a switching operation or a catastrophic outage? Does power flow through a local net load sink, as might be determined by superposition of supply sources over time, negate that sink from exclusion as a LN? Recommend additional clarity for this characteristic. 10. E4 - Customer Reactive Power devices: No Comments: Refer to comments related to reactive resources for Question 6 regarding Inclusion I5. 11. Other concerns: No Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. We strongly support the approach to defining the Bulk Electric System as proposed here. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments.
Dennis Sismaet	Seattle City Light	6	Affirmative	Comments: 1. Core Definition: Yes Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. We strongly support the approach to defining the Bulk Electric System as proposed here. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the

Voter	Entity	Segment	Vote	Comment
				approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. 2. I1 - Transformer inclusions: No Comments: The wording of Inclusion I1 is not clear. The term transformers needs to be further defined with respect to multiphase transformers and generator step-up transformers. Recommend the following wording: "All transformers with at least two primary and secondary terminals operated at or above 100kV, and generator step-up transformers (GSU) with one terminal operated at or above 100kV, unless excluded by E1 or E3." 3. I2 - Generation Thresholds: Yes Comments: Recommend removing the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document and provide the details of what generating resources should be included. The current language induces circular arguments without a true governing document. The definition should drive what appears in the Registry Criteria. Inclusion I2 should be revised to read: "Generating resources with a gross nameplate rating of 20MVA or greater, or generating plant/facility connected at a common bus, with an aggregate nameplate rating of 75MVA or greater and is directly connected to a BES Element." This is consistent with proposed Inclusion. 4. I3 - Blackstart Units: Yes Comments: None 5. I4 - Dispersed Power: No Comments: The term "common point" needs clarification with respect to connection to the BES. Recommend the following wording: "connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 KV or above." 6. I5 - Reactive Power devices: No Comments: Technical studies need to be conducted to confirm reactive resource impacts on the reliability of the BES. The inclusion of reactive resources is a significant expansion of the current BES definition and therefore requires technical justification for inclusion. Inclusion I5 as written is generally confusing with multiple references to other inclusions and exclusions in the definition. Recommend removing references to reactive

Voter	Entity	Segment	Vote	Comment
				resources from Phase 1 until technical justification can be demonstrated (as part of Phase 2). 7. E1 - Radial System: Yes Comments: (1) The E1 Reference Note should be re-worded to state "Radial systems shall be assessed with all normally open switching devices in their open positions." The current wording is unclear with respect to the treatment of normally open switching devices. (2) Recommend that load bus tie-breakers be excluded from the BES as these devices apply to the users of the BES. (3) Recommend that the potential inclusion in the BES of protective relay systems which reach beyond a load network or ring bus should be confirmed in Phase 2 pursuant to technical studies. 8. E2 - Behind-the-Meter-Generation: Yes Comments: The wording of Exclusion E2 should be consistent with the Statement of Compliance Registry Criteria in Section III.c.4. 9. E3 - Local Network: Yes Comments: Defining characteristic b) "Power flows only into the LN" is confusing. For example, is this condition meant as an absolute, that power never under any circumstances flows out? Are exceptions allowed, such as during a switching operation or a catastrophic outage? Does power flow through a local net load sink, as might be determined by superposition of supply sources over time, negate that sink from exclusion as a LN? Recommend additional clarity for this characteristic. 10. E4 - Customer Reactive Power devices: No Comments: Refer to comments related to reactive resources for Question 6 regarding Inclusion I5. 11. Other concerns: No Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. We strongly support the approach to defining the Bulk Electric System as proposed here. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments.

Voter	Entity	Segment	Vote	Comment
Michael J. Haynes	Seattle City Light	5	Affirmative	1. Core Definition: Yes Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. We strongly support the approach to defining the Bulk Electric System as proposed here. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. 2. I1 - Transformer inclusions: No Comments: The wording of Inclusion I1 is not clear. The term transformers needs to be further defined with respect to multiphase transformers and generator step-up transformers. Recommend the following wording: "All transformers with at least two primary and secondary terminals operated at or above 100kV, and generator step-up transformers (GSU) with one terminal operated at or above 100kV, unless excluded by E1 or E3." 3. I2 - Generation Thresholds: Yes Comments: Recommend removing the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document and provide the details of what generating resources should be included. The current language induces circular arguments without a true governing document. The definition should drive what appears in the Registry Criteria. Inclusion I2 should be revised to read: "Generating resources with a gross nameplate rating of 20MVA or greater, or generating plant/facility connected at a common bus, with an aggregate nameplate rating of 75MVA or greater and is directly connected to a BES Element." This is consistent with proposed Inclusion. 4. I3 - Blackstart Units: Yes Comments: None 5. I4 - Dispersed Power: No Comments: The term "common point" needs clarification with respect to connection to the BES. Recommend the following wording: "connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 KV or above." 6. I5 - Reactive Power devices: No Comments: Technical studies need to be

Voter	Entity	Segment	Vote	Comment
				conducted to confirm reactive resource impacts on the reliability of the BES. The inclusion of reactive resources is a significant expansion of the current BES definition and therefore requires technical justification for inclusion. Inclusion I5 as written is generally confusing with multiple references to other inclusions and exclusions in the definition. Recommend removing references to reactive resources from Phase 1 until technical justification can be demonstrated (as part of Phase 2). 7. E1 - Radial System: Yes Comments: (1) The E1 Reference Note should be re-worded to state "Radial systems shall be assessed with all normally open switching devices in their open positions." The current wording is unclear with respect to the treatment of normally open switching devices. (2) Recommend that load bus tie-breakers be excluded from the BES as these devices apply to the users of the BES. (3) Recommend that the potential inclusion in the BES of protective relay systems which reach beyond a load network or ring bus should be confirmed in Phase 2 pursuant to technical studies. 8. E2 - Behind-the-Meter-Generation: Yes Comments: The wording of Exclusion E2 should be consistent with the Statement of Compliance Registry Criteria in Section III.c.4. 9. E3 - Local Network: Yes Comments: Defining characteristic b) "Power flows only into the LN" is confusing. For example, is this condition meant as an absolute, that power never under any circumstances flows out? Are exceptions allowed, such as during a switching operation or a catastrophic outage? Does power flow through a local net load sink, as might be determined by superposition of supply sources over time, negate that sink from exclusion as a LN? Recommend additional clarity for this characteristic. 10. E4 - Customer Reactive Power devices: No Comments: Refer to comments related to reactive resources for Question 6 regarding Inclusion I5. 11. Other concerns: No Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. We strongly support the approach to defining the Bulk Electric System as proposed here. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis

Voter	Entity	Segment	Vote	Comment
				within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments.
Hao Li	Seattle City Light	4	Affirmative	Comments: 1. Core Definition: Yes Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. We strongly support the approach to defining the Bulk Electric System as proposed here. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. 2. I1 - Transformer inclusions: No Comments: The wording of Inclusion I1 is not clear. The term transformers needs to be further defined with respect to multiphase transformers and generator step-up transformers. Recommend the following wording: "All transformers with at least two primary and secondary terminals operated at or above 100kV, and generator step-up transformers (GSU) with one terminal operated at or above 100kV, unless excluded by E1 or E3." 3. I2 - Generation Thresholds: Yes Comments: Recommend removing the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document and provide the details of what generating resources should be included. The current language induces circular arguments without a true governing document. The definition should drive what appears in the Registry Criteria. Inclusion I2 should be revised to read: "Generating resources with a gross nameplate rating of 20MVA or greater, or generating plant/facility connected at a common bus, with an aggregate nameplate rating of 75MVA or greater and is directly connected to a BES Element." This is consistent with proposed Inclusion.

Voter	Entity	Segment	Vote	Comment
				4. I3 - Blackstart Units: Yes Comments: None 5. I4 - Dispersed Power: No Comments: The term "common point" needs clarification with respect to connection to the BES. Recommend the following wording: "connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 KV or above." 6. I5 - Reactive Power devices: No Comments: Technical studies need to be conducted to confirm reactive resource impacts on the reliability of the BES. The inclusion of reactive resources is a significant expansion of the current BES definition and therefore requires technical justification for inclusion. Inclusion I5 as written is generally confusing with multiple references to other inclusions and exclusions in the definition. Recommend removing references to reactive resources from Phase 1 until technical justification can be demonstrated (as part of Phase 2). 7. E1 - Radial System: Yes Comments: (1) The E1 Reference Note should be re-worded to state "Radial systems shall be assessed with all normally open switching devices in their open positions." The current wording is unclear with respect to the treatment of normally open switching devices. (2) Recommend that load bus tie-breakers be excluded from the BES as these devices apply to the users of the BES. (3) Recommend that the potential inclusion in the BES of protective relay systems which reach beyond a load network or ring bus should be confirmed in Phase 2 pursuant to technical studies. 8. E2 - Behind-the-Meter-Generation: Yes Comments: The wording of Exclusion E2 should be consistent with the Statement of Compliance Registry Criteria in Section III.c.4. 9. E3 - Local Network: Yes Comments: Defining characteristic b) "Power flows only into the LN" is confusing. For example, is this condition meant as an absolute, that power never under any circumstances flows out? Are exceptions allowed, such as during a switching operation or a catastrophic outage? Does power flow through a local net load sink, as might be determined by superposition of supply sources over time, negate that sink from exclusion as a LN? Recommend additional clarity for this characteristic. 10. E4 - Customer Reactive Power devices: No Comments: Refer to comments

Voter	Entity	Segment	Vote	Comment
				related to reactive resources for Question 6 regarding Inclusion I5. 11. Other concerns: No Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. We strongly support the approach to defining the Bulk Electric System as proposed here. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments.

Response: 1. Thank you for your support.
2. The SDT believes the existing language is clear and the proposed additional language would be redundant. No change made.
3. The SDT has reverted to specific numeric thresholds consistent with the ERO Statement of Compliance Registry Criteria for Phase I.
4. Thank you for your support.
5. The "single point of connection of 100 kV or higher" is where the radial system will begin if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation.
6. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the

Voter	Entity	Segment	Vote	Comment
definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. 7. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment. The treatment of protection systems is but one of many items to be analyzed in Phase II. 8. The wording of Exclusion E2 is essentially the same as the wording on this topic in the ERO Statement of Registry Criteria which has been in existence for several years and is well understood in the industry. The roles of the Balancing Authority, Generator Owner, and Generator Operator are implied in the ERO Statement of Compliance Registry Criteria and the terms were added to Exclusion E2 as the result of industry requests for clarification. 9. Several commenters suggested that the requirement under Exclusion E3.b should apply only during normal operating conditions, in other words, commenters felt that some power flow should be allowed to flow from the candidate local network back into the BES as long as it only occurred under abnormal conditions. To this suggestion, the SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that in order to maintain the intent of a bright-line characteristic in the BES definition such a qualifier could not be accommodated. However, the SDT pointed out that for those circumstances where a candidate for local network is unable to utilize the local network exclusion due to an abnormal situation that caused power to flow out of the network, the network could be a suitable candidate that could apply for exclusion under the Exception Process. 10. See response in #6 above. 11. Thank you for your support.				
Long T Duong	Snohomish County PUD No. 1	1	Affirmative	The Public Utility District No. 1 of Snohomish County ("SNPD") believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. SNPD therefore strongly supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and,

Voter	Entity	Segment	Vote	Comment
				(2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. Below are SNPD's responses to the NERC comment form for the 2nd Draft of Definition of BES (Project 2010-17). SNPD believes the refinements below will clarify the current draft of the BES definition, without changing the current intent. 1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Comments: SNPD strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, SNPD supports use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. Â§ 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will

Voter	Entity	Segment	Vote	Comment
				help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate - "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. Â§ 824o(a)(4) - will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. Â§ 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). For similar reasons, Snohomish believes use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. Snohomish recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, Snohomish agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, Snohomish is prepared to support the BES definition as proposed by the SDT. While Snohomish strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in

Voter	Entity	Segment	Vote	Comment
				our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, Snohomish believes a 200-kV threshold would be more appropriate for WECC than a 100-kV threshold. In addition, a 200-kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view is therefore incorrect. That being said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, Snohomish will support the SDT's proposal and will not further pursue its claims regarding the 200-kV threshold. Finally, we suggest that the SDT language address the circumstance when a facility is covered by both an Inclusion and an Exclusion. We note that some of the inclusions already contain language addressing this question. For example, Inclusion 1 indicates that transformers falling within the specified parameters are part of the BES ". . . unless excluded under Exclusions E1 or E3." Where it is not already included, similar language should be included in the other Inclusions and/or Exclusions to explain whether the SDT intends the Inclusions or the Exclusions to predominate in situations where facilities might be covered by both. We suggest clarifying language in our comments to I1 and I4 below. 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Comments: We support the SDT's changes to the first Inclusion because it is

Voter	Entity	Segment	Vote	Comment
				more clear and simple than the initial approach. That being said, we suggest that an additional sentence o
William T Moojen	Snohomish County PUD No. 1	6	Affirmative	The Public Utility District No. 1 of Snohomish County ("SNPD") believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. SNPD therefore strongly supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. Below are SNPD's responses to the NERC comment form for the 2nd Draft of Definition of BES (Project 2010-17). SNPD believes the refinements below will clarify the current draft of the BES definition, without changing the current intent. 1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Comments: SNPD strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, SNPD supports use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution

Voter	Entity	Segment	Vote	Comment
				of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. Â§ 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate - "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. Â§ 824o(a)(4) - will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. Â§ 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). For similar reasons, Snohomish believes use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. Snohomish recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, Snohomish agrees with the approach taken

Voter	Entity	Segment	Vote	Comment
				by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, Snohomish is prepared to support the BES definition as proposed by the SDT. While Snohomish strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, Snohomish believes a 200-kV threshold would be more appropriate for WECC than a 100-kV threshold. In addition, a 200-kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view is therefore incorrect. That being said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, Snohomish will support the SDT's proposal and will not further pursue its claims regarding the 200-kV threshold. Finally, we suggest that the SDT language address the circumstance when a facility is covered by both an Inclusion and an Exclusion. We note that some of the inclusions already contain language addressing this question. For example, Inclusion 1 indicates that transformers falling within the specified parameters are part of the BES ". . . unless excluded under Exclusions E1 or E3." Where it is not already included, similar language should be included in the other Inclusions and/or Exclusions to explain whether the SDT intends the Inclusions or the

Voter	Entity	Segment	Vote	Comment
				Exclusions to predominate in situations where facilities might be covered by both. We suggest clarifying language in our comments to I1 and I4 below. 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Comments: We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence o
Sam Nietfeld	Snohomish County PUD No. 1	5	Affirmative	The Public Utility District No. 1 of Snohomish County ("SNPD") believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. SNPD therefore strongly supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. Below are SNPD's responses to the NERC comment form for the 2nd Draft of Definition of BES (Project 2010-17). SNPD believes the refinements below will clarify the current draft of the BES definition, without changing the current intent. 1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Comments: SNPD strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded

Voter	Entity	Segment	Vote	Comment
				from the core definition (i.e., "all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, SNPD supports use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. Â§ 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate - "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. Â§ 824o(a)(4) - will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. Â§ 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). For similar reasons, Snohomish believes use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site),

Voter	Entity	Segment	Vote	Comment
				which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. Snohomish recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, Snohomish agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, Snohomish is prepared to support the BES definition as proposed by the SDT. While Snohomish strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, Snohomish believes a 200-kV threshold would be more appropriate for WECC than a 100-kV threshold. In addition, a 200-kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view is therefore incorrect. That being said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, Snohomish will support the SDT's proposal and will not further pursue its claims regarding the 200-kV threshold.

Voter	Entity	Segment	Vote	Comment
				Finally, we suggest that the SDT language address the circumstance when a facility is covered by both an Inclusion and an Exclusion. We note that some of the inclusions already contain language addressing this question. For example, Inclusion 1 indicates that transformers falling within the specified parameters are part of the BES ". . . unless excluded under Exclusions E1 or E3." Where it is not already included, similar language should be included in the other Inclusions and/or Exclusions to explain whether the SDT intends the Inclusions or the Exclusions to predominate in situations where facilities might be covered by both. We suggest clarifying language in our comments to I1 and I4 below. 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Comments: We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence o
John D Martinsen	Public Utility District No. 1 of Snohomish County	4	Affirmative	The Public Utility District No. 1 of Snohomish County ("SNPD") believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. SNPD therefore strongly supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. Below are SNPD's responses to the NERC comment form for the 2nd Draft of Definition of BES (Project 2010-17). SNPD believes the refinements below will clarify the current draft of the BES definition, without changing the current intent. 1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would

Voter	Entity	Segment	Vote	Comment
				be more appropriate, please provide specific suggestions in your comments. Comments: SNPD strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, SNPD supports use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. Â§ 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate - "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. Â§ 824o(a)(4) - will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. Â§ 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). For similar reasons, Snohomish believes use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the

Voter	Entity	Segment	Vote	Comment
				NERC Glossary of Terms Used, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. Snohomish recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, Snohomish agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, Snohomish is prepared to support the BES definition as proposed by the SDT. While Snohomish strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, Snohomish believes a 200-kV threshold would be more appropriate for WECC than a 100-kV threshold. In addition, a 200-kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view is therefore incorrect. That being said, we raise the issue here to emphasize the importance of the Exclusions for Local

Voter	Entity	Segment	Vote	Comment
				Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, Snohomish will support the SDT's proposal and will not further pursue its claims regarding the 200-kV threshold. Finally, we suggest that the SDT language address the circumstance when a facility is covered by both an Inclusion and an Exclusion. We note that some of the inclusions already contain language addressing this question. For example, Inclusion 1 indicates that transformers falling within the specified parameters are part of the BES ". . . unless excluded under Exclusions E1 or E3." Where it is not already included, similar language should be included in the other Inclusions and/or Exclusions to explain whether the SDT intends the Inclusions or the Exclusions to predominate in situations where facilities might be covered by both. We suggest clarifying language in our comments to I1 and I4 below. 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Comments: We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence o
Response: The SDT refers Snohomish to the individual comment responses in the definition comment form as the comments expressed here are identical to the comments submitted by Snohomish on that form.				
Thomas Richards	Fort Pierce Utilities Authority	4	Affirmative	FPUA supports the exclusion of Local Networks from the BES. Such systems are generally not "necessary for operating an interconnected electric transmission network," the standard in Orders 743 and 743-A. However, we have some suggestions to clarify the proposed language for this Exclusion. We have a major concern with the wording in E3 defining a Local Network. The requirement that "Power flows only into the LN" fails to recognize that loop flows are inevitable in a networked system, particularly during a contingency. It just doesn't make sense

Voter	Entity	Segment	Vote	Comment
				that E3 allows flows out of the LN when exporting power that was generated within the LN, yet de minimis loop flows are not. I am suggesting that the "Power flows only into the LN" requirement be replaced with different criteria to allow "minor" inadvertent transfers across the LN. Such a modification would bring E3 in line with the technical justification paper developed for this project. FPUA supports FMPA's suggested change: "Power flows only into the LN, that is, at each individual connection at 100 kV or higher, the pre-contingency flow of power is from outside the LN into the LN for all hours of the previous 2 years" to help clarify the intent. Two years is suggested because it is the time period set out in the draft exception application form for which an applicant should state whether power flows through an Element to the BES.
Response: Several commenters suggested that the requirement under Exclusion E3.b should apply only during normal operating conditions, in other words, commenters felt that some power flow should be allowed to flow from the candidate local network back into the BES as long as it only occurred under abnormal conditions. To this suggestion, the SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that in order to maintain the intent of a bright-line characteristic in the BES definition such a qualifier could not be accommodated. However, the SDT pointed out that for those circumstances where a candidate for local network is unable to utilize the local network exclusion due to an abnormal situation that caused power to flow out of the network, the network could be a suitable candidate that could apply for exclusion under the Exception Process.				
Allen Mosher	American Public Power Association	4	Affirmative	APPA would like to thank the Standard Drafting Team (SDT) for their work on this standard and will continue to support approval of the current draft of the Bulk Electric System (BES) definition to meet the FERC imposed deadline. APPA also fully supports immediate consideration in Phase 2 of this project of the technical issues raised by the drafting team and commenters in response to the current draft definition. The SDT should be applauded for addressing the issue of local distribution facilities by placing the exclusion in the BES definition itself: "This does not include facilities used in the local distribution of electric energy." It is clearly spelled out in Section 215 that local distribution facilities are not subject to compliance with NERC standards. Including this statement in the definition ensures consistency between NERC's technical standards and the legal foundation

Voter	Entity	Segment	Vote	Comment
				upon which these standards are based. The current BES definition allows for various interpretations which could allow for excessive compliance documentation on facilities that are not part of the BES. The drafting team has provided sufficient granularity through the specific inclusions and exclusions to provide clear direction to NERC, regional entities and registered entities on the specific subset of electric facilities that are included within (or excluded from) the BES. APPA applauds the SDT for understanding that many utilities have unique system configurations and there is a need to differentiate between networked and radial systems. Allowing the exclusion for radial systems serving only load to have a normally open switch between the BES and such a radial system provides an important distinction. This clarifies the issue that a single radial fed system is the same as a system with multiple feeds with normally open switches between them. The SDT should be commended for identifying and addressing the issue of local networks (LN). Even though these systems are built in a networked configuration, the electric energy delivered is intended only to serve local distribution load. APPA believes that level-of-service/quality-of-service issues arising in local distribution systems must be left to the authority of state and local regulatory agencies and governing bodies. Therefore local networks should be excluded from the BES. APPA is concerned that the 20MVA & 75MVA generation threshold was not addressed in Phase 1 of this project, but fully recognizes the difficulty in timely completing development of the necessary technical studies and consensus development required to include this improvement in Phase 1. For these reasons, APPA supports the current draft BES definition and requests that the SDT move quickly to the phase 2 process to study what generation is necessary for reliable operation of the BES. APPA also requests more specificity on the detailed information required to support BES exceptions processed through the NERC Rules of Procedure drafting process. Additional technical specificity will help ensure consistency between regions and transparency for registered entities on the technical studies and data

Voter	Entity	Segment	Vote	Comment
				required to support exception requests.

Response: Thank you for your support.
Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up.
The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.
There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that

Voter	Entity	Segment	Vote	Comment
the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result ofa sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.				

Voter	Entity	Segment	Vote	Comment
Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.				
Greg Lange	Public Utility District No. 2 of Grant County	3	Affirmative	The Public Utility District No. 1 of Grant County ("GCPD") believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. GCPD therefore strongly supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. GCPD strongly supports the addition of the language regarding local distribution facilities, as it matches congressional intent to leave the regulation of these facilities to state and local authorities. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. Many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately

Voter	Entity	Segment	Vote	Comment
				stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. As the Phase II process moves forward, we recommend that SDT consider the extensive work performed on the point of demarcation question by the WECC BESDTF. GCPD does not support The inclusion of Reactive Power devices because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Also, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Reactive Power devices should be subject to the same technical analysis for inclusion or exclusion that will cover generators in the Phase II process. GCPD strongly supports the revised Local Networks ("LNs") exclusion from the BES. GCPD also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, GCPD supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." GCPD supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is very small, the outward flow is only for a few hours a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b)

Voter	Entity	Segment	Vote	Comment
				be revised to read: "Except in unusual circumstances, power flows only into the LN."

Response: The exception process is being worked on in parallel with the definition.
Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up.
Thank you for your support.
The development of demarcation points will be included in Phase 2 of this project. Work done at WECC and other regions will be utilized as appropriate.
The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.
Several commenters suggested that the requirement under Exclusion E3.b should apply only during normal operating conditions, in other words, commenters felt that some power flow should be allowed to flow from the candidate local network back into the BES as long as it only occurred under abnormal conditions. To this suggestion, the SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that in order to maintain the intent of a bright-line characteristic in the BES definition such a qualifier could not be accommodated. However, the SDT pointed out that for those circumstances where a candidate for local network is unable to utilize the local network exclusion due to an abnormal situation that caused power to flow out of the network, the network could be a suitable candidate that could apply for exclusion under the Exception Process.

Voter	Entity	Segment	Vote	Comment
John H Hagen	Pacific Gas and Electric Company	3	Affirmative	We support the overall approach with the following concerns: 1) Clarify what is included as a Blackstart Resource and do not rely on what is defined in local or regional restoration plans, as this will create regional variances; 2) Inclusion of generating units >20mva seems to low and
Response: 1. Blackstart Resource is a defined term that can be found in the NERC Glossary. 2. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.				
Brad Chase	Orlando Utilities Commission	1	Affirmative	Orlando Utilities Commission supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. in addition, phase II should include a clear distinction between the BES and BPS.
Ballard K Mutters	Orlando Utilities Commission	3	Affirmative	Orlando Utilities Commission supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date.

Voter	Entity	Segment	Vote	Comment
Response: The exception process is being worked on in parallel with the definition. Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up.				
CJ Ingersoll	Constellation Energy	3	Affirmative	While we support the proposed definition to satisfy the FERC Order, we also support continued work on the threshold questions slated for "Phase II", in particular the refinement of the generation thresholds.
Response: Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up.				
Howard M. Mott Jr.	Clay Electric Cooperative	3	Affirmative	The Note under Exclusions: E1 - Radial Systems: should not include "...as depicted on prints or one-line diagrams..." and should be changed. "Note - A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion." I recommend the note be changed to read: Note - A normally open switching device between radial systems operated in a 'make-before-break' fashion does not affect this exclusion.
Response: Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment.				
Brian Fawcett	Clatskanie People's Utility District	3	Affirmative	1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: Yes No: Comments: We agree with the changes. We must point out that the overall flow, or how one proceeds through the inclusions and exclusions is not clear. Can an item that meets an inclusion be subsequently excluded? If so, this needs to be explicitly stated. So far, we only have the flow chart produced by the ROP team that indicates otherwise (http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf). This was made evident by the question at the 9/28 webinar regarding an I5 capacitor on an E3 local network. The questioner thought the capacitor was BES per I5, but the answer was that it was excluded per E3. We can find no support for the

Voter	Entity	Segment	Vote	Comment
				answer given. The listing of specific exclusions within I1 (exception proves the rule) argues for questioner's stance that the capacitor is BES as written. Also, if included items could subsequently be excluded, they would be no different from any other item that met the voltage threshold of 100kV. There would be no need for any of the inclusions if all possible outputs from the inclusion tests go to the same exclusion test inputs. We strongly support the addition of the language regarding local distribution facilities, as it matches congressional intent to leave the regulation of these facilities to state and local authorities. 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: Clatskanie PUD strongly agrees with this inclusion as written. It is consistent with the recent PRC-004 and PRC-005 interpretation and the NERC definition of Transmission. We believe the recent changes to this inclusion add clarity. 3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Referencing the Criteria which in turn references the BES definition creates a circular definition. Clatskanie PUD encourages the adoption of specific thresholds that are technically justified. We also note that the Criteria and its revisions do not go through the standards development process, so that thresholds may change with little warning and without triggering an implementation plan for facilities that may be swept into the BES as a result. 4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language

Voter	Entity	Segment	Vote	Comment
				would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: We agree with the removal of the voltage language, since the inclusions and exclusions apply only to equipment over 100 kV. 5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: Clatskanie PUD agrees both with the inclusion and with the revised language. The revised language removes the need to provide a separate definition for "Collector System". 6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: While we agree that reactive devices of sizable capacity connected at 100 kV or higher are needed for BES reliability, Clatskanie PUD fails to see why this inclusion is needed as they are already captured by the 100 kV threshold. We would propose instead to eliminate this inclusion and substitute an exclusion for smaller capacity devices. If the SDT really believes an inclusion for reactive devices is needed, we suggest the SDT provide a technically justified capacity limit within the inclusion. In addition we suggest also including the phrase "...unless excluded under Exclusion E1, E2 or E4" similar to that in I1. Please see the answer to Q1 above Q10 below. 7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Clatskanie PUD notes that a new term has been introduced, "non-retail generation," with no definition provided. The answer to the question on this during the 9/28 webinar indicated that non-retail generation was behind the retail customer's meter. We can see no reason why

Voter	Entity	Segment	Vote	Comment
				the net-metered PV systems should count toward the aggregate limit (exceeding the limit means no exclusion) while a non-blackstart thermal plant doesn't (the radial system is excluded if any amount of load is present). We have also heard the SDT meant just the opposite of what was stated in the webinar. We ask that a reasonable definition for non-retail be provided within the BES definition document. We strongly agree that radial systems should be excluded and that the presence of normally open switching devices between radial systems should not cause them to be considered non-radial. Such a result would cause the removal of these devices to the detriment of the local level of service. We note that the singular "A normally open switching device" is used and suggest that an allowance be made for the possibility of multiple devices. "Normally open switching devices..." 8. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2 (behind-the-meter generation)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: 9. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3 (local network)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: We strongly agree that local networks should be excluded, since they act much like the radial systems excluded in E1 while providing a higher level of service to customers. These networks should not be discouraged in the name of reliability. We again object to the introduction of the new confusing term "non-retail generation" with no definition provided.
Response: 1. The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100				

Voter	Entity	Segment	Vote	Comment
kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element as defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind-the-retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the				

Voter	Entity	Segment	Vote	Comment
interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. 2. Thank you for your support. 3. The SDT has reverted to specific numeric thresholds consistent with the ERO Statement of Compliance Registry Criteria for Phase I. 4. Thank you for your support. 5. Thank you for your support. 6. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. 7. “Non-retail generation” means that generation which is on the system (supply) side of the retail meter. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator’s responsibility to indicate how a switch is used in the normal operating environment. 8. Thank you for your support. 9. Thank you for your support. “Non-retail generation” means that generation which is on the system (supply) side of the retail meter.				

Voter	Entity	Segment	Vote	Comment
Gregg R Griffin	City of Green Cove Springs	3	Affirmative	GCS appreciates the SDT's work on this project. For the most part, GCS supports what it believes to be the intent of the proposed language. The proposed specific exclusion of facilities used in the local distribution of electric energy is appropriate and consistent with Section 215 of the Federal Power Act. However, we have suggestions to better carry out what we believe to be the SDT's intent. The first sentence can be read as: "... all ... Real Power and Reactive Power resources connected at 100 kV or higher", which is surely not what the SDT intends. The basic problem is that Inclusions I2 and I4 do not modify the first sentence, e.g., from a set theory perspective, the set described by the first sentence includes the sets described in inclusions I2 and I4; hence, I2 and I4 do not modify the first sentence. From a literal reading, this would cause any size generator connected at 100 kV to be included, which is surely not the intent of the SDT. For similar reasons, the core definition and Inclusion I5 now has the effect of including all generators connected at 100 kV since a generator is a "dynamic device ... supplying or absorbing Reactive Power". The word "dedicated" in I5 is not sufficient in GCS's mind to unambiguously exclude generators from this statement. GCS suggests the following wording to address these issues: "Transmission Elements (not including elements used in the local distribution of electric energy) and Real Power and Reactive Power resources as described in the list below, unless excluded by Exclusion or Exception: a. Transmission Elements other than transformers and reactive resources operated at 100 kV or higher. b. Transformers with primary and secondary terminals operated at 100 kV or higher. c. Generating resource(s) (with gross individual or gross aggregate nameplate rating per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above. d. Blackstart Resources identified in the Transmission Operator's restoration plan. e. Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above, but not including generation on the retail side of the retail meter. f. Non-generator static or dynamic devices dedicated to supplying or absorbing more than 6 MVAr of

Voter	Entity	Segment	Vote	Comment
				Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in bullet 2 above." 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: Yes No: Comments: Please see comments to Question 1 3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: yes No: Comments: Please see comments to Question 1 4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: Yes No: Comments: Please see comments to Question 1. 5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: Yes No: Comments: We recommend clarifying that the dispersed power resources covered by this inclusion do not include generators on the retail side of the retail meter. Specifically, we recommend that the Inclusion read: "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100kV or above, but not including generation on the retail side of the retail meter." 6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you

Voter	Entity	Segment	Vote	Comment
				do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: Comments: To help clarify and to avoid inclusion of de minimis reactive resources, we propose a size threshold of 6 MVAr consistent with the smallest size generator included in the BES at a 0.95 power factor, which is a common leading power factor used in Facility Connection Requirements for generators. In other words, 6 MVAr is consistent with typically the least amount of MVAr required to be absorbed by the smallest generator meeting the registry criteria. 7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: Yes No: Comments: GCS supports the exclusion of radial systems from the BES Definition. Such systems are generally not "necessary for operating an interconnected electric transmission network," the standard in Orders 743 and 743-A. We have several suggestions to clarify the proposed language for this Exclusion. Proposed Exclusion E1 refers to "[a] group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher." We appreciate the SDT's clarification of the point of connection requirement, but the term "a single point of connection" should be further defined (more clearly than just by voltage), and should be generic enough to encompass the various bus configurations. It is not the case, for example, that each individual breaker position in a ring bus is a separate point of connection for this purpose; in that situation, a bus at one voltage level at one substation should be considered "a single point of connection." Some examples of configurations that should be considered a single point of connection for this purpose are at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf, Examples 1-6. Although the core definition (appropriately) refers to "Transmission Elements" (with a capital "T"), proposed Exclusion E1 refers to "transmission Elements" (with a lowercase "t"). To avoid confusion, either "Transmission" should be

Voter	Entity	Segment	Vote	Comment
				capitalized in both locations, or the word "transmission" should simply be deleted from Exclusion E1, leaving a "group of contiguous Elements." We understand that the lack of capitalization may have been a deliberate choice by the SDT in an attempt to avoid confusion that SDT members believe exists in the Glossary definition.

Response: 1. – 4. The SDT refers the commenter to the first phrase of the core definition starting with "Unless modified…" which the SDT believes handles the concern brought out here. The SDT considered your wording changes in its deliberations and refers the commenter to the revised redline of the definition posted in response to the consideration of comments.

5. The SDT further clarifies that generating units on the customer's side of the retail meter are not included under Inclusion I4 since customer-side retail generation typically does not "utilize[e] a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above."

6. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.

7. The "single point of connection of 100 kV or higher" is where the radial system will begin if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. The SDT considered the disposition of the word "transmission" in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be

Voter	Entity	Segment	Vote	Comment
included in the term "Element".				
Thomas C Duffy	Central Hudson Gas & Electric Corp.	3	Affirmative	Due to the movement to a phased BES definition development process and assuming the definition is approved as proposed, there is an urgent need for NERC to provide clear guidance to Registered Entities regarding how to proceed with facilities and address changes to the NERC Compliance Registry registration obligations brought in/on by the application of the new definition. The problem stems from a likely scenario whereby the affected Registered Entities may be faced with an Implementation Plan and an Exception Request Procedure which must be completed prior to the completion of the Phase II definition development process. If that is the case, many Registered Entities will be confronted with either (1) spending large amounts of human and financial resources, not yet acquired, to address facilities/procedures necessary to address possible new compliance obligations only to find their efforts rendered unnecessary by the results produced in Phase II or, (2) waiting until the results of Phase II are provided and risking being found non-compliant and subject to substantial penalties in the future. Neither option can be viewed as a desirable, or for that matter, an acceptable position to be placed in.
Response: Part of the implementation plan for this project is for NERC to work with regional entities on transition plans. Those regional entities would then work with registered entities to try to avoid the situation described by the commenter.				
Richard K Vine	California ISO	2	Affirmative	We support the SDT's decision to exclude the cranking paths from the BES definition since testing and verification of the use of facilities in the cranking path is already covered by the appropriate EOP standards. However, we suggest removing the entirety of Inclusion I3. This inclusion is extraneous given there is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability.

Voter	Entity	Segment	Vote	Comment
Response: The SDT disagrees that Blackstart Resources should not be included in the BES Definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES elements. No change made.				
James Jones	Southwest Transmission Cooperative, Inc.	1	Affirmative	In general, we support the proposed definition of the BES. However, we have identified a few concerns that warrant the SDT's consideration. We'd prefer to see the language from the ERO Statement of Compliance Registry Criteria repeated within the BES Definition itself instead of referencing an outside document. As it stands right now, the Compliance Registry Criteria needs to stay intact for Phase I of this project. That makes the Compliance Registry Criteria reliant on the BES Definition and vice versa. We understand that the Statement of Compliance Registry Criteria may be reviewed/revised at the same time Phase 2 of this project is being developed, therefore we agree with Inclusion I2 of this draft. Blackstart Resources can actually be on the distribution system. There is still the question of whether the distribution system would then be subjected to the enforceable standards. If so, there would most likely be a significant cost increase associated with tracking compliance for these distribution systems without a commensurate increase in reliability since Blackstart Resources are rarely used. This could very well cause entities to un-designate Blackstart Resources on distribution systems to avoid these distribution systems from becoming part of the BES. The same rationale that was used for eliminating cranking paths could also be applied to Blackstart Resources. A flowgate should not be used to limit applicability of E3. First, there is no

Voter	Entity	Segment	Vote	Comment
				definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the "permanent" adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First, flowgates are created to manage congestion. The IDC is more of a congestion management tool than a reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve IROLs that have been violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The characteristics of the flowgate make it a good proxy for estimating how much contractual use has been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROLs, many simply are not. The term "non-retail generation" used in Exclusion E1 (item c) and again in E3 (item a) should be clarified (see comments for question 8 below). The Note after item c should also be clarified to indicate that closing a normally open switch doesn't affect this exclusion.

Voter	Entity	Segment	Vote	Comment
Noman Lee Williams	Sunflower Electric Power Corporation	1	Affirmative	In general, we support the proposed definition of the BES. However, we have identified a few concerns that warrant the SDT's consideration. We'd prefer to see the language from the ERO Statement of Compliance Registry Criteria repeated within the BES Definition itself instead of referencing an outside document. As it stands right now, the Compliance Registry Criteria needs to stay intact for Phase I of this project. That makes the Compliance Registry Criteria reliant on the BES Definition and vice versa. We understand that the Statement of Compliance Registry Criteria may be reviewed/revised at the same time Phase 2 of this project is being developed, therefore we agree with Inclusion I2 of this draft. Blackstart Resources can actually be on the distribution system. There is still the question of whether the distribution system would then be subjected to the enforceable standards. If so, there would most likely be a significant cost increase associated with tracking compliance for these distribution systems without a commensurate increase in reliability since Blackstart Resources are rarely used. This could very well cause entities to un-designate Blackstart Resources on distribution systems to avoid these distribution systems from becoming part of the BES. The same rationale that was used for eliminating cranking paths could also be applied to Blackstart Resources. A flowgate should not be used to limit applicability of E3. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of

Voter	Entity	Segment	Vote	Comment
				IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the "permanent" adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First, flowgates are created to manage congestion. The IDC is more of a congestion management tool than a reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve IROLs that have been violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The characteristics of the flowgate make it a good proxy for estimating how much contractual use has been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROLs, many simply are not. The term "non-retail generation" used in Exclusion E1 (item c) and again in E3 (item a) should be clarified (see comments for question 8 below). The Note after item c should also be clarified to indicate that closing a normally open switch doesn't affect this exclusion.

Response: The SDT has reverted to specific numeric thresholds consistent with the ERO Statement of Compliance Registry Criteria for Phase I.

The SDT disagrees that Blackstart Resources should not be included in the BES Definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES

Voter	Entity	Segment	Vote	Comment
elements. No change made. The SDT believes that the language in Exclusion E3.c prohibiting "Flowgates" from qualifying for definitional exclusion is appropriate and necessary. As a definitional exclusion characteristic, Exclusion E3.c must follow the principle of being a bright-line and easily identifiable, and as such, the SDT feels that the definition cannot allow some types of Flowgates and disallow others. Flowgates must continue to be a prohibiting characteristic under Exclusion E3, since these facilities are more likely to be used in the transfer of bulk power than not. An entity who wishes to make a case for exclusion of a unique type of Flowgate facility can do so through the exception process. The SDT believes that the continued qualifier of "permanent" associated with the term "Flowgate" addresses the majority of the concern in this comment. No change made. "Non-retail generation" means that generation which is on the system (supply) side of the retail meter. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment.				
Jerome Murray	Oregon Public Utility Commission	9	Affirmative	With the condition that reference is not made to the NERC Statement of Compliance Registry Criteria (SCRC) within the BES definition. This circularity must be eliminated. Recommended language should be: "I2 - Generating resource(s) with a gross individual nameplate rating greater than 20 MVA or with a gross aggregate nameplate rating greater than 75 MVA including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above."
Response: The SDT has reverted to specific numeric thresholds consistent with the ERO Statement of Compliance Registry Criteria for Phase I.				
Gregory S Miller	Baltimore Gas & Electric Company	1	Affirmative	While BGE supports the proposed definition to satisfy the FERC Order, we also support continued work on the threshold questions slated for "Phase II".
Response: Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up.				

Voter	Entity	Segment	Vote	Comment
Luther E. Fair	Gainesville Regional Utilities	1	Affirmative	GVL feels that the effort to improve this standard is heading in the right direction. We look forward to the phase 2 segment of the process where additional clairity can be offered. Thanks for all your hard work.
Mark B Thompson	Alberta Electric System Operator	2	Affirmative	The AESO agrees with the NERC BES definition. It should be noted however that when the AESO adopts a NERC definition in Alberta the AESO must consider the applicability of the NERC definition in Alberta which may result in revisions to such definition to align it with our current electric energy market framework.
Benjamin Friederichs	Big Bend Electric Cooperative, Inc.	3	Affirmative	I believe this definition would include those elements necessary to the reliable operation of the BES while excluding those elements that would not have a material impact. NERC's willingness to exclude radial 115kv transmission lines is especially beneficial to smaller utilities like us. Their inclusion would not improve the reliability of the BES, but would vastly increase our costs and regulatory/reporting burdens.
James L Layton	Blue Ridge Electric	3	Affirmative	The SDT has done a good job of clearly defining the BES and developing a clear inclusion and exculsion list.
Joe Noland	City of Cheney	3	Affirmative	The City of Cheney agrees with changes made to the BES definition
Jason Fortik	Lincoln Electric System	3	Affirmative	No comments.
Anthony Schacher	Salem Electric	3	Affirmative	Salem Electric is encouraged to see that the standard drafting team understands the reality that in many circumstances many small radially fed utilities have no effect on the bulk electric system. By permitting reasonable and prudent exceptions it will allow many of the small utilities to be able to spend our limited time and resources on the reliability of our systems for our end users, instead of undertaking unnecessary steps to protect a system upon which we have no effect. The exception process is thorough but still manageable for small utilities with limited resources. Salem Electric would like to thank the Standards Drafting Team for their hard work and dedication in defining the Bulk Electric System.
Bob C. Thomas	Illinois Municipal Electric Agency	4	Affirmative	Illinois Municipal Electric Agency (IMEA) appreciates the SDT's diligence in developing bright-line BES Definition language; particularly, language clarifying the exclusion of local distribution facilities, achieving more realistic/reasonable

Voter	Entity	Segment	Vote	Comment
				identification of radial systems, and recognizing the distinction of local networks. With its Affirmative vote, IMEA supports and recommends comments submitted by the Transmission Access Policy Study Group.
Frank R. McElvain	Siemens Energy, Inc.	7	Affirmative	I am not completely satisfied with the arbitrary nature of the 100 kV demarcation. I know of 60 kV systems that parallel 500 kV circuits. However, this draft captures my concept of the Bulk Electric System pretty well.
Response: Thank you for your support.				

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF A REVISED DEFINITION OF "BULK ELECTRIC SYSTEM"
IN THE NERC GLOSSARY OF TERMS USED IN RELIABILITY STANDARDS

EXHIBIT E

COMPLETE DEVELOPMENT RECORD OF THE

PROPOSED REVISED DEFINITION OF "BULK ELECTRIC SYSTEM"

Project 2010-17
Proposed Definition of Bulk Electric System and Related Rules of Procedure Team

Related Files

BES Definition Project Fact Sheet

Rules of Procedure Development Team: BES Definition Exception Process page, click here.

Status:
The definition of Bulk Electric System, along with the application form to support requests for BES exceptions, were approved by the ballot pool. The NERC Board of Trustees will meet on January 18, 2012 to act on the definition and associated Rules of Procedure changes.

Purpose/Industry Need:
On November 18, 2010 FERC issued Order 743 and directed NERC to revise the definition of Bulk Electric System so that the definition encompasses all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. Phase I of Project 2010-17 Definition of Bulk Electric System concluded on November 21, 2011 with stakeholder approval of a revised definition of Bulk Electric System and application form titled 'Detailed Information to Support an Exception Request' referenced in the Rules of Procedure Exception Process. The revised definition, modifications to the Rules of Procedure to provide a process for determining exceptions to the definition, and an application form to support that process, will all be presented to the NERC Board of Trustees for adoption and then filed with regulatory authorities for approval.

Phase II of the project is being initiated to develop appropriate technical justification to support refinements to the definition that were suggested by stakeholders during Phase I, and to refine the definition as technically justified.

Related Rule of Procedure
Related to the development of the definition, there is a Rules of Procedure modification underway. Click related files to see this activity.

Draft	Action	Dates	Results	Consideration of Comments
Phase 2 Draft 1 SAR(65) **Supporting Materials:** Definition of Bulk Electric System (last approved)(66) Unofficial Comment Form (Word)(67)	Comment Period Info(68) Submit Comments>>	01/04/12 - 02/03/12		
Draft 3 **Definition of Bulk Electric System** Clean(55) | Redline to Last Posting(56) **Implementation Plan for Definition** Clean (57)| Redline to Last Posting(58) **Detailed Information to Support BES Exceptions Request**	Recirculation Ballots Info(61) Vote>>	11/10/11 - 11/21/11 (closed)	Summary (62) BES Definition Full Record (63) BES Exceptions Full Record (64)	

Clean **(59)** | Redline to Last Posting**(60)**				
Draft 2 **Definition of Bulk Electric System** Clean**(37)** | Redline to Last Posting**(38)** **Implementation Plan for Definition** Clean **(39)** | Redline to Last Posting**(40)** **Supporting Materials** Comment Form (Word)**(41)** Draft Supplemental SAR**(42)** 090111 Letter to A. Mosher from Chairman Anderson**(43)** 082411 Letter to Chairman Anderson from from A. Mosher**(44)** Technical Justification for Local Network	Initial Ballot of Definition of BES Updated Info**(46)** Info**(47)** Vote>>	09/30/11 - 10/10/11 (closed)	Summary **(50)** Full Record **(51)**	Consideration of Comments**(53)**
	Join Ballot Pool>>	08/26/11 -09/26/11 (closed)		
	Comment Period Updated Info**(48)** Info**(49)** Submit Comments>>	08/26/11 - 10/10/11 (closed)	BES Definition Comments Received **(52)**	Consideration of Comments**(54)**

Exclusion**(45)**				
Draft 2 Detailed Information to Support BES Exceptions Request**(28)** **Supporting Materials** Comment Form (Word)**(29)**	Initial Ballot of Detailed Information to Support BES Exceptions Request Info**(30)** Vote>>	09/30/11 - 10/10/11	Summary **(32)** Full Record **(33)**	Consideration of Comments**(35)**
	Join Ballot Pool>>	08/26/11 -09/26/11		
	Comment Period Info**(31)** Submit Comments>>	08/26/11 - 10/10/11	BES Exceptions Comments Received **(34)**	Consideration of Comments**(36)**
Draft 1 Technical Principles for Demonstrating BES Exceptions **(23)** Comment Form (Word)**(24)**	**Comment Period** Submit Comments>> Info**(25)**	5/11/11 -6/10/11 (closed)	Comments Received **(26)**	Technical Principles Consideration of Comments**(27)**
	Bulk Electric			Definition of Bulk

SAR Version 2 Clean**(13)** | Redline to last posting**(14)** **Definition of Bulk Electric System** Clean**(15)** | Redline to last posting**(16)** **Implementation Plan for Definition** Clean**(17)** Comment Form (Word)**(18)**	**System Definition Revision Status** Info**(19)**			Electric System Consideration of Comments**(22)**
	Comment Period Info**(20)** Submit Comments>>	4/28/11 -5/27/11 (closed)	Comments Received **(21)**	
Draft SAR Version 1 Definition of Bulk Electric System**(1)** Clean **(2)**| Redline to last approval**(3)** **Supporting Materials**: Concept Paper**(4)** Unofficial BES SAR & Definition Comment Form (Word)**(5)**	**Comment Period** Info**(7)** Submit Comments>>	12/17/10 – 1/21/11	**BES Definition Exception Process Comments Received** Comments Received **(8)** **Broken down into files 8A-8N)**	BES SAR & Definition Consideration of Comments**(9)** BES Definition Exception Process Consideration of Comments Q1**(10)** Q2**(11)** Q3**(12)**

Official BES Definition Exception Process Comment Form (Word)**(6)**				

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

August 8, 2011

Bulk Electric System Drafting Team
c/o Peter Heidrich, Chairman
pheidrich@frcc.com

Dear Peter and members of the Bulk Electric System Drafting Team:

I first want to acknowledge the dedication and extraordinary effort that the members of the drafting team have devoted and will continue to devote to the important issues surrounding the assignment to develop a revised definition of "bulk electric system". One of the greatest strengths of the ERO model is its ability to bring together for the common good subject matter experts from across North America, and your work is strong evidence of that.

I am taking the unusual step of writing to you to raise a legal issue that I recently learned of. At the recent NERC Member Representatives Committee meeting in Vancouver, Peter Heidrich described a number of changes that the drafting team is considering for inclusion in its next draft of the proposed BES definition. One of those changes was to include in the definition the following sentence:

> The bulk electric system shall not include facilities used in local distribution as determined by the applicable regulatory authority.

I fully agree with commenters and the drafting team that it would be useful and appropriate to include a statement in the BES definition that the BES does not include facilities used in local distribution. Such a statement would track a similar statement in section 215 of the Federal Power Act:

> The term [bulk power system] does not include facilities used in the local distribution of electric energy. (Federal Power Act, Section 215(a)(1)).

However, the proposed statement goes beyond what is in section 215 and includes the phrase "as determined by the applicable regulatory authority." The term "applicable regulatory authority" is not defined, but it is very broad. It could include state commissions, provincial governments, local city councils, and perhaps boards of directors of co-operatives. It could lead to a patchwork of different results.

What that means is every regulatory authority could be making a determination as to the scope of NERC's authority and the scope of FERC's authority under section 215. That situation is unworkable for NERC, and I believe it will be unacceptable to FERC.

1120 G Street, NW, Suite 990
Washington, DC 20005
202-393-3998 | www.nerc.com

The issue of where to draw the line between local distribution and transmission has been addressed in many places over the years, for many purposes, under several different criteria. When the issue arises in the reliability context, it can be addressed by reference to those criteria. But It would be a mistake (and unnecessary) for NERC to put its thumb on the scale of where the line falls between state and federal jurisdiction by saying responsibility for making that decision is in the hands of whatever regulatory chooses to make the decision.

To repeat, I fully support the inclusion of a statement that the “bulk electric system” does not include facilities used in local distribution. My request is that you not include the additional phrase, “as determined by the applicable regulatory authority.”

I would be happy to discuss this matter with the team or team leadership.

Thank you for your attention.

Sincerely,

David N. Cook
Senior Vice President & General Counsel
NERC
1120 G St. NW, Suite 990
Washington, DC 20005
(o) 202-393-3998
(c) 609-915-3063
david.cook@nerc.net

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standard Authorization Request Form

Title of Proposed Standard: NERC Glossary of Terms: Revision of the Bulk Electric System definition.
Request Date: December 6, 2010
SC Approval Date: December 8, 2010

SAR Requester Information	**SAR Type** (*Check a box for each one that applies.*)
Name: Regional Bulk Electric System Definition Coordination Group	☐ New Standard
Primary Contact: Peter Heidrich (Manager of Reliability Standards, FRCC) Regional Participation: Michelle Mizumori, WECC; Phil Fedora, NPCC; Jeff Mitchell, RFC	☒ Revision to existing Definition
Telephone: (813) 207-7994 Fax: (813) 289-5646	☐ Withdrawal of existing Standard
E-mail: pheidrich@frcc.com	☐ Urgent Action

Purpose (Describe what the standard action will achieve in support of bulk power system reliability.)

Revise the definition of Bulk Electric System (BES) to address the Federal Energy Regulatory Commission's (FERC) concerns as identified in FERC Order 693 issued on March 16, 2007 and directives in Order 743 issued on November 18, 2010 (Order 743) so that the definition encompasses all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system.

Industry Need (Provide a justification for the development or revision of the standard, including an assessment of the reliability and market interface impacts of implementing or not implementing the standard action.)

This project supports the EROs obligation to respond to the Commission's directives and recommendations relative to the definition of Bulk Electric System identified in Order No. 743.

Brief Description (Provide a paragraph that describes the scope of this standard action.)

Revise the definition of Bulk Electric System (BES) contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity and to establish consistency across all Regions in distinguishing between BES and non-BES Elements and Facilities.

Detailed Description (Provide a description of the proposed project with sufficient details for the standard drafting team to execute the SAR.)

Revise the definition of Bulk Electric System (BES) to address the Federal Energy Regulatory Commission's (FERC) concerns as identified in FERC Order 693 issued on March 16, 2007 and directives in Order 743 issued on November 18, 2010 (Order 743) so that the definition encompasses all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system.

Existing NERC Glossary of Terms Definition of Bulk Electric System:

As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition.

The authors are proposing a revised definition of the term BES to provide for improved clarity, to reduce ambiguity and to establish a universal "bright-line" for distinguishing between BES and non-BES Elements and Facilities.

This proposed definition provides consistency across the continent's reliability regions by establishing a definition that clearly describes what constitutes BES and non-BES Elements and Facilities. The BES definition references an exemption process (which may include regional differences as defined by Order 672 or jurisdictional exemptions as appropriate for those entities not subject to Section 215 of the Federal Power Act) that can be used to:

- Identify the Radial Transmission systems that are excluded from the BES;
- Identify Elements and Facilities operated at voltages of 100kV or higher that may be excluded from the BES; and
- Identify Elements and Facilities operated at voltages less than 100kV that may be included in the BES.

Proposed continent-wide definition of Bulk Electric System:

Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher necessary to support bulk power system reliability. Elements and Facilities operated at voltages of 100kV or higher, including Radial Transmission systems, may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process.

The development, approval and application of the BES definition exemption process (including periodic review of exempted facilities) will be governed by revisions to the NERC Rules of Procedure, in close coordination with the revision of the BES definition.

However, as envisioned, the standard drafting team will work closely with the team developing the BES definition exemption process to develop a single coordinated implementation plan. It is also envisioned, that the team working to develop the BES definition exemption process will solicit input from drafting

teams, stakeholders, and Regional Reliability Organizations in identifying physical and operational characteristics for consideration in developing the BES definition exemption process.

Reliability Functions

The Standard will Apply to the Following Functions *(Check box for each one that applies.)*		
☒	Reliability Assurer	Monitors and evaluates the activities related to planning and operations, and coordinates activities of Responsible Entities to secure the reliability of the bulk power system within a Reliability Assurer Area and adjacent areas.
☒	Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
☒	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports Interconnection frequency in real time.
☐	Interchange Authority	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
☒	Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
☒	Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within its portion of the Planning Coordinator's Area.
☒	Transmission Owner	Owns and maintains transmission facilities.
☒	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
☒	Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within the Transmission Planner Area.
☒	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
☐	Distribution Provider	Delivers electrical energy to the End-use customer.
☒	Generator Owner	Owns and maintains generation facilities.
☒	Generator Operator	Operates generation unit(s) to provide real and reactive power.
☐	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
☒	Load-Serving Entity	Secures energy and transmission service (and reliability-related services) to serve the End-use Customer.

Reliability and Market Interface Principles

Applicable Reliability Principles *(Check box for all that apply.)*	
☒	1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
☒	2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
☒	3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.
☒	4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented.
☒	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems.
☒	6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.
☒	7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis.
☒	8. Bulk power systems shall be protected from malicious physical or cyber attacks.

Does the proposed Standard comply with all of the following Market Interface Principles? *(Select 'yes' or 'no' from the drop-down box.)*
1. A reliability standard shall not give any market participant an unfair competitive advantage. Yes
2. A reliability standard shall neither mandate nor prohibit any specific market structure. Yes
3. A reliability standard shall not preclude market solutions to achieving compliance with that standard. Yes
4. A reliability standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes

Related Standards

Standard No.	Explanation

Related SARs

SAR ID	Explanation

Regional Variances

Region	Explanation
FRCC	
MRO	
NPCC	
SERC	
TRE	
RFC	
SPP	
WECC	

Proposed Continent-wide Definition of Bulk Electric System:

Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher necessary to support bulk power system reliability. Elements and Facilities operated at voltages of 100kV or higher, including Radial Transmission systems, may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process.

Proposed Continent-wide Definition of Bulk Electric System:

~~As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems,~~ Bulk Electric System: All Transmission and ~~associated equipment, generally~~Generation Elements and Facilities operated at voltages of 100 kV or higher~~.~~ necessary to support bulk power system reliability. Elements and Facilities operated at voltages of 100kV or higher, including Radial ~~transmission facilities serving only load with one transmission source are generally not~~Transmission systems, may be excluded and Elements and Facilities operated at voltages less than 100kV may be included ~~in this~~if approved through the BES definition exemption process.

Project 2010-17 Definition of Bulk Electric System

Background Information

Purpose

In support of the ERO's ability to respond to Commission directives and recommendations, this project will address the issues raised by the Commission, the ERO, the Regional Entities, and the industry as stated in FERC Order No. 693 and Order No. 743. In Order No. 743, the Commission directed the following:

A. Utilize the NERC Standard Development Process to revise the definition of Bulk Electric System (BES) contained in the NERC Glossary of Terms.
B. Develop a single Implementation Plan to address the application of the revised definition of the BES and the implementation of the exemption process.
C. Utilize the NERC Rules of Procedure to develop and implement an 'exemption process' used to identify Elements and Facilities which will be included in or excluded from the BES.

This project will address items 'A' and 'B' and will coordinate efforts between the Standard Drafting Team (SDT) and the group working to develop the exemption process for inclusion in the NERC Rules of Procedure to ensure that the revised BES definition and exemption process result in an accurate, repeatable, and transparent method for the identification of BES and non-BES Elements and Facilities.

Introduction

The Regional Bulk Electric System Definition Coordination Group was established at the request of NERC senior management, prior to the issuance of Order 743, to gain continent-wide consistency in a revised definition of the Bulk Electric System (BES). The results of several industry driven Regional (FRCC, NPCC, RFC, and WECC) projects addressing the issue were compared and consolidated to achieve a common approach to defining the BES.

The Regional Bulk Electric System Definition Coordination Group is proposing a common approach to defining the BES to provide for improved clarity, to reduce ambiguity, and to establish a universal method ("bright-line") of distinguishing between BES and non-BES Elements and Facilities that is reflected in the Standards Authorization Request (SAR).

A common approach to the identification of BES Elements and Facilities will establish a repeatable method of correctly applying the NERC Reliability Standard requirements by the industry and facilitate consistent application of compliance efforts by the entities involved

internally and across Regional boundaries (i.e., FERC, ERO, Regional Entities, and registered entities).

This proposal would provide consistency across the nation's reliability regions by establishing a BES 'Framework' definition and a common set of criteria that clearly provide guidance for determining what constitutes BES and non-BES Elements and Facilities. The BES 'Framework' will also allow for application of an exemption process (which may include regional differences as defined by Order 672 or jurisdictional exemptions as appropriate for those entities not subject to Section 215 of the Federal Power Act) consistent with the criteria to technically assess whether or not an Element or Facility should be included or excluded from the BES as exceptions to the definition and criteria (with concurrence from the ERO). The development, approval, and utilization of the exemption process will be governed by revisions to the NERC Rules of Procedure to address this specific issue.

Proposed BES Criteria

The Regional Bulk Electric System Definition Coordination Group proposed a set of criteria for the identification of BES Elements and Facilities recommended for inclusion in the proposed continent-wide definition of BES:

1. Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, with both primary and secondary windings of 100 kV or higher;
2. Individual generation resources (including GSU transformers and the associated generator interconnecting line lead(s)) greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above;
3. Generation plants (including GSU transformers and the associated generator interconnecting line lead(s))with aggregate capacity greater than 75 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above;
4. Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's (TOP's) restoration plan;
5. Transmission Elements or Facilities operated at voltages below 100kV where the exemption process deems the Element or Facility to be included in the BES;
6. Individual generation resources greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where the exemption process deems the generation resources to be included in the BES; and
7. Generation plants with aggregate capacity greater than 75 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at

voltages below 100kV where the exemption process deems the generation plants to be included in the BES.

The proposed criteria recommended for the exclusion of Elements and Facilities from the BES consist of:

1. Any radial Transmission Element or System, connected from one Transmission source to a Load-serving Element and/or generation resources not included in items 2, 3, 4, 6, and 7 above are excluded from the BES;
2. Elements and Facilities identified through application of the exemption process, consistent with the criteria, where the exemption process deems that the Element or Facility should be excluded from the BES (with concurrence from the ERO); and
3. Generating plant control and operation functions which include relays and systems that control and protect the unit for boiler, turbine, environmental, and/or other plant restrictions.

These criteria will be vetted by the industry through the Standards Development Process via industry comments and eventual ballot. As envisioned, criteria that are applicable on a continent-wide basis will be added to the definition of BES; criteria that apply in some, but not all areas, will be addressed through the exemption process.

Please **DO NOT** use this form to submit comments. Please use the electronic comment form located at the link below to submit comments on the SAR and proposed modification to the definition of Bulk Electric System (Project 2010-17). The electronic comment form must be submitted by **January 21, 2011.**

http://www.nerc.com/filez/standards/Project2010-17_BES.html

If you have questions please contact Ed Dobrowolski at Ed.Dobrowolski@nerc.net or by telephone at 609-947-3673.

Background:
FERC issued Order 743 on November 18, 2010 with the directives identified below:

16. After consideration of the comments submitted, the Commission adopts the NOPR's proposal with some modifications. The Commission directs the ERO to revise the definition of "bulk electric system" through the NERC Standards Development Process to address the Commission's concerns discussed herein. The Commission believes the best way to address these concerns is to eliminate the Regional Entities' discretion to define "bulk electric system" without ERO or Commission review, maintain a bright-line threshold that includes all facilities operated at or above 100 kV except defined radial facilities, and adopt an exemption process and criteria for excluding facilities that are not necessary to operate an interconnected electric transmission network. However, NERC may propose a different solution that is as effective as, or superior to, the Commission's proposed approach in addressing the Commission's technical and other concerns so as to ensure that all necessary facilities are included within the scope of the definition.

The BES SAR authors are proposing a revised definition of the term BES to provide improved clarity, to reduce ambiguity and to establish a universal "bright-line" for distinguishing between BES and non-BES Elements and Facilities.

Proposed continent-wide definition of Bulk Electric System:

> *Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher necessary to support bulk power system reliability. Elements and Facilities operated at voltages of 100kV or higher, including Radial Transmission systems, may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process.*

This proposed definition provides consistency across the continent's reliability regions by establishing a definition that clearly describes what constitutes BES and non-BES Elements and Facilities. The BES definition references an exemption process (which may include regional differences as defined by Order 672 or jurisdictional exemptions as appropriate for those entities not subject to Section 215 of the Federal Power Act) that can be used to:

- Identify the Radial Transmission systems that are excluded from the BES;

- Identify Elements and Facilities operated at voltages of 100kV or higher that may be excluded from the BES; and
- Identify Elements and Facilities operated at voltages less than 100kV that may be included in the BES.

The development, approval and application of the BES definition exemption process (including periodic review of exempted facilities) will be governed by revisions to the NERC Rules of Procedure, in close coordination with the revision of the BES definition.

Information collected from the following questions will assist both the BES Drafting Team and the group working to develop a BES Definition Exception Process.

1. Should the following should be classified as part of the BES?
   - Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, with both primary and secondary windings of 100 kV or higher

   ☐ Yes ☐ No

   Comments:

2. Should the following be classified as part of the BES?
   - Individual generation resources (including GSU transformers and the associated generator interconnecting line lead(s)) greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above

   ☐ Yes ☐ No

   Comments:

3. Should the following be classified as part of the BES?
   - Generation plants (including GSU transformers and the associated generator interconnecting line lead(s))with aggregate capacity greater than 75 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above

   ☐ Yes ☐ No

   Comments:

4. Should the following be classified as part of the BES?
   - Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's (TOP's) restoration plan

   ☐ Yes ☐ No

Comments:

5. Should the following be classified as part of the BES?
   - Transmission Elements or Facilities operated at voltages below 100kV where the exemption process deems the Element or Facility to be included in the BES

   ☐ Yes ☐ No

   Comments:

6. Should the following be classified as part of the BES?
   - Individual generation resources greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where the exemption process deems the generation resources to be included in the BES

   ☐ Yes ☐ No

   Comments:

7. Should the following be classified as part of the BES?
   - Generation plants with aggregate capacity greater than 75 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where the exemption process deems the generation plants to be included in the BES

   ☐ Yes ☐ No

   Comments:

8. Should the following be excluded from the Elements and Facilities classified as part of the BES?
   - Any radial Transmission Element or System, connected from one Transmission source to a Load-serving Element and/or generation resources not included in items 2, 3, 4, 6, and 7 above are excluded from the BES

   ☐ Yes ☐ No

   Comments:

9. Should the following be excluded from the Elements and Facilities classified as part of the BES?

   - Elements and Facilities identified through application of the exemption process, consistent with the criteria, where the exemption process deems that the Element or Facility should be excluded from the BES (with concurrence from the ERO)

   ☐ Yes ☐ No

   Comments:

10. Should the following be excluded from the Elements and Facilities classified as part of the BES?

- Generating plant control and operation functions which include relays and systems that control and protect the unit for boiler, turbine, environmental, and/or other plant restrictions.
  ☐ Yes ☐ No

  Comments:

11. Do you believe that the proposed definition of BES, accompanied by a separate BES Definition Exception Process meets the reliability-related intent of the directives in Order 743?
    ☐ Yes ☐ No

    Comments:

12. If you have a proposal for an equally efficient and effective method of achieving the reliability-related intent of the directives in Order 743, please provide your proposal here.
    Comments:

13. Please provide any other information that you feel would be helpful to the drafting team working on the definition of BES.
    Comments:

Official Comment form for BES Definition Exception Process

Please use this form to submit your recommendations for consideration in developing criteria for deviating from the default criteria for classifying Elements and Facilities as part of the BES.

Please send recommendations relative to the BES Definition Exception Process and associated documentation to sarcomm@nerc.com with "BES Definition" in the subject line. The information should be submitted no later than **January 21, 2011**.

If you have questions please contact Ed Dobrowolski at Ed.Dobrowolski@nerc.net or by telephone at 609-947-3673.

Please provide your name, organization, telephone number and email address so that we may contact you if we need clarification:

Name:

Organization:

Telephone:

Email:

Background:

FERC issued Order 743 on November 18, 2010 with the directives identified below:

16. After consideration of the comments submitted, the Commission adopts the NOPR's proposal with some modifications. The Commission directs the ERO to revise the definition of "bulk electric system" through the NERC Standards Development Process to address the Commission's concerns discussed herein. The Commission believes the best way to address these concerns is to eliminate the Regional Entities' discretion to define "bulk electric system" without ERO or Commission review, maintain a bright-line threshold that includes all facilities operated at or above 100 kV except defined radial facilities, and adopt an exemption process and criteria for excluding facilities that are not necessary to operate an interconnected electric transmission network. However, NERC may propose a different solution that is as effective as, or superior to, the Commission's proposed approach in addressing the Commission's technical and other concerns so as to ensure that all necessary facilities are included within the scope of the definition.

NERC is working to address these directives with two activities – the definition of Bulk Electric System (BES) is being revised through the standard development process and a BES Definition Exception Process is being developed as a proposed modification to the Rules of Procedure.

The information you provide in response to the following questions may be used by the standard drafting team working to revise the definition of BES or by the group working to develop a BES Definition Exception Process.

Official Comment form for BES Definition Exception Process

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

    a. Identify the Element or Facility recommended for exclusion:

    b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

    c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

    Justification:

    d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

    ☐ Continent-wide

    ☐ Interconnection-wide

    ☐ Region-wide

    ☐ Less than Region-wide

    ☐ Unknown

    Comments relative to the proposed exclusion(s):

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **below 100kV** which should be considered for **inclusion** in the Elements and Facilities classified as part of the BES:

    a. Identify the Element or Facility recommended for inclusion:

    b. Attach a generic one-line diagram depicting the Element or Facility (if available).

    c. Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

    Justification:

    d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

    ☐ Continent-wide

    ☐ Interconnection-wide

    ☐ Region-wide

    ☐ Less than Region-wide

    ☐ Unknown

Comments relative to the proposed inclusion(s):

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

   Comments:

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standards Announcement

Standards Authorization Request (SAR), Draft Definition and Exception Process Informal Comment Period Open
December 17, 2010-January 21, 2011

Now available at: http://www.nerc.com/filez/standards/Project2010-17_BES.html

Project 2010-17: Definition of Bulk Electric System

A proposed SAR, a proposed revision to the definition of "Bulk Electric System," and a set of concepts for use in developing a BES Definition Exception Process have been posted for comment until **8 p.m. Eastern on January 21, 2011.**

Instructions

Due to the nature of the comments we are seeking from stakeholders, there are **two different comment forms** and we ask that you complete both.

1. The SAR and BES comment form

   Please use the electronic form to submit comments on the SAR and proposed definition of Bulk Electric System. If you experience any difficulties in using the electronic form, please contact Monica Benson at monica.benson@nerc.net.

   An off-line, unofficial copy of the SAR and BES Definition comment form is posted on the project page: http://www.nerc.com/filez/standards/Project2010-17_BES.html

2. The BES Definition Exception Process comment form

   The BES Definition Exception Process comment form is also posted on the project page identified above. Please use the BES Definition Exception Process comment form to submit comments and supporting information relative to the concepts proposed for use in developing a BES Definition Exception Process. The BES Definition Exception Process comment form must be submitted to sarcomm@nerc.com with "BES Definition" in the subject line.

Next Steps

The drafting team will draft and post a summary of the responses to comments received during this period.

Project Background

On November 18, 2010 FERC issued Order 743 and directed NERC to revise the definition of Bulk Electric System so that the definition encompasses all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. Additional specificity will reduce ambiguity and establish consistency across all Regions in distinguishing between BES and non-BES Elements and Facilities.

In addition, NERC was directed to develop a process for identifying any Elements or Facilities that should be excluded from the BES. NERC is working to address these directives with two activities – the definition of Bulk Electric System (BES) is being revised through the standard development process and a BES Definition Exception Process is being developed as a proposed modification to the NERC Rules of Procedure. Comments received in response to this initial posting will be used by the drafting team working on the revision to the definition and by the group working to develop the BES Definition Exception Process.

Standards Development Process

The Standard Processes Manual contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

For more information or assistance, please contact Monica Benson, Standards Process Administrator, at monica.benson@nerc.net or at 609.452.8060.

North American Electric Reliability Corporation
116-390 Village Blvd.
Princeton, NJ 08540
609.452.8060 | www.nerc.com

Question 1:

If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

- **a.** Identify the Element or Facility recommended for exclusion:
- **b.** Provide a generic one-line diagram depicting the Element or Facility in question (if available).
- **c.** Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).
- **d.** Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

Commenters:

John A. Gray, The Dow Chemical Company 3

Michael Moltane & John Zipp, ITC Holdings 5

Frank Gaffney, Florida Municipal Power Agency, Et all 6

Josh Dellinger, Glacier Electric Cooperative 13

Michelle Mizumori, Western Electricity Coordinating Council 14

Brandy A. Dunn, Western Area Power Administration 16

Alain Pageau, Hydro-Québec TransÉnergie 17

Guy Zito, Northeast Power Coordinating Council 18

Jim Uhrin, ReliabilityFirst Corporation 20

Joe Petaski, Manitoba Hydro 21

John W. Delucca, Lee County Electric Cooperative 22

Paul Cummings, City of Redding 24

Patrick Farrell, Southern California Edison Company 25

Ed Davis, Entergy Services, Inc 27

Manny Robledo, City of Anaheim 28

Lorissa Jones, Bonneville Power Administration 30

David Burke, Orange and Rockland Utilities 31

Jim Case (Entergy), SERC OC Standards Review Group 33

Thad Ness, American Electric Power 34

Amir Hammad, Constellation Power Source Generation, Inc., Et all 36

William J. Gallagher, Vermont Public Power Supply Authority 38

David Angell, Idaho Power 44

Marc M. Butts, Southern Company 45

Andrew Z. Pusztai, American Transmission Company 46

Ronald Sporseen, PNGC Power, Et all 48

Jerome Murray, Oregon Public Utility Commission 50

John D. Martinsen , Public Utility District No. 1 of Snohomish County 51

Steve Alexanderson P.E., Central Lincoln 53

John A. Gray, The Dow Chemical Company

Phone: 281-966-2390
Email: JAGray3@dow.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion:

   As discussed in the comments of The Dow Chemical Company ("Dow") on the recommended definition of BES, the 100 kV standard is inapplicable to generation and should not be used to identify generation facilities that are included in the BES, or that are eligible for an exception or exclusion. Instead, the NERC Statement of Compliance
   Registry Criteria already sets forth criteria for determining when individual generating units and generating plants/facilities are not part of the bulk electrical system. Those existing standards and the generator-specific registration determinations that have been made using those standards should be preserved.

   Dow does not object to retaining a 100 kV standard for identifying transmission facilities that should be considered part of the BES, but exclusions must be made for distribution facilities and interconnection facilities. If owners and/or operators of such facilities are required to secure an "exception" or "exclusion" from the 100 kV standard, then such process must ensure that exceptions or exclusions are available before mandatory reliability standards become applicable.

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

   For a manufacturing site, distribution facilities deliver electricity from the generating plants and or the transmission grid to the manufacturing plants. Interconnection facilities are generally identified by reference to the point of interconnection with the transmission grid. Facilities located on the generator's side of this interconnection up to the site transformers are generally considered interconnection facilities while facilities located at or beyond the point of interconnection are generally considered transmission facilities.

   c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

   Justification: The NERC Statement of Compliance Registry Criteria excludes certain generating facilities, because these generating facilities are not material to the reliability of the BES. Distribution facilities are expressly excluded from the definition of BES pursuant to Section 215 of the Federal Power Act. Distribution facilities are typically operated differently from transmission facilities. As such,

distribution facilities should not be subject to the same reliability standards as transmission facilities. FERC has recognized that interconnection facilities may or may not be material to the reliability of the BES. As such, FERC has held that a facts-and-circumstances analysis should be used to determine whether and to what extent such facilities should be considered part of the BES and, therefore, subject to mandatory reliability standards. *See New Harquahala Generating Company, LLC, 123 FERC ¶ 61,173 at P 44 (2008), clarified, 123 FERC ¶ 61,311 (2008).*

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

Continent-wide

Comments relative to the proposed exclusion(s):

At minimum, the exclusions applicable to distribution facilities and interconnection facilities should apply to all facilities that are subject to FERC's reliability jurisdiction under Section 215 of the Federal Power Act.

Michael Moltane & John Zipp, ITC Holdings

Telephone: 248-946-3093

Email: mmoltane@itctransco.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   Comments relative to the proposed exclusion(s): It is unclear how we would identify an individual element then in part d. declare it Region-wide. This needs to be made more clear

Frank Gaffney, Florida Municipal Power Agency, Et all

Florida Municipal Power Agency is filing the comments below on behalf of its' project participants:

City of New Smyrna Beach
KUA
Lakeland Electric
City of Clewiston
Beaches Energy Services
Ocala Electric Utility

Telephone: 407-355-7767

Email: frank.Gaffney@fmpa.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion:

      This question refers to "exclusions"; we believe, however, that the intent of this comment form is to elicit feedback on the process for "exemptions." It is important to distinguish between the two concepts, as FERC did in Order 743. *See, e.g.*, Paragraph 1, which refers to "maintain[ing] a bright-line threshold that includes all facilities operated at or above 100 kV *except defined radial facilities*," as well as to "establish[ing] an exemption process and criteria." (emphasis added). In other words, in brief, an "exclusion" is outside of the BES by definition, whereas exempt Elements are removed on a case-by-case basis by going through a process.

      FMPA draws the distinction as follows:

      An exclusion is the removal of a category of Elements from the BES definition. The current BES definition explicitly carves out radials serving only load with one transmission source. This is a clear example of an exclusion. There is no "exclusion process" now, nor should there be one in the future; the point of an exclusion is that the class of excluded Elements can—without any process—be treated like sub-100 kV transmission, in that they are presumed to be non-BES unless a particular Element is demonstrated, on a case-by-case basis, to be properly included in the BES (see responses to Questions 5 and 11 in FMPA' comments on BES definition, submitted today, and FMPA response to Question 2 below).

      An exemption, on the other hand, is a finding that a particular Element, although nominally part of the BES, does not need to be included in the BES because it is not necessary for operating an interconnected transmission network.

Because exemptions are less clear-cut than exclusions, each exemption of an Element needs to be approved by NERC so that the Registered Entity and compliance authorities have certainty about the Elements with respect to which compliance is required. In many, perhaps all, cases, this process will likely require a case-by-case examination of each Element for which an exemption is requested.

FMPA responds to this question with respect to the one "exclusion" from the BES definition that we advocate, that of radial Transmission Elements serving only load and/or generation not registered pursuant to the Statement of Compliance Registry Criteria. We also propose uniform criteria for deciding, on a case-by-case basis, whether to grant requested exemptions from the BES, or to include nominally non-BES Elements in the BES. The process that we propose for exemption requests and proposed inclusions is discussed below in response to the invitation of "[c]omments relative to the proposed exclusion(s)."

Exclusion:

FMPA proposes only one exclusion from the BES definition, namely, "Radial Transmission Elements serving only load with one Transmission source are generally not included in this definition. A radial Transmission Element may be considered as 'serving only load' for purposes of the foregoing general exclusion even if it connects generation, so long as that generation is not registered pursuant to the Statement of Compliance Registry Criteria." This formulation, which is discussed in FMPA' comments submitted today on the BES definition, is intended to preserve the current exclusion of radials serving only load with one transmission source, and to clarify that the presence of a generator that is not registered under the Compliance Registry Criteria does not convert a radial into a BES Element. The end result is that radial transmission is excluded unless it connects generation that is registered pursuant to the Statement of Compliance Registry Criteria. Consistent with the Compliance Registry Criteria, a single generator under 20 MVA, or a plant under 75 MVA, if not designated as a Blackstart Resource needed for system restoration, is unlikely to affect the grid. Therefore, the presence of such generation should not require that an otherwise non-BES radial be included in the BES. Rooftop photovoltaic cells, for example, are increasingly common. If FMPA' proposed clarification is not accepted, the presence of such insignificant generation could nullify the exclusion of radials to load with one transmission source, with no benefit to reliability.

Exemption criteria

FMPA has not yet developed a list of criteria that we believe to be exhaustive, though we emphasize that such a list must be an ultimate goal of this process. We propose the following criteria as a start:

FMPA proposes that at least two classes of elements be eligible to request an exemption:

i. Elements that are part of a radial "system" originating from a single BES source serving only load, as in the Florida Keys. Clarifications: a) radial system means any number of series and/or parallel Elements as long as they all originate from a single BES source and do not have another BES source; b) "single BES source" means one BES bus / substation / switching substation at one voltage level, and c) consistent with FMPA' proposed exclusion of radials serving only load and unregistered generation, "serving only load" includes serving generation that is not registered through the Statement of Compliance Registry Criteria.

ii. Elements that are part of a "looped" system that has two transmission sources primarily for local quality of service to the retail customers supplied by the looped system in question and is not used for bulk electric system flow (e.g., the transfer distribution factor of flows across the looped system is low, representing a high impedance path across the looped system). Specific criteria might be: a) a looped system that participate in less than a 5% of transfer (e.g., 5% or less transfer distribution factor); and b) that the looped system in question does not limit transfers.

A radial or looped system to be exempted must meet the following criteria:

1. The radial or looped system may not contribute to any Category D or C contingency resulting in: 1) a supply / demand mismatch greater than the largest loss of source contingency in the Reliability Coordinator area; or 2) an Adverse Reliability Impact where, if the Element were not involved in those Category D or C contingencies, those thresholds would not be exceeded.

Studies to determine whether this criterion is met would be conducted in accordance with TPL-004-0 and TPL 003-0 standards (or corresponding contingencies in revision to the TPL standards) in the Short Term Planning Horizon. Although the above criteria are acceptable responses to a Category D contingency, the concept of the test is to see if a radial or looped system would cause a significantly worse response to Category C or D contingencies by testing the contingency with and without the radial or looped system. FMPA believes that such criteria are good indicators that a radial or looped system should be included in the BES as it highlights whether the protection systems are important for critical clearing times, and whether the radial or looped systems can contribute to an Adverse Reliability Impact in combination with other contingencies;

2. No portion of the radial or looped system may meet any of the conditions of Attachment 1 to CIP-002-4;

3. No portion of the radial or looped system may meet any of the conditions listed in items B1 to B5 of Attachment B to PRC-023-2;

4. No portion of the radial or looped system may be a part of, or be a limiting element of, any Path, Interchange, or Flowgate used in the calculation of ATC in accordance with standards MOD-028, MOD 029 or MOD 030; and

5. No portion of the radial or looped system may include a blackstart resource or cranking path deemed significant to the TOP or RC restoration plans of EOP-005, EOP-006 or EOP-007.

If a Registered Entity demonstrates to NERC that an Element that is nominally in the BES meets *all* of these criteria, the exemption would be granted.

Conversely, if NERC demonstrates that a nominally non-BES Element meets the negative of *any* of these criteria (*e.g.*, if any portion of the radial or looped system meets any of the conditions of Attachment 1 to CIP-002-4 or of Attachment B to PRC-023-2), the Element would be included in the BES.

Throughout these comments, FMPA refers to "Elements" and not to "facilities." This is because "Facility" is defined in the NERC Glossary as "[a] set of electrical equipment that operates as a single Bulk Electric System Element…." Because these comments (and the BES definition) address whether Elements are or are not part of the BES, it is incorrect to refer to the Elements in question as "Facilities," because a Facility is defined as a *BES* Element.

In developing the exemption/inclusion criteria and process, NERC and the SDT should bear in mind the requirement of Order 743: "NERC should develop an exemption process that includes *clear, objective, transparent, and uniformly applicable* criteria for exemption of facilities that are *not necessary for operating the grid*." Paragraph 115 (emphasis added). NERC and the SDT should also bear in mind that FERC anticipates that between the BES definition and the exemption process, there will be only "minimal[]" effect on "small entities." Order 743, Paragraph 169. Order 743 is referring to the Small Business Act definition of a "small electric utility" as one that has a total electric output of less than four million MWh in the preceding year. *See* BES NOPR, 133 FERC ¶ 61,150, Paragraph 35 & footnote 50.

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: Radial Transmission Elements serving only load have been recognized for years as non-BES because such Elements are very unlikely to affect the BES. FERC stated in Order 743 that NERC may retain that exclusion.

Similarly, generators under 20 MVA and generating plants under 75 MVA are not subject to registration pursuant to the Statement of Compliance Registry Criteria, which has been accepted by FERC, because of the recognition that such generators are very unlikely to affect the BES. It is thus consistent with the Compliance Registry Criteria to exclude from the BES definition radials serving load with one

transmission source even if there is some generation on the radial, so long as none of the generation is registered. If the generation is not significant enough to be registered, it is not significant enough to transform an otherwise non-BES radial to load into a BES Element.

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

Continent-wide

The exclusion of radials to load and unregistered generation, as part of the BES definition, should apply on a continent-wide basis.

Each Element proposed for exemption or inclusion should be considered individually, under the same criteria (proposed above), applied uniformly continent-wide.

Comments relative to the proposed exclusion(s):

Exemption and Inclusion Processes:

The exemption and inclusion processes should be designed to ensure continent-wide uniformity to the maximum extent possible. To that end, NERC must use a uniform process; the criteria for approving or denying an exemption, or for including an Element in the BES, must be clear; and entities must be able to appeal decisions to another body within NERC or to FERC.

In order to obtain an exemption, a Registered Entity should be required to demonstrate that the Element for which it is requesting an exemption is not "necessary for operating an interconnected electric transmission network." This is the standard set out in Order 743; it is also part of the definition of the "bulk-power system" in Section 215 of the Federal Power Act, 16 U.S.C. § 824o(a)(1)(A) (the other part of the statutory definition is "electric energy from generation facilities needed to maintain transmission system reliability," 16 U.S.C. § 824o(a)(1)(B)). Application of this standard should be informed by the statutory definitions of "reliability standard" ("a requirement, approved by the Commission under this section, to provide for reliable operation of the bulk-power system") and "reliable operation" ("operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure of system elements").

Conversely, to include a nominally non-BES Element in the BES, NERC should be required to demonstrate that the Element *is* necessary for operating an interconnected electric transmission network.

Criteria for determining whether an Element is or is not "necessary for operating an interconnected electric transmission network" are proposed in response to Question 1(a) above. The criteria should be uniform continent-wide, though they will be applied to each Element on a case-by-case basis.

Exemption requests and proposed inclusions should be decided by NERC staff in the first instance. FMPA does not believe that the exemption and inclusion processes should be delegated to the Regional Entities. In Order 743, FERC emphasized the need for continent-wide uniformity; in fact, it was inconsistency among regions that prompted Order 743. FMPA members' experience with Regional registration processes suggests that Regional implementation of the BES exemption and inclusion processes is unlikely to yield the uniformity that FERC directed. Furthermore, implementing this FERC directive will unavoidably require significant personnel resources, either at NERC or at the Regions. Delegating the process to the Regions would impose additional costs due to the need for NERC to exercise strong oversight to attempt to maintain uniformity. It may be that after the exemption and inclusion processes have been in place for a few years and a body of precedent has been accumulated, delegation will be appropriate. At this time, however, NERC staff should make the initial decision on all exemption requests and proposed inclusions.

FMPA proposes, for the sake of consistency with the registration appeal process, that appeals of decisions on exemptions and inclusions be to the Board of Trustees Compliance Committee (BOTCC), with further appeals to FERC if necessary. Appeals to the BOTCC would consist of the record compiled by NERC Staff, and additional paper submissions by NERC Staff and the Registered Entity demonstrating why the Element(s) in question is or is not "necessary for operating an interconnected electric transmission network." *See* NERC Rules of Procedure, Appendix 5A, "Organization Registration and Certification Manual," at 14-16. Registered Entities should have the option of requesting a hearing. Hearing procedures could be modeled on the Compliance and Certification Committee's "Hearing Procedures for Use in Appeals of Certification Matters," in Appendix 4E of the NERC Rules of Procedure.

FMPA also suggests that decisions on exemptions and inclusions be made available to others, either subject to CEII protection or in a form suitable for public release. As precedent develops, Registered Entities will increasingly be able to judge for themselves the likelihood that a particular exemption will be granted, or that an appeal of an inclusion will succeed. We expect that giving Registered Entities more information on which to base their decisions will significantly reduce the burden on NERC of processing exemptions and inclusions.

We propose that BES Elements for which an exemption request is pending should continue to be included in the BES until the exemption and any appeals are decided,

and that non-BES Elements for which an inclusion is pending should continue to be non-BES until the inclusion and any appeals are decided.

The transition process should include an important exception to the general rule proposed for BES status during the pendency of an exemption request: to allow for a smooth transition, to the extent that Elements that are currently considered non-BES become BES under the new definition, those Elements should be permitted to request exemptions and to continue to be considered non-BES until their exemption requests and any appeals are decided.

Josh Dellinger, Glacier Electric Cooperative

Telephone: 406-873-5566

Email: joshd@glacierelectric.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for exclusion: Our delivery point, which is a loop-fed 115kV switching station.

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: This station's main purpose is to be a delivery point for our system. We are a distribution cooperative that serves mainly residential and small commercial loads. Each year we peak around 35 MW and average around 22 MW. This station is loop fed by two 115 kV lines to give our members more reliability. No transmission planner, balancing authority, transmission operator, reliability coordinator, etc. has included this station in any critical path lists or system restoration plans. This station is not designated as critical asset by its balancing authority or transmission operator. The available short-circuit MVA at this station is 677 MVA. If a fault were to occur at this station, outages would be limited to the local area and the BES as a whole would not be adversely affected at all. It is our belief that facilities such as this are insignificant to the BES and do not need to be considered part of the BES.

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

Michelle Mizumori, Western Electricity Coordinating Council

Telephone: 801-819-7624

Email: mmizumori@wecc.biz

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion: Those elements or facilities above 100 kV that are shown through engineering studies to not be necessary to reliably operate an interconnected transmission system.

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

   c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

   Justification: An element or facility that is not necessary to reliably operate an interconnected transmission system need not be included in the Bulk Electric System (BES). This can be assessed using engineering studies that show the effect of worst-case disturbances on multiple indicators such as frequency, voltage, system flows, operating limits, generator tripping, cascading outages, and/or islanding with the element or facility removed from service. An element or facility is not necessary to reliably operate if the system can maintain acceptable steady-state and dynamic performance during and after a worst-case disturbance with the element removed from service.

   d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

   ☒ Continent-wide

   ☒ Interconnection-wide

   ☒ Region-wide

   Comments relative to the proposed exclusion(s):

   The BES functions to generate bulk power and transfer that bulk power to locations from which it is then distributed to end-use load. Elements that generate bulk power, transfer bulk power, or support the transfer of bulk power are part of the BES.

   An element is necessary to reliably operate an interconnected transmission system if it significantly affects the ability of the BES to generate bulk power or carry bulk power to locations from which is it distributed to end-use load. While operating voltage (i.e.,

the proposed 100 kV bright-line) may be a clear and repeatable proxy for identifying those elements that are necessary to reliably operate an interconnected transmission system, it is a broad approach that may not adequately address specific examples. Moreover, engineering studies can be used to more granularly and accurately identify elements that are not needed to reliably operate an interconnected transmission system.

The thresholds on the indicators listed above may vary between interconnections and regions. For example, voltage deviation may be more relevant in the Western Interconnection (which is primarily stability limited) than in the Eastern Interconnection (which is primarily thermally limited).

Brandy A. Dunn, Western Area Power Administration

Telephone: 720-962-7431

Email: dunn@wapa.gov

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion: Any Element above 100-kV that is shown (through system studies) to NOT be necessary to reliably operate the interconnected transmission system.

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

   c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

      Justification: An Element that is not required to reliably operate the interconnected transmission system does not need to be included in the BES (or specifically called-out in the definition). This can be assessed through engineering system studies that show the worst-case results based on indicators such as voltage, frequency, OTC limits, angular instability and/or cascading outages based on that Element being removed from service.

   d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

      ☒ Continent-wide

      ☒ Interconnection-wide

      ☒ Region-wide

      Comments relative to the proposed exclusion(s): An Element is necessary to reliably operate the interconnected transmission system if it significantly affects the ability of the BES to carry bulk power to end-use load. While a brightline test voltage (such as the proposed >100-kV) may be a clear and repeatable proxy for identifying Elements that are necessary to reliably operate the interconnected transmission system, this broad approach may not adequately address specific examples. Engineering system studies can accurately identify Elements which are not needed to reliably operate the interconnected transmission system.

Alain Pageau, Hydro-Québec TransÉnergie

Telephone: 514 879-4100 #5414

Email: pageau.alain@hydro.qc.ca

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

    a. Identify the Element or Facility recommended for exclusion: The transmission lines dedicated to serve the native load in the Quebec Interconnection.

Guy Zito, Northeast Power Coordinating Council

Telephone: 212-840-1070

Email: gzito@npcc.org

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion:

   All step-down transformers with their low-side terminals operated at below 100 kV.

   Radial taps from a BES feeder or bus connection to loads. All elements or facilities in series with excluded or exempt elements or facilities -- upstream to a designated point-of-demarcation with the BES and downstream to the customer meter or interconnection. (Refer to the response to Question 3, New York Indicator [NY-2] below, and the response to Question 13, proposed definition 'Point-of-Demarcation' in the BES Definition Comments provided separately). For example, upstream from an exempt or excluded feeder to the upstream-side of the disconnect switch connecting the excluded or exempted feeder to the BES, or if no disconnect switch is present, to the upstream BES supply-bus connection. This exclusion or exemption would extend to and also apply to related equipment, such as circuit switchers, circuit breakers, ground switches, disconnect switches, busses, etc. that are down-stream of the point-of-demarcation and in the same circuit with the exempted or excepted feeders and transformers.

   Local generation and any facility associated with local generation serving as a load modifier to local load only. The power generated is demonstrated to be consumed locally and does not flow back into the BES. The operation (or loss) of the local generation and/or associated facilities does not materially impact any BES transmission facilities. If a local generator functions as a load modifier, and does not materially impact the BES, meaning that it is not necessary to maintain BES reliability, then it should be excluded from the definition of BES under the BES Exclusion process.

   The transmission lines dedicated to serve the native load in the Quebec Interconnection.

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available). Not Applicable

   c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

   Justification: The FERC Seven Factor test has been shown to be a reliable, repeatable method for identifying facilities that are local distribution and separating

them from those facilities which perform a transmission function. The indicators of local distribution in the Commission's seven-factor test[1] are:

1) Local distribution facilities are normally in close proximity to retail customers;
2) Local distribution facilities are primarily radial in character;
3) Power flows into local distribution systems, and rarely, if ever flows out;
4) When power enters a local distribution system, it is not reconsigned or transported on to some other market;
5) Power entering a local distribution system is consumed in a comparatively restricted geographic area;
6) Meters are based at the transmission / local distribution interface to measure flow into the local distribution system; and
7) Local distribution systems will be of reduced voltage.

[1] Ref. FERC Order No. 888 at 31,771 and 31,981, e.g., *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities*

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

☒ Less than Region-wide

☒ Unknown

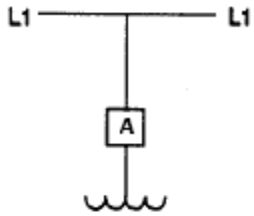
Jim Uhrin , ReliabilityFirst Corporation

Telephone: 330.247.3058
Email: jim.urhin@rfirst.org

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for exclusion: Those that have no impact to the reliability of the BES for any reason or could at anytime. Those that may or could through reconfiguration and or operating procedures must be included.

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).



In the diagram above, any equipment downstream of the "A" breaker that does not or could not trip and lockout a BES facility (e.g. line, transformer, etc.) may be excluded, however if equipment below the "A" breaker could or does trip and lockout a BES facility for any reason, then it should be included.

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: If the facility could never trip and lockout a BES facility, there is no reason to include it. However, caution and careful consideration must be used when exclusions are considered. There maybe times during toplogy changes or system re-configurations that certain facilities could trip and lockout a BES facility and therefore must be included.

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

Joe Petaski, Manitoba Hydro

Telephone: 204-487-5332

Email: jpetaski@hydro.mb.ca

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion: Radial Transmission Elements and Systems - See comment below

      Comments relative to the proposed exclusion(s): Radial Transmission Elements and Systems should be excluded from the Elements and Facilities classified as part of the BES but a clear NERC definition of radial is required to prevent misunderstandings and misapplications of the BES definition and exemption process. Also, there should be no regional differences in the BES definition or in the BES definition exemption process.

John W. Delucca, Lee County Electric Cooperative

Telephone: 239-656-2190

Email: john.delucca@lcec.net

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for exclusion: Radial load serving elements that do not have an adverse effect upon the BES should be excluded. Also Transmission systems that have no adverse impact on the BES as evidenced by engineering design and criteria and load modeling should be excluded such as Non-FERC Jurisdictional Facilities; Radial Non-Transmission Load Serving Elements; Looped Non-Transmission Load Serving Elements; Looped Non-Transmission Load Serving Elements Designed & Installed with No Intent to Provide Transmission Load Service.

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available). Please refer to **Attachment 1b.6 – 1b.9** the draft BES Definition currently under review in the FRCC region. There are multiple single-lines included that represent a fair cross section of elements that should be excluded.

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: The purpose of including facilities in the definition of BES is make them subject to federal regulations that are designed to serve the reliability needs of the BES and to prevent cascading of outages to a broad section of the BES. Certain elements operated at voltages of 100kV or higher have zero measurable impact to the reliable operation of the Interconnected BES. No practical purpose is served by including those elements, and if they are, it unnecessarily increases the cost of delivered power. The following list also should be considered, a). No FERC Jurisdiction; b) Facilities were/are designed, installed, and operated to serve local non-transmission loads; c) Rates are designed to provide revenue to meet local non-transmission service; d) Facilities were never designed or intended to provide capability of entity-to-entity, region-to-region load flows other than that required to meet local non-transmission service loads; e) Reactance resources whose purpose is neutralizing non-transmission inductive loads and/or to compensate for "within entity" losses.

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

Comments relative to the proposed exclusion(s): The submitted diagrams are not intended to represent every possible element that should be excluded Continent-wide. The complete list should be determined by the proposed task force in order that regional differences in system characteristics is taken into account. In addition, to insure continuity, but the final decision as to what meets the exclusion criteria should reside in the Region with appeal process to NERC and possibly FERC.

Paul Cummings, City of Redding

Telephone: 530-245-7016

Email: pcummings@ci.redding.ca.us

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for exclusion: **Those elements or facilities operated at or above 100kV that are shown through engineering studies not to be necessary to reliably operate an interconnected transmission system. Radial elements unless they are shown to be necessary to reliably operate an interconnected transmission system. See Attachment 1. (Refer to Attachment 1b.5)**

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available). **Refer to Attachment 1b.5**

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: **"The impact an Element has on the BES shall be determined by assessing the performance of key measures of BES reliability through power flow, post-transient, and transient stability analysis with (1) the system, and the Subject Element, operating at reasonably stressed conditions that replicate expected system conditions under which the loss of the Subject Element would have the greatest impact on the key measures of reliability, and (2) the Subject Element removed from service, but without allowing for system readjustment."**

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

☒ Interconnection-wide

☒ Region-wide

Patrick Farrell, Southern California Edison Company

Telephone: 626-302-1321

Email: Patrick.Farrell@sce.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion: The elements and facilities above 100kV that are shown through engineering studies to not be necessary to reliably operate an interconnected transmission system should be excluded. Additionally, the transmission facilities at 100kV and above that are radial in nature, used for load serving purposes, and which are not parallel to interconnected transmission systems should be excluded. As an example, in SCE's system, the Valley 115kV system is radial in nature and the power flow is generally from 500kV to 115kV to serve load.

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

   c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

   Justification: An element or facility that is not necessary to reliably operate an interconnected transmission system need not be included in the BES. This can be assessed using engineering studies that show the effect of worst-case disturbances on multiple indicators such as frequency, voltage, system flows, operating limits, generator tripping, and cascading outages and/or islanding with the element or facility removed from service. If a system can maintain acceptable steady-state and dynamic performance during and after a worst-case disturbance with the element removed from service, that element or facility is not necessary to reliably operate the system.

   d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

   X Continent-wide

   X Interconnection-wide

   X Region-wide

   Comments relative to the proposed exclusion(s): The Bulk Electric System (BES) functions to generate bulk power and transfer that bulk power to locations from which it is then distributed to end-use load. Elements that generate bulk power, transfer bulk power, or support the transfer of bulk power are part of the BES.

An element is necessary to reliably operate an interconnected transmission system if it significantly affects the ability of the BES to generate bulk power or carry bulk power to locations from which it is distributed to end-use load. While operating voltage (i.e. the proposed 100kV bright-line) may be a clear and repeatable proxy for identifying those elements that are necessary to reliably operate an interconnected transmission system, it is a broad approach that may not adequately address specific examples. Engineering studies can be used to more granularly and accurately identify elements which are not needed to reliably operate an interconnected transmission system.

The thresholds on the indicators listed above may vary between interconnections and regions. For example, SCE's system has facilities rated at the 115kV level that are radial in nature for load serving purposes. Therefore, applying a 100kV bright-line may unnecessarily bring facilities that could be excluded through an engineering study.

Ed Davis, Entergy Services, Inc

Telephone: 504-576-3029

Email: edavis@entergy.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion:

      These questions and possible responses by entities are appropriate as the questions relate to specific facilities and configurations to be considered for exemption. The questions do not reflect principles (criteria) for the determination of if facilities or configurations to be included / excluded in the definition of BES. We agree the questions and responses may be appropriate here if the responses are to be used as examples to develop exemption principles (criteria). However, we suggest the authors should have also asked the industry for principles (criteria) they believe should be included as exemption criteria.

      These questions and responses also do not address a possible process for determining if facilities or configurations should be included / excluded in the definition of BES. We suggest the authors should have also asked the industry for process suggestions they would like included in the final process.

Manny Robledo, City of Anaheim
Telephone: 714-765-5107
Email: mrobledo@anaheim.net

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for exclusion: City of Anaheim Lewis-Vermont 230kV radial transmission line and seven 230kV to 69kV transformer banks and associated substation equipment, which are also radial transmission elements serving load.

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available). **Refer to attachments:**

1b.1 Anaheim System One-Line,
1b.2 Anaheim 220kV System,
1b.3 Anaheim 69kV Bus Impedance Diagram

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: The 220kV facilities owned and operated by Anaheim are radial transmission elements fed from one transmission source, i.e. Lewis Substation. Southern California Edison Company (SCE) and the California Independent System Operator (CAISO) are the TO/TOPs for the interconnection of Lewis Substation to the BES, including the protection system that de-energizes both Anaheim buses using SCE owned breakers without interrupting any BES transmission lines. The 220kV system owned and operated by the City of Anaheim is radial to the BES at Lewis Substation and feeds a 69kV sub-transmission system through three 220kV/69kV transformer banks. Anaheim is able to reliably serve 100% of its load using only three of the four banks at Lewis; however, to improve reliability within Anaheim, in 2008 Anaheim built a redundant substation (Vermont Substation) 1.5 miles from Lewis, which is connected via a 220kV transmission line. This line is not needed to maintain BES or Anaheim system reliability because it is in parallel with four (4) 69kV lines, which also connect Lewis to Vermont. Its only purpose is to provide backup transformation should there be a catastrophic failure of the Lewis transformer banks. Pursuant to an SCE-Anaheim operating order only three transformer banks may be in service at any time to limit short circuit duty, so the banks at Vermont are truly redundant.

Transmission elements serving radial load, radial distribution systems, or non-GO/GOP generation connected to such radial lines and excluded from BES. To eliminate reliability gaps, such radial transmission elements should be classified as "Distribution" equipment subject to DP standards, and the PRC and vegetation management standards should be made applicable to Distribution Providers and this equipment. This is consistent with the

NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for radial transmission facilities that function as Distribution and are not required for the reliable operation of the BES.

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

Comments relative to the proposed exclusion(s): Transmission elements serving radial load, radial distribution systems, or non-GO/GOP generation connected to such radial lines and excluded from BES. To eliminate reliability gaps, such radial transmission elements should be classified as "Distribution" equipment subject to DP standards, and the PRC and vegetation management standards should be made applicable to Distribution Providers and this equipment. This is consistent with the NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for radial transmission facilities that function as Distribution and are not required for the reliable operation of the BES.

Lorissa Jones, Bonneville Power Administration

Telephone: 360-418-8978

Email: ljjones@bpa.gov

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for exclusion: Those elements or facilities above 100kV that are shown through engineering studies not to be necessary to reliably operate an interconnected transmission system.

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: An element or facility that is not necessary to reliably operate an interconnected transmission system need not be included in the BES. This can be assessed using engineering studies that show the effect of worst-case disturbances on multiple indicators such as frequency, voltage, system flows, operating limits, generator tripping, cascading outages and/or islanding with the element or facility removed from service. If a system can maintain acceptable steady-state and dynamic performance during and after a worst-case disturbance with the element removed from service, that element or facility is not necessary to reliably operate the system.

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Interconnection-wide

☒ Region-wide

David Burke, Orange and Rockland Utilities

Telephone: 845-577-3076

Email: burkeda@oru.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for exclusion:

All step-down transformers with their low-side terminals operated at below 100 kV. Radial taps from a BES feeder or bus connection to loads. All elements or facilities in-series with excluded or exempt elements or facilities -- upstream to a designated point-of-demarcation with the BES and downstream to the customer meter or interconnection. For example, upstream from an exempt or excluded feeder to the upstream-side of the disconnect switch connecting the excluded or exempted feeder to the BES, or if no disconnect switch is present, to the upstream BES supply-bus connection. This exclusion or exemption would extend to and also apply to related equipment, such as circuit switchers, circuit breakers, ground switches, disconnect switches, busses, etc. that are down-stream of the point-of-demarcation and in the same circuit with the exempted or excepted feeders and transformers.

Local generation and any facility associated with local generation serving as a load modifier to local load only. The power generated is demonstrated to be consumed locally and does not flow back into the BES. The operation (or loss) of the local generation and/or associated facilities does not materially impact any BES transmission facilities. If a local generator functions as a load modifier, and does not materially impact the BES, meaning that it is not necessary to maintain BES reliability, then it should be excluded from the definition of BES under the BES Exclusion process.

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

Not Applicable

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: The FERC Seven Factor test has been shown to be a reliable, repeatable method for identifying facilities that are local distribution and separating them from those facilities which perform a transmission function. The indicators of local distribution in the Commission's seven-factor test[2] are:

1) Local distribution facilities are normally in close proximity to retail customers;

2) Local distribution facilities are primarily radial in character;

3) Power flows into local distribution systems, and rarely, if ever flows out;

4) When power enters a local distribution system, it is not reconsigned or transported on to some other market;

5) Power entering a local distribution system is consumed in a comparatively restricted geographic area;

6) Meters are based at the transmission / local distribution interface to measure flow into the local distribution system; and

7) Local distribution systems will be of reduced voltage.

[1] Ref. FERC Order No. 888 at 31,771 and 31,981, e.g., *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities*

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

X☐ Continent-wide

X☐ Unknown

Jim Case (Entergy), SERC OC Standards Review Group

Telephone: 601-985-2345
Email: jcase@entergy.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   Comments relative to the proposed exclusion(s): We agree

Thad Ness, American Electric Power

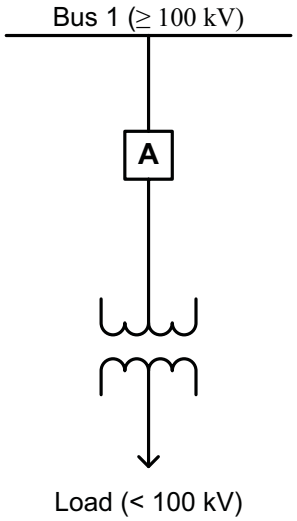
Telephone: 614-716-2053

Email: tkness@aep.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion: Radial facilities and elements operating at or above 100 kV, that are connected to only load serving facilities operated at distribution voltage levels and that include a high side circuit breaker or circuit switcher should be excluded from the BES classification. While protective systems themselves are not by default part of the BES, nor should they be classified as a BES element, the breaker failure schemes associated with the high side circuit breaker or circuit switcher are part of a Protection System and should comply with the appropriate standards.

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).



   c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

   Justification: Facilities such as that described in 1.a. are designed to support only one way power flow; from the BES to the load. Operation of the high side circuit breaker or circuit switcher, Device A, removes the transformer from service interrupting power flow to the load but will not interrupt power flow on the BES nor effect reliability of the BES. While protective systems themselves are not by default

part of the BES, nor should they be classified as a BES element, the breaker failure scheme associated with Device A has the potential of interrupting BES power flow by clearing Bus 1. For this reason, the breaker failure scheme is part of a Protection System and should comply with the appropriate standards.

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

Amir Hammad, Constellation Power Source Generation, Inc., Et all

CPSG is filing the comments below on behalf of:
Constellation Energy Group, Inc.
Baltimore Gas & Electric Company
Constellation Energy Commodities Group, Inc.
Constellation Energy Control and Dispatch, LLC
Constellation NewEnergy, Inc. and its affiliates
Constellation Energy Nuclear Group, LLC,[3]

Telephone: 410-787-5226
Email: amir.hammad@constellation.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for exclusion: Constellation believes that the exclusions mapped out in RFC's BES definition, as well as the diagrams in Appendix A of the RFC BES definition would be a good starting point for the standard drafting team in developing exclusions.

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available). Constellation believes that the exclusions mapped out in RFC's BES definition, as well as the diagrams in Appendix A of the RFC BES definition would be a good starting point for the standard drafting team in developing exclusions.

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: The BES definition in RFC has been vetted through its members and incorporates the essence of NERC's BES definition but includes bright lines for its members to abide by.

RFC Definition of BES:
https://www.rfirst.org/Documents/RFC%20BES%20Definition.pdf

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

[3] On November 6, 2009, EDF, Inc. ("EDF") and Constellation Energy Group, Inc. completed a transaction pursuant to which EDF acquired a 49.99 percent ownership interest in CENG. CENG was previously a wholly owned subsidiary of Constellation Energy Group, Inc.

Comments relative to the proposed exclusion(s):

As described in RFC's BES definition, the following elements should be excluded:

(1) radial facilities connected to load serving facilities or individual generation resources smaller than 20 MVA or a generation plant with aggregate capacity less than 75 MVA where the failure of the radial facilities will not adversely affect the reliable steady-state operation of other facilities operated at voltages of 100 kV or higher and

(2) balance of generating plant control and operation functions (other than protection systems that directly control the unit itself and step-up transformer); these facilities would include relays and systems that automatically trip a unit for boiler, turbine, environmental, and/or other plant restrictions, and

(3) all other facilities operated at voltages below 100 kV.

William J. Gallagher, Vermont Public Power Supply Authority

Telephone: (802) 839-0562

Email: bgallagher@vppsa.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages 100kV and above which should be considered for exclusion from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion:

   This question refers to "exclusions"; we believe, however, that the intent of this comment form is to elicit feedback on the process for "exemptions." It is important to distinguish between the two concepts, as FERC did in Order 743. *See*, *e.g.*, Paragraph 1, which refers to "maintain[ing] a bright-line threshold that includes all facilities operated at or above 100 kV *except defined radial facilities*," as well as to "establish[ing] an exemption process and criteria" (emphasis added). In other words, in brief, an "exclusion" is outside of the BES by definition, whereas exempt Elements are removed on a case-by-case basis by going through a process.

   TAPS draws the distinction as follows:

   An exclusion is the removal of a category of Elements from the BES definition. The current BES definition explicitly carves out radials serving only load with one transmission source. This is a clear example of an exclusion. There is no "exclusion process" now, nor should there be one in the future; the point of an exclusion is that the class of excluded Elements can—without any process—be treated like sub-100 kV transmission, in that they are presumed to be non-BES unless a particular Element is demonstrated, on a case-by-case basis, to be properly included in the BES (*see* responses to Questions 5 and 11 in TAPS' comments on BES definition, submitted today, and TAPS response to Question 2 below).

   An exemption, on the other hand, is a finding that a particular Element, although nominally part of the BES, does not need to be included in the BES because it is not necessary for operating an interconnected transmission network.

   Because exemptions are less clear-cut than exclusions, each exemption of an Element needs to be approved by NERC so that the Registered Entity and compliance authorities have certainty about the Elements with respect to which compliance is required. In many, perhaps all, cases, this process will likely require a case-by-case examination of each Element for which an exemption is requested.

   TAPS responds to this question with respect to the one "exclusion" from the BES definition that we advocate, that of radial Transmission Elements serving only load and/or generation not registered pursuant to the Statement of Compliance Registry Criteria. We also propose uniform criteria for deciding, on a case-by-case

basis, whether to grant requested exemptions from the BES, or to include nominally non-BES Elements in the BES. The process that we propose for exemption requests and proposed inclusions is discussed below in response to the invitation of "[c]omments relative to the proposed exclusion(s)."

Exclusion:

TAPS proposes only one exclusion from the BES definition, namely, "Radial Transmission Elements serving only load with one Transmission source are generally not included in this definition. A radial Transmission Element may be considered as 'serving only load' for purposes of the foregoing general exclusion even if it connects generation, so long as that generation is not registered pursuant to the Statement of Compliance Registry Criteria." This formulation, which is discussed in TAPS' comments submitted today on the BES definition, is intended to preserve the current exclusion of radials serving only load with one transmission source, and to clarify that the presence of a generator that is not registered under the Compliance Registry Criteria does not convert a radial into a BES Element. The end result is that radial transmission is excluded unless it connects generation that is registered pursuant to the Statement of Compliance Registry Criteria. Consistent with the Compliance Registry Criteria, a single generator under 20 MVA, or a plant under 75 MVA, if not designated as a Blackstart Resource needed for system restoration, is unlikely to affect the grid. Therefore, the presence of such generation should not require that an otherwise non-BES radial be included in the BES. Rooftop photovoltaic cells, for example, are increasingly common. If TAPS' proposed clarification is not accepted, the presence of such insignificant generation could nullify the exclusion of radials to load with one transmission source, with no benefit to reliability.

Exemption criteria

TAPS has not yet developed a list of criteria that we believe to be exhaustive, though we emphasize that such a list must be an ultimate goal of this process. We propose the following criteria as a start:

TAPS proposes that at least two classes of facilities be eligible to request an exemption:

i. Elements that are part of a radial "system" originating from a single BES source serving only load, as in the Florida Keys. Clarifications: a) radial system means any number of series and/or parallel Elements as long as they all originate from a single BES source and do not have another BES source; b) "single BES source" means one BES bus / substation / switching substation at one voltage level, and c) consistent with TAPS' proposed exclusion of radials serving only load and unregistered generation, "serving only load" includes serving generation that is not registered through the Statement of Compliance Registry Criteria.

ii. Elements that are part of a "looped" system that has two transmission sources primarily for local quality of service to the retail customers supplied by the looped system in question and is not used for bulk power system flow (*e.g.*, the transfer distribution factor of flows across the looped system is low, representing a high impedance path across the looped system). Specific criteria might be: a) a looped system that participates in less than a 5% of transfer (*e.g.*, 5% or less transfer distribution factor); and b) that the looped system in question does not limit transfers.

A radial or looped system to be exempted must meet the following criteria:

1. The radial or looped system may not contribute to any Category D or C contingency resulting in: 1) a supply / demand mismatch greater than the largest loss of source contingency in the Reliability Coordinator area; or 2) an Adverse Reliability Impact where, if the Element were not involved in those Category D or C contingencies, those thresholds would not be exceeded.

Studies to determine whether this criterion is met would be conducted in accordance with TPL-004-0 and TPL-003-0 standards (or corresponding contingencies in revision to the TPL standards) in the Short Term Planning Horizon. Although the above criteria are acceptable responses to a Category D contingency, the concept of the test is to see if a radial or looped system would cause a significantly worse response to Category C or D contingencies by testing the contingency with and without the radial or looped system. TAPS believes that such criteria are good indicators that a radial or looped system should be included in the BES as it highlights whether the protection systems are important for critical clearing times, and whether the radial or looped systems can contribute to an Adverse Reliability Impact in combination with other contingencies;

2. No portion of the radial or looped system may meet any of the conditions of Attachment 1 to CIP-002-4;

3. No portion of the radial or looped system may meet any of the conditions listed in items B1 to B5 of Attachment B to PRC-023-2;

4. No portion of the radial or looped system may be a part of, or be a limiting element of, any Path, Interchange, or Flowgate used in the calculation of ATC in accordance with standards MOD-028, MOD-029 or MOD-030; and

5. No portion of the radial or looped system may include a Blackstart Resource or cranking path deemed significant to the TOP or RC restoration plans of EOP-005, EOP-006 or EOP-007.

If a Registered Entity demonstrates to NERC that an Element that is nominally in the BES meets *all* of these criteria, the exemption would be granted.

Conversely, if NERC demonstrates that a nominally non-BES Element meets the negative of *any* of these criteria (*e.g.*, if any portion of the radial or looped system meets any of the conditions of Attachment 1 to CIP-002-4 or of Attachment B to PRC-023-2), the Element would be included in the BES.

Throughout these comments, TAPS refers to "Elements" and not to "facilities." This is because "Facility" is defined in the NERC Glossary as "[a] set of electrical equipment that operates as a single Bulk Electric System Element…" Because these comments (and the BES definition) address whether Elements are or are not part of the BES, it is incorrect to refer to the Elements in question as "Facilities," because a Facility is defined as a *BES* Element.

In developing the exemption/inclusion criteria and process, NERC and the SDT should bear in mind the requirement of Order 743: "NERC should develop an exemption process that includes *clear, objective, transparent, and uniformly applicable* criteria for exemption of facilities that are *not necessary for operating the grid*." Paragraph 115 (emphasis added). NERC and the SDT should also bear in mind that FERC anticipates that between the BES definition and the exemption process, there will be only "minimal[]" effect on "small entities." Order 743, Paragraph 169. Order 743 is referring to the Small Business Act definition of a "small electric utility" as one that has a total electric output of less than four million MWh in the preceding year. *See* March 18, 2010 BES Notice of Proposed Rulemaking, Paragraph 35 & footnote 50.

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: Radial Transmission Elements serving only load have been recognized for years as non-BES because such Elements are very unlikely to affect the BES. FERC stated in Order 743 that NERC may retain that exclusion.

Similarly, generators under 20 MVA and generating plants under 75 MVA are not subject to registration pursuant to the Statement of Compliance Registry Criteria, which has been accepted by FERC, because of the recognition that such generators are very unlikely to affect the BES. It is thus consistent with the Compliance Registry Criteria to exclude from the BES definition radials serving load with one transmission source even if there is some generation on the radial, so long as none of the generation is registered. If the generation is not significant enough to be registered, it is not significant enough to transform an otherwise non-BES radial to load into a BES Element.

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

The exclusion of radials to load and unregistered generation, as part of the BES definition, should apply on a continent-wide basis.

Each Element proposed for exemption or inclusion should be considered individually, under the same criteria (proposed above), applied uniformly continent-wide.

Comments relative to the proposed exclusion(s):

Exemption and Inclusion Processes:

The exemption and inclusion processes should be designed to ensure continent-wide uniformity to the maximum extent possible. To that end, NERC must use a uniform process; the criteria for approving or denying an exemption, or for including an Element in the BES, must be clear; and entities must be able to appeal decisions to another body within NERC or to FERC.

In order to obtain an exemption, a Registered Entity should be required to demonstrate that the Element for which it is requesting an exemption is not "necessary for operating an interconnected electric transmission network." This is the standard set out in Order 743 (*e.g.*, Paragraph 1); it is also part of the definition of the "bulk-power system" in Section 215 of the Federal Power Act, 16 U.S.C. § 824*o*(a)(1)(A). Application of this standard should be informed by the statutory definitions of "reliability standard" ("a requirement, approved by the Commission under this section, to provide for reliable operation of the bulk-power system," 16 U.S.C. § 824*o*(a)(3)) and "reliable operation" ("operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure of system elements," 16 U.S.C. § 824*o*(a)(4)).

Conversely, to include a nominally non-BES Element in the BES, NERC should be required to demonstrate that the Element *is* necessary for operating an interconnected electric transmission network.

Criteria for determining whether an Element is or is not "necessary for operating an interconnected electric transmission network" are proposed in response to Question 1(a) above. The criteria should be uniform continent-wide, though they will be applied to each Element on a case-by-case basis.

Exemption requests and proposed inclusions should be decided by NERC staff in the first instance. TAPS does not believe that the exemption and inclusion processes should be delegated to the Regional Entities. In Order 743, FERC emphasized the need for continent-wide uniformity; in fact, it was inconsistency among regions that

prompted Order 743. TAPS members' experience with Regional registration processes suggests that Regional implementation of the BES exemption and inclusion processes is unlikely to yield the uniformity that FERC directed. Furthermore, implementing this FERC directive will unavoidably require significant personnel resources, either at NERC or at the Regions. Delegating the process to the Regions would impose additional costs due to the need for NERC to exercise strong oversight to attempt to maintain uniformity. It may be that after the exemption and inclusion processes have been in place for a few years and a body of precedent has been accumulated, delegation will be appropriate. At this time, however, NERC staff should make the initial decision on all exemption requests and proposed inclusions.

TAPS proposes, for the sake of consistency with the registration appeal process, that appeals of decisions on exemptions and inclusions be to the Board of Trustees Compliance Committee (BOTCC), with further appeals to FERC if necessary. Appeals to the BOTCC would consist of the record compiled by NERC Staff, and additional paper submissions by NERC Staff and the Registered Entity demonstrating why the Element(s) in question is or is not "necessary for operating an interconnected electric transmission network." *See* NERC Rules of Procedure, Appendix 5A, Organization Registration and Certification Manual at 14-16. Registered Entities should have the option of requesting a hearing. Hearing procedures could be modeled on the Compliance and Certification Committee's "Hearing Procedures for Use in Appeals of Certification Matters," in Appendix 4E of the NERC Rules of Procedure.

TAPS also suggests that decisions on exemptions and inclusions be made available to others, either subject to CEII protection or in a form suitable for public release. As precedent develops, Registered Entities will increasingly be able to judge for themselves the likelihood that a particular exemption will be granted, or that an appeal of an inclusion will succeed. We expect that giving Registered Entities more information on which to base their decisions will significantly reduce the burden on NERC of processing exemptions and inclusions.

We propose that BES Elements for which an exemption request is pending should continue to be included in the BES until the exemption and any appeals are decided, and that non-BES Elements for which an inclusion is pending should continue to be non-BES until the inclusion and any appeals are decided.

The transition process should include an important exception to the general rule proposed for BES status during the pendency of an exemption request: to allow for a smooth transition, to the extent that Elements that are currently considered non-BES become BES under the new definition, those Elements should be permitted to request exemptions and to continue to be considered non-BES until their exemption requests and any appeals are decided.

David Angell, Idaho Power
Telephone: 208-388-2701
Email: daveangell@idahopower.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion: Non-radial transmission systems which provide reliable service to load-service substations. There are two examples where this applies: 1.) The non-radial transmission system serving a metro area load at 138 kV where 230 kV and higher voltage systems surround the area and provide the bulk electric system transfer, and 2.) The non-radial transmission loops that serve rural area load at 138 kV that are essentially tangential to the bulk electric transfer path.

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available). Refer to Attachment 1b.4

   c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

      Justification: Large load-serving substations require non-radial service to ensure acceptable reliability performance. Such transmission systems do not carry bulk power transfers as there are substantial higher voltage transmission lines that surround the metro area which carry the bulk transfers. Idaho Power has evaluated serving the area from systems that are sourced from only a single bulk substation. Such a configuration would result in requiring an additional 100 miles of transmission to compared to the existing network configuration.

   d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

      Continent-wide

Marc M. Butts, Southern Company

Telephone: 205-257-4839

Email: mmbutts@southernco.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion: Individual Generators ≤ 75 MVA; this threshold also needs to be included in the NERC Compliance Registry Criteria.

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

   c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

   Justification: Generators less than 75 MVA are not large enough to have a significant impact on the bulk electric system.. However, aggregate generation that exceeds 75 MVA should be considered for applications such as wind farms.

   d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

   ☒ Unknown

Andrew Z. Pusztai, American Transmission Company

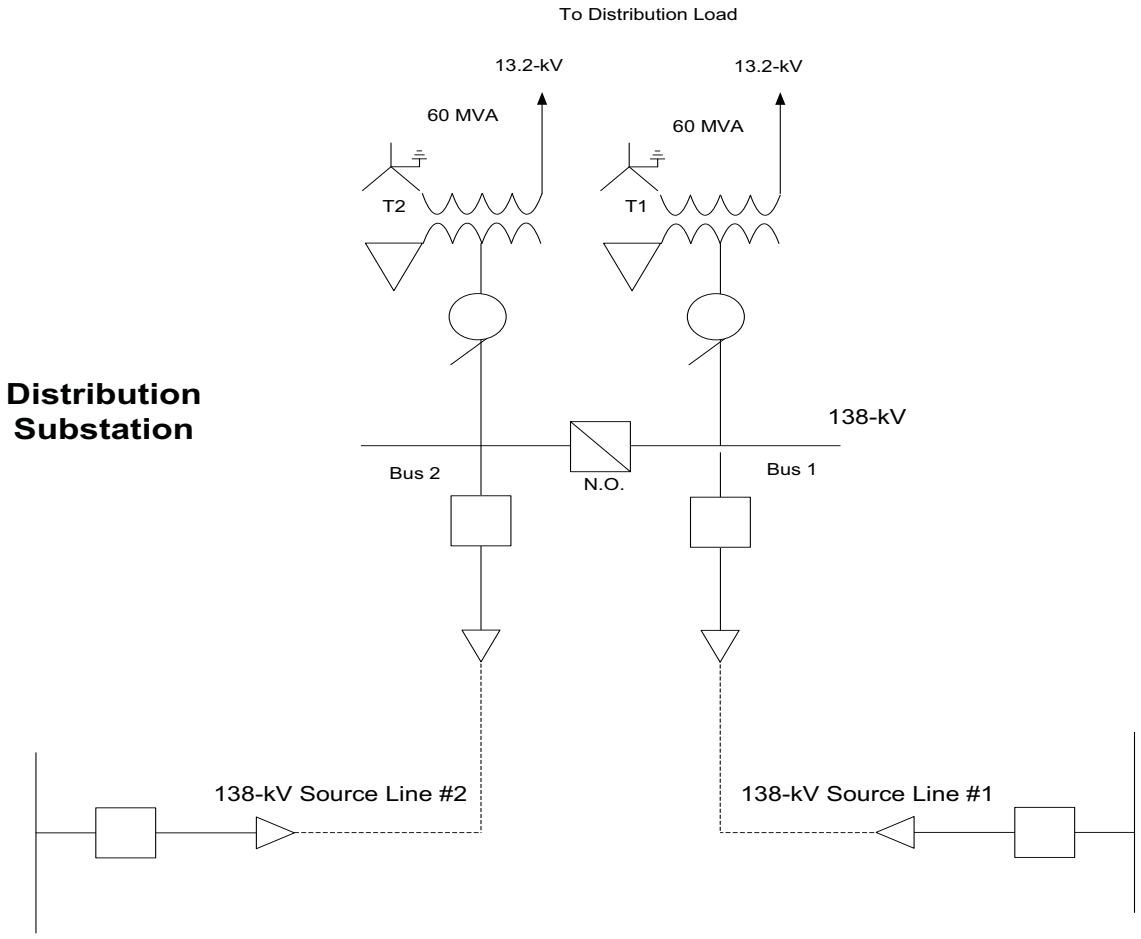
Telephone: 262-506-6913
Email: apusztai@atcllc.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion: Exclude transmission lines that are operated at 100 kV and above that are operationally radial transmission elements because of a operating restriction that prevents the line from being operated as a network transmission element.

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

   The transmission line between Source Line #1 and Sources Line #2 would be a Network element if the bus-tie circuit breaker was closed, However, Operating Procedures require the bus-tie circuit breaker to be normally open (N.O.) So, the load on Bus 1 is served by the radial line segment from Source Line #1 and the load on Bus 2 is served by the radial line segment from Source Line #2.



c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: Although the transmission element (line) between network Source #1 and network Source #2 could be a network element if the bus-tie breaker is closed, the two line sections are normally operated as two different radial elements. So, the radial Transmission Element exclusion should apply.

Ronald Sporseen, PNGC Power, Et all

Email: RSporseen@pngcpower.com

Supporters of the following comments are as follows:

Bud Tracy, Blachly-Lane Electric Cooperative
Dave Hagen, Clearwater Power Cooperative
Dave Sabala, Douglas Electric Cooperative
Heber Carpenter, Raft River Rural Electric Cooperative
Dave Markham, Central Electric Cooperative
Jon Shelby, Northern Lights, Inc.
Ken Dizes, Salmon River Electric Cooperative
Ray Ellis, Okanogan County Electric Cooperative
Richard Reynolds, Lost River Electric Cooperative
Rick Crinklaw, Lane Electric Cooperative
Roger Meader, Coos-Curry Electric Cooperative
Roman Gillen, Consumer's Power Inc.
Steve Eldrige, Umatilla Electric Cooperative
Marc Farmer, West Oregon Electric Cooperative
Michael Henry, Lincoln Electric Cooperative
Bryan Case, Fall River Electric Cooperative

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for exclusion:

- Radial lines
- Local distribution networks, generators, generation plants, loads, transformers, reactive devices, and protection and control system found to not cause adverse reliability impacts on neighboring bulk system Elements and Facilities using a performance-based exclusion process.

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

Assuming FERC continues to insist upon a 100kV "bright line" definition, we support a process to exclude systems operating at 100kV and above that do not cause adverse reliability impacts on the neighboring bulk transmission system. For facilities operating at 100kV or above, the exclusion process should allow exclusion of those elements that, using a performance-based assessment, are demonstrated to operate without causing adverse reliability impacts on neighboring bulk system.

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: The ultimate goal of the Reliability Standards process should be to achieve reliable operation of the bulk transmission system, as defined by Congress. The term "reliable operation" was a term specifically defined in FPA Section 215 to include standards assuring the operation of bulk transmission system elements "within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance. . . or unanticipated failure of system elements." 16 U.S.C. § 825o(a)(4). Congress specifically precluded the mandatory reliability system from enforcing standards for adequacy of service, which were left to state and local authorities. 16 U.S.C. § 825o(i)(2).

Recognizing that Congress intended the mandatory reliability regime to focus on thermal, voltage, and stability limits on the bulk system rather than more generally on levels of service to retail customers, the Standards Development Team should define the Bulk Electric System to include only those facilities whose failure or mis-operation meaningfully threatens to produce instability, uncontrolled separation, or cascading failures on the bulk system. As a legal matter, expanding the definition to include local distribution facilities and facilities that do not threaten thermal, voltage or stability impacts on the bulk system exceeds the permissible scope of NERC Reliability Standards and FERC authority under FPA Section 215. As a practical matter, mandating adherence to Reliability Standards for facilities, or equipment, that do not cause adverse reliability impacts on the neighboring bulk system is a significant diversion of funds and resources that will produce little or no benefits in terms of improved reliability of the bulk system.

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

☒ Interconnection-wide

Comments relative to the proposed exclusion(s): The WECC Bulk Electric System Definition Task Force ("BESDTF") has carefully considered and provided an extensive record of technical support for excluding Radial Facilities and Local Distribution Networks from the BES. While we recognize that physical differences between the electric system in WECC and other reliability regions may justify different approaches in those regions, we commend the work of the BESDTF to the standard drafting team.

Jerome Murray, Oregon Public Utility Commission

Telephone: 503-378-6626

Email: Jerry.murray@state.or.us

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion: An element or facility that is not necessary to reliably operate an interconnected transmission system need not be included in the BES

   d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

   ☒ Continent-wide

   ☒ Interconnection-wide

   ☒ Region-wide

   Comments relative to the proposed exclusion(s): This should be assessed first using engineering-based inspection (or screening) methodologies for 100 kV to 200 kV sub-transmission elements to determine obvious exclusions from the BES. For questionable sub-transmission elements, engineering-based studies evaluating worst-case scenarios need to be performed to establish exclusion from the BES.

   The thresholds associated with screening methodologies and worst-case studies may vary between interconnections and regions. For example, voltage deviation may be more relevant in the Western Interconnection (which is primarily stability limited) than in the Eastern Interconnection (which is primarily thermally limited).

John D. Martinsen , Public Utility District No. 1 of Snohomish County

Telephone: 425-783-8080

Email: jdmartinsen@snopud.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion:

      - Radial lines
      - Local distribution networks, generators, generation plants, loads, transformers, reactive devices, and protection and control system found to not cause adverse reliability impacts on neighboring bulk system Elements and Facilities using a performance-based exclusion process.

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available). Assuming FERC continues to insist upon a 100-kV "bright line" definition, SNPD supports a process to exclude systems operating at 100 kV and above that do not cause adverse reliability impacts on the neighboring bulk transmission system. For facilities operating at 100 kV or above, the exclusion process should allow exclusion of those elements that, using a performance-based assessment, are demonstrated to operate without causing adverse reliability impacts on neighboring bulk system.

      Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

   Justification: The ultimate goal of the Reliability Standards process should be to achieve reliable operation of the bulk transmission system, as defined by Congress. The term "reliable operation" was a term specifically defined in FPA Section 215 to include standards assuring the operation of bulk transmission system elements "within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance. . . or unanticipated failure of system elements." 16 U.S.C. § 824o(a)(4). Congress specifically precluded the mandatory reliability system from enforcing standards for adequacy of service, which were left to state and local authorities. 16 U.S.C. § 824o(i)(2).

   Recognizing that Congress intended the mandatory reliability regime to focus on thermal, voltage and stability limits on the bulk system rather than more generally on levels of service to retail customers, the Standards Development Team should define the Bulk

Electric System to include only those facilities whose failure or mis-operation meaningfully threatens to produce instability, uncontrolled separation, or cascading failures on the bulk system. As a legal matter, expanding the definition to include local distribution facilities and facilities that do not threaten thermal, voltage or stability impacts on the bulk system exceeds the permissible scope of NERC Reliability Standards and FERC authority under FPA Section 215. As a practical matter, mandating adherence to Reliability Standards for facilities that do not cause adverse reliability impacts on the neighboring bulk system is a significant diversion of funds and resources that will produce little or no benefits in terms of improved reliability of the bulk system.

c. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

☒ Interconnection-wide

Comments relative to the proposed exclusion(s): The WECC Bulk Electric System Definition Task Force ("BESDTF") has carefully considered and provided an extensive record of technical support for excluding Radial Facilities and Local Distribution Networks from the BES. While we recognize that physical differences between the electric system in WECC and other reliability regions may justify different approaches in those regions, we commend the work of the BESDTF to the standard drafting team.

Steve Alexanderson P.E., Central Lincoln

Telephone: 541-574-2064

Email: salexanderson@cencoast.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion: All the SS_ 115 kV buses in the attached one-lines as well as the connecting lines should be excluded from consideration since they are radial serving load. Additional facilities may be put through the exclusion process, and excluded if shown not to be needed for "reliable operation" as defined in 16 U.S.C. § 824o(a)(4).

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available). Refer to **Attachment 1b.10 & 1b.11**

   c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

   Justification: These SS_ facilities in the diagram are operated radially and are used to distribute energy locally. The FPA specifically excludes "facilities used in the local distribution of electric energy" (16 U.S.C. § 824o(a)(1)) and prohibits FERC from enforcing standards for adequacy of service (16 U.S.C. § 824o(i)(2)). In addition, any faults or failures in these facilities will only affect the local area, and not cause instability, uncontrolled separation, or cascading outages (16 U.S.C. § 824o(a)(4)). These facilities should be excluded by inspection, and should not be required to go through an exemption process.

   d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

      X Continent-wide

   Comments relative to the proposed exclusion(s): The two diagrams illustrate the overreaching approach that WECC is presently using. Documents on the RFC web site prove that the WECC approach is not at all universal.

   The SS2 bus is presently considered by WECC to be BES because it has two transmission sources, NON-RADIAL SUB 1 and NON-RADIAL SUB 3, even though the K9-5 at SS3 is normally open. WECC considers any possible second source regardless of the system is operated. Any faults at SS3 or in the supplying lines will result only in a local outage. We hope the SDT will consider actual operating conditions when it defines "radial" and "one transmission source."

The 115 kV bus at SS6 is considered by WECC to be BES because it has two transmission sources, one by way of NON-RADIAL SUB 4 and the other by way of NON-RADIAL SUB 5 (off the one-line to the right). We don't think that is what NERC meant by "transmission source." A fault on the SS6 bus would result in a local outage affecting only the four substations tapped off the NON-RADIAL SUB 4/SUB 5 line. We assume that if the risk of such an outage was unacceptable, the serving transmission company would have required protection at the tap points. We hope the SDT will properly clarify what is meant by a transmission source.

All the SS 115 kV buses shown also have multiple transmission sources by way of normally open tie switches on the 12.47 kV system. Again we hope the SDT will consider operating philosophies when defining "radial" and "one transmission source."

All the substation transformers in the diagrams are considered by WECC to be BES because one winding exceeds 100 kV. We understand the SDT properly intends to look at the lowest voltage winding rather than the highest.

Except for the fuses at SS8, all the SS transformer protection systems are considered by WECC to be BES subject to PRC-005. This is not because the transformers are considered to BES, but because relay operation results in tripping a circuit switcher that exceeds 100 kV. We expect the SDT will properly consider the zone of protection rather than the voltage of the interrupting device.

Please also consider the 115 kV lines joining the NON-RADIAL SUBs in the two diagrams. While most of them cannot be considered to be radial with one transmission source, they are not used to transport bulk power. Their purpose is the local distribution of power. Parallel 230 kV lines (not shown in the diagrams) are responsible for the bulk power transport. The WECC Bulk Electric System Definition Task Force has been working on a definition of "local distribution networks" that would properly classify the 115 kV lines as non-BES. We hope the SDT will look at the work the BESDTF has done.

Question 2:

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

    a. Identify the Element or Facility recommended for inclusion:

    b. Attach a generic one-line diagram depicting the Element or Facility (if available).

    c. Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

    d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

Commenters:

Michael Moltane and John Zipp, ITC Holdings 3

Frank Gaffney, Florida Municipal Power Agency, Et all 4

Brandy A. Dunn, Western Area Power Administration 7

Alain Pageau, Hydro-Québec TransÉnergie 8

Guy Zito, Northeast Power Coordinating Council 9

Jim UhrinReliabilityFirst Corporation 11

Joe Petaski, Manitoba Hydro 12

John W.Delucca, Lee County Electric Cooperative 13

Paul Cummings, City of Redding 14

Patrick Farrell, Southern California Edison Company 15

Manny Robledo, City of Anaheim 17

Lorissa Jones, Transmission Reliability Program Manager 18

David Burke, Orange and Rockland Utilities 19

Alice Ireland, Xcel Energy 20

Amir Hammad, Constellation Power Source Generation, Inc., Et all 21

William J. Gallagher, Transmission Access Policy Study Group 22

Marc M. Butts, Southern Company 23

Ronald Sporseen, PNGC Power, Et all 24

Michael Moltane and John Zipp, ITC Holdings

Telephone: 248-946-3093

Email: mmoltane@itctransco.com

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

Comments relative to the proposed inclusion(s): Again it is unclear what is meant by Region wide when talking about an element inclusion. It is important that this be tied to the PRC023 "Critical Element" definition/test. Why would I apply for an element inclusion when there is no definition of what is required for the element to be included?

Frank Gaffney, Florida Municipal Power Agency, Et all

Florida Municipal Power Agency is filing the comments below on behalf of its' project participants:

City of New Smyrna Beach
KUA
Lakeland Electric
City of Clewiston
Beaches Energy Services
Ocala Electric Utility

Telephone: 407-355-7767
Email: frank.Gaffney@fmpa.com

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion:

FMPA' proposed criteria for inclusion are listed above in response to Question 1(a). As stated above, there should be no "generic" or "categorical" inclusions. Inclusions, like exemptions, should be considered on a case-by-case basis. The *criteria* by which proposed inclusions or requested exemptions are judged, however, should be uniform across the continent.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Continent-wide

Comments relative to the proposed inclusion(s): This question appears to assume that all inclusions in the BES will be categorical, rather than case-by-case. This is inappropriate. Inclusions, like exclusions, should involve case-specific consideration of the uniform, continent-wide criteria.

The inclusion process should be the mirror image of the exemption process: it is NERC, rather than the Registered Entity, who initiates the process, and the burden is on NERC to demonstrate that the Element to be included is "necessary for operating an interconnected electric transmission network." The processes should otherwise be identical: the initial determination should be made by NERC staff, with appeals to the Board of Trustees Compliance Committee, and to FERC if necessary. The proposed process is discussed in more detail in response to Question 1 above.

Michelle Mizumori, Western Electricity Coordinating Council

Telephone: 801-819-7624

Email: mmizumori@wecc.biz

3. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: Elements or Facilities that are shown through engineering studies to be necessary to reliably operate an interconnected bulk electric system.

b. Attach a generic one-line diagram depicting the Element or Facility (if available).

c. Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: An element or facility that is necessary to reliably operate an interconnected transmission system should be included in the BES. This can be measured using engineering studies that show the effect of worst-case disturbances on multiple indicators such as frequency, voltage, system flows, operating limits, generator tripping, cascading outages, and/or islanding. If the system cannot maintain acceptable steady-state and dynamic performance with a disturbance at the element, it is necessary to reliably operate the system.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Continent-wide

☒ Interconnection-wide

☒ Region-wide

Comments relative to the proposed inclusion(s): While operating voltage (i.e., the proposed 100 kV bright-line) may be a clear and repeatable proxy for identifying those elements that are necessary to reliably operate an interconnected transmission system, it is a broad approach that may not adequately address specific examples. Moreover, engineering studies can be used to more granularly and accurately identify such elements that are needed to reliably operate an interconnected transmission system.

The thresholds on the indicators listed above may vary between interconnections and regions. For example, voltage deviation may be more relevant in the Western

Interconnection (which is primarily stability limited) than in the Eastern Interconnection (which is primarily thermally limited).

Brandy A. Dunn, Western Area Power Administration

Telephone: 720-962-7431

Email: dunn@wapa.gov

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: Any Element above 100-kV that is shown (through system studies) to be necessary to reliably operate the interconnected transmission system.

b. Attach a generic one-line diagram depicting the Element or Facility (if available).

c. Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: An Element that is required to reliably operate the interconnected transmission system should be included in the BES. This can be assessed through engineering system studies that show the worst-case results based on indicators such as voltage, frequency, OTC limits, angular instability and/or cascading outages based on that Element being removed from service. If the system cannot maintain acceptable performance without that Element, it is necessary to reliably operate the interconnected transmission system.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Continent-wide

☒ Interconnection-wide

☒ Region-wide

Comments relative to the proposed inclusion(s): While a brightline test voltage (such as the proposed >100-kV) may be a clear and repeatable proxy for identifying Elements that are necessary to reliably operate the interconnected transmission system, this broad approach may not adequately address specific examples. Engineering system studies can accurately identify Elements which are not needed to reliably operate the interconnected transmission system.

Alain Pageau, Hydro-Québec TransÉnergie

Telephone: 514 879-4100 #5414

Email: pageau.alain@hydro.qc.ca

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: Common interconnection between the two jurisdictions.

b. Attach a generic one-line diagram depicting the Element or Facility (if available).

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: Common rules should applied to the common elements.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Continent-wide

Guy Zito, Northeast Power Coordinating Council

Telephone: 212-840-1070

Email: gzito@npcc.org

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: Transmission facilities as determined to be necessary for reliability to the bulk electric system. Common interconnections between two or more areas.

b. Attach a generic one-line diagram depicting the Element or Facility (if available).

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: The exemption process should allow for a registered entity to submit the results of an objective, impact based assessment evaluation in support of its application for exemption of facilities that would otherwise be classified as part of the BES. This assessment process, when consistently applied in a non-arbitrary manner, would yield results that demonstrate that the facilities for which the exemption is being sought do not impact the BES whenever they are removed from service.

Any regional or registered entity can present technical studies to NERC for consideration of the expansion of the Bulk Electric System. The primary consideration by NERC Staff for inclusion must be that the addition of these recommended facilities bring a measurable (not subjective) incremental reliability benefit to real-time grid operations. Common rules should apply to elements common to the interconnections between two or more areas.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Continent-wide

☒ Interconnection-wide

☒ Region-wide

☒ Less than Region-wide

Comments relative to the proposed inclusion(s): Registered Entities must retain the right to appeal any decisions with direct implications to their facilities. Broad applications of "included facilities" could result in the designation of facilities, the

inclusion of which is not warranted. Registered Entities need the right to seek exemption when broad new inclusions are applied.

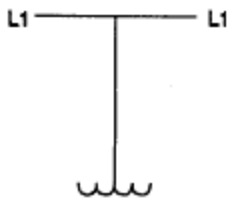
Jim Uhrin ReliabilityFirst Corporation

Telephone: 330.247.3058
Email: jim.uhrin@rfirst.org

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: Those facilities that trip and lockout a BES facility at anytime must be included.

b. Attach a generic one-line diagram depicting the Element or Facility (if available).



In the diagram above, the distribution transformer operated below 100 kV without a high-side interrupting device and connected to the BES that does or could trip and lockout a BES facility should be included since there is no way to isolate the transformer without tripping/locking out another BES facility. However, if radial equipment has sectionalizing (such as a high-side ground switch or circuit switcher) that prohibits its operation from or does not trip and lockout a BES facility for any reason and therefore could not affect operation of the BES, those facilities could also be excluded.

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: If the facility trips and lockouts a BES facility, then it should be included as a part of the BES.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Continent-wide

Joe Petaski, Manitoba Hydro

Telephone: 204-487-5332

Email: jpetaski@hydro.mb.ca

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

Comments relative to the proposed inclusion(s): No comment but there should be no regional differences in the BES definition or in the BES definition exemption process.

John W.Delucca, Lee County Electric Cooperative

Telephone: 239-656-2190

Email: john.delucca@lcec.net

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

- **a.** Identify the Element or Facility recommended for inclusion: No specific element proposed.
- **b.** Attach a generic one-line diagram depicting the Element or Facility (if available).
- **c.** Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

  Justification: The only reason a lower voltage should be considered for inclusion is if, under normal operating conditions, loss of these elements has a significant reliability impact upon the BES

Comments relative to the proposed inclusion(s): Only where and if a rare case of BES impact exists.

Paul Cummings, City of Redding

Telephone: 530-245-7016

Email: pcummings@ci.redding.ca.us

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: Those elements or facilities operated b elow 100kV that are shown through engineering studies to be necessary to reliably operate an interconnected transmission system. See Attachment 1below.

b. Attach a generic one-line diagram depicting the Element or Facility (if available).

Refer to Attachment 1b.5

c. Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: "The impact an Element has on the BES shall be determined by assessing the performance of key measures of BES reliability through power flow, post-transient, and transient stability analysis with (1) the system, and the Subject Element, operating at reasonably stressed conditions that replicate expected system conditions under which the loss of the Subject Element would have the greatest impact on the key measures of reliability, and (2) the Subject Element removed from service, but without allowing for system readjustment."

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Continent-wide

☒ Interconnection-wide

☒ Region-wide

Patrick Farrell, Southern California Edison Company

Telephone: 626-302-1321

Email: Patrick.Farrell@sce.com

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: Elements or Facilities that are shown through engineering studies to be necessary to reliably operate an interconnected bulk electric system may need to be included even if operated at voltages below 100kV. Additionally, there are transmission facilities at 100kV and above that are radial in nature and used for load serving purposes that are not parallel to interconnected transmission systems. As an example, in SCE's system the Valley 115kV system is radial in nature and the power flow is generally from 500kV to 115kV to serve load.

b. Attach a generic one-line diagram depicting the Element or Facility (if available).

c. Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: An element or facility that is necessary to reliably operate an interconnected transmission system should be included in the BES. This can be measured using engineering studies that show the effect of worst-case disturbances on multiple indicators such as frequency, voltage, system flows, operating limits, generator tripping, and cascading outages and/or islanding. If the system cannot maintain acceptable steady-state and dynamic performance without the subject element in service, that element is necessary to reliably operate the system.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

X Continent-wide

X Interconnection-wide

X Region-wide

Comments relative to the proposed inclusion(s): While operating voltage (i.e. the proposed 100kV bright-line) may be a clear and repeatable proxy for identifying those elements that are necessary to reliably operate an interconnected transmission system, it is a broad approach that may not adequately address specific examples. Engineering studies can be used to more granularly and accurately identify elements which are not needed to reliably operate an interconnected transmission system.

The thresholds on the indicators listed above may vary between interconnections and regions. For example, SCE's system has facilities rated at the 115kV level that are radial in nature for load serving purposes. Therefore, applying a 100kV bright-line may unnecessarily bring facilities that could be excluded through an engineering study.

Manny Robledo, City of Anaheim

Telephone: 714-765-5107

Email: mrobledo@anaheim.net

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

Comments relative to the proposed inclusion(s): Anaheim's sub-transmission system is operated at 69kV and is radial to the BES with one transmission source. There is no transmission through Anaheim, and there are no generators connected to Anaheim's distribution system that are required for the reliable operation of the BES.

Lorissa Jones, Transmission Reliability Program Manager

Telephone: 360-418-8978

Email: ljjones@bpa.gov

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: Elements or Facilities that are shown through engineering studies to be necessary to reliably operate an interconnected bulk electric system. Balancing Authorities need to have the authority to recommend inclusion on a facility by facility basis based on impact to the larger BES considerations for registration.

b. Attach a generic one-line diagram depicting the Element or Facility (if available).

c. Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: An element or facility that is necessary to reliably operate an interconnected transmission system should be included in the BES. This can be measured using engineering studies that show the effect of worst-case disturbances on multiple indicators such as frequency, voltage, system flows, operating limits, generator tripping, cascading outages and/or islanding. If the system cannot maintain acceptable steady-state and dynamic performance without the subject element in service, it is necessary to reliably operate the system.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Interconnection-wide

☒ Region-wide

Comments relative to the proposed inclusion(s): While operating voltage (i.e. the proposed 100 kV brightline) may be a clear and, repeatable proxy for identifying those elements that are necessary to reliably operate an interconnected transmission system, it is a broad approach that may not adequately address specific examples. Moreover engineering studies can be used to more granularly and accurately identify such elements which are needed to reliably operate an interconnected transmission system.

David Burke, Orange and Rockland Utilities

Telephone: 845-577-3076

Email: burkeda@oru.com

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: Transmission facilities as determined to be necessary for reliability to the bulk electric system.

b. Attach a generic one-line diagram depicting the Element or Facility (if available).

c. Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: Any regional or registered entity can present technical studies to NERC for consideration of the expansion of the Bulk Electric System. The primary consideration by NERC Staff for inclusion must be that the addition of these recommended facilities bring a measurable (not subjective) incremental reliability benefit to real-time grid operations.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

X☐ Continent-wide

X☐ Interconnection-wide

X☐ Region-wide

X☐ Less than Region-wide

Comments relative to the proposed inclusion(s): Registered Entities must retain the right to appeal any decisions with direct implications to their facilities. Broad applications of "included facilities" could result in the designation of facilities, the inclusion of which is not warranted. Registered Entities need the right to seek exemption when broad new inclusions are applied.

Alice Ireland, Xcel Energy

Telephone: 303-571-7868

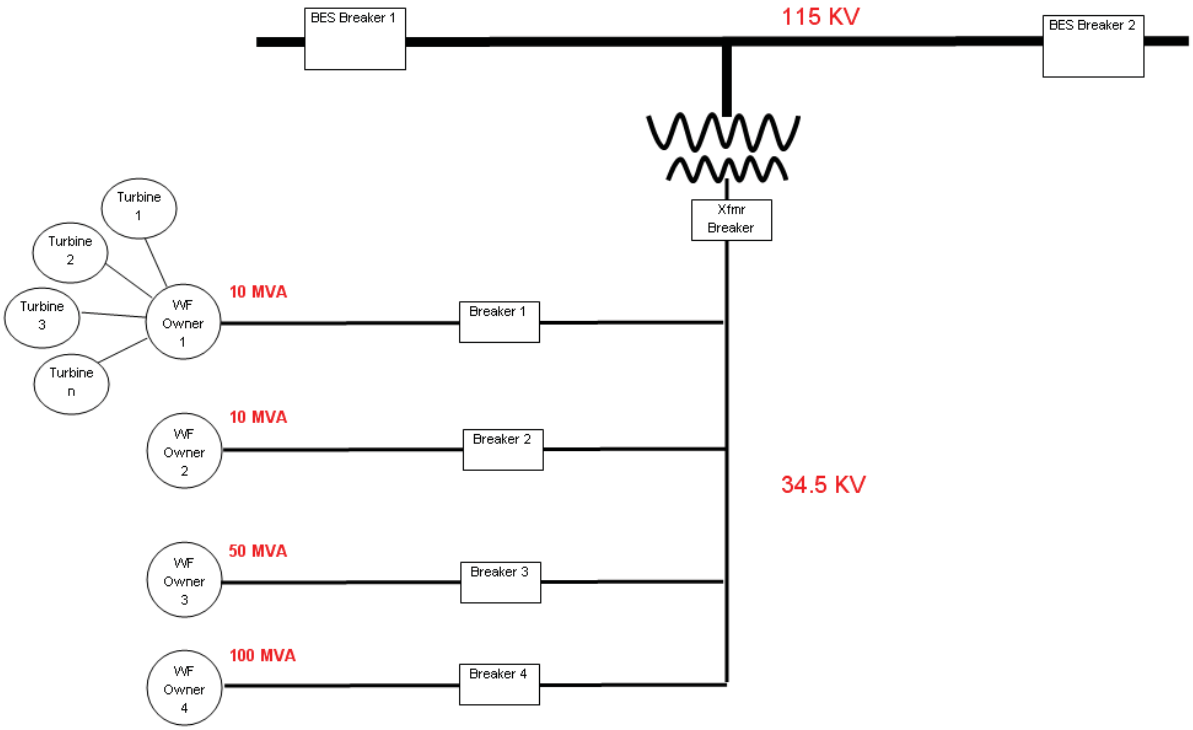
Email: alice.murdock@xcelenergy.com

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Unknown

Comments relative to the proposed inclusion(s): The scenario below should be considered and worked through as part of the development of the definition and exemptions. As stated in questions 2, 3, 8 of the BES definition comment questionnaire it is unclear as to how treatment of facilities would occur, especially if there are multiple/separate owners of each wind farm, even thought they aggregate to a common bus that connects to the transmission system. Treatment of the bus and breakers between each wind farm and the transformer also needs to be contemplated and addressed in the definition or exclusion process.



Amir Hammad, Constellation Power Source Generation, Inc., Et all

CPSG is filing the comments below on behalf of:

Constellation Energy Group, Inc.
Baltimore Gas & Electric Company
Constellation Energy Commodities Group, Inc.
Constellation Energy Control and Dispatch, LLC
Constellation NewEnergy, Inc. and its affiliates
Constellation Energy Nuclear Group, LLC,[1]

Telephone: 410-787-5226
Email: amir.hammad@constellation.com

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: Constellation believes that the drafting team should incorporate the inclusions found in the Compliance Registration criteria that have been excluded by the proposed BES definition. RFC has adopted this approach in their BES definition.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Continent-wide

Comments relative to the proposed inclusion(s): Constellation does not believe that there are any Transmission or Generation Elements or Facilities operated at voltages below 100kV that should be considered for inclusion in the Elements and Facilities classified as part of the BES other than those provided for in the Compliance Registration Criteria and echoed in the RFC BES Definition sited above.

[1] On November 6, 2009, EDF, Inc. ("EDF") and Constellation Energy Group, Inc. completed a transaction pursuant to which EDF acquired a 49.99 percent ownership interest in CENG. CENG was previously a wholly owned subsidiary of Constellation Energy Group, Inc.

William J. Gallagher, Transmission Access Policy Study Group

Telephone: (802) 839-0562

Email: bgallagher@vppsa.com

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: TAPS' proposed criteria for inclusion are listed above in response to Question 1(a). As stated above, there should be no "generic" or "categorical" inclusions. Inclusions, like exemptions, should be considered on a case-by-case basis. The *criteria* by which proposed inclusions or requested exemptions are judged, however, should be uniform across the continent.

Comments relative to the proposed inclusion(s): This question appears to assume that all inclusions in the BES will be categorical, rather than case-by-case. This is inappropriate. Inclusions, like exclusions, should involve case-specific consideration of the uniform, continent-wide criteria.

The inclusion process should be the mirror image of the exemption process: it is NERC, rather than the Registered Entity, who initiates the process, and the burden is on NERC to demonstrate that the Element to be included is "necessary for operating an interconnected electric transmission network." The processes should otherwise be identical: the initial determination should be made by NERC staff, with appeals to the Board of Trustees Compliance Committee, and to FERC if necessary. The proposed process is discussed in more detail in response to Question 1 above.

Marc M. Butts, Southern Company

Telephone: 205-257-4839

Email: mmbutts@southernco.com

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

Comments relative to the proposed inclusion(s): Subpart D should be deleted – any inclusion should be a specific request for a specific facility, not on a generic Continent-wide, Interconnection-wide or Region wide-basis.

Ronald Sporseen, PNGC Power, Et all

Email: RSporseen@pngcpower.com

Supporters of the following comments are as follows:

Bud Tracy, Blachly-Lane Electric Cooperative
Dave Hagen, Clearwater Power Cooperative
Dave Sabala, Douglas Electric Cooperative
Heber Carpenter, Raft River Rural Electric Cooperative
Dave Markham, Central Electric Cooperative
Jon Shelby, Northern Lights, Inc.
Ken Dizes, Salmon River Electric Cooperative
Ray Ellis, Okanogan County Electric Cooperative
Richard Reynolds, Lost River Electric Cooperative
Rick Crinklaw, Lane Electric Cooperative
Roger Meader, Coos-Curry Electric Cooperative
Roman Gillen, Consumer's Power Inc.
Steve Eldrige, Umatilla Electric Cooperative
Marc Farmer, West Oregon Electric Cooperative
Michael Henry, Lincoln Electric Cooperative
Bryan Case, Fall River Electric Cooperative

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: In rare cases, facilities operating below 100kV should be considered for inclusion in the BES, but only if the RRO provides clear evidence that such facilities threaten to cause instability, uncontrolled separation, or cascading outages on the bulk transmission system if those facilities are not included as part of the BES.

b. Attach a generic one-line diagram depicting the Element or Facility (if available).

c. Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: As discussed above, the ultimate goal of the standards drafting process must be to ensure the reliable operation of the bulk transmission system, so that the risks of instability, uncontrolled separation, and cascading outages on the bulk system are reduced. In rare cases, it is possible that facilities operating at voltages below 100kV may create risks of this kind to the bulk system. However, caution should be used when identifying parallel lower voltage systems that reduce transfers on higher voltage systems as reliability concerns. In many cases these concerns are commercial in nature and the burden to resolve these capacity issues should be placed on the TSP.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Continent-wide

☒ Interconnection-wide

Comments relative to the proposed inclusion(s): The BESDTF has developed an approach in which certain facilities operating at voltages below 100kV would be included in the BES, but facilities not falling within these specific, defined categories would not be included in the BES unless the RRO could demonstrate that the facility creates a material impact threatening the reliable operation of the bulk interconnected system. We believe this is a sensible approach to this question.

John D. Martinsen, Public Utility District No. 1 of Snohomish County

Telephone: 425-783-8080

Email: jdmartinsen@snopud.com

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **below 100kV** which should be considered for **inclusion** in the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for inclusion:

      In rare cases, facilities operating below 100 kV should be considered for inclusion in the BES, but only if the RRO provides clear evidence that such facilities threaten to cause instability, uncontrolled separation, or cascading outages on the bulk transmission system if those facilities are not included as part of the BES.

   b. Attach a generic one-line diagram depicting the Element or Facility (if available).

   c. Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: As discussed above, the ultimate goal of the standards drafting process must be to ensure the reliable operation of the bulk transmission system, so that the risks of instability, uncontrolled separation, and cascading outages on the bulk system are reduced. In rare cases, it is possible that facilities operating at voltages below 100 kV may create risks of this kind to the bulk system. However, caution should be used when identifying parallel lower voltage systems that reduce transfers on higher voltage systems as reliability concerns. In many cases these concerns are commercial in nature and the burden to resolve these capacity issues should be placed on the TSP.

   d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

      ☒ Continent-wide

      ☒ Interconnection-wide

Comments relative to the proposed inclusion(s): The BESDTF has developed an approach in which certain facilities operating at voltages below 100-kV would be included in the BES, but facilities not falling within these specific, defined categories would not be included in the BES unless the RRO could demonstrate that the facility creates a material impact threatening the reliable operation of the bulk interconnected system. We believe this is a sensible approach to this question.

Steve Alexanderson P.E., Central Lincoln

Telephone: 541-574-2064

Email: salexanderson@cencoast.com

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **below 100kV** which should be considered for **inclusion** in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: This burden would be on the Regional Entity rather than the Registered Entity. Facilities that are not radial serving only load may be put through an inclusion process (similar to, but with the opposite effect of the exclusion process) to determine if they are needed for "reliable operation" as defined in 16 U.S.C. § 824o(a)(4).

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

X Continent-wide

Question 3:

Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Commenters:

John A. Gray, The Dow Chemical Company 3

Michael Moltane/John Zipp, ITC Holdings 4

Laura Lee, Duke Energy 5

Michelle Mizumori, Western Electricity Coordinating Council 6

Brandy A. Dunn, Western Area Power Administration 7

Alain Pageau, Hydro-Québec TransÉnergie 8

Guy Zito, Northeast Power Coordinating Council 9

Jim UhrinReliabilityFirst Corporation 11

Joe Petaski, Manitoba Hydro 12

John W. Delucca, Lee County Electric Cooperative 13

Paul Cummings, City of Redding 14

Patrick Farrell, Southern California Edison Company 15

Dan Rochester, Independent Electricity System Operator 16

Lorissa Jones, Transmission Reliability Program Manager 18

David Burke, Orange and Rockland Utilities 19

Alice Ireland, Xcel Energy 21

Allen Mosher, American Public Power Association 22

Jim Case, Entergy SERC OC Standards Review Group 25

John P. Hughes, Electricity Consumers Resource Council (ELCON) 26

Thad Ness, American Electric Power 31

Amir Hammad, Constellation Power Source Generation, Inc. (CPSG), Et All 32

Marc M. Butts, Southern Company 35

Andrew Z. Pusztai, American Transmission Company 36

Al DiCaprio, PJM 37

Bud Tracy, Blachly-Lane Electric Cooperative 38

Jerome Murray, Oregon Public Utility Commission 41

John D. Martinsen , Public Utility District No. 1 of Snohomish County 42

Steve Alexanderson P.E., Central Lincoln 45

Brian J. Murphy, NextEra Energy, Inc. 46

John A. Gray, The Dow Chemical Company

281-966-2390
JAGray3@dow.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

   Comments: Dow has reviewed and generally supports the comments prepared by The Electricity Consumers Resource Council (ELCON).

Michael Moltane/John Zipp, ITC Holdings

Telephone: 248-946-3093

Email: mmoltane@itctransco.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: I would be motivated to apply for element exclusions and the process looks good. I don't see a reason for us to apply for any inclusions

Laura Lee, Duke Energy

Telephone: 704-382-3625

Email: Laura.Lee@duke-energy.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: There are three parts to the work that need to be accomplished to fulfill the intent of the Commission's Order; 1) revision of the definition of Bulk Electric System, 2) development of exemption criteria and 3) development of a process for applying the exemption criteria. The first two parts of the work should be accomplished using the standards development process. This work is technical in nature and therefore should be developed by technical experts in the industry. The Rules of Procedure change process should be reserved for the mechanics of administering the exemption process.

The Regions should administer the exemption process with NERC serving an oversight role to ensure consistency among the Regions. This would fit logically with the Regions' administration of other processes such as the registration process.

Each registered entity that identifies Transmission or Generation Elements or Facilities that should be included or excluded from the Bulk Electric System should submit an application to the Region, including the information sought in parts a, b and c of questions 1 and 2 in this document (i.e., identification of the Element or Facility, diagram, and technical justification). The Region should then review the request through a stakeholder technical committee using the criteria approved through the standards development process. NERC should periodically review all applications of the exemption process to ensure consistency in the Regions' application of the criteria.

Michelle Mizumori, Western Electricity Coordinating Council

Telephone: 801-819-7624

Email: mmizumori@wecc.biz

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: In addition to defining functional characteristics that can be used for an exemption process, the use of engineering studies that demonstrate the effect of an element on system performance must also be allowed, but must include clearly-defined and technically-justified assumptions, metrics, and thresholds. To the extent that there are physical differences between regions or interconnections, variations between those regions and interconnections must be allowed. However; all assumptions, metrics, and thresholds must be thoroughly vetted and approved by NERC as part of the NERC Exemption Process. Furthermore, it would be helpful if NERC could clarify the process that it will use to develop the Exemption Process and Criteria, including how the team will be populated, how coordination with the Drafting Team will be assured, and how the vetting process would occur. It is important that the team developing the exemption criteria includes technical experts from the stakeholder community.

Brandy A. Dunn, Western Area Power Administration

Telephone: 720-962-7431

Email: dunn@wapa.gov

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: The use of engineering system studies that demonstrate the impact of an Element on system performance must be allowed to demonstrate inclusion/exclusion to the BES. To the extent there are physical differences between Regions, variations between those Regions must be allowed. Also – the Exception Definition Task Force needs to be a stakeholder-populated/ -driven process.

The exemption process should be part and parcel of the definition. Exemption language furthermore must be explicit and unambiguous. The WECC Bulk Electric Definition Task Force (BESDTF) has expended considerable effort over the last two years exploring important issues pertaining to exempting elements from the BES including;

a. Lines of demarcation between BES and non-BES elements
b. Definition of 'radial'
c. High voltage distribution networks.
d. Impact assessment methodologies.

Alain Pageau, Hydro-Québec TransÉnergie

Telephone: 514 879-4100 #5414

Email: pageau.alain@hydro.qc.ca

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: For the Canadian entities, the inclusion or exclusion of equipment and facilities in the BES must be also approved by the Canadian regulators. (as answer 2c). We believe that it is very difficult to propose first a definition for the BES and only after an Exemption process. Both aspects influence each other and both should be carried out together.

Guy Zito, Northeast Power Coordinating Council

Telephone: 212-840-1070

Email: gzito@npcc.org

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments:

[1] **Seven Factor Test** – NPCC participating members believe that the BES Exclusion process should place substantial weight upon Factor 3 from the FERC Seven Factor test. Factor 3 states, "Power flows into local distribution systems, and rarely, if ever flows out."[1] We also believe that Factor 7 has been broadly interpreted by FERC, State Commissions and the Courts to **include** facilities serving a distribution function and operated at 100 kV and above. [2,3,4,5,6,7]

[2] **NPCC A-10 Methodology for Determine BPS Elements** – NPCC participating member believe the A-10 Criteria methodology that NPCC uses to determine its BPS elements can be further utilized to identify critical system components that may be operated below the 100 kV threshold. The Criteria may also be used be used in lieu of the use of "higher" thresholds that appear or are contemplated in some of the ERO standards such as FAC-003 cites 200kV and above, the TPL-001 currently under development may specify a 200 kV threshold for some "more stringent" planning criteria. These higher thresholds may lend themselves to the use of an "impact based" methodology that could be used to determine where more stringent requirements may need to be applied.

[3] **New York State Public Service Commission (NYSPSC)** - In Opinion No. 97-12, Case 97-E-0251, the NYPSC provided utilities under its jurisdiction explicit guidance for

[1] We view the term "rarely" as used in Factor 3 to be bounded on the upside by a reverse power flow rate of no more than 10% of all hours and a peak reverse power flow (MW) amount of no more than 50% of peak inflows.
[2] STATE OF IOWA DEPARTMENT OF COMMERCE UTILITIES BOARD, DOCKET NO. SPU-98-12, IN RE: MIDAMERICAN ENERGY COMPANY, ORDER RECOMMENDING DELINEATION OF TRANSMISSION AND LOCAL DISTRIBUTION FACILITIES, Issued April 30, 1999. See http://www.state.ia.us/iub/docs/orders/1999/0430_spu9812.pdf
[3] *Pacific Gas and Electric Company, et al*., 77 FERC ¶ 61,077 at 61,325 (1996).
[4] *Puget Sound Energy, Inc*., 110 FERC ¶ 61,229 at 61,856 (2005).
[5] Case No. U-l3862, August 26, 2003 meeting of the Michigan Public Service Commission in Lansing, Michigan.
[6] "With regard to the deference it would provide to recommendations by state regulatory authorities concerning where to draw the jurisdictional line between FERC jurisdictional transmission facilities and state-jurisdictional local distribution facilities, FERC provided the following guidelines:… (e) If the utility's classifications and/or cost allocations are supported by the state regulatory authorities and are consistent with the principles established in Order No. 888, FERC **will defer to such classifications** and/or cost allocations." FERC comments filing by *Central Illinois Light Company*, Docket EL03-39-000, filed Dec. 20, 2002.
[7] *Mansfield Municipal Electric Department v. New England Power Co*., 97 FERC ¶ 61,134 (2001). "…the Municipals' facilities have all of these [Seven Factor Test] indicators except the last one. The voltage of the lines is 115 kV, the same voltage as the transmission grid. As discussed supra, the voltage alone is not dispositive of the issue as to whether a line is distribution or transmission. We must also look at the function."

determining the point-of-demarcation between transmission facilities under FERC jurisdiction and distribution

facilities under NYSPSC jurisdiction.[8] Appendix C to this Order established three (3) measures that utilities were instructed to use in determining the classification of transmission and distribution assets.

[4] FERC non-jurisdictional entities such as the Canadian Provinces.

The exemption process should clearly address the process and requirements for FERC non-jurisdictional entities (such as the Canadian entities) with the exception of the interconnections between them and those entities under FERC jurisdiction, and/or those entities having a direct impact on those interconnections. See **APPENDIX C**

[8] STATE OF NEW YORK PUBLIC SERVICE COMMISSION, OPINION NO. 97-12 in CASE 97-E-0251 - *Proceeding on Motion of the Commission to Distinguish Bulk Electric Transmission System from Local Distribution Facilities*.

Jim Uhrin ReliabilityFirst Corporation

Telephone: 330.247.3058

Email: jim.uhrin@rfirst.org

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: ReliabilityFirst would like to see this as a simple and easy-to-follow definition. The exclusion process needs to be clear without room for discussion or interpretation.

- There must be a common framework developed, along with a single NERC-wide BES definition.
- The definition should serve as a common approach for the identification of BES Elements and Facilities that are subject to compliance.
- The definition and approach for the determination must be repeatable.
- The method must clearly identify the BES elements for use by the industry.
- In order to obtain consistency, the definition, application and criteria must be used across Regional Entity boundaries.
- The revised BES definition should be consistent with the Statement of Compliance Registry Criteria so as not to create a conflict between the two, and could possibly simply reference the Criteria for issues such as size of generating units (e.g., 20 MVA units and 75 MVA plants) included in the BES.
- The criteria for exemption should be included within the BES definition, and the exemption process should contain only the procedure for submitting and determination of such. The exemption process should not contain a third set of criteria (in addition to the BES definition itself and the Statement of Compliance Registry Criteria) in which to make a determination of facilities to be monitored for compliance to standards.
- With the revised BES definition containing specific requirements for inclusion in the BES, will the separate Statement of Compliance Registry Criteria even be needed?

Joe Petaski, Manitoba Hydro

Telephone: 204-487-5332

Email: jpetaski@hydro.mb.ca

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments:

a. A NERC definition of 'radial' is required to prevent misapplication of the BES definition and exemption process.

b. There should be no regional differences in the BES definition or in the BES definition exemption process.

c. There should be equal representation from the regions to draft this standard

d. There should be consistent wording to describe the process - exception or exemption.

John W. Delucca, Lee County Electric Cooperative

Telephone: 239-656-2190

Email: john.delucca@lcec.net

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: The exception process under draft in the FRCC region should serve as a strong basis that could be applied Continent-wide. Also while the exclusion process should be administered within the Region there needs to be an appeals process in place that progresses quickly. In addition, a Region should not be allowed to allege violations of reliability standards related to a system while in the appeals process. If the appeal is not upheld the entity should then be allowed time to bring the system into compliance. Also for consideration Bright-line" methodology seems to be the "easy button" solution, but this "one-size fits all' places the burden on entities to obtain exclusions. From an entity's viewpoint, move the "bright-line threshold" to non-radial facilities operating at or greater than 230 kV, and adopt an inclusion process and criteria for including facilities that are necessary to operate an interconnected electric transmission network.

Paul Cummings, City of Redding

Telephone: 530-245-7016

Email: pcummings@ci.redding.ca.us

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: The WECC Bulk Electric System Definition Task Force has done extensive work on this topic. Please consider their current work when drafting the BES definition and exception process.

Patrick Farrell, Southern California Edison Company

Telephone: 626-302-1321

Email: Patrick.Farrell@sce.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: In addition to defining functional characteristics that can be used for an exemption process, the use of engineering studies that demonstrate the effect of an element on system performance should be allowed, with clearly defined and technically justified assumptions, metrics, and thresholds. To the extent that there are physical differences between regions or interconnections, variations between those regions and interconnections should be allowed. However, all the assumption, metrics, and thresholds will need to be thoroughly vetted and approved by NERC as part of the NERC Exemption Process.

Dan Rochester, Independent Electricity System Operator

Telephone: 905-855-6363

Email: dan.rochester@ieso.ca

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: We have difficulties understanding the intent of this Comment Form and the content in Q1 and Q2, above, which appear to be templates for information to be included in an exclusion/inclusion request rather than asking for comments on each of the listed items.

1. Is the intent of this Comment Form to obtain:
    a. Recommendations of the criteria to be considered in developing deviations from the default criteria for classifying Elements and Facilities as part of the BES?
    b. Assessment of the templates proposed in Q1 and Q2?
2. The concept paper that is posted alongside the SAR and proposed definition is not referenced in this Comment Form. Is it the drafting team's intent to solicit comments on the concept paper?
3. In the concept paper, three exemption criteria are presented. We do not have any issue with the first and third criteria but are concerned that Criterion #2 is not a criterion. It states that:

    "Elements and Facilities identified through application of the exemption process, consistent with the criteria, where the exemption process deems that the Element or Facility should be excluded from the BES (with concurrence from the ERO)."

    This criterion appears to reference yet another set of criteria not already included in the set or the concept paper. In fact, this "referenced" set needs to be clearly stipulated to ensure that applicants are fully aware of the conditions under which an Element or Facility operated at 100 kV or above can be deemed not necessary to support bulk power system reliability and, conversely, the conditions for an Element or Facility operated at below 100 kV to be included. The "templates" presented in Q1 and Q2 of this Comment Form also do not convey the needed conditions.

    We believe it is the clear conditions for exclusion (Elements/Facilities of 100 kV and above) and inclusion (below 100 kV) that need to be developed and fully vetted. We urge the drafting team to proceed to developing these criteria expeditiously so as to support the assessment and approval of the revised definition of BES.
4. We strongly advocate that the exemption process allows for a registered entity to submit the results of an objective, impact-based assessment process in support of its application for exemption of facilities that would otherwise be classified as part of the BES. This

assessment process, when consistently applied in a non-arbitrary manner, would yield results that demonstrate concretely, that the facilities for which the exemption is being sought, do not impact the BES.

5. Finally, given that the exemption process will be used to included and exclude transmission facilities we suggest either of the following as a more appropriate name: "BES Classification Exception Process" or "BES Classification Review Process".

Lorissa Jones, Transmission Reliability Program Manager

Telephone: 360-418-8978

Email: ljjones@bpa.gov

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: In addition to defining functional characteristics that can be used for an exemption process, the use of engineering studies that demonstrate the effect of an element on system performance must also be allowed, with clearly defined and technically justified assumptions, metrics and thresholds. Furthermore, to the extent that there are physical differences between regions or interconnections, variations between those regions and interconnections must be allowed. However all assumptions, metrics and thresholds must be thoroughly vetted and approved by NERC as part of the NERC Exemption Process.

David Burke, Orange and Rockland Utilities

Telephone: 845-577-3076

Email: burkeda@oru.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments:

[1] Seven Factor Test – NPCC participating members believe that the BES Exclusion process should place substantial weight upon Factor 3 from the FERC Seven Factor test. Factor 3 states, "Power flows into local distribution systems, and rarely, if ever flows out."[9] We also believe that Factor 7 has been broadly interpreted by FERC, State Commissions and the Courts to **include** facilities serving a distribution function and operated at 100 kV and above.[10,11,12,13,14,15]

[2] **NPCC A-10 Methodology for Determine BPS Elements** – NPCC participating member believe the A-10 Criteria methodology that NPCC uses to determine its BPS elements can be further utilized to identify critical system components that may be below the 100 kV threshold. The Criteria may also be used be used in lieu of the use of "higher" thresholds that appear or are contemplated in some of the ERO standards such as FAC-003 cites 200kV and above, the TPL-001 currently under development may specify a 200 kV threshold for some "more stringent" planning criteria. These higher thresholds may lend themselves to the use of an "impact based" methodology that could be used to determine where more stringent requirements may need to be applied.

[3] **New York State Public Service Commission (NYSPSC)** - In Opinion No. 97-12, Case 97-E-0251, the NYPSC provided utilities under its jurisdiction explicit guidance for determining the point-of-demarcation between transmission facilities under FERC

[9] We view the term "rarely" as used in Factor 3 to be bounded on the upside by a reverse power flow rate of no more than 10% of all hours and a peak reverse power flow (MW) amount of no more than 50% of peak inflows.
[10] STATE OF IOWA DEPARTMENT OF COMMERCE UTILITIES BOARD, DOCKET NO. SPU-98-12, IN RE: MIDAMERICAN ENERGY COMPANY, ORDER RECOMMENDING DELINEATION OF TRANSMISSION AND LOCAL DISTRIBUTION FACILITIES, Issued April 30, 1999. See http://www.state.ia.us/iub/docs/orders/1999/0430_spu9812.pdf
[11] *Pacific Gas and Electric Company, et al*., 77 FERC ¶ 61,077 at 61,325 (1996).
[12] *Puget Sound Energy, Inc*., 110 FERC ¶ 61,229 at 61,856 (2005).
[13] Case No. U-l3862, August 26, 2003 meeting of the Michigan Public Service Commission in Lansing, Michigan.
[14] "With regard to the deference it would provide to recommendations by state regulatory authorities concerning where to draw the jurisdictional line between FERC jurisdictional transmission facilities and state-jurisdictional local distribution facilities, FERC provided the following guidelines:… (e) If the utility's classifications and/or cost allocations are supported by the state regulatory authorities and are consistent with the principles established in Order No. 888, FERC **will defer to such classifications** and/or cost allocations." FERC comments filing by *Central Illinois Light Company*, Docket EL03-39-000, filed Dec. 20, 2002.
[15] *Mansfield Municipal Electric Department v. New England Power Co*., 97 FERC ¶ 61,134 (2001). "…the Municipals' facilities have all of these [Seven Factor Test] indicators except the last one. The voltage of the lines is 115 kV, the same voltage as the transmission grid. As discussed supra, the voltage alone is not dispositive of the issue as to whether a line is distribution or transmission. We must also look at the function."

jurisdiction and distribution facilities under NYSPSC jurisdiction.[16] Appendix C to this Order established three (3) measures that utilities were instructed to use in determining the classification of transmission and distribution assets. See **APPENDIX C**

NEW YORK INDICATORS (FINAL REVISED VERSION)

[NY-1] A transmission system delivers power from generation plants to local distribution systems. Where a generator directly supplies a local distribution system, the need for a transmission system to deliver its output to load depends on the size of the generator in relation to the minimum load of that system.

[NY-2] Transmission systems end at the high-voltage terminals or at the disconnect switch of a substation transformer; if no transformer is present, the transmission system ends at the bus tap of the local distribution feeder.

[16] STATE OF NEW YORK PUBLIC SERVICE COMMISSION, OPINION NO. 97-12 in CASE 97-E-0251 - *Proceeding on Motion of the Commission to Distinguish Bulk Electric Transmission System from Local Distribution Facilities*.

Alice Ireland, Xcel Energy
Telephone: 303-571-7868
Email: alice.murdock@xcelenergy.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: Xcel Energy agrees that the FERC Order 743 directs NERC to modify the Rules of Procedure to include the process for how an entity or region may initiate an exclusion or inclusion. However, we do not agree that FERC also directed that the actual criteria and technical specifics for inclusion or exclusion be developed as part of the Rules of Procedure. Furthermore, since the inclusion/exclusion criteria is a key component to the definition of BES, we feel the criteria should be treated as part of the definition development and developed in the same manner as the definition itself. (Preferably by the same drafting team.)

It is also not clear as to why the Reliability Assurer is included as an applicable entity in the SAR.

Allen Mosher, American Public Power Association

Telephone: 202-467-2944

Email: amosher@publicpower.org

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments:

The Concept Paper states at page 1 that in Order 743, FERC directed NERC to do the following:

A. Utilize the NERC Standard Development Process to revise the definition of Bulk Electric System (BES) contained in the NERC Glossary of Terms.

B. Develop a single Implementation Plan to address the application of the revised definition of the BES and the implementation of the exemption process.

C. Utilize the NERC Rules of Procedure to develop and implement an 'exemption process' used to identify Elements and Facilities which will be included in or excluded from the BES.

The Concept Paper continues to state that:

> This project will address items 'A' and 'B' and will coordinate efforts between the Standard Drafting Team (SDT) and the group working to develop the exemption process for inclusion in the NERC Rules of Procedure to ensure that the revised BES definition and exemption process result in an accurate, repeatable, and transparent method for the identification of BES and non-BES Elements and Facilities.

APPA agrees that the standards process must be used to develop the revised BES definition and that NERC has been directed to use its Rules of Procedure process to develop an ROP-based procedure to implement an exemption/exclusion/inclusion process. However, the FERC directives do not speak to how and by whom the technical methodology, study criteria and data requirements for requesting and receiving approval for an exemption should be developed.

To the maximum extent possible, subject to time constraints imposed by FERC, this inherently technical methodology needs to be developed through the NERC standards development process, in conjunction with development of the revised definition of BES. Separate development will significantly hamper development of industry consensus in support of the revised BES definition and the yet to be developed ROP modifications for the exemption process.

The most critical question is how do we arrive at a commonly agreed upon, widely accessible, transparent, and replicable continent-wide methodology to determine whether

each specific facility is or is not "necessary to operate an interconnected electric transmission network" to quote from paragraph 16 of Order 743. While each region may have a separate model reflecting its topology and system performance characteristics, a continent-wide approach is required to address FERC concerns about inconsistency across regions that are not the result of physical differences.

The statutory definition of the term bulk-power system defines the outer extent of facilities that can be included (at least within the United States) within the NERC definition of BES. FPA section 215(a)(1) states that the bulk-power system includes "(A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability." Further, the term BPS "does not include facilities used in the local distribution of electric energy." [emphasis added].

Similarly, "reliable operation" is defined at 215(a)(4) to mean "operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure of system elements."

These definitions appear to point to two basic questions for the classification of each facility or element as BES or non-BES:

1. Is the facility or element necessary for reliable operation because it contributes significant capability to the interconnected transmission network?
2. Will the misoperation or unanticipated failure of the facility or element adversely affect the reliable operation of the interconnected transmission network?

APPA suggests that the BES SDT or separate study teams should be directed to establish the outline for this study methodology. APPA further suggests that BES sub-teams be established to address the Proposed BES Criteria in the Concept Paper. Separate sub-teams should be established to address detailed system configuration and study methodology issues affecting:

1. Radials serving load (with and without distribution voltage generation not subject to registration)
2. Other transmission elements that entities seek to include in or exclude from the BES.
3. Generating plant equipment that entities seek to include in or exclude from the BES.
4. Technical issues raised by the FERC Seven Factor Test for Local Distribution Facilities.

Separate sub-teams are appropriate because the study issues are likely to be quite distinct. For example, radials serving only load do not provide alternative pathways for reliable BES

operations, as might some sub-100 kV facilities. Mixing the two teams together might slow progress on identification of various commonly used radial to load center configurations that with proper protection schemes do not have the potential to adversely affect the BES. A focused effort on permissible exclusions of radials serving load is essential to prevent distribution providers from adopting less reliable system configurations to serve their loads because they are concerned that the preferred configuration will make them subject to registration as TOs and/or TOPs.

Note that the proposed sub-teams do not necessarily have to be populated by members of the SDT. The new standards process allows SDTs to gather informal input from a variety of sources. However, development and posting for industry comment of the minimum acceptable characteristics of the study methodology to be used in the Exceptions Process should be the responsibility of the BES SDT.

The Comment Form on the Exclusion Process poses reasonable questions and it is my hope that registered entities and regional entities identify numerous candidate facilities and elements for inclusion or exclusion from the BES, accompanied by one-line diagrams that lay out each of the permutations for such facilities that are candidates for exclusion/inclusion. These facilities range from simple radial transmission lines and distribution step-down transformers to 100 kV class distribution networks that operate radially from the BES. I also hope that entities submit extensive technical documentation to explain why such facilities should be excluded from or included in the BES.

Jim Case, Entergy SERC OC Standards Review Group

SERC OC Standards Review Group participants in developing the above comments:

Jim Case, Entergy
Gerald Beckerle, Ameren
Andy Burch, EEI
Randy Castello, Miss Power
Dan Roethemeyer, Dynegy
Melinda Montgomery, Entergy
Sam Holeman, Duke
Joel Wise, TVA
Alvis Lanton, SIPC
Hamid Zakery, Dynegy
John Neagle, AECI
Mike Hirst, Cogentrix
Tim Hattaway, PowerSouth
Robert Thomasson, BREC
Shardra Scott, Gulf Power
Patrick Woods, EKPC
Alisha Ankar, Prairie Power
Bill Hutchison, SIPC
J.T. Wood, Southern

Telephone: 601-985-2345
Email: jcase@entergy.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: Each inclusion and exclusion should be based solely on its technical justification.

"The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."

John P. Hughes, Electricity Consumers Resource Council (ELCON)

Telephone: 202-682-1390

Email: jhughes@elcon.org

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: ELCON members have always supported fair and effective reliability efforts at NERC. However, the expansion of the standards compliance responsibility implied by the NERC Concept Document goes too far. As written, this proposal could have the effect of devaluing a large number of industrial owned electrical power assets by forcing industrials to meet new and unnecessary compliance obligations. Many will be forced to choose to either accept a significant new cost or fire sale their assets to local providers increasing the purchaser's market power in the process. ELCON feels the addition of new compliance obligations should not be done in such a wholesale manner but instead done on an exception and as needed basis that factors in both a realistic appraisal of the underlying risk and the economic burden imposed on the registered entity relative to the expected benefits.

Specific recommendations and concerns are:

1. An Overarching "Principle" for the Identification of BES Elements and Facilities Must be the Guidance Provided by FERC That Significant Expansion of the Compliance Registry is Not Contemplated.

In FERC's March 18, 2010 Notice of Proposed Rulemaking (NOPR) on the Revision to Electric Reliability Organization Definition of Bulk Electric System, the Commission stated regarding the revision to the BES definition:

> This proposal would eliminate the discretion provided in the current definition for a Regional Entity to define "bulk electric system" within a region. Importantly, however, we emphasize that we are not proposing to eliminate all regional variations and we do not anticipate that the proposed change would affect most entities. ¶ 16. … the Commission does not believe that the proposal would have an immediate effect on entities in any Regional Entity other than NPCC. ¶ 27.

Similarly, in Order No. 743, the Commission stated:

> We expect that our decision to direct NERC to develop a uniform modified definition of "bulk-electric system" will eliminate regional discretion and ambiguity. The change will not significantly increase the scope of the present definition, which applies to transmission, generation and interconnection facilities. The proposed exemption process will provide sufficient means for entities that do not believe particular facilities are necessary for operating the interconnected transmission system to apply for an exemption. ¶ 144.

One area where the proposed BES definition and exception process will significantly expand the Compliance Registry is the criteria applicable to behind-the-meter generation (primarily cogeneration facilities). We urge that the BES definition should not change the currently applicable 20 MVA / 75 MVA generation size threshold applicable to generation facilities or the manner in which that threshold is currently applied, with behind- the- meter cogeneration facilities evaluated based on the net capacity actually provided to the grid.

2. A Second Overarching "Principle" for the Identification of BES Elements and Facillities Is the Need to Clarify Which Facilities Perform a True Transmission Function and Excluding Facilities That Perform a Local Distribution Function, As Required by Law.

Congress stated in Federal Power Act section 215:

SEC. 215. ELECTRIC RELIABILITY.
''(a) DEFINITIONS.—For purposes of this section:
''(1) The term 'bulk-power system' means—
''(A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and
''(B) electric energy from generation facilities needed to maintain transmission system reliability.

The term does not include facilities used in the local distribution of electric energy.

There has been little attempt by NERC to clarify what in fact are "facilities used in the local distribution of electric energy" even though any plain English application of the term makes such a determination self-evident. The proposed BES definition should expressly exclude facilities used in the local distribution of electric energy, and the identification of such facilities is independent of the identification of BES transmission. Facilities used for local distribution are NOT the residual of any determination of what are BES transmission facilities.

3. A Third Overarching "Principle" for the Identification of BES Elements and Facilities Must be Recognition of the Risk Imposed by the Element or Facility, and the Economic Burden of the Owner/Operator of the Element of Facility.

The efforts of the BES Standards Drafting Team follow the release of two important policy documents.

First, on January 18, 2011, the White House issued an Executive Order ("Improving Regulation and Regulatory Review") by President Obama regarding improvements to federal regulations and the review of existing regulations to ensure, among other things, that a regulation be proposed or adopted "only upon reasoned determination that its benefits justify its costs," and that regulations be tailored "to impose the least burden on society."

Second, the NERC Planning Committee issued on January 10, 2011, "Risk-Based Reliability Compliance – White Paper Concept Discussion," which attempts to advance "processes and procedures to prioritize [NERC's] efforts and 'tiering' elements of its programs to maximize their value and optimize the benefit/cost of effort from stakeholders." This white paper complements the President's Executive Order.

ELCON believes that BES exclusion criteria and process should recognize and exclude elements and facilities in which the risk to bulk electric system reliability is at most theoretical or speculative, and where the compliance burden clearly outweighs the benefits. Such a determination should recognize the historical record of the element or facility in terms of the owner or operator's coordination with the BA or control area, and transmission operators. This principle should be applied to the development of exclusion/inclusion criteria for private lines that connect loads and behind-the-meter generation to true BES Elements and Facilities.

4. An Additional Principle for the Identification of BES Elements and Facilities Should Be the Explicit Recognition on How the Element or Facility is Actually Operated or Used, Not Its Physical or Nominal Rating That May be Irrelevant to Reliability Considerations.

In Order No. 743, FERC clarified that it did not intend to require NERC to utilize the term "rated at" rather than the term "operated at" for the voltage threshold in the revised BES definition. A principle for the identification of BES Elements and Facilities should be such recognition and not exclusively on the rated value of an Element or Facility. This principle should be used to retain the exclusion in the Statement of Compliance Registry Criteria (Revision 5.0) for "net capacity provided to the bulk power system" in the context of the 20 MVA generating unit and 75 MVA generating plant thresholds. The "net capacity" applies to capacity "put" of a behind-the-meter generator whose predominant function is to serve load at the same site.

5. An Additional Principle for the Identification of BES Elements and Facilities Should be the Exclusion of PSEs That Do Not Own or Operate Physical Assets and Whose Power Transactions Are Exclusively Financial in Nature.

Many PSEs that operate in FERC jurisdictional organized wholesale markets (i.e., ISOs and RTOs) do not own, operate or lease physical assets and are currently bombarded with data requests that assume that they own or control such assets. An example of a superfluous data request is to prove that adequate reactive power has been procured to support the load. This is a question that should not have been asked and displays a profound ignorance of the operation of ISO/RTO markets. One potential solution to this problem is to create two subsets of PSEs: one that owns and operates physical assets that are used to serve their loads, and a second that does not.

Some Regional Entities have also begun to ask questions that require PSEs to reveal the details of specific commercial transactions. This raises a broader question on what NERC and regional compliance staffs and auditors "need to know" and whether such questions are an abuse of their enforcement authority.

6. Any Attempt to Make Demand Side Management (DSM) Measures an Element or Facility of BES Will Be Shortsighted and Counterproductive.

Proposals that unilaterally and arbitrarily remove exclusions for generation and transmission, including the application of new compliance obligations to DSM programs, go far beyond what FERC intended in its guidance for revisions. Any new requirement concerning voluntary DSM adds cost to a process that so far has only acted to support reliability with performance equal to and sometimes superior to traditional providers. How is it that a potential resource that can contribute to maintaining reliability is now so quickly identified as a risk? We warn against the overzealous pursuit of control over every asset and resource on the electric system. This mindset will only breed cynicism and end the willingness of potentially dispatchable loads to cooperate with the real operators and owners of the BES.

A recently issued FERC study highlights the potential value to reliability of DSM (in the form of dispatchable demand response) (See Joseph H. Eto et al., Use of Frequency Response Metrics to Assess the Planning and Operating Requirements for Reliable Integration of Variable Renewable Generation, LBNL-4142E, December 2010). To reliably integrate greater amounts of wind energy resources to the bulk electric system, the study recommended the:

Expanded use of demand response that is technically capable of providing frequency control (potentially including smart grid applications), starting with broader industry appreciation of the role of demand response in augmenting primary and secondary frequency control reserves.

7. Revising the Definition of BES Does Not Justify Shifting the Plenary Burden for BPS Reliability from Utilities to Utility Customers. A BES Principle Should Recognize That the Obligation to Serve Applies in One Direction.

The only reason the bulk power system exists is to deliver electric power to residential households, commercial businesses, government facilities and industrial facilities of all sizes. The value of a reliable BPS is dependent on the needs of end use customers. Nothing in the legislative history of section 215 of the Federal Power Act suggests that Congress wittingly intended to change that relationship.

The burden of complying with NERC Reliability Standards is a cost of doing business for utility providers of generation, transmission and distribution services. Generation and interconnection facilities of industrial customers are almost never intended for or used to "operate the interconnected transmission network." Those facilities are integral to a manufacturing process, including purchasing power from the grid. They were built in expectation that the BPS was prudently planned and operated by utilities. The rare exceptions are administered under applicable tariffs or contracts, and are already Registered Entities.

Part of NERC's effort should include defining the line between a BES asset that is used to deliver power and an End User asset that's sole purpose is to serve the End User's load. The NERC Functional Model includes a vague definition of End-use Customer. The problem is determining the scope of an end-use device. If an industrial company owns a 138 kV to 13.8 kV transformer that feeds its plant, is that an end-use device or a transmission asset that is used to transmit power to the low voltage distribution network within the manufacturing facility? Any work to revise the definition of the BES should also include a clarification of its boundaries. We believe that NERC should not expand the scope of the BES to include assets within end-use customer's private use networks.

8. An Additional BES Principle Should be that BES Elements and Facilities be Limited to Only Functions Currently Specified in the NERC Functional Model (Version 5).

NERC's development of the revised BES definition and exclusion/inclusion criteria and processes should be limited to functions specified in the NERC Functional Model (Version 5).

9. NERC is Encouraged to Propose a "Different Solution" That is as Effective as, or Superior to, the Commission's Proposed Approach. The Proposed Principles for the Exclusion of Elements and Facilities from the BES Should Include a Process for Categorical Exclusion Based on Common Physical Characteristics.

The Commission stated in Order No. 743 regarding its proposed revision of the BES definition (and presumably the exclusion/inclusion criteria and processes):

… NERC may propose a different solution that is as effective as, or superior to, the Commission's proposed approach in addressing the Commission's technical and other concerns so as to ensure that all necessary facilities are included within the scope of the definition. ¶ 16.

In addition, specific to the exclusion of Elements and Facilities from the BES, the Final Rule did not adopt the exclusion process proposed in the NOPR (i.e., facility-by-facility review). In the Final Order, FERC directed NERC to develop an exclusion process "with practical application that is less burdensome than the NOPR proposal."

FERC has also allowed NERC to consider concerns (mainly industrials') regarding "exclusion categories" in developing the exclusion process and criteria. ¶ 120.

ELCON interprets the Commission's statements to mean that the agency is open to developing a more efficient compliance process, including processes that minimize unnecessary regulatory burdens on potential Registered Entities and the administrative costs of NERC and RE compliance operations. In the spirit of "streamlining" NERC and the REs' review of smaller entities, ELCON recommends the addition of a principle on the exclusion of Elements and Facilities from the BES that encourages a process for categorical exclusion of entities based on common physical characteristics.

Thad Ness, American Electric Power

Telephone: 614-716-2053

Email: tkness@aep.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: We appreciate the opportunity to provide advance comments on the BES definition exemption process. The comments provided above are initial thoughts, and are by no means an exhaustive itemized list of exemptions. AEP looks forward to contributing additional input through the standards development process when the SDT provides drafts or revisions.

Amir Hammad, Constellation Power Source Generation, Inc. (CPSG), Et All

CPSG is filing the comments below on behalf of:
Constellation Energy Group, Inc.
Baltimore Gas & Electric Company
Constellation Energy Commodities Group, Inc.
Constellation Energy Control and Dispatch, LLC
Constellation NewEnergy, Inc. and its affiliates
Constellation Energy Nuclear Group, LLC,[17]

Telephone: 410-787-5226
Email: amir.hammad@constellation.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: While the Regional Bulk Electric System Coordination Group has done an admirable job at drafting an initially proposed list of inclusion and exclusion criteria, Constellation strongly suggests that the continued work on criteria be orchestrated through the FERC-approved standard development process and not as part of a Rules of Procedure revision. We view development of the technical criteria for both the BES definition and exemption process as a single exercise.

The compliance implications and technical nature of such criteria make it imperative that industry input be considered in a transparent stakeholder process. It is appropriate for NERC to develop aspects such as the administrative management, the role and interaction of the regions, an appeal process, etc. However, due to the technical aspects of BES operation, the drafting team members are best suited to devise criteria for inclusion or exclusion of facilities to the BES.

To clarify the distinction between the exception process and the exception criteria, the purpose statement in the concept document should add a fourth bullet to read:

- **A.** Utilize the NERC Standard Development Process to revise the definition of Bulk Electric System (BES) contained in the NERC Glossary of Terms.
- **B.** Utilize the NERC Standard Development Process to develop exception criteria to be utilized in the exception process.Develop a single Implementation Plan to address the application of the revised definition of the BES and the implementation of the exemption process.

[17] On November 6, 2009, EDF, Inc. ("EDF") and Constellation Energy Group, Inc. completed a transaction pursuant to which EDF acquired a 49.99 percent ownership interest in CENG. CENG was previously a wholly owned subsidiary of Constellation Energy Group, Inc.

C. Utilize the NERC Rules of Procedure to develop and implement an 'exemption process' used to identify Elements and Facilities which will be included in or excluded from the BES.

The revised definition should expressly incorporate exclusions for facilities below 100 kV. Entities should not have to seek an exemption for facilities below 100 kV or for radial lines. They should be clearly excluded in the BES definition itself. We encourage the drafting team to embrace a design concept that seeks to maximize the "brightness" of bright line criteria. The BES exemption process should contemplate very few exemptions. The TFE process is an example of a process not to be repeated here.

In addition, Constellation is not convinced that creation of a definition and an exception process is the best course to respond to the FERC directives. We are concerned that the current approach of a simple, all inclusive definition coupled with an exception criteria and process will not draw on the fundamentals underpinning the existing definition and create a cumbersome and unnecessary exception process.

As an alternative, we propose that the standard drafting team utilize the Compliance Registry Criteria – Section III (Rules of Procedure Appendix 5B) along with definition threshold language to develop a more comprehensive definition. Further, we propose that the BES drafting team incorporate the criteria directly into the revised BES definition, replacing the term "bulk power system" in each criterion with "greater than 100 kV." It will make for a longer definition, but by aligning the facilities requiring registration as those defined as BES, the definition will more clearly determine the line between BES and non-BES. It is preferable that non-BES facilities be excluded by the definition language rather than to define BES broadly and require non-BES facilities go through an exception process. Ideally, this approach can eliminate the need for an onerous exemption process as well as eliminate the need for Section III of the Registry Criteria in the Rules of Procedure.

For special case facilities deemed non-BES by the revised definition that may warrant consideration for inclusion, an "opt-in" evaluation could be conducted.

The rules of procedure process may be used to develop the "opt-in" process that would replace the proposed exception concept; however, the drafting team, perhaps in collaboration with regional entities, should develop any opt-in criteria needed for the process. Again, it is appropriate for NERC to develop aspects such as the administrative management, the role and interaction of the regions, an appeal process, etc. However, due to the technical aspects of BES operation, the drafting team members are best suited to devise criteria for non-BES facilities to warrant inclusion in the BES.

We find that this approach to revising the BES definition would satisfy the FERC directives in Order 743 by encompassing all facilities necessary for operating an interconnected electric transmission network into a national level, bright-line definition. This approach will improve the clarity and consistency of the BES definition for application by Industry and NERC as well as avoiding creation of a potentially cumbersome exception process.

Shaun Anders, City Water Light and Power

Telephone: 217-321-1323

Email: shaun.anders@cwlp.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: CWLP has chosen to comment on the inclusion/exclusion process as a whole. The current lack of detailed, firm administrative guidelines as well as an unambiguous process for resolving disputes between parties involved in the process of adjudicating inclusions/exclusions is problematic. It is CWLP's belief that developing the proposed administrative framework for the process is needed first. Focusing on the data to be submitted as shown in (1) and (2) above does not address the scope, nature, and criteria applicable to the review of requests for inclusions/exclusions. Regardless, CWLP feels strongly that the sole basis for approval or rejection of a request should be technical justification.

Speaking to the process in general, any inclusion or exclusion should be a specific request for a specific facility; continent-wide, interconnect-wide, and region-wide applicability for inclusions/exclusions departs from the intent of FERC Order 743 to establish a definition without regional variances.

Marc M. Butts, Southern Company

Telephone: 205-257-4839

Email: mmbutts@southernco.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: The evaluation method should be clear, understandable, and technically based. Sometimes the "process" is called an Exemption Process and other times it is called "Exception Process",

Andrew Z. Pusztai, American Transmission Company
Telephone: 262-506-6913
Email: apusztai@atcllc.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments:

a. ATC feels strongly that the exemption criteria need to be developed by the SDT. NERC Staff should focus on the process (identification, notification, appeal and rights) but the SDT is in the better position to develop the technical basis of the exemption criteria.

b. The NERC process for exclusion or inclusion must clearly address who is responsible for submitting an Element or Facility Exception Process. Is it limited to the asset owner of the Element or Facilities, or is it open to neighboring entities that may want to initiate a request for exemption or inclusion to the BES?

c. Also, ATC believes the process should allow for multi-year distinctions for exceptions. In other words, if a Registered Entity gets an Element or Facility excluded, then that exclusion or inclusion should be allowed for 3 or more years. Annual certifications and approval are too restrictive.

d. ATC also supports the comments as submitted by EEI REAC on the Draft Concept Paper on the Definition of BES Project 2010-17

Al DiCaprio, PJM

Telephone: 610-666-8854

Email: dicrapm@pjm.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: We have difficulties understanding the intent of this Comment Form and the content in Q1 and Q2, above, which appear to be templates for information to be included in an exclusion/inclusion request rather than asking for comments on each of the listed items.

1. Is the intent of this Comment Form to obtain:
   a. Recommendations of the criteria to be considered in developing deviations from the default criteria for classifying Elements and Facilities as part of the BES?
   b. Assessment of the templates proposed in Q1 and Q2?
2. The concept paper that is posted alongside the SAR and proposed definition is not referenced in this Comment Form. Is it the drafting team's intent to solicit comments on the concept paper?
3. In the concept paper, three exemption criteria are presented. We do not have any issue with the first and third criteria but are concerned that Criterion #2 is not a criterion. It states that:

"Elements and Facilities identified through application of the exemption process, consistent with the criteria, where the exemption process deems that the Element or Facility should be excluded from the BES (with concurrence from the ERO)."

This criterion appears to reference yet another set of criteria not already included in the set or the concept paper. In fact, this "referenced" set needs to be clearly stipulated to ensure that applicants are fully aware of the conditions under which an Element or Facility operated at 100 kV or above can be deemed not necessary to support bulk power system reliability and, conversely, the conditions for an Element or Facility operated at below 100 kV to be included. The "templates" presented in Q1 and Q2 of this Comment Form also do not convey the needed conditions.

We believe it is the clear conditions for exclusion (Elements/Facilities of 100 kV and above) and inclusion (below 100 kV) that need to be developed and fully vetted. We urge the drafting team to proceed to developing these criteria expeditiously so as to support the assessment and approval of the revised definition of BES.

Bud Tracy, Blachly-Lane Electric Cooperative

Telephone: 541.688.8711

Email: tracyb@blachlylane.coop

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments:

1. We have a number of concerns related to the initial SAR proposal:

a) The primary concern expressed by FERC in Order No. 743 was the discretion the current definition accords to the RROs to develop their own definition of the BES without approval by NERC or FERC. See Order No. 743, 133 FERC ¶ 61,150 at P 16 (2010) (FERC believes the "best way to address these concerns is to eliminate the Regional Entities' discretion to define 'bulk electric system' without ERO or Commission review"); at 30 (same). Hence, we believe FERC's concern can be addressed by simply removing the phrase "As defined by the Regional Reliability Organization" from the existing definition. The result would be that the RROs could then develop regionally-appropriate rules based on the uniform definition, which NERC and FERC could then approve, giving deference to the technical findings of the RROs and NERC, as the FPA requires. FPA Section 215(d), 16 U.S.C. § 825o(d). We urge the standards drafting team to consider the virtues of such a minimalist approach and then focus on alternative approaches that will achieve FERC's aim more effectively and/or at lower cost, and on the exemption process, which will, unless FERC abandons its insistence on a 100-kV bright-line threshold, be the most important aspect of the standards development process.

b) The definition proposed in the SAR would incorporate "All Transmission and Generation Elements and Facilities" that are "necessary to support bulk power system reliability." We applaud the effort to properly restrict the definition of BES using the NERC-defined terms "Transmission," "Generation," "Elements" and "Facilities." By using these terms, the drafting team recognizes that Congress excluded from the statutory "Bulk-Power System" definition "facilities used in the local distribution of electric energy," FPA Section 215(a)(1), 16 U.S.C. § 825o(a)(1), and has thereby excluded such facilities from the reach of the mandatory reliability system. Similarly, by focusing the definition on "Transmission" and "Generation," the standards drafting team recognizes that Congress limited the reach of reliability standards to: (1) "facilities and control systems necessary for operating an interconnected electric energy transmission network," and, (2) "electric energy from generation facilities needed to maintain transmission system reliability." Id.

When viewed in the context of the proposed BES definition, however, we are concerned that incorporating the terms as defined in the NERC Glossary may create unnecessary confusion and ambiguity. For example, the NERC Glossary defines "Facility" as "[a] set of electrical equipment that operates as a single Bulk Electric System Element." But attempting to define BES by using a term that itself incorporates "Bulk Electric System" is circular and is likely to create confusion in applying the revised definition. Similarly, "Generation" is not specifically defined in the NERC Glossary of Terms, creating potential confusion.

Finally, the NERC Glossary defines "Transmission" in part as "the movement or transfer of electric energy between points of supply and points at which it is transformed for delivery to customers." This creates the potential for an over-inclusive definition since "Transmission" could, by this definition, be understood to encompass only the last transformation of voltage to end-user level voltage in a system, whereas distribution systems generally include several downward transformations of voltage between the point of bulk delivery and the end-use consumer. One could argue that each of the segments between delivery of bulk power to the local distribution utility and that utility's step-down transformers is, by the terms of the definition, merely moving power "between points of supply" and only the last segment includes the "point at which [power] is transformed for delivery to customers." This, of course, would improperly classify a large portion of most distribution system as "Transmission."

For these reasons, it may be necessary to define "Generation" and to more precisely define "Facility" and "Transmission" as part of the standards drafting process.

We note, on the other hand, that "reliable operation" was a term specifically defined by Congress in FPA Section 215 to include the operation of BES elements "within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance. . . or unanticipated failure of system elements." 16 U.S.C. § 825o(a)(4). Congress specifically precluded the mandatory reliability system from enforcing standards for adequacy of service, which were left to state and local authorities. 16 U.S.C. § 825o(i)(2). Accordingly, we applaud the standards drafting team for including in the BES only facilities "necessary to support bulk power system reliability," because the use of the italicized term at least implicitly excludes from the definition facilities that affect only the levels of service that were explicitly excluded from the mandatory reliability regime by Congress and do not affect "reliable operation" of the BES as Congress defined it.

c) The proposed SAR definition unnecessarily restricts the exclusion in the existing definition for radial facilities. The existing definition provides that radial facilities are "generally not included" in the BES. The proposed new definition would significantly restrict this exclusion, excluding radial systems from the BES only if they are excluded through the "BES definition exemption process." We believe there is no reason to make radial systems and other elements of the electric system

that, because of their limited interaction with the bulk system, have no meaningful impact on bulk system reliability go through a potentially onerous exemption process. Rather, such systems should be presumptively excluded from the definition, as they are now. Further, for the reasons set forth in detail by the WECC BESDTF, local distribution networks in the West should be subject to a similar categorical exclusion, subject to inclusion in the BES only upon a demonstration that the network creates substantial reliability risks for the bulk system. This approach is consistent with FERC's direction that "radial facilities, as well as facilities used in the local distribution of electric energy as provided in Section 215, will continue to be excluded." Order No. 743 at P 120.

Jerome Murray, Oregon Public Utility Commission
Telephone: 503-378-6626
Email: Jerry.murray@state.or.us

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments:

1. The work that has been completed by the WECC Bulk Electric System Definition Task Force is based on sound engineering principles and appears to be a comprehensive solution to defining the BES and providing a means for exceptions to the 100 kV "bright line" criteria. The NERC BES Drafting Team is urged accept the proposal in whole or include contained principles to guide NERC's process for exception.
2. There is serious concern in the Western Interconnection that if a strict 100 kV bright line is mandated that billions of dollars will be needed to be upgrade 100kV to 200 kV distribution elements to comply with NERC reliability/security standards. There is a significant potential for unintended consequences. A serious one is that there could be substantially less monetary resources available for new transmission investment for high impact BES elements and for relieving congestion. Another is FERC would arguably be negating the 7 factor test for distribution facilities, extending FERC jurisdiction over distribution facilities, bringing costs for such facilities into the FERC tariffs, and reducing PUC state review of such investments. These could result in substantial cost increases and/or reliability issues for electric consumers.

John D. Martinsen , Public Utility District No. 1 of Snohomish County

Telephone: 425-783-8080

Email: jdmartinsen@snopud.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments:

1. We have a number of concerns related to the initial SAR proposal:

a) The primary concern expressed by FERC in Order No. 743 was the discretion the current definition accords to the RROs to develop their own definition of the BES without approval by NERC or FERC. *See* Order No. 743, 133 FERC ¶ 61,150 at P 16 (2010) (FERC believes the "best way to address these concerns is to eliminate the Regional Entities' discretion to define 'bulk electric system' *without ERO or Commission review*"); at 30 (same). Hence, we believe FERC's concern can be addressed by simply removing the phrase "As defined by the Regional Reliability Organization" from the existing definition. The result would be that the RROs could then develop regionally-appropriate rules based on the uniform definition, which NERC and FERC could then approve, giving deference to the technical findings of the RROs and NERC, as the FPA requires. FPA Section 215(d), 16 U.S.C. § 824o(d). We urge the standards drafting team to consider the virtues of such a minimalist approach and then focus on alternative approaches that will achieve FERC's aim more effectively and/or at lower cost, and on the exemption process, which will, unless FERC abandons its insistence on a 100-kV bright-line threshold, be the most important aspect of the standards development process.

b) The definition proposed in the SAR would incorporate "All *Transmission* and *Generation Elements* and *Facilities*" that are "necessary to support bulk power system *reliability*." We applaud the effort to properly restrict the definition of BES using the NERC-defined terms "Transmission," "Generation," "Elements" and "Facilities." By using these terms, the drafting team recognizes that Congress excluded from the statutory "Bulk-Power System" definition "facilities used in the local distribution of electric energy," FPA Section 215(a)(1), 16 U.S.C. § 824o(a)(1), and has thereby excluded such facilities from the reach of the mandatory reliability system. Similarly, by focusing the definition on "Transmission" and "Generation," the standards drafting team recognizes that Congress limited the reach of reliability standards to: (1) "facilities and control systems necessary for operating an interconnected electric energy transmission network," and, (2) "electric energy from generation facilities needed to maintain transmission system reliability." *Id.*

When viewed in the context of the proposed BES definition, however, we are concerned that incorporating the terms as defined in the NERC Glossary may create unnecessary confusion and ambiguity. For example, the NERC Glossary defines "Facility" as "[a] set of electrical equipment that operates as a single Bulk Electric System Element." But attempting to define BES by using a term that itself incorporates "Bulk Electric System" is circular and is likely to create confusion in applying the revised definition. Similarly, "Generation" is not specifically defined in the NERC Glossary of Terms, creating potential confusion.

Finally, the NERC Glossary defines "Transmission" in part as "the movement or transfer of electric energy between points of supply and points at which it is transformed for delivery to customers." This creates the potential for an over-inclusive definition since "Transmission" could, by this definition, be understood to encompass only the last transformation of voltage to end-user level voltage in a system, whereas distribution systems generally include several downward transformations of voltage between the point of bulk delivery and the end-use consumer. One could argue that each of the segments between delivery of bulk power to the local distribution utility and that utility's step-down transformers is, by the terms of the definition, merely moving power "between points of supply" and only the last segment includes the "point at which [power] is transformed for delivery to customers." This, of course, would improperly classify a large portion of most distribution system as "Transmission."

For these reasons, it may be necessary to define "Generation" and to more precisely define "Facility" and "Transmission" as part of the standards drafting process.

We note, on the other hand, that "reliable operation" was a term specifically defined by Congress in FPA Section 215 to include the operation of BES elements "within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance. . . or unanticipated failure of system elements." 16 U.S.C. § 824o(a)(4). Congress specifically precluded the mandatory reliability system from enforcing standards for adequacy of service, which were left to state and local authorities. 16 U.S.C. § 824o(i)(2). Accordingly, we applaud the standards drafting team for including in the BES only facilities "necessary to support bulk power system *reliability*," because the use of the italicized term at least implicitly excludes from the definition facilities that affect only the levels of service that were explicitly excluded from the mandatory reliability regime by Congress and do not affect "reliable operation" of the BES as Congress defined it.

c) The proposed SAR definition unnecessarily restricts the exclusion in the existing definition for radial facilities. The existing definition provides that radial facilities are "generally not included" in the BES. The proposed new definition would significantly restrict this exclusion, excluding radial systems from the BES

only if they are excluded through the "BES definition exemption process." We believe there is no reason to make radial systems and other elements of the electric system that, because of their limited interaction with the bulk system, have no meaningful impact on bulk system reliability, go through a potentially onerous exemption process. Rather, such systems should be presumptively excluded from the definition, as they are now. Further, for the reasons set forth in detail by the WECC BESDTF, local distribution networks in the West should be subject to a similar categorical exclusion, subject to inclusion in the BES only upon a demonstration that the network creates substantial reliability risks for the bulk system. This approach is consistent with FERC's direction that "radial facilities, as well as facilities used in the local distribution of electric energy as provided in Section 215, will continue to be excluded." Order No. 743 at P 120.

Steve Alexanderson P.E., Central Lincoln

Telephone: 541-574-2064

Email: salexanderson@cencoast.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: Our understanding of the FERC Order was that the threshold would be 100 kV "**except** for defined radial facilities" and that they also ordered NERC to adopt an "**exemption process**". The question confuses the two distinct parts by speaking of an "**exception process"** never ordered by FERC. We urge the SDT to clearly define "radial" in such a way that no external "process" is needed, and that radial facilities can easily be determined by each registered entity by inspection. And if they have facilities that don't meet the radial definition, they may still be put through a formal exemption process and be exempted if they are found not to contribute to reliable operation of the BPS.

The WECC Bulk Electric System Definition Task Force has done extensive work on this topic. Please consider their current work when drafting the BES definition and exemption process.

Brian J. Murphy, NextEra Energy, Inc.

Telephone: (305) 442-5132

Email: Brian.J.Murphy@fpl.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: Based on the information posted by the North American Electric Reliability Corporation (NERC) on its plans to address Order No. 743 of the Federal Energy Regulatory Commission (FERC), NextEra Energy, Inc.1 (NextEra) believes that NERC (and associated drafting teams) should slightly modify its direction to more closely align with FERC's proposed framework. In Order No. 743, at paragraph 30, FERC stated that:

The Commission believes the best way to address these concerns is to eliminate the regional discretion in the ERO's current definition, maintain the bright-line threshold that includes all facilities operated at or above 100 kV except defined radial facilities, and establish an exemption process and criteria for excluding facilities the ERO determines are not necessary for operating the interconnected transmission network. It is important to note that Commission is not proposing to change the threshold value already contained in the definition, but rather seeks to eliminate the ambiguity created by the current characterization of that threshold as a general guideline.

1 NextEra registered entities, which include NextEra Energy Resources, Inc. and Florida Power & Light Company, operate in the eight NERC regions. **Official Comment form for BES Definition Exception Process** FERC also provided NERC with the opportunity to propose an alternative approach. NextEra believes, however, that FERC's proposed framework is appropriately designed to enhance the definition of the Bulk Electric System (BES) in the NERC glossary, and to separately develop a process to apply for and receive, as appropriate, an exemption from the BES definition. Although it appears that NERC and the drafting teams may also be inclined to proceed as suggested by FERC, there are indications in the questionnaire and BES concept paper that there may be some thought to deviating from FERC's proposal.

A review of the information posted by NERC seems to indicate NERC's intention to have a drafting team develop a revised BES definition via the standards development process (*i.e.,* Appendix 3A of the NERC Rules of Procedure). It also seems that NERC is interested in assigning a "working group" to separately develop an exemption process that would be implemented as a new process in the NERC Rules of Procedure. NextEra agrees with this approach.

NextEra's concerns stem from some of the words in the proposed BES definition, the BES concept paper and the questions asked, which seem to suggest an unnecessarily overlapping definition and exemption process, and a movement toward an exemption process based on categories rather than criteria. Thus, to address these concerns NextEra proposes the

following enhancements to more clearly separate the BES definition and exemption process, and align each more closely with Order No. 743.

As for the BES definition, NextEra encourages the drafting team to solely focus its efforts on the definition. The currently posed revised BES definition reads as follows:

Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher necessary to support bulk power system reliability. Elements and Facilities operated at voltages of 100kV or higher, including Radial Transmission systems, may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process.

NextEra maintains that this is not the correct starting point, nor consistent with Order No. 743 or the other material posted by NERC, that suggests a more definitive separation of the BES definition from the exemption process. Thus, NextEra proposes that the definition be revised to read as follows:

Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher, unless a Transmission or Generation Element or Facility has been exempted pursuant to the exemption process set forth in the NERC Rules of Procedure. **Official Comment form for BES Definition Exception Process** This proposed BES definition more clearly and cleanly separates the BES definition from the exemption process. It also does not add unnecessary qualifiers or verbiage that may result in confusion.

NextEra is also concerned that the working group assigned to the exemption process may initially be more focused on developing categories, instead of an exemption process and associated criteria. Given the unique circumstances of the interconnected BES, including system topology, NextEra does not believe that it would be a productive exercise for the exemption working group to focus on types, groups or categories of equipment; instead, its efforts should focus on developing specific objective criteria to judge the reasonableness of a request or application for an exemption. This approach also seems more in line with FERC's statement in Order No. 743 at paragraph 115:

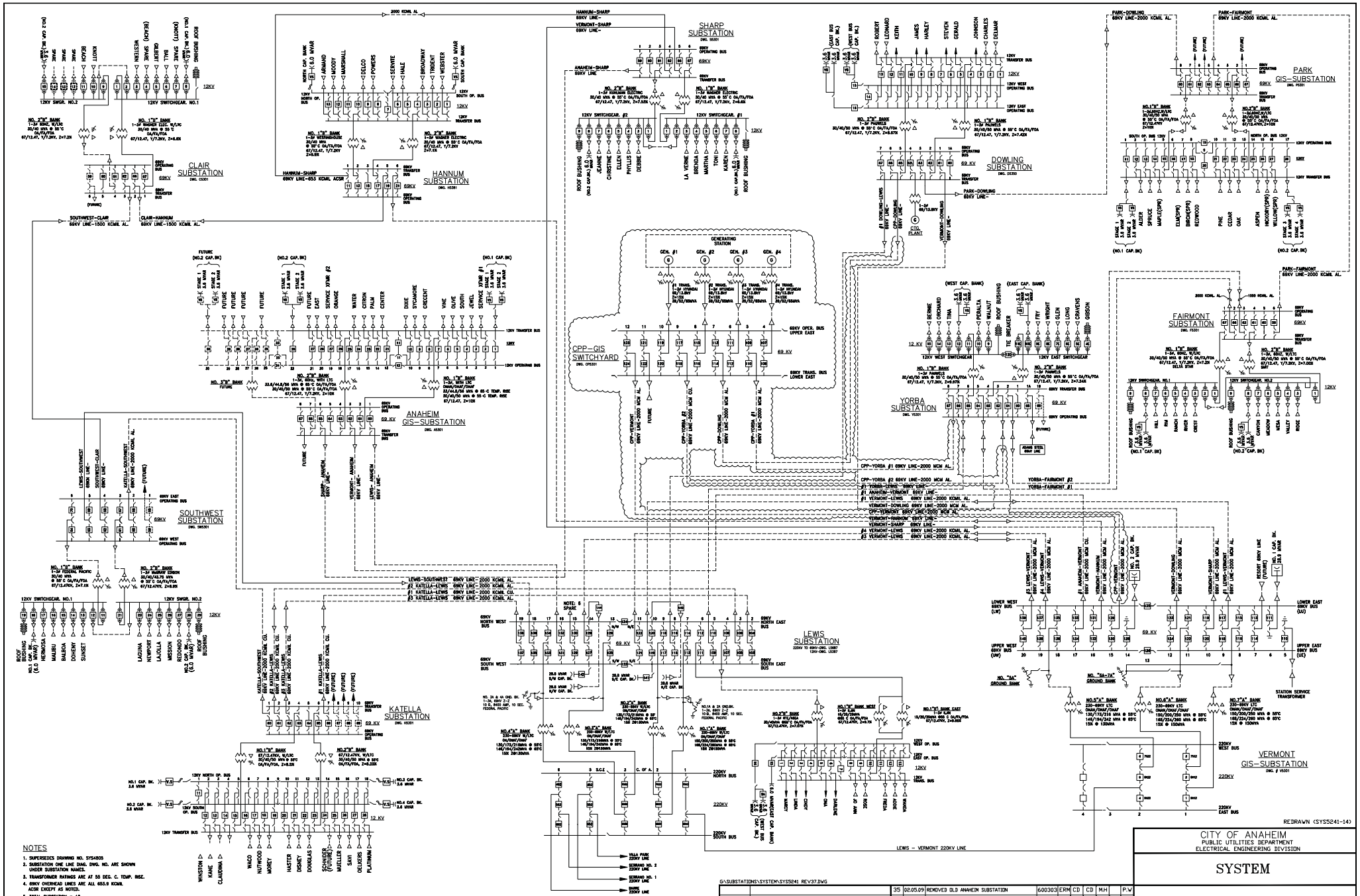
NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid. The ERO also should determine any related changes to its Rules of Procedures that may be required to implement the exemption process, and file the proposed exemption process and rule changes with the Commission. The challenges of developing an exemption process also include ensuring than any applicant is afforded due process and balanced decision-making, as required by section 215 of the Federal Power Act. Thus, the exemption process must address legal, regulatory and technical issues.

Accordingly, NextEra requests that NERC assemble a working group (perhaps via the Standards Committee) to develop the exemption process that is comprised of stakeholders

with legal, regulatory and technical experience. Without this balance of disciplines, NextEra is concerned that a technical-heavy working group will attempt to develop a "fix," instead of a process whereby applicants may request an exemption, and have that exemption judged by specific criteria and pursuant to a process that affords due process and balanced decision-making.

It is not clear whether an exemption working group has already been assembled. If it has, NextEra requests that NERC consider restructuring of the group consistent with NextEra's proposal.

In summary, NextEra requests that the BES definition drafting team adopt NextEra's proposed definition of BES. NextEra also requests that NERC assemble a cross-functional working group to develop an exemption process based on specific criteria (rather than categories), and a process that affords applicants due process and balanced decision-making.



NOTES

1. SUPERSEDES DRAWING NO. SYS4805
2. SUBSTATION ONE LINE DWG. DWG. NO. ARE SHOWN UNDER SUBSTATION NAMES.
3. TRANSFORMER RATINGS ARE AT 55 DEG. C. TEMP. RISE.
4. 69KV OVERHEAD LINES ARE ALL 653.9 KCMIL ACSR EXCEPT AS NOTED.
5. TOTAL SUBSTATION = 12
   TOTAL 12KV FEEDERS = 106
6. ALL EQUIPMENT (69KV CIRCUIT BREAKERS AND DISCONNECT SWITCHES) ARE ON PLACE AND ENERGIZED. NO LOAD CONNECTED TO THIS POSITION.
7. ALL 69KV TRANSMISSION LINE OVERHEAD AND UNDERGROUND ARE SHOWN FOR REFERENCE ONLY. THE EXACT LOCATION AND LENGTH OF TRANSITION BETW 69KV OVERHEAD AND UNDERGROUND LINE IS SHOWN ON THE T&D DRAWINGS.

Attachment 1b.1 - Manny Robledo, City of Anaheim

G:\SUBSTATIONS\SYSTEM\SYS5241 REV37.DWG

DWG. NO.	REFERENCE	NO.	DATE	REVISION	W.O.	BY	CHK.	DSGR.	ENG.	P.E.	ENG. MGR.	
		35	02.05.09	REMOVED OLD ANAHEIM SUBSTATION	600303	ERM	CD	CD	M.H		P.W	
		34	01.21.09	AS-BUILTRECORD DWG REV.33	600303	ERM	CD	CD	M.H		P.W	
		33	10.26.07	CHANGE LA JOLLA & WESTERN FROM FUTURE CKTS TO ACTIVE CKTS		RY		RY				
		32	08.26.08	ADDED NEW-ANAHEIM 69/12KV GIS SUB.	600303	CD	CD	CD	F.B		P.W	
		31	02.15.08	ADDED VERMONT 220/69KV GIS SUB.	600303	YK	CD	CD	M.H		P.W	
		37	10.27.10	ADDED CPP GENERATING STATION			CD	CD	CD	F.B	P.W	
		36	02.12.09	REVISED SCE SIDE BREAKERS NUMBERING FOR LEWIS SUB.			DT	M.H		M.H	P.W	

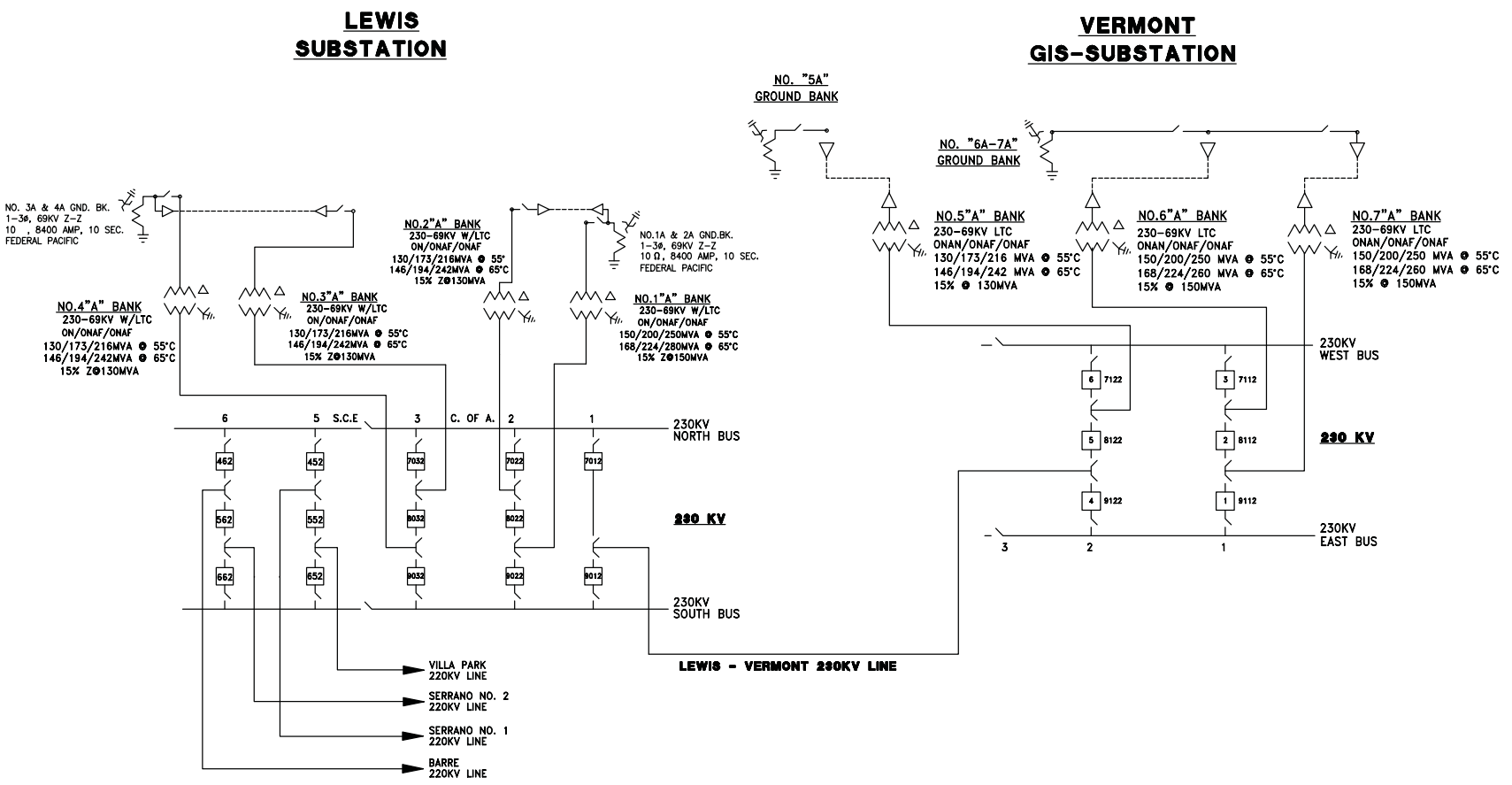
CITY OF ANAHEIM
PUBLIC UTILITIES DEPARTMENT
ELECTRICAL ENGINEERING DIVISION

SYSTEM

SYSTEM ONE LINE DIAGRAM

DATE 10-14-94	DSGNR.	ENG.	FIELD SUPT.	ENG. MGR.	
BY YOUNG	PROJ. NO.	DRAWING NO.			REV.
CHECK	W.O.	SYS5241			37
SCALE N.T.S.					

Attachment 1b.2 - Manny Robledo, City of Anaheim



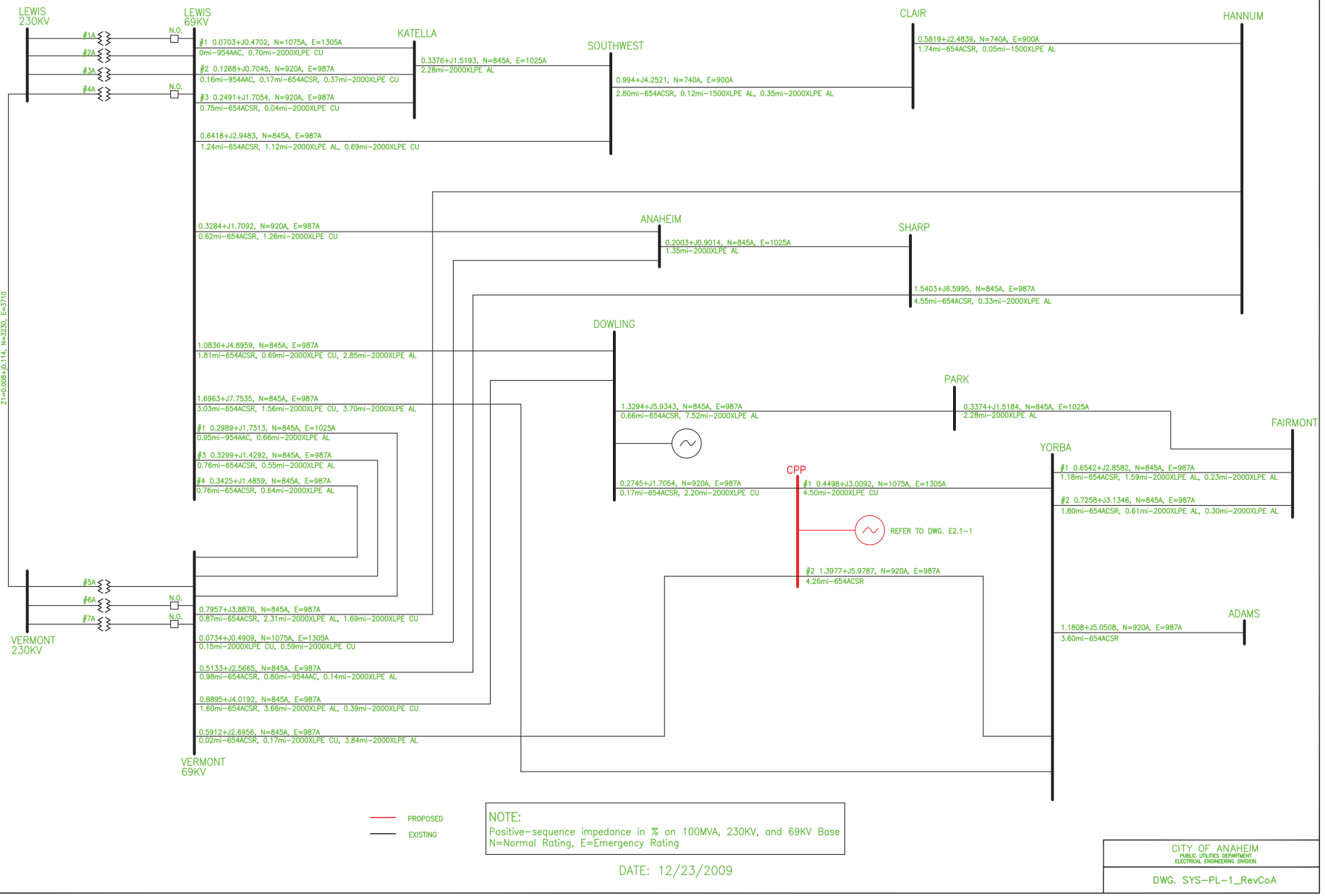
CITY OF ANAHEIM
PUBLIC UTILITIES DEPARTMENT
ELECTRICAL ENGINEERING DIVISION

230KV SYSTEM

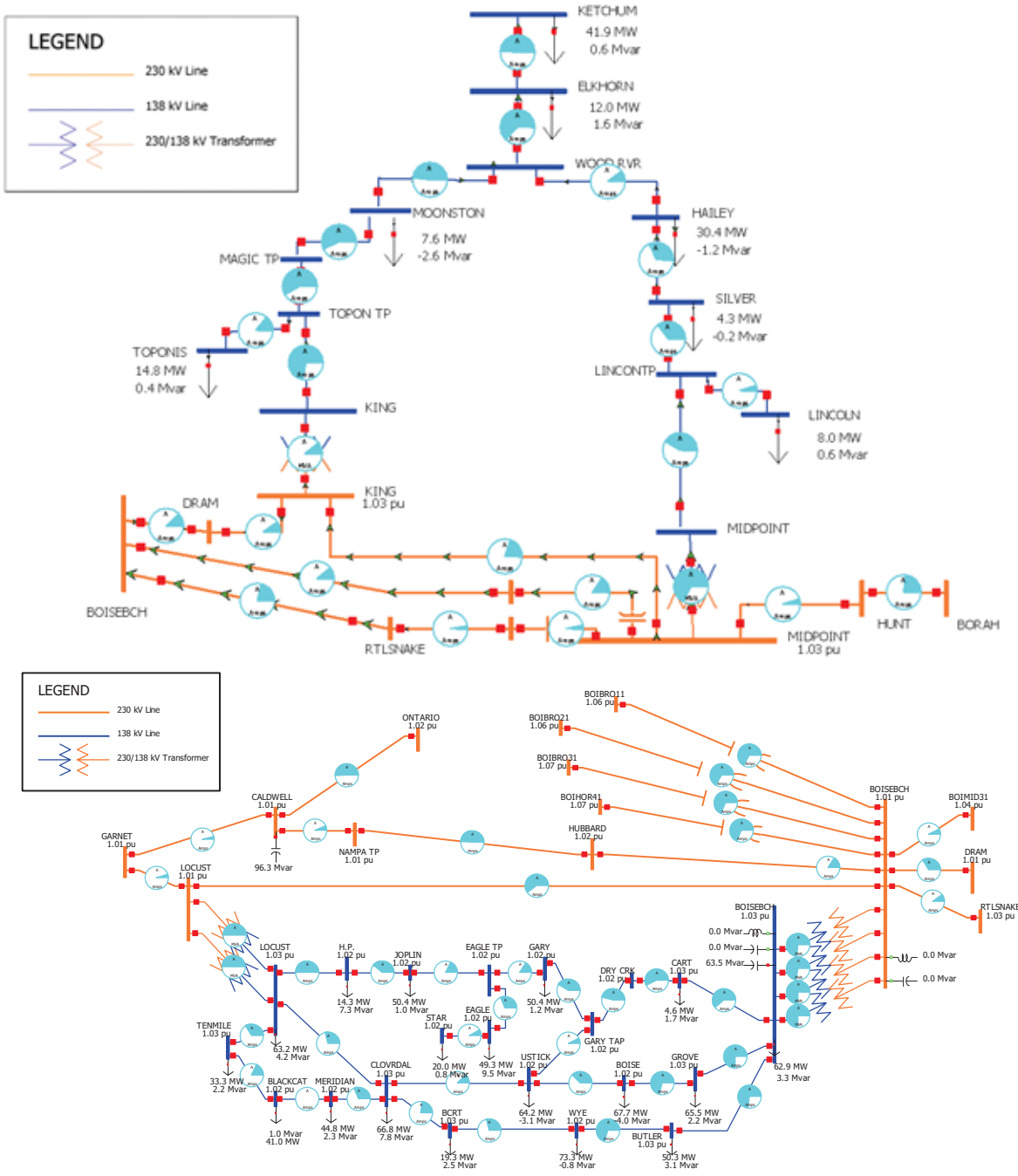
SYSTEM ONE LINE DIAGRAM

DATE	DSGNR.	ENG.	
BY	PROJ. NO.	DRAWING NO.	REV.
CHECK	W.O.		
SCALE N.T.S.			

Attachment 1b.2 - Manny Robledo, City of Anaheim



Official Comment form for BES Definition Exception Process



c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: Large load-serving substations require non-radial service to ensure acceptable reliability performance. Such transmission systems do not carry bulk power transfers as there are substantial higher voltage transmission lines that surround the metro area which carry the bulk transfers. Idaho Power has evaluated serving the area from systems that are sourced from only a single bulk substation. Such a configuration would result in requiring an additional 100 miles of transmission to compared to the existing network configuration.

Attachment 1

DRAFT Bulk Electric System Facilities
Excerpts from Proposal 6 – 1/5/11
Date: not yet approved

I. CLASSIFICATION

The following Table provides the framework for classification of Elements as BES or non-BES. In addition, the Table identifies the Elements which are subject to inclusion or exclusion based on the process set forth in Appendix A

	Description of **Element**	Included in BES and cannot be excluded through an exception process regardless of voltage level	Included in BES but could be excluded through an exception process	Not included in BES. Could be included through an exception process
A	**Elements** that provide Nuclear Off-Site Power Supply	**Yes**		
B	**Elements** that interconnects aBackstart Resource, or are part of a black-start Cranking Path[1] as included in the system restoration plan[2] of a Transmission Operator or Balancing Authority.	**Yes**		
C	**Elements** that are part of a WECC Transfer Path identified in the list of Major WECC Transmission Paths in Attachment 2, TOP-007-WECC-1.	**Yes**		
D	**Elements** operated above 100 kV (except G and H below)		**Yes**	
E	Generating Units and the associated **Generator Interconnection Elements** operated at or above 100 kV that meet the registration criteria in Section III (c) of NERC's Statement of Compliance Registry Criteria.		**Yes**	
F	**Elements** operated below 100 kV.			**Yes**

[1] Cranking Path is defined in the NERC Glossary.

[2] NERC Standard EOP-005, Attachment 1 sets forth the elements for consideration in a system restoration plan.

DRAFT

	Description of **Element**	Included in BES and cannot be excluded through an exception process regardless of voltage level	Included in BES but could be excluded through an exception process	Not included in BES. Could be included through an exception process
G	**Qualifying Radial Elements** operated below 200 kV.			**Yes**
H	**Local Distribution Networks** operated below 200 kV.			**Yes**

Table 1 – BES Classification

II. DEFINITIONS

Automatic Fault Interrupting Device (AFID)	A device that operates automatically (i.e., without operator intervention) to interrupt fault current. Such devices include circuit breakers, vacuum interrupters, and fuses.
Demarcation Point	A physical location that indicates a change from BES **Elements** to non-BES **Elements.**
Local Distribution Network	**Local Distribution Networks** are groups of **Elements** that function to distribute power to load rather than to transfer bulk power from location to location. **Local Distribution Networks** are connected to the BES at more than one location to improve the level of service to retail customer load. **Local Distribution Networks** must meet the following requirements: a. **Must be connected through automatic fault-interrupting devices.** All **Local Distribution Network** connections to BES **Elements** must be through **Automatic Fault-Interrupting Devices.** b. **Limits on connected generation.** If the network includes generation, it qualifies as a **Local Distribution Network** only if: (1) no single generator or line contingency could cause the loss of generation larger than the threshold for Generator Operator/Generator Owner registration set forth in the NERC Statement of Compliance Registry Criteria, and (2) the generation has not been designated, or is under contract, as a "must-run" generator or otherwise required to operate under some circumstances for BES transmission reliability. c. **Power flows into the Local Distribution Network.** Net power flows into, not out of, the **Local Distribution Network** under non-contingency conditions. "Net" power means the algebraic

	sum of flows at all points at which the **Local Distribution Network** connects to the BES. This requirement may be demonstrated by providing (1) any continuous 8760-hour meter data within the last two years from all boundary points of the **Local Distribution Network** or (2) if continuous 8760-hour data is not available, the entity and WECC Staff may mutually agree upon a data period. d. **Not used to transfer bulk power** ▪ The **Local Distribution Network** does not have, or contribute to, an established Path rating, WECC Operating Transfer Capability, nor a published TTC for flow through the **Local Distribution Network**. • Opening one or more connections from the **Local Distribution Network** to the BES does not decrease (but may improve), the established WECC Transfer Capability of (a) parallel transfer path(s) or **Elements**. ▪ The **Local Distribution Network** is not used to schedule energy originating outside of the **Local Distribution Network** for delivery across and outside the **Local Distribution Network** to other entity systems that are otherwise physically interconnected through to the BES by interconnections with third party systems. A **Local Distribution Network** that does not meet the criteria for exemption in this defi**nition may be excluded fro**m the BES by demonstrating that it is **not necessary for the oper**ation of an interconnected transmission system through the process set forth in Appendix A to this Policy.
Element	**Element** means an*y* electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components.
Generator Interconnection Elements	**Generator Interconnection Elements (GIEs)** are sole-use facilities for the purpose of connecting the generating unit(s) to the transmission grid. In this regard, the sole-use facility only transmits power associated with the interconnecting generator, whether delivered to the grid or delivered to the generator for station service or auxiliary load, or delivered to meet cogeneration load requirements. These **GIEs** are BES **Elements** to the extent that their connected generating units are considered part of the BES. The point of interconnection with the transmission system is the location at which operating responsibility for the Generator Interconnection Facility changes between the Transmission Operator and the Generator Operator. The principles expressed in this definition cannot and will not take effect until the relevant standards are modified to apply to these **GIEs** as Generator Owners and Generator Operators.
Qualifying Radial Element	**Qualifying Radial Elements** are radial **Elements** that meet the following criteria:

	a. **Normally not operated in parallel.** Transmission **Elements** that are normally operated as radial **Elements** are not deemed part of the BES, even if the radial **Elements** can be connected to the BES at more than one location through one or more normally open switches. To qualify, normally open switches, if any, which can be used to parallel the otherwise radial **Elements**, must be shown in operating diagrams and/or operating procedures as normally open. A normally open switch may be closed for a short period of time only to avoid interruption of service when load is transferred from one radial source to another radial source. b. **Limitations on connected generation.** The radial **Element** does not connect generating a unit or units which either (1) for any single unit, is greater than 20 MVA and interconnected at or above 100 kV or, for multiple units, are greater than 75 MVA in total or (2) has been designated and is under contract as a "must-run" generator or otherwise required to operate under some circumstances for BES transmission reliability. c. **Must be connected through an automatic fault-interrupting device. Qualifying Radial Elements** must be connected to the BES through an **Automatic Fault-Interrupting Device**. **Elements** connected to other **Elements** via a "hard tap" (not through an **Automatic Fault-Interrupting Device**) carry the same BES status as the **Element** to which they are connected. However, a hard-tapped **Element** may still be excluded from the BES through the material impact assessment set forth in Appendix A. If an **Element** meets all the requirements of a **Qualifying Radial Element**, all **Elements** downstream from the **Qualifying Radial Element** are also excluded from the BES. The upper extent of a set of **Qualifying Radial Elements** is identified by its **Demarcation Point**.

III. OTHER PROVISIONS

1. **Demarcation Points.** Please see Appendix C for a discussion regarding **Demarcation Points**.
2. **Separate ownership.** An **Element** that meets the qualifications for exclusion from the BES shall be deemed non-BES. In the case in which two or more parties own separate (parts of a) connected **Element(s)** that meet the qualifications for exclusion from the BES, nothing in this policy is intended to preclude the owners of any non-BES **Element(s)** from voluntarily complying with mandatory reliability standards related to that non-BES **Element(s)**.

Attachment 2

Appendix C – Draft 1/15/2011)

Demarcation Principles

The following points serve to explain the rationale for the demarcation points between BES and Non-BES elements. Note that the diagrams in this Appendix C are only intended to provide examples of the demarcation between BES and non-BES, and not as a substitute for the narrative definition.

Summary of Principles

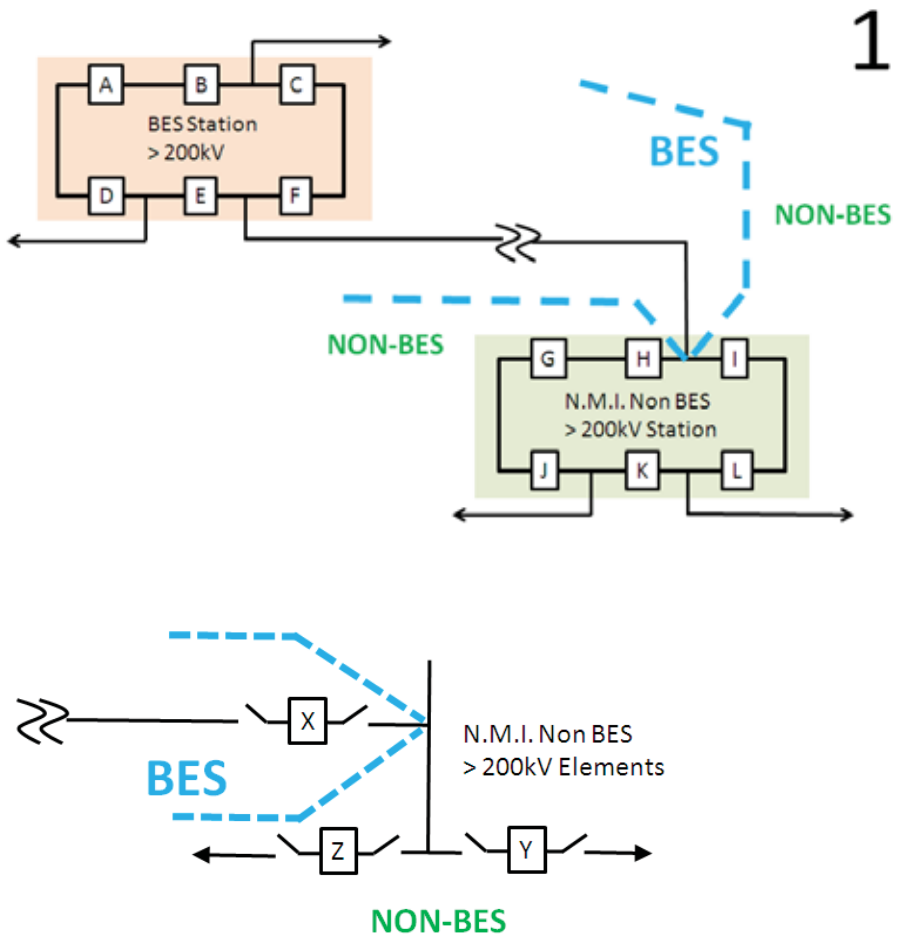
The demarcation principles are listed here along with a statement explaining the rationale for each, and are depicted in the various single-line diagrams that follow.

DRAFT

Official Comment form for BES Definition Exception Process

Principle 1:

A line connecting a BES bus to a bus that has been found to have no impact to the BES through the application of an MIA, shall be designated BES.



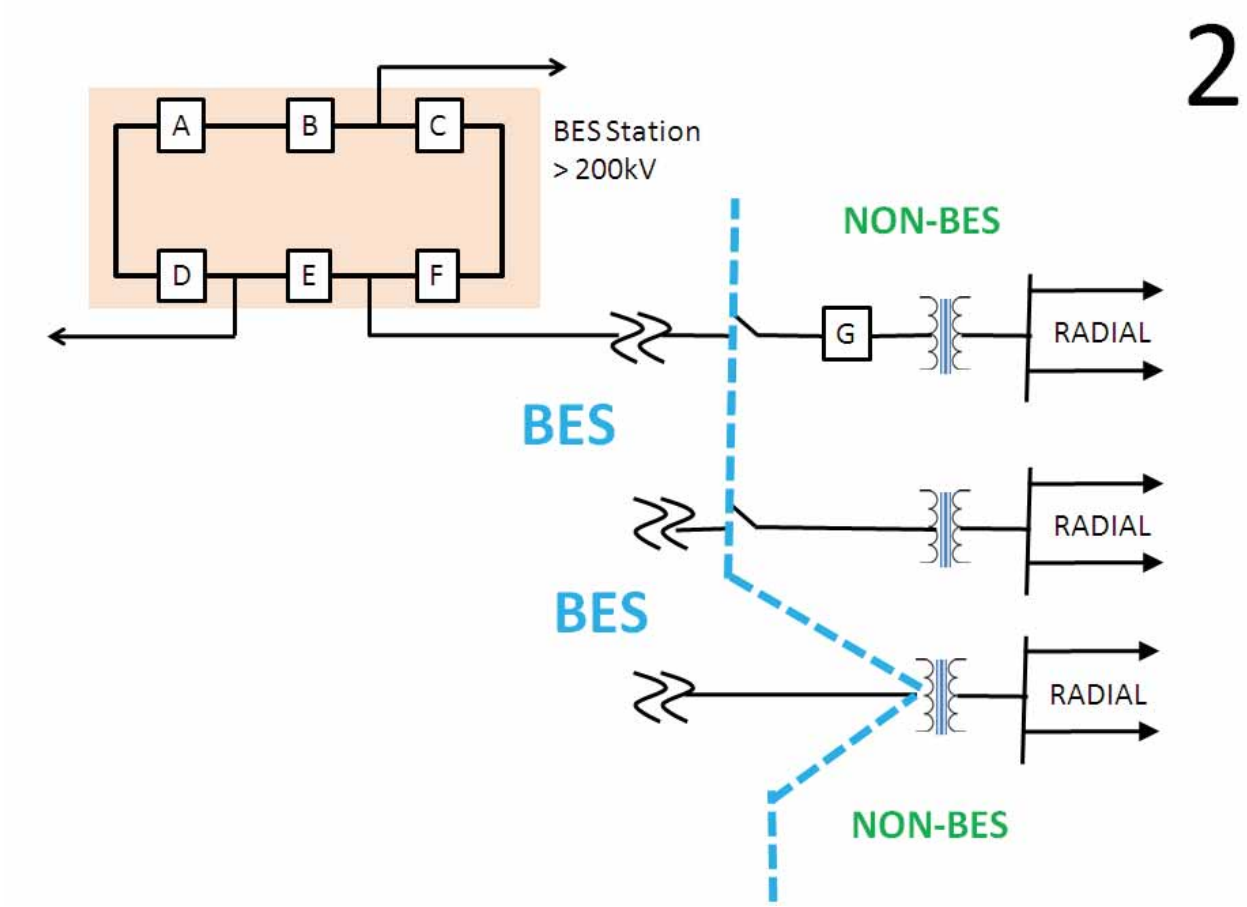
Rationale:

As the MIA process is applied to individual power system buses, line elements that connect BES buses to MIA-excluded non-BES buses represent a transition between BES and non-BES. The line connecting the bus excluded from the BES by MIA to a BES bus shall be designated BES by default, because it is indeterminate where along the line length the impact changes from material to immaterial to the reliability of the BES. The demarcation point is the physical connection of the line to the non-BES bus.

Official Comment form for BES Definition Exception Process

Principle 2:

A radial line having an operating voltage greater than 200kV is designated as BES from its point of connection with its source up to the point where the line is terminated at a physical disconnect switch within a receiving substation, or, if no switch exists in the receiving substation, the high side bushings of the receiving substation transformer(s).



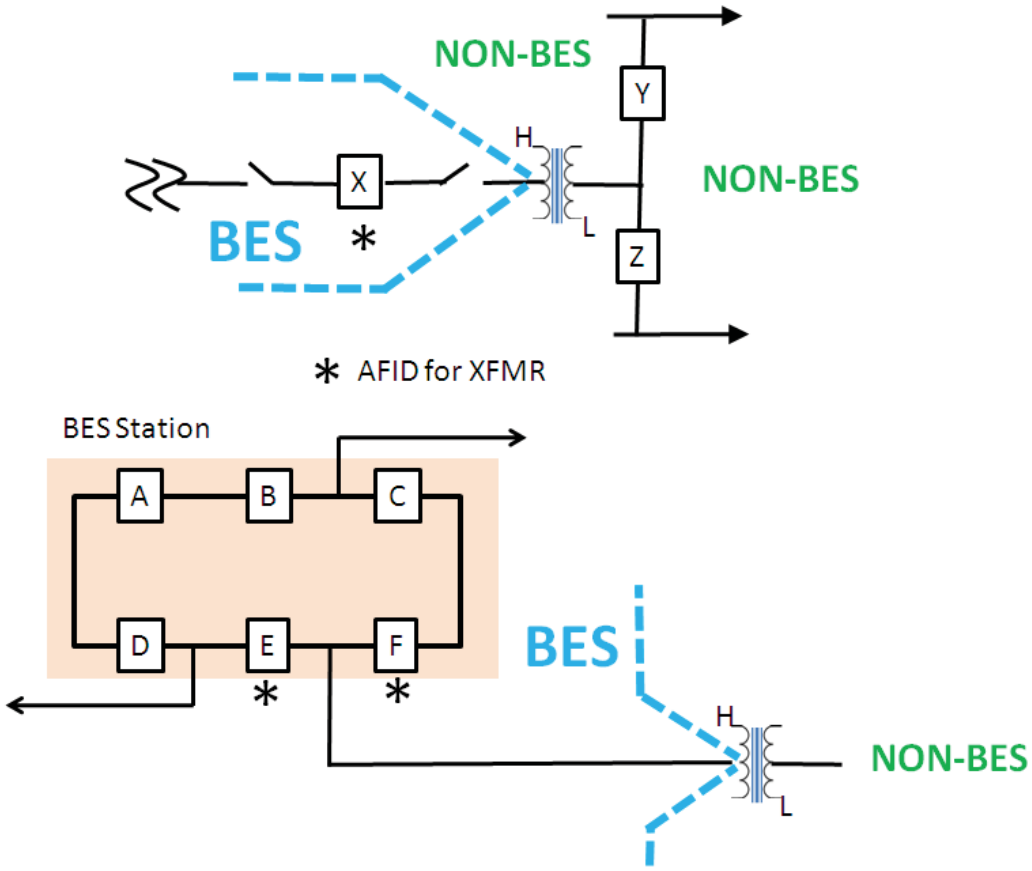
Rationale:

A radial line operated at above 200kV is brought into the BES through footnote 4 of the NERC Statement of Compliance Registry Criteria, provided, however, this line may be excluded through the MIA process.

Principle 3:

Except for Generator Step-up Transformers (GSU), provided that the high voltage side of a transformer is primarily protected by an Automatic Fault Interrupting Device (AFID), the transformer always takes the status of the low voltage side. For GSU's, the transformer's classification is that of the associated Generator Interconnection Element(s).

3



Rationale:

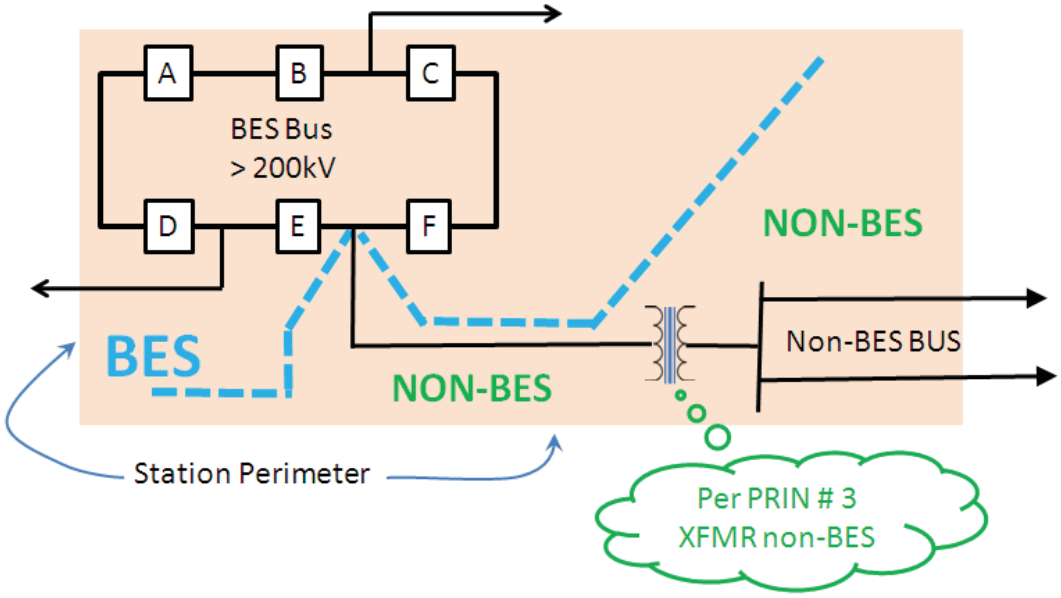
The presence of an AFID (or in the instance of ring bus or breaker-and-a-half scheme, AFIDs) allows the transformer to be considered as a separable unit serving the function of providing connection and transformation of the high side to the low side. Where the electric facilities on the low side are non-BES, the transformer is simply an extension of these non-BES facilities, providing delivery and connectivity from the BES source. For a GSU, the transformer is clearly an extension of the functionality provided by the Generator Interconnection Element(s), namely, to move bulk power from the BES generator to the BES network, and hence, the classification of the GSU must be matched to the GIE.

Official Comment form for BES Definition Exception Process

Principle 4:

The connection of a 200 kV or higher voltage bus to a non-BES transformer is also designated non-BES provided that the connection in its entirety is located within the confines of a substation/switching station perimeter.

4



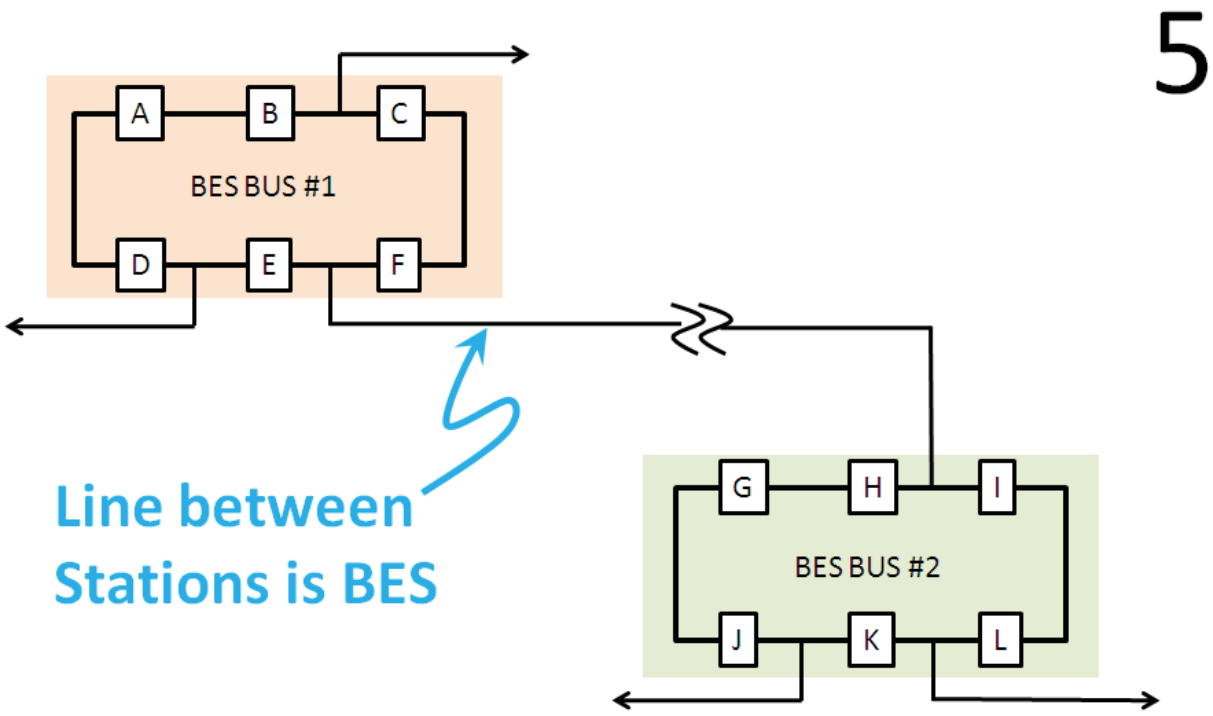
Rationale:

Within a substation, the connection from the BES to the non-BES transformer is considered to be an extension of the transformer itself. Had the lead line to this transformer extended outside the confines of the substation, it would be considered to be a line, rather than a bus extension, and would be addressed in a fashion similar to Principle 2 above.

Official Comment form for BES Definition Exception Process

Principle 5:

A line directly connecting one BES bus to another BES bus shall also be designated as BES.

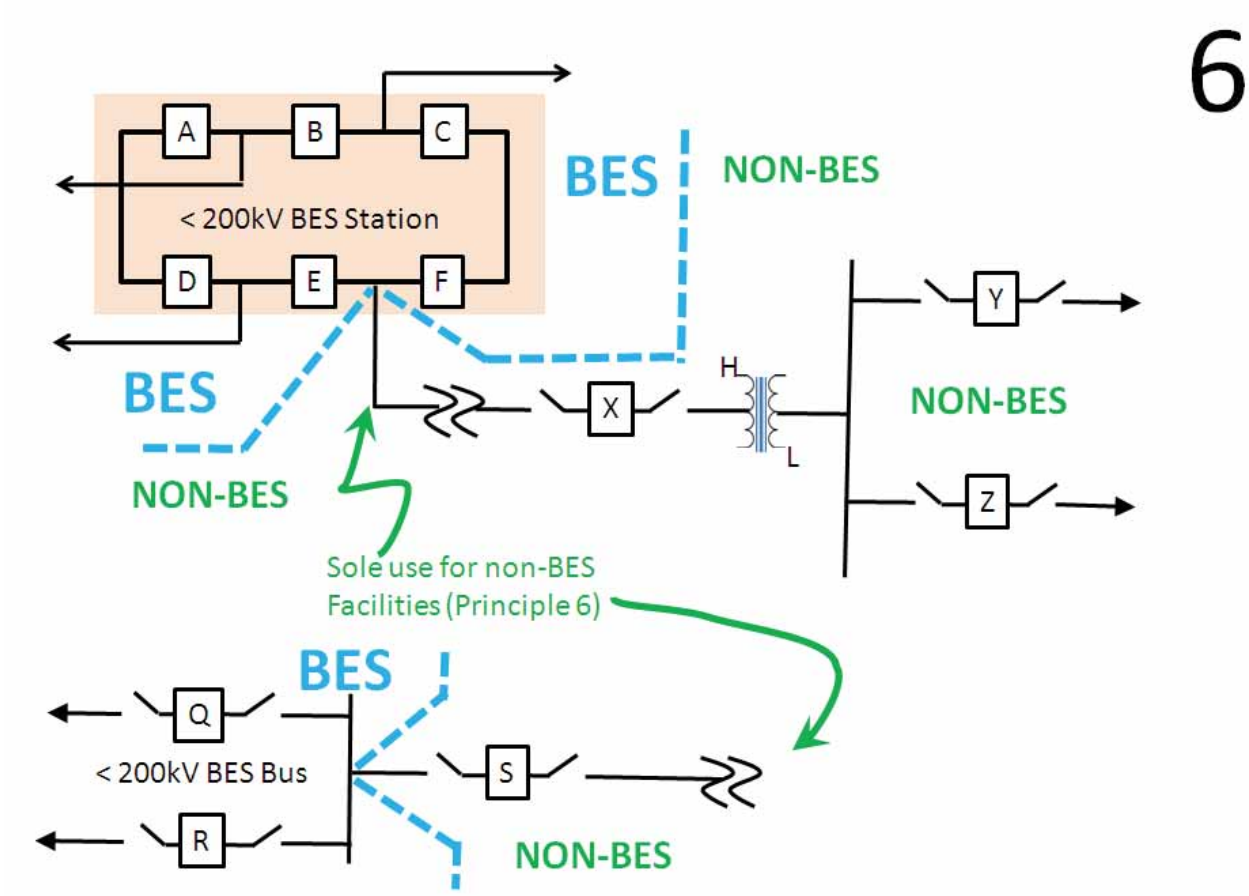


Rationale:

As both BES buses in question are directly connected to one another via a line element, that line element becomes an integral part of the BES. Note that this only affects direct connections between BES buses. If transformations or other intermediary network facilities are electrically connected between the bounds of two BES buses, they may qualify for Local Distribution Network exclusion from the BES.

Principle 6:

Where power flows through an AFID and connecting elements from a 200kV or lower BES bus solely to a non-BES element, that AFID and connecting elements shall be deemed non-BES. If the flow serves a BES element or a combination of BES and non-BES elements, the AFID and connecting elements carrying such dual purpose flow shall be considered to be BES.



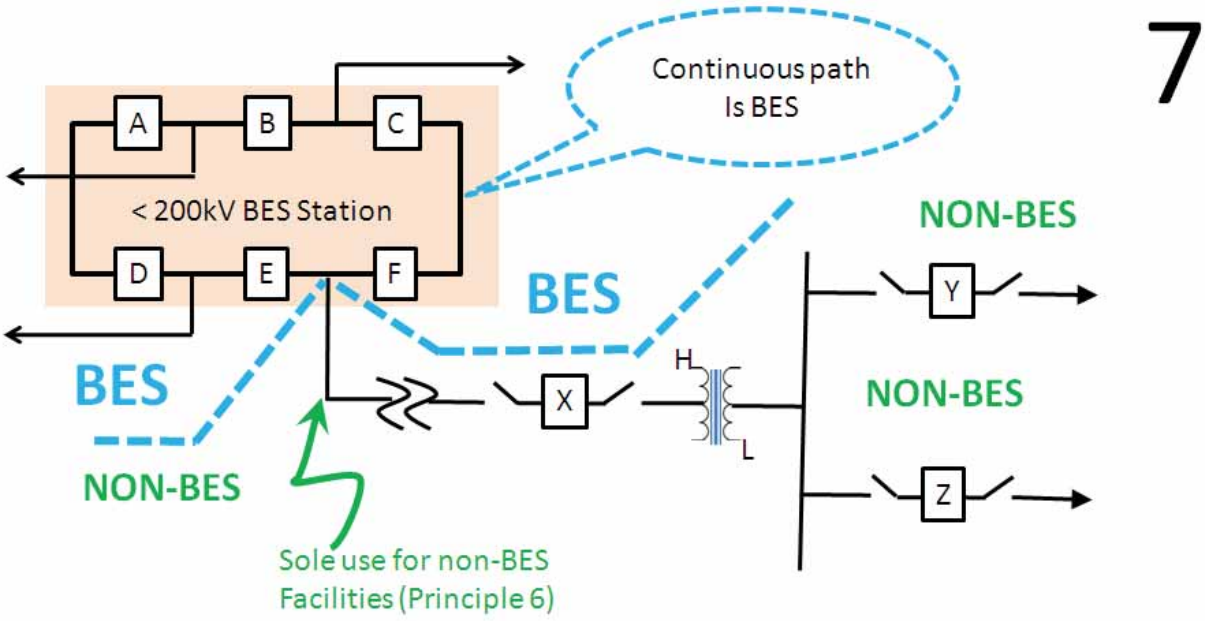
Rationale:

Where the sole use of an element is to provide connectivity from the BES to a non-BES element, the element itself is serving an entirely non-BES function. This applies only to 200kV and below, as above 200kV, footnote 4 of the NERC Statement of Compliance Registry Criteria becomes applicable. (See Principle 2 above.) If any of the flow on the subject element also serves (flows through?) a BES element, the element is serving a BES function, and it should therefore be classified as BES. [The concept of "BES flow" makes me wonder if we won't have to define what "BES flow" is.]

Principle 7:

Official Comment form for BES Definition Exception Process

The continuous path at a common voltage within a substation between two BES buses shall also be designated as BES.

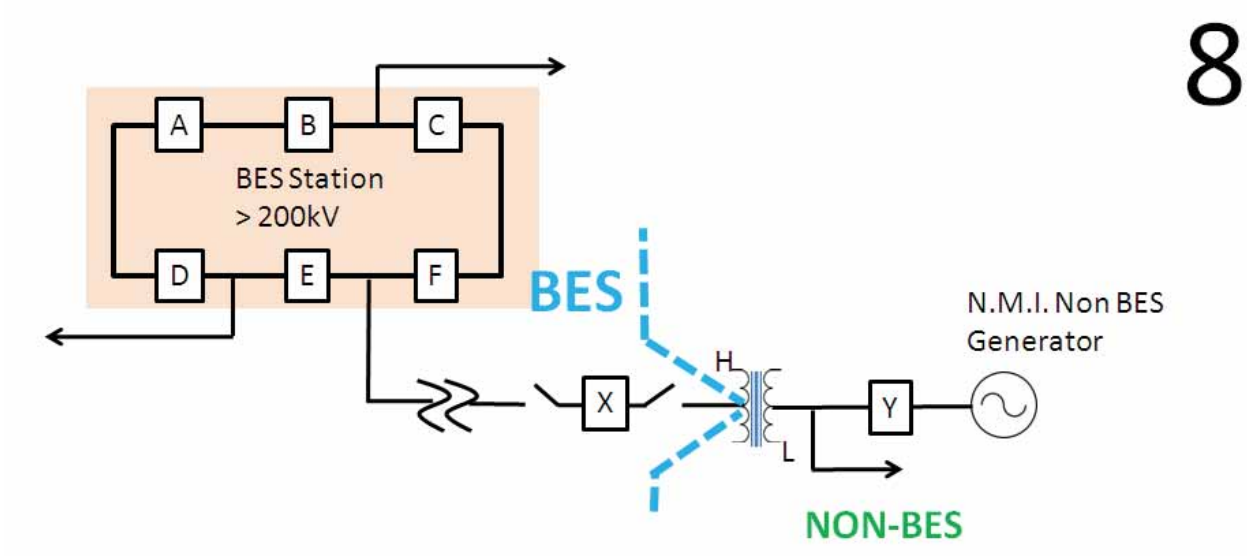


Rationale:

This is similar to Principle 5. The direct connection between BES buses is carrying BES flow, and hence, is serving a BES function.

Principle 8:

While Transmission Protection Systems are not elements of the BES, owing to the fact that they are secondary voltage sensing/control systems, some Transmission Protection Systems affect the reliability of the Bulk Electric System. Particularly, the Protection Systems associated with BES equipment (those that initiate opening of BES interrupting devices) shall be deemed to "affect the reliability of the BES" as in the context of NERC Standard PRC-005-1.



BDT - This diagram does not go with principle 8 and will be deleted from principle 8, but a principle 9 should probably be added to elaborate on the demarcation point between a non-BES generator and the BES.

Rationale:

Per the text in NERC Standard PRC-005-1, Transmission Protection Systems may "affect the reliability of the Bulk Electric System", and these are the ones that are subject to the requirements of this Standard. Therefore, it is recognized that Transmission Protection Systems themselves, are not BES components, but certainly may affect the reliability of the BES. Transmission Protection Systems that detect faults on non-BES elements and initiate opening of only non-BES elements do not have any impact on the reliability of the BES. However, certain backup protection systems for non-BES elements (for example, breaker failure protection schemes) can initiate the opening of BES breakers. [All Transmission Protection Systems whose purpose is to detect faults on the BES clearly have an effect on the reliability of the BES.

FRCC
Florida Reliability Coordinating Council, Inc.

FLORIDA RELIABILITY COORDINATING COUNCIL, INC.
1408 N. WESTSHORE BLVD., SUITE 1002
TAMPA, FLORIDA 33607-4512
PHONE 813.289.5644 • FAX 813.289.5646
WWW.FRCC.COM

FRCC Bulk Electric System

Purpose:

The Bulk Electric System, as defined by the NERC Reliability Standards Glossary, provides the ability to define and specify detail on a regional basis. The NERC definition is:

> "As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition."

The FRCC Regional Entity is further defining the definition to clarify and reduce ambiguity.

The Bulk Electric System within the FRCC footprint is defined as all:

1. Electrical generation resources greater than 20 MVA (gross nameplate rating) or a generation plant with aggregate capacity greater than 75 MVA ((gross aggregate nameplate rating) including generator step-up (GSU) transformers and associated equipment from the generator terminals to the high side of the GSU)) connected at voltages of 100 kV or higher (high side of GSU).

2. Transmission Elements and associated equipment, operated at voltages of 100 kV or higher.

3. Transformers (other than generator step-up (GSU) transformers) with both primary and secondary windings of 100 kV or higher.

The FRCC Bulk Electric System excludes:

- Any radial Transmission Element or System connected from one transmission source to load serving Elements and/or generation resources not included in item 1 above, where a loss of the radial Elements or System will not result in an Adverse Reliability Impact.

- Generating plant control and operation functions which include relays and systems that control and protect the unit for boiler, turbine, environmental, and/or other plant restrictions.

- All other Elements operated at voltages below 100 kV.

Final Version 9/1/2010

Approved by the FRCC Board of Directors _____

Effective Dates:
FRCC BES Definition, Appendix A: Clarification to the FRCC Bulk Electric System (BES) Definition for Radial Transmission Elements or Systems Exclusion, and Appendix C: Adverse Reliability Impact Study Requirements: 1st day of the 3rd calendar quarter following regulatory approval.
Appendix B: FRCC regional application of the term "transmission Protection Systems": 1st day of the 7th calendar quarter following regulatory approval.

Supporting Documentation

a) See Appendix A for further clarification of radial Transmission Elements or Systems.

b) See Appendix B for further clarification of transmission Protection Systems.

c) See Appendix C for further clarification of Adverse Reliability Impact Study requirements.

Appendix A

Clarification to the FRCC Bulk Electric System (BES) Definition for Radial Transmission Elements or Systems Exclusion

This is a clarification to the FRCC BES definition exclusion list regarding the exclusion of radial Transmission Elements / System. Since it is impractical to document every situation for exclusion of radial Transmission Elements / System, examples are provided for general clarification.

The exclusion states: "Radial Transmission Element or System connected from one transmission source to load serving Elements and/or generation resources not included in 1) above …", in general, unregistered generation[1], "… where a loss of the radial Elements or System will not result in an Adverse Reliability Impact".

There are a few principles that are applied in determining if radial Elements / Systems are excluded:

- Radial System can be a collection of parallel Elements as long as the radial System originates at one transmission source and that the System does not connect to a second transmission source under normal operations.
    - FRCC considers normal operations (i.e. normal system configuration) in determining whether Elements / Systems are radial and does not consider alternate configurations. For instance, entities may install normally open switches between radial Elements/ Systems and operate the switches in a 'make-before-break' fashion to allow for system reconfiguration to maintain continuity of electrical service to customers.
- One transmission source is a contiguous bus configuration (e.g. ring bus, breaker-and-a-half scheme, etc.) comprised of one or more BES Elements operated at one voltage level 100kV or higher.
- Adverse Reliability Impact is as defined in the NERC Glossary of Terms. Studies are necessary to determine if an Adverse Reliability Impact can result from the loss of a radial Element / System if the peak loads or generation resources within the radial Element / System exceed one-half of the largest single loss of source contingency in the FRCC region. Studies will be performed by the responsible entity and approved by the FRCC Planning Committee.

---

[1] Unregistered generation means that generation that does not meet the registration criteria described in NERC's Statement of Compliance Registry Criteria.

Approved by the FRCC Board of Directors _____

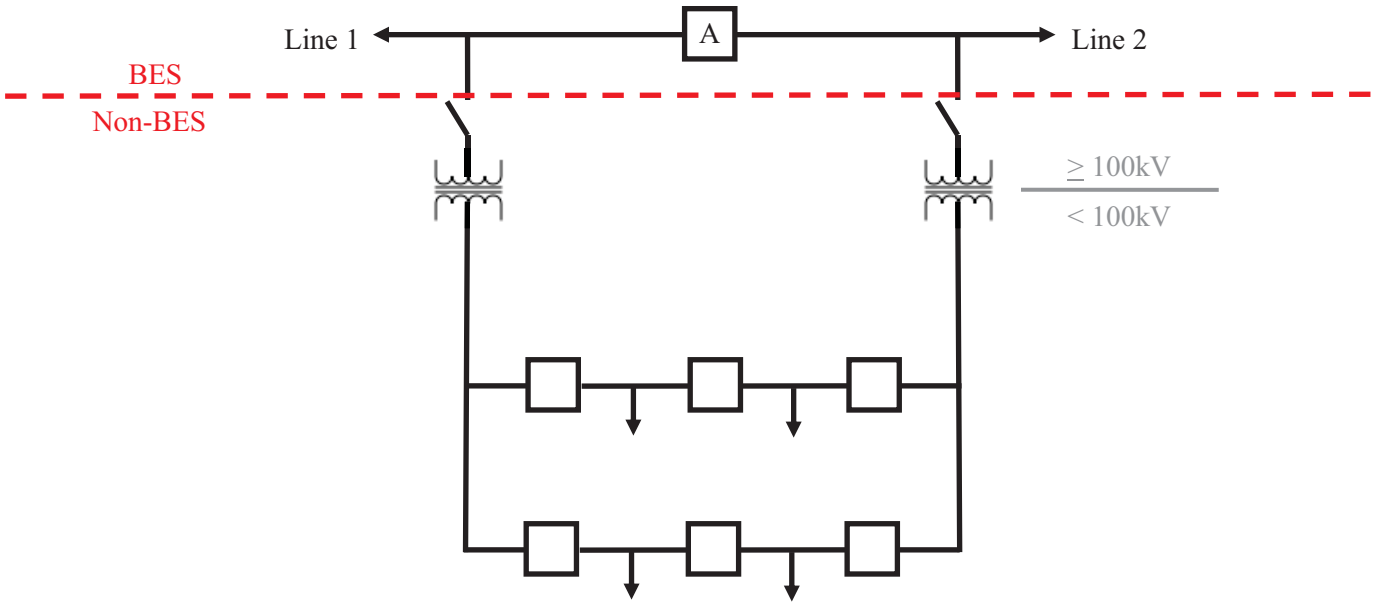
Effective Dates:

FRCC BES Definition, Appendix A: Clarification to the FRCC Bulk Electric System (BES) Definition for Radial Transmission Elements or Systems Exclusion, and Appendix C: Adverse Reliability Impact Study Requirements: 1st day of the 3rd calendar quarter following regulatory approval.

Appendix B: FRCC regional application of the term "transmission Protection Systems": 1st day of the 7th calendar quarter following regulatory approval.

The following examples are provided for clarification of where the boundary between BES and radial exclusions are located.

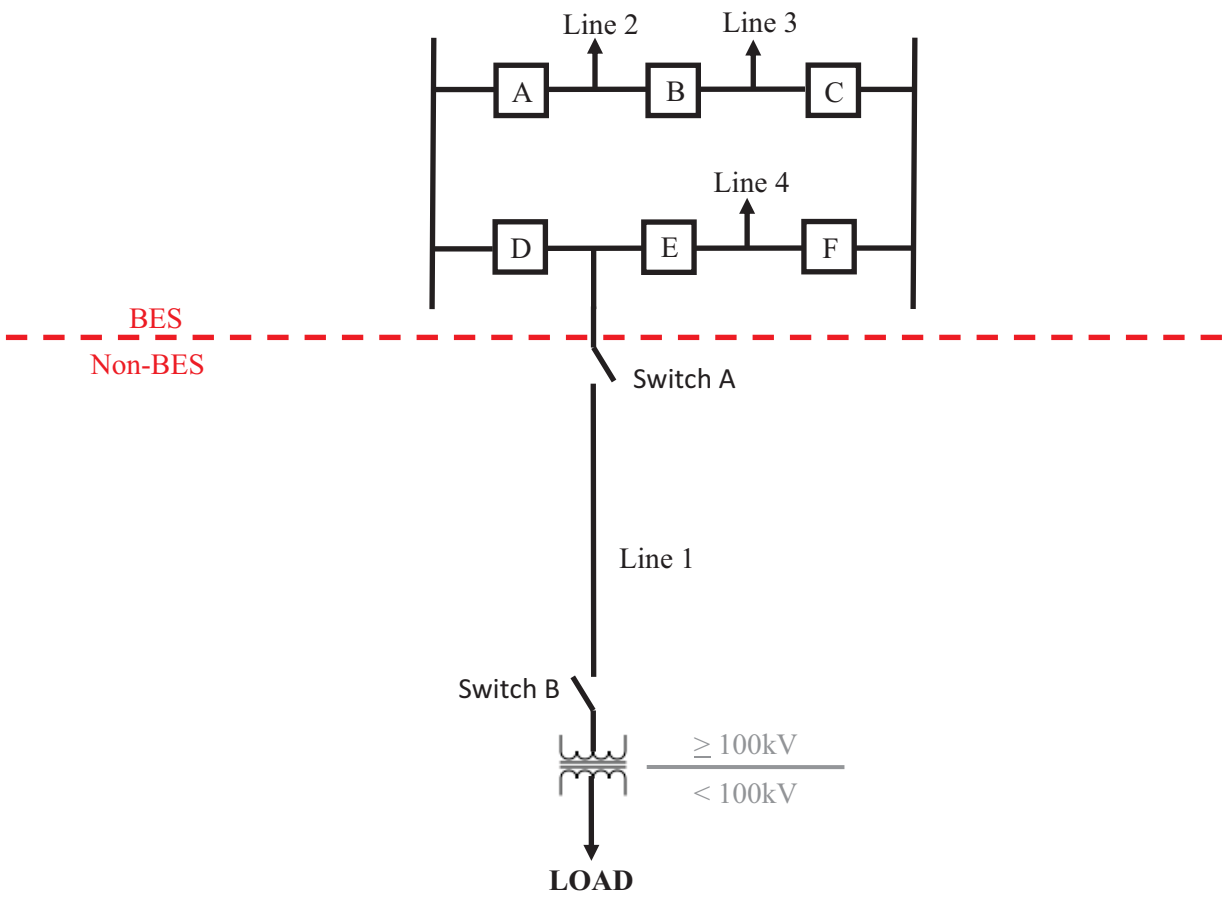
Example One:



In this example:

- Lines 1 & 2, breaker 'A' and the associated buses (> 100kV) are part of the BES.
    - The > 100 kV bus is the single transmission source.
- Radial Exclusion:
    - Both transformers and the illustrated switches are radial and excluded from the definition of the BES as long as the loss of the < 100 kV bus does not result in an Adverse Reliability Impact.
- The border between BES and non-BES is at the bus (source) side of the > 100 kV transformer switches.

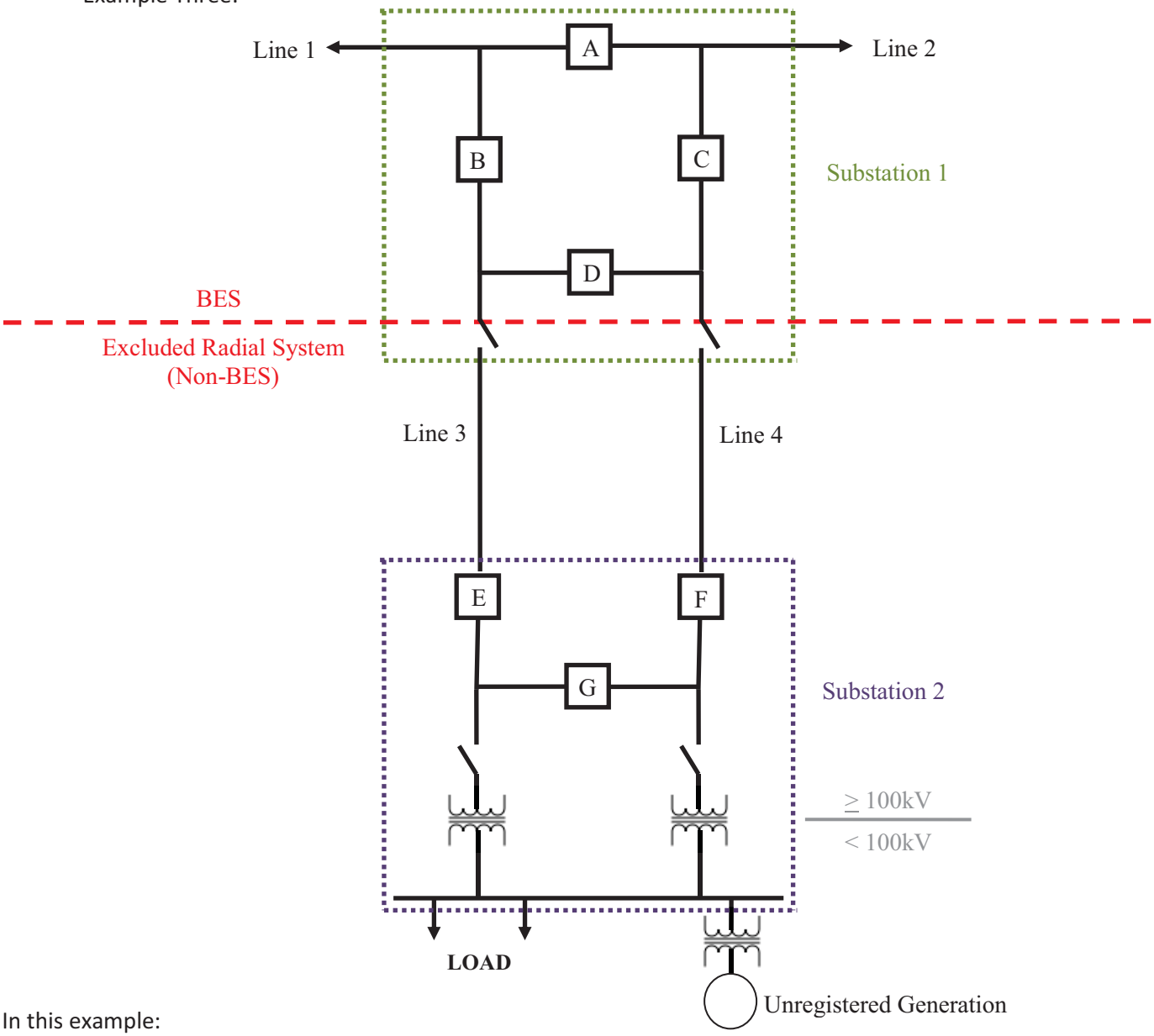
Example Two:



In this example:

- Lines 2, 3 and 4 are networked lines and part of the BES.
- Radial Exclusion:
  - Line 1 and associated switch are radial and are not part of the BES, as long as the loss of the radial system or portions thereof does not cause an Adverse Reliability Impact.
  - The transformer and associated switch are not part of the BES.
- The border between BES and the radial exclusion would be at bus (source) side of the Line 1 switch.
- If Switch A at the top of Line 1 does not exist then the BES/non-BES dashed line moves down to the source side of Switch B connected to Line 1.

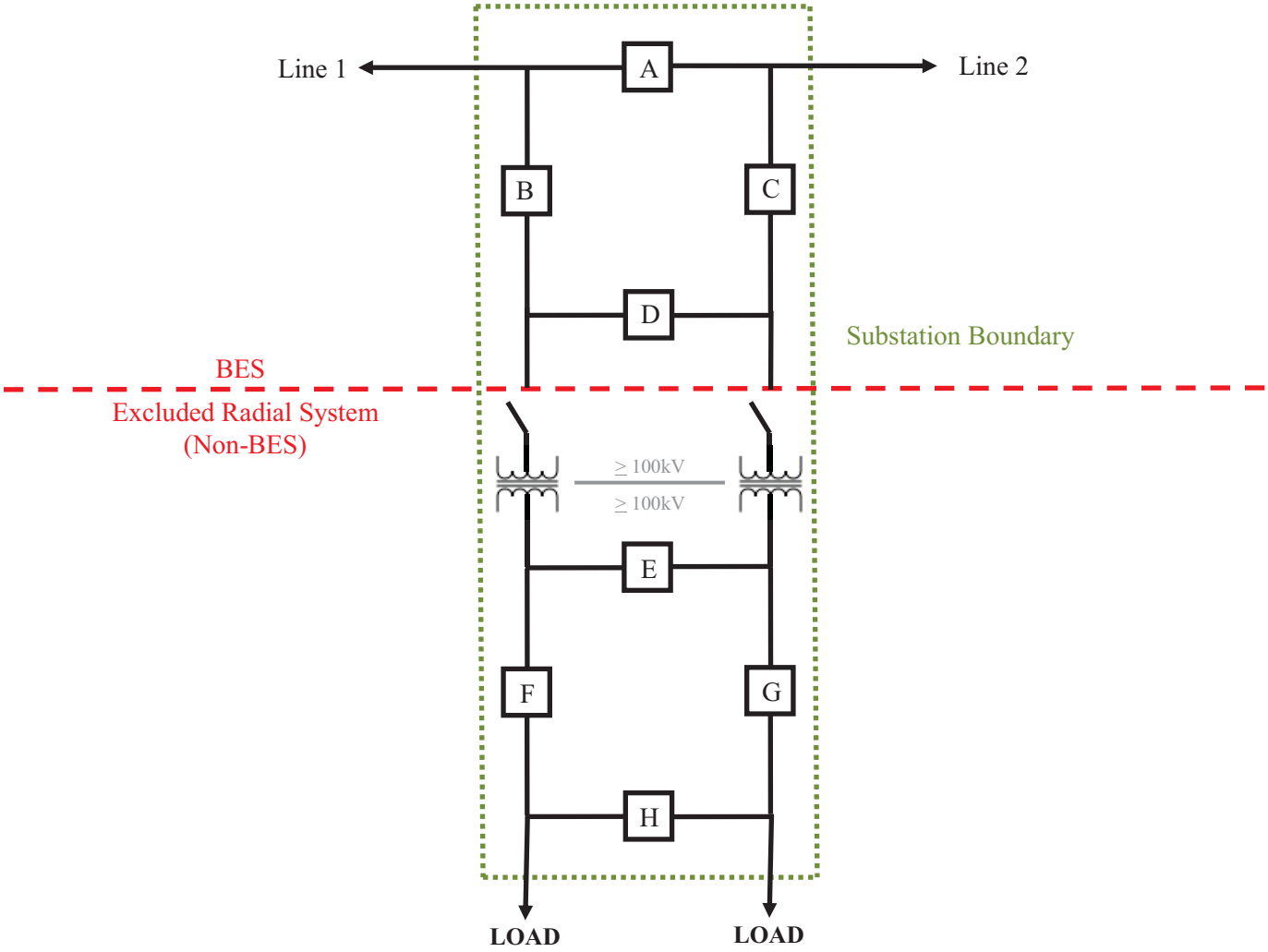
Example Three:



In this example:

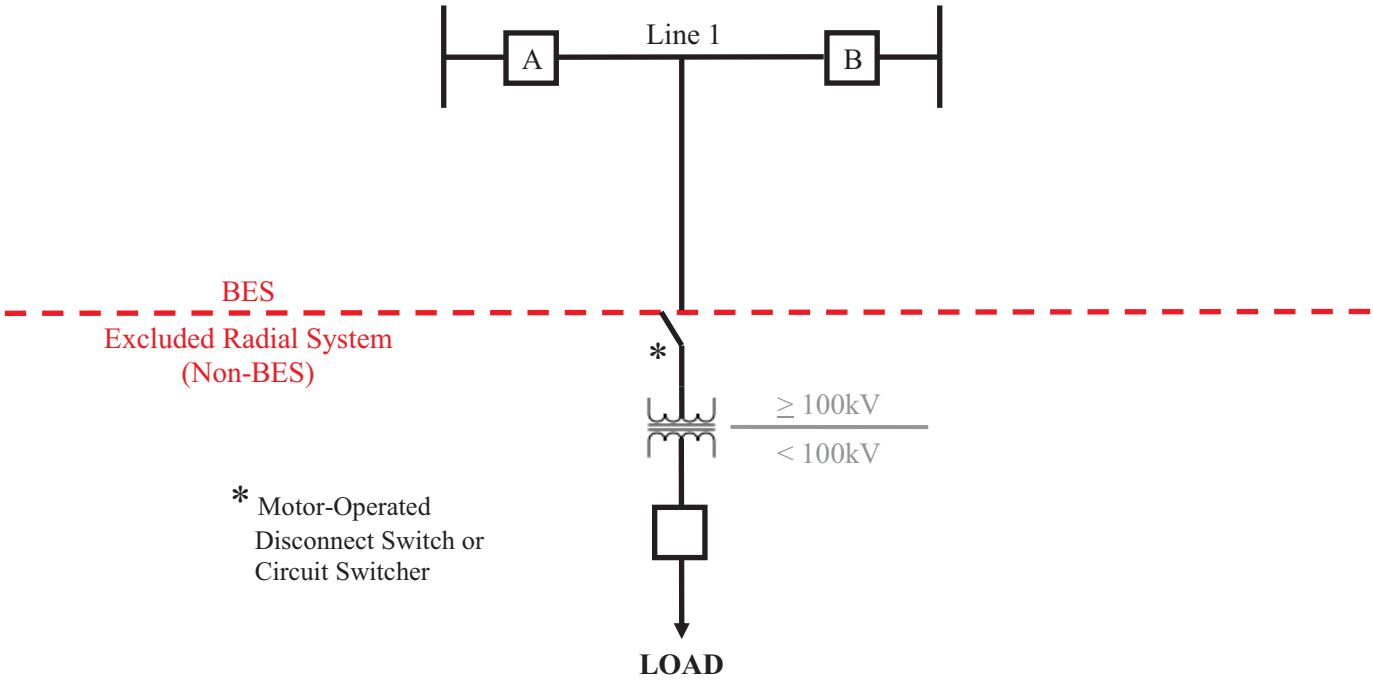
- Lines 1 and 2 and substation 1 are part of the BES.
- Radial Exclusion:
  - Lines 3 and 4, substation 2, and the transformers comprise the radial system since it serves only load and unregistered generation and is excluded from the BES as long as the loss of the radial system, or portions thereof (e.g., loss of all generation without loss of load, visa versa, or loss of the entire radial system) does not cause an Adverse Reliability Impact.
- The border between BES and the radial exclusion would be at bus (source) side of the Line 3 & 4 line switches at substation 1.

Example Four:



- Line 1, Line 2 and the ring bus comprised of breakers A, B, C and D are part of the BES.
- Radial Exclusion:
    - The transformers, the ring bus comprised of breakers E, F, G and H and the radial Elements serving only load emanating from that ring bus comprise the radial system as long as the loss of the radial system does not cause an Adverse Reliability Impact.
- The border between BES and the radial exclusion would be at bus (source) side of the transformer switches on the high side of the transformers.

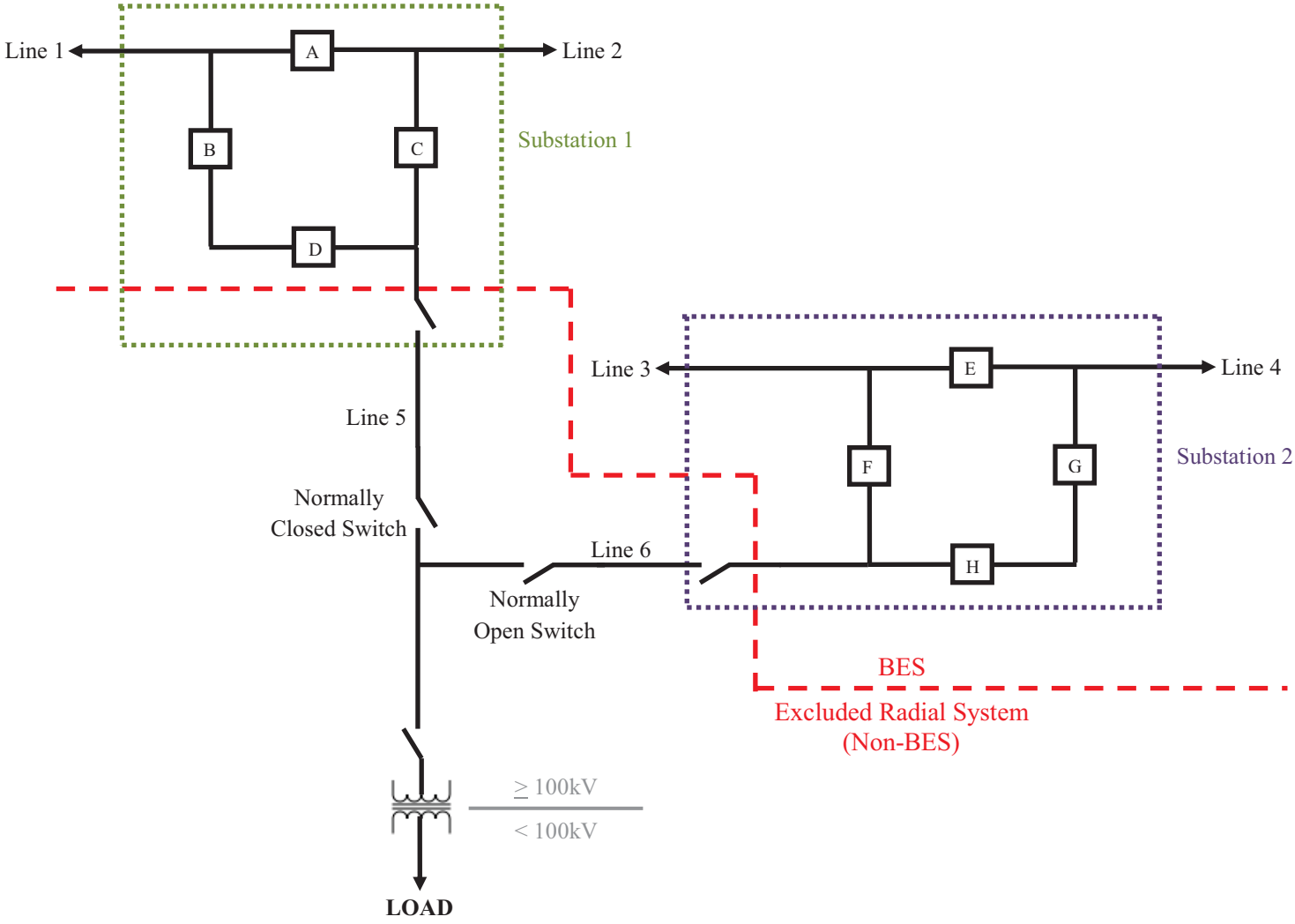
Example Five:



In this example:

- Line 1 is a network line supplying a tapped substation, and the line, including the tapped segment to the radial substation, is part of the BES since the entire line is operated as a single BES Element.
- Radial Exclusion:
    - The tap substation is radial and not part of the BES as long as the loss of the radial system or portions thereof does not cause an Adverse Reliability Impact.
- The boundary between the BES and the radial exclusion is at the line (source) side of the switch at the tapped substation.

Example Six:



In this example:

- Lines 1, 2, 3 & 4 and Substations 1 and 2 are part of the BES.
- Radial Exclusion:
  - Line 5 & 6 and the associated switches are radial and are not part of the BES as long as the loss of the radial systems or portions thereof does not cause an Adverse Reliability Impact.
  - The transformer and associated switch are not part of the BES.

Note: 'Make-before-break' switching to change the source from Substation 1 to Substation 2 does not void the radial exclusion.

- The border between BES and the radial exclusion would be at bus (source) side of the Line 5 & 6 line switches at Substations 1 & 2 respectively.

Appendix B

FRCC regional application of the term "transmission Protection Systems"

This is a clarification of the FRCC regional application of the term "transmission Protection Systems" as used in the PRC -series Reliability Standards Since it is impractical to document every situation for Protection Systems, examples are provided for general clarification.

Protection Systems, as defined by this Appendix B, are included in the definition of "transmission Protection Systems" for application of NERC PRC-series Reliability Standards.

- Protection Systems included in the application of the term "transmission Protection Systems":
    - Protection Systems that detect faults on transmission elements (lines, buses, transformers, etc.) identified as being included in the Bulk Electric System (BES) and trips an interrupting device that interrupts current supplied directly from a BES Element.

The following examples are provided for clarification of the definition of "transmission Protection Systems".

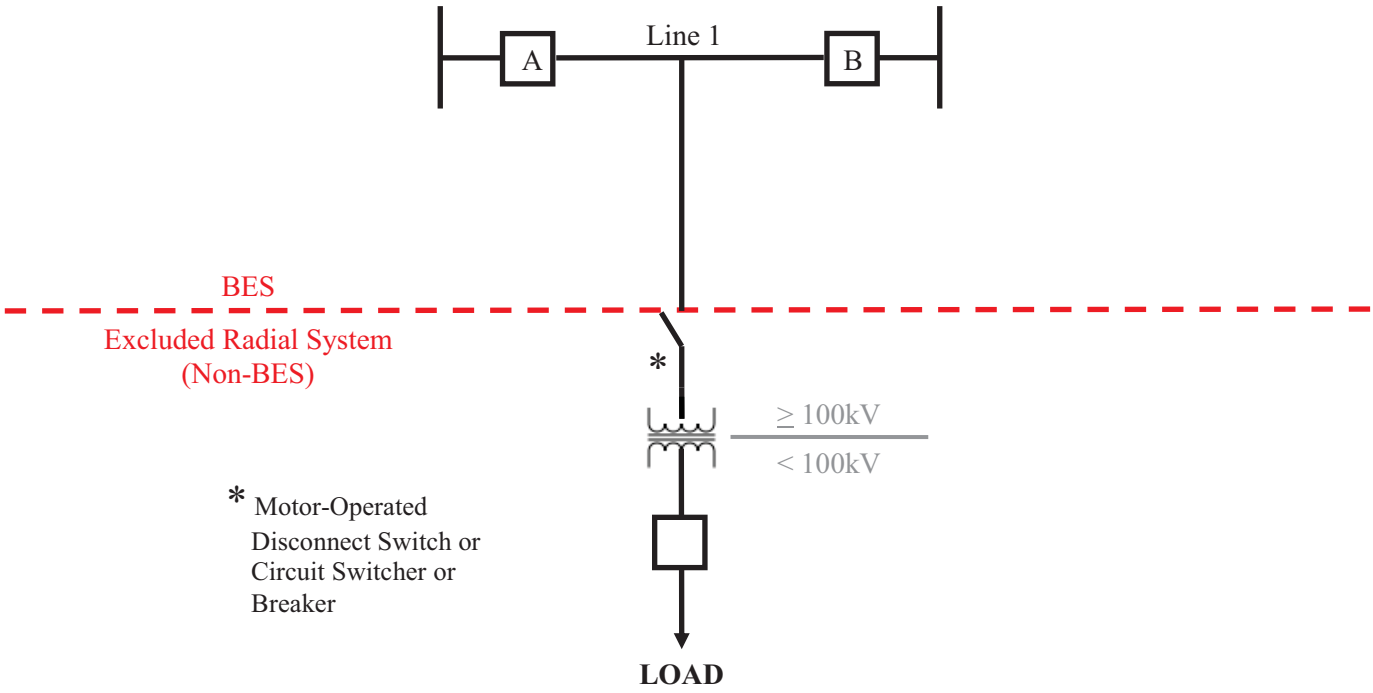
In general, a two step process is followed:

1. Identify which Elements are considered BES
2. Determine which Protection Systems detect faults on transmission elements (lines, buses, transformers, etc.) identified as being included in the Bulk Electric System (BES) and trip an interrupting device that interrupts current supplied directly from a BES Element.

Note: Isolation/disconnect switches are omitted in these examples (i.e., breaker disconnects, transformer isolation, etc.) except where such switches are relevant to operation of transmission Protection Systems.

Approved by the FRCC Board of Directors _____
Effective Dates:
FRCC BES Definition, Appendix A: Clarification to the FRCC Bulk Electric System (BES) Definition for Radial Transmission Elements or Systems Exclusion, and Appendix C: Adverse Reliability Impact Study Requirements: 1st day of the 3rd calendar quarter following regulatory approval.
Appendix B: FRCC regional application of the term "transmission Protection Systems": 1st day of the 7th calendar quarter following regulatory approval.

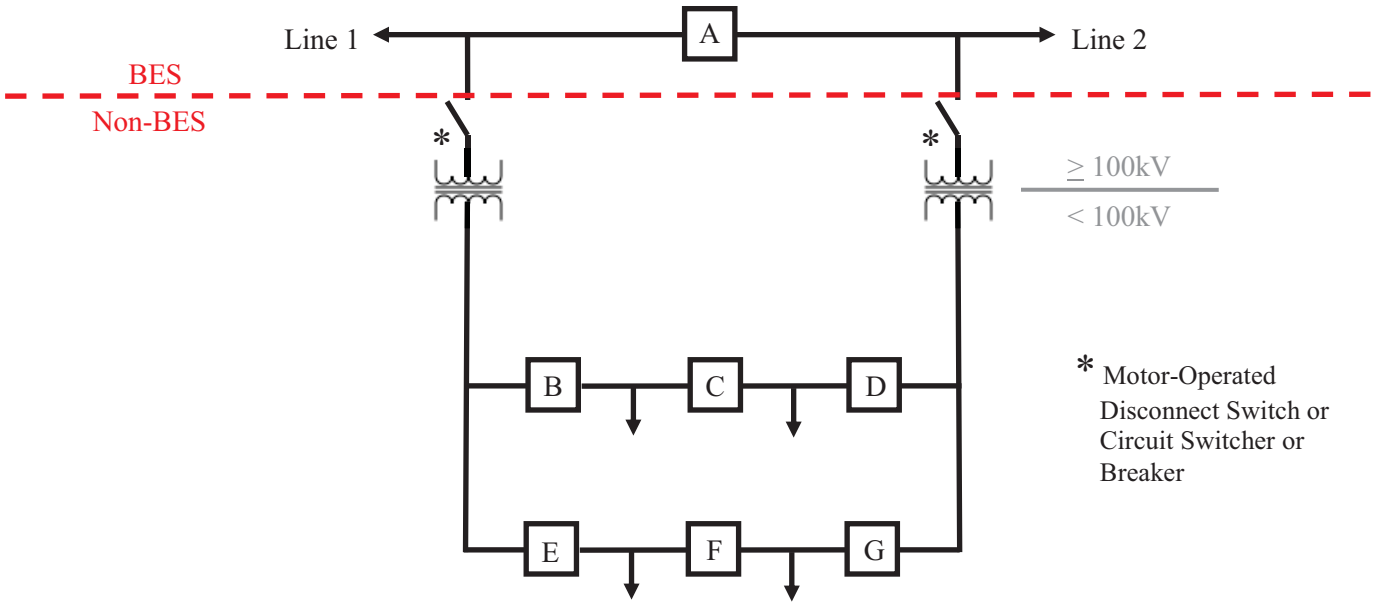
Example One:



In this example:

- Circuit breakers 'A' and 'B' and Transmission Line 1 are part of the BES.
- Protection Systems for Transmission Line 1 including the radial tap are "transmission Protection Systems."
- The transformer and associated switches are not part of the BES.
- Protection Systems for the transformer are not "transmission Protection Systems" because the transformer is not a BES Element.

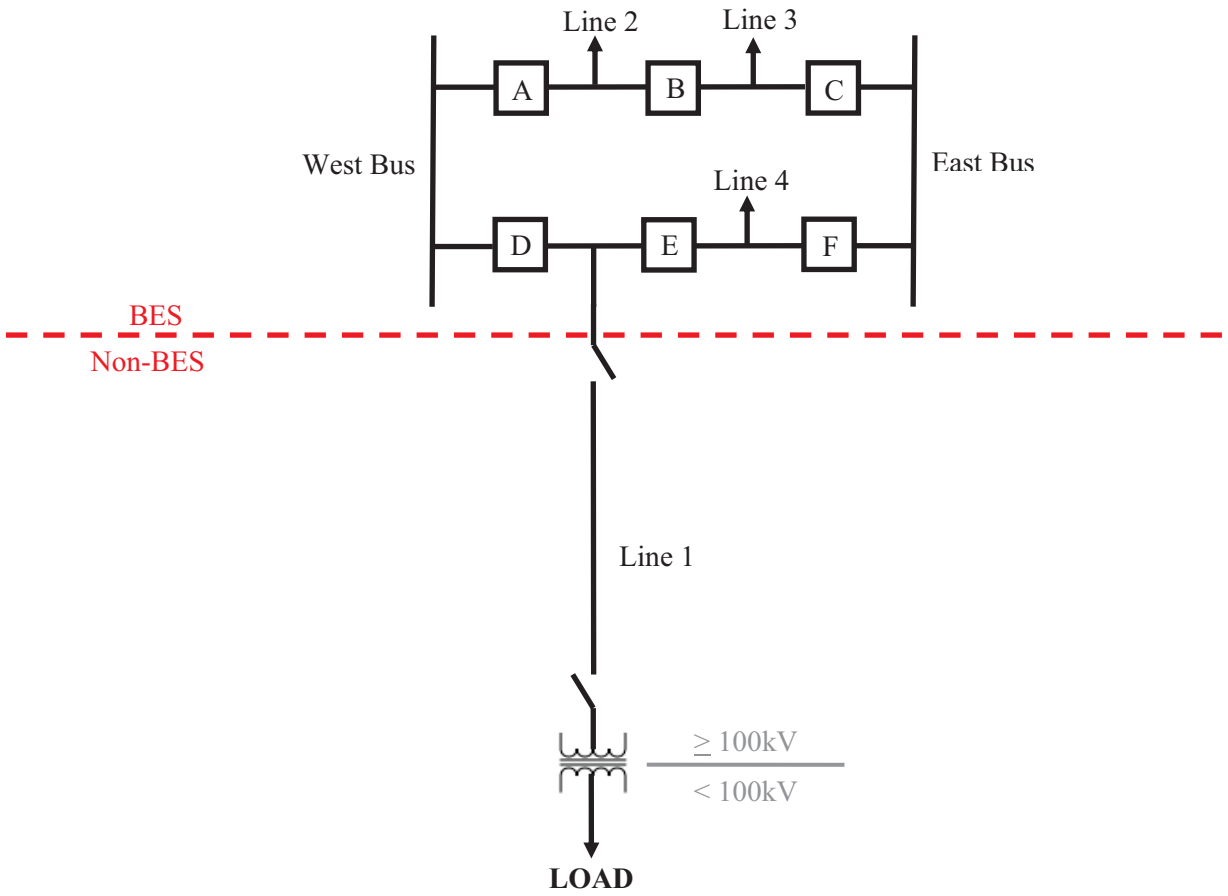
Example Two:



In this example:

- Circuit breaker 'A' and Transmission Lines 1 & 2 are part of the BES.
- The transformers and associated switches are not part of the BES.
- Protection Systems for Transmission Lines 1 & 2 are "transmission Protection Systems".
- Protection Systems for the transformer are not "transmission Protection Systems" because the transformer is not a BES Element.

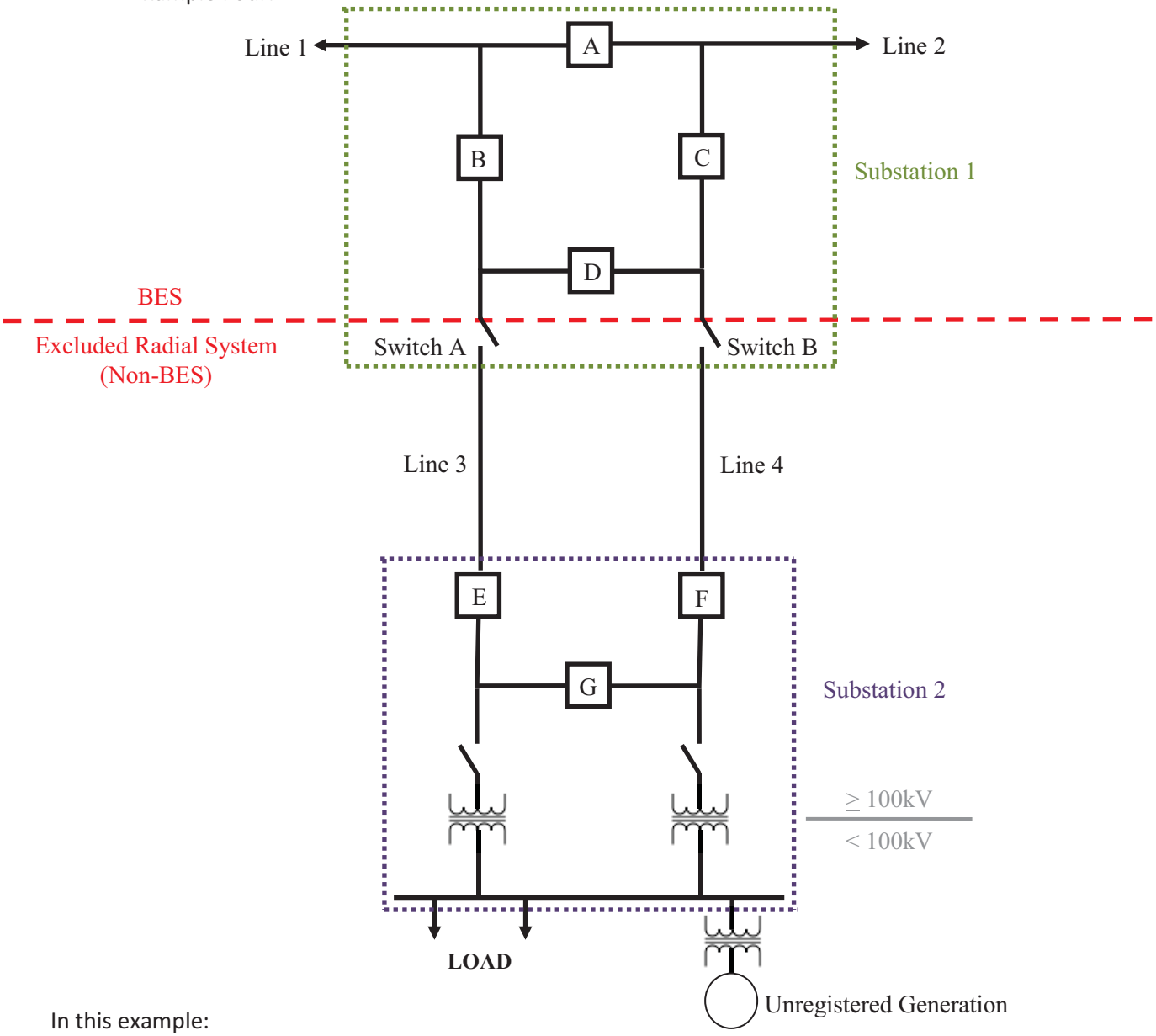
Example Three:



In this example:

- Lines 2, 3 and 4 and the substation, including the East and West bus, are part of the BES.
- Line 1, including the transformer and the associated switches, is radial and not part of the BES.
- The Protection System for the bus/line between breakers D and E and the associated tap is a "transmission Protection System."
- Protection Systems for the transformer are not "transmission Protection Systems" because the transformer is not a BES Element.

- Example Four:



In this example:

- Transmission Lines 1 & 2 and circuit breakers A, B, C and D are part of the BES.
- Circuit breakers 'E', 'F' and 'G', Transmission Lines 3 & 4 and the transformers are not part of the BES.
- The Protection Systems for the bus sections between breakers B and D and breakers C and D including the bus sections connecting to the source side of Switch A and Switch B are "transmission Protection Systems."

Appendix C

Adverse Reliability Impact Study Requirements

Purpose

Adverse Reliability Impact Study is the analysis (steady-state screening and if required dynamic stability analysis) performed by a functional entity that wishes to apply for exclusion of a radial system which exceeds the triggering parameter defined by the "Study Triggers" from the Regional Bulk Electric System (BES).

Study Triggers

Studies are necessary to determine if an Adverse Reliability Impact[1] can result from the loss of a radial Element / System if the peak loads or generation resources within the radial Element / System exceed one-half of the largest single loss of source contingency in the FRCC region.

If the entity's proposed radial system is above the established triggering parameter the entity will be required to perform an Adverse Reliability Impact Study and submit for approval in accordance with the 'Approval Process' defined in this document. This impact study should evaluate the loss of the proposed radial system applying the following study parameters.

Study Parameters

- Cover critical system conditions and study years as deemed appropriate by the responsible entity.
- Study FRCC Region transmission facilities to ensure that they remain within applicable ratings and voltage limits.
- Include loss of entire radial system as a contingency event.
- At a minimum, studies should cover a five (5) year period.
- Additional studies as requested by the FRCC Regional Entity Planning Committee.

Study Frequency

Adverse Reliability Impact Studies will be conducted every five (5) years or when system configuration changes dictate a need for re-evaluation or as requested by the FRCC Regional Entity (RE)

---

[1]The *NERC Glossary of Terms (dated: April 20, 2009)* defines Adverse Reliability Impact as: The impact of an event that results in frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or cascading outages that affects a widespread area of the Interconnection.

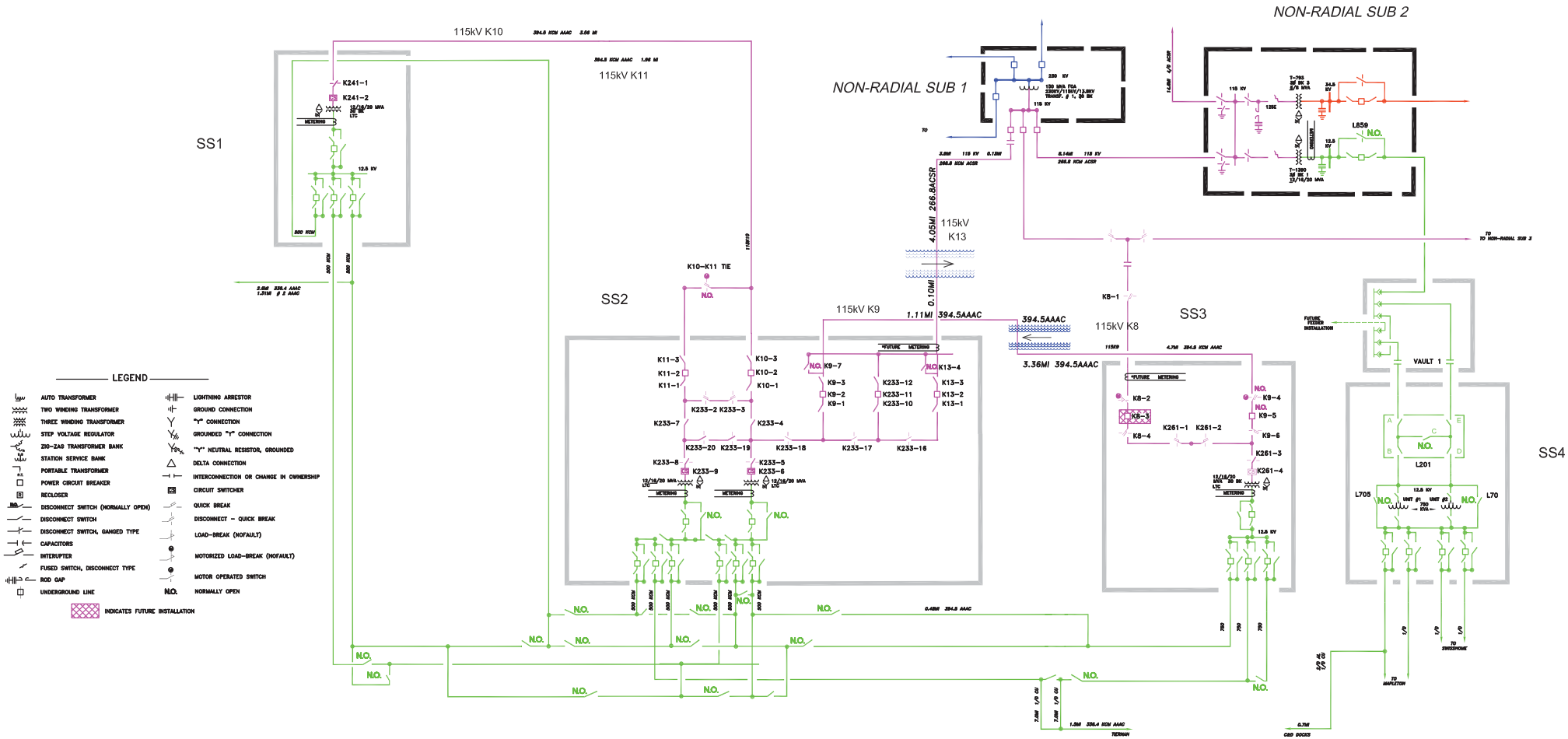
Planning Committee (PC). FRCC Standing Committees may also make a request to the FRCC RE PC for studies to be performed.

FRCC Regional Entity Planning Committee Approval Process

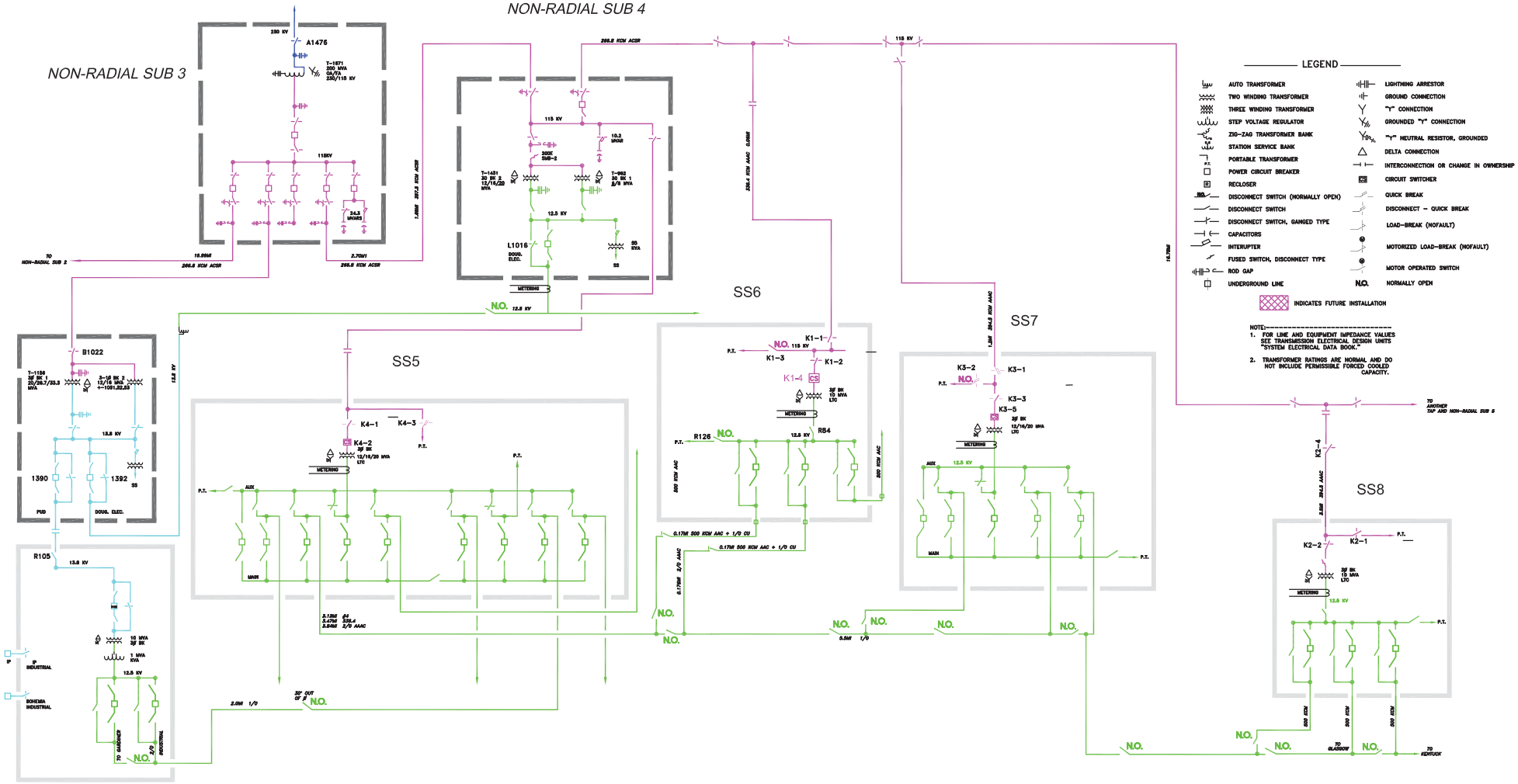
All requests for Radial Element/System Exclusions should be submitted to the FRCC RE PC for review and approval. The FRCC RE PC will review the Adverse Reliability Impact Study (steady-state screening and if required dynamic stability analysis) and will determine if the identified Radial Element/System meets all criteria for exclusion.

- Requests for radial exclusions (below triggering parameters) should include the following:
  - Executive Summary/Outcome Justification
  - Assumptions and Methodologies
- Requests for radial exclusions (at or above triggering parameters) should include the following:
  - Executive Summary/Outcome Justification
  - Assumptions and Methodologies
  - Study Results

Attachment 1b.10 - Steve Alexanderson P.E., Central Lincoln



Attachment 1b.11 - Steve Alexanderson P.E., Central Lincoln



Consideration of Comments on Definition of Bulk Electric System— Project 2010-17

Following the development of this report, the leadership of the BES Definition SDT and Rules of Procedure teams met with the leadership of the Standards Program and the Standards Committee and determined that the BES Definition SDT will assume responsibility for working with stakeholders to identify what evidence is needed to support a request for an exception to the BES definition.

The BES Definition team will solicit stakeholder input to identify the evidence an entity will need to provide when submitting a request for an exception to the definition of BES. While the determination of what evidence will be needed to support a request for a BES Definition Exception will be developed using NERC's standard development process, a decision on where the final product will reside - in the definition of BES, or as an attachment (e.g., a procedure identifying what evidence to produce when applying for a BES exception) to the Rules of Procedure will be made jointly by the leadership of the Standards Program and the Standards Committee at a later stage. Given the time constraints of this project, having all the technical clarity associated with this project developed by a single team seemed the most efficient decision.

The Definition of Bulk Electric System Drafting Team thanks all commenters who submitted comments on the SAR and proposed modification to the definition of Bulk Electric System. These standards were posted for a 30-day public comment period from December 17, 2010 through January 21, 2011. The stakeholders were asked to provide feedback on the standards through a special Electronic Comment Form. There were 82 sets of comments, including comments from more than 175 different people from approximately 129 companies representing 10 of the 10 Industry Segments as shown in the table on the following pages.

http://www.nerc.com/filez/standards/Project2010-17_BES.html

Prior to the issuance of Order 743a, the SDT carefully weighed the many suggestions received in these comments as well as reviewing numerous documents from Regional Entities and other sources in coming up with a revised definition shown here:

Bulk Electric System (BES): All Transmission Elements operated at 100 kV or higher, Real Power resources as described below, and Reactive Power resources connected at 100 kV or higher unless such designation is modified by the list shown below.

Inclusions:

- I1 - Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings of 100 kV or higher unless excluded under Exclusions E1 and E3.

- I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above.
- I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.
- I4 - Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage.
- I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.

Exclusions:

- E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and:
  a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or,
  b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or,
  c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.
- E2 - A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.
- E3 - Local distribution networks (LDNs): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:
  a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;
  b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;
  c) Power flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN;
  d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and
  e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a

comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

The SDT has made corresponding changes to the appropriate wording of the SAR and is now asking the Standards Committee for approval to move this project to the definition development phase.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 609-452-8060 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

[1] The appeals process is in the Reliability Standards Development Procedures: http://www.nerc.com/standards/newstandardsprocess.html.

Index to Questions:

1. Should the following be classified as part of the BES? 16
   - Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, with both primary and secondary windings of 100 kV or higher 16
2. Should the following be classified as part of the BES? 30
   - Individual generation resources (including GSU transformers and the associated generator interconnecting line lead(s)) greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above 30
3. Should the following be classified as part of the BES? 46
   - Generation plants (including GSU transformers and the associated generator interconnecting line lead(s))with aggregate capacity greater than 75 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above 46
4. Should the following be classified as part of the BES? 59
   - Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's (TOP's) restoration plan 59
5. Should the following be classified as part of the BES? 71
   - Transmission Elements or Facilities operated at voltages below 100kV where the exemption process deems the Element or Facility to be included in the BES 71
6. Should the following be classified as part of the BES? 81
   - Individual generation resources greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where the exemption process deems the generation resources to be included in the BES 81
7. Should the following be classified as part of the BES? 94
   - Generation plants with aggregate capacity greater than 75 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where the exemption process deems the generation plants to be included in the BES 94
8. Should the following be excluded from the Elements and Facilities classified as part of the BES? 106
   - Any radial Transmission Element or System, connected from one Transmission source to a Load-serving Element and/or generation resources not included in items 2, 3, 4, 6, and 7 above are excluded from the BES 106
9. Should the following be excluded from the Elements and Facilities classified as part of the BES? 119
   - Elements and Facilities identified through application of the exemption process, consistent with the criteria, where the exemption process deems that the Element or Facility should be excluded from the BES (with concurrence from the ERO) 119

10. Should the following be excluded from the Elements and Facilities classified as part of the BES? 129
    - Generating plant control and operation functions which include relays and systems that control and protect the unit for boiler, turbine, environmental, and/or other plant restrictions 129
11. Do you believe that the proposed definition of BES, accompanied by a separate BES Definition Exception Process meets the reliability-related intent of the directives in Order 743? 138
12. If you have a proposal for an equally efficient and effective method of achieving the reliability- related intent of the directives in Order 743, please provide your proposal here. 157
13. Please provide any other information that you feel would be helpful to the drafting team working on the definition of BES. 171

The Industry Segments are:

1 — Transmission Owners
2 — RTOs, ISOs
3 — Load-serving Entities
4 — Transmission-dependent Utilities
5 — Electric Generators
6 — Electricity Brokers, Aggregators, and Marketers
7 — Large Electricity End Users
8 — Small Electricity End Users
9 — Federal, State, Provincial Regulatory or other Government Entities
10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Guy Zito	Northeast Power Coordinating Council										X

Additional Member	Additional Organization	Region	Segment Selection
1.	Alan Adamson	New York State Reliability Council, LLC	NPCC	10
2.	Gregory Campoli	New York Independent System Operator	NPCC	2
3.	Kurtis Chong	Independent Electricity System Operator	NPCC	2
4.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1
5.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC	3
6.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10
7.	Dean Ellis	Dynegy Generation	NPCC	5
8.	Brian Evans-Mongeon	Utility Services	NPCC	8
9.	Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC	5
10.	Brian L. Gooder	Ontario Power Generation Incorporated	NPCC	5
11.	Kathleen Goodman	ISO - New England	NPCC	2
12.	Chantel Haswell	FPL Group, Inc.	NPCC	5
13.	David Kiguel	Hydro One Networks Inc.	NPCC	1
14.	Michael R. Lombardi	Northeast Utilities	NPCC	1

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
15.		Randy MacDonald	New Brunswick System Operator	NPCC	2								
16.		Bruce Metruck	New York Power Authority	NPCC	6								
17.		Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10								
18.		Robert Pellegrini	The United Illuminating Company	NPCC	1								
19.		Si Truc Phan	Hydro-Quebec TransEnergie	NPCC	1								
20.		Saurabh Saksena	National Grid	NPCC	1								
21.		Michael Schiavone	National Grid	NPCC	1								
22.		Bohdan Dackow	US Power Generating Company (USPG)	NPCC	NA								
2.	Group	Charles W. Long	SERC EC Planning Standards Subcommittee		X									X

Additional Member		Additional Organization	Region	Segment Selection
1.	Pat Huntley	SERC Reliability Corporation	SERC	10
2.	Bob Jones	Southern Company Services	SERC	1
3.	Darrin Church	Tennessee Valley Authority	SERC	1
4.	Jim Kelley	PowerSouth Energy Cooperative	SERC	1
5.	John Sullivan	Ameren Services Co.	SERC	1
6.	Phil Kleckley	South Carolina Electric & Gas Co.	SERC	1

3.	Group	Patricia Hervochon	Public Service Enterprise Group Company		X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Jim Hubertus	PSE&G	RFC	1, 3
2.	Scott Slickers	PSEG Fossil	RFC	5
3.	Jim Hebson	PSEG ER&T	RFC	6
4.	Dominic Grasso	PSEG Power CT	NPCC	5
5.	Peter Dolan	PSEG ER&T	NPCC	6
6.	Dominic DiBari	PSEG Fossil Odessa Ector Power Partners	ERCOT	5
7.	Eric Schmidt	PSEG ER&T	ERCOT	6

4.	Group	Carol Gerou	MRO's NERC Standards Review Subcommittee											X

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10

	Additional Member	Additional Organization	Region	Segment Selection
1.	Mahmood Safi	Omaha Public Utility District	MRO	1, 3, 5, 6
2.	Chuck Lawrence	American Transmission Company	MRO	1
3.	Tom Webb	Wisconsin Public Service Corporation	MRO	3, 4, 5, 6
4.	Jason Marshall	Midwest ISO Inc.	MRO	2
5.	Jodi Jenson	Western Area Power Administration	MRO	1, 6
6.	Ken Goldsmith	Alliant Energy	MRO	4
7.	Alice Ireland	Xcel Energy	MRO	1, 3, 5, 6
8.	Dave Rudolph	Basin Electric Power Cooperative	MRO	1, 3, 5, 6
9.	Eric Ruskamp	Lincoln Electric System	MRO	1, 3, 5, 6
10.	Joe DePoorter	Madison Gas & Electric	MRO	3, 4, 5, 6
11.	Scott Nickels	Rochester Public Utilties	MRO	4
12.	Terry Harbour	MidAmerican Energy Company	MRO	6, 1, 3, 5
13.	Richard Burt	Minnkota Power Cooperative, Inc.	MRO	1, 3, 5, 6

5.	Group	Al DiCaprio	IRC Standards Review Committee		X							

	Additional Member	Additional Organization	Region	Segment Selection
1.		Bill Phillips	MISO	MRO	2
2.		James Castle	NYISO	NPCC	2
3.		Matt Goldberg	ISO-NE	NPCC	2
4.		Greg Van Pelt	CAISO	WECC	2
5.		Charles Yeung	SPP	SPP	2
6.		Dan Rochester	IESO	NPCC	2
7.		Mark Thompson	AESO	WECC	2
8.		Steve Myers	ERCT	ERCOT	2

6.	Group	Frank Gaffney	Florida Municipal Power Agency	X		X	X	X	X	X			

	Additional Member	Additional Organization	Region	Segment Selection
1.	Tim Beyrle	City of New Smyrna Beach	FRCC	4
2.	Greg Woessner	KUA	FRCC	3

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10

3.	Jim Howard	Lakeland Electric	FRCC	3
4.	Lynne Mila	City of Clewiston	FRCC	3
5.	Joe Stonecipher	Beaches Energy Services	FRCC	1
6.	Cairo Vanegas	FPUA	FRCC	4
7.	Randy Hahn	Ocala Electric Utility	FRCC	3

7.	Group	Denise Koehn	Bonneville Power Administration	X		X		X	X				

Additional Member	Additional Organization	Region	Segment Selection
1.	Sara Sundborg	BPA, Transmission, Technical Operations	WECC	1
2.	John Anasis	BPA, Transmission, Technical Operations	WECC	1
3.	Jim Gronquist	BPA, Transmission, Technical Operations	WECC	1
4.	James O'Brien	BPA, Transmission, Technical Operations	WECC	1
5.	Siraji Hirsi	BPA, Transmission, Technical Operations	WECC	1
6.	Daniel Goodrich	BPA, Transmission, Technical Operations	WECC	1
7.	Lorissa Jones	BPA, Transmission Reliability Program	WECC	1

8.	Group	Doug Hohlbaugh	FirstEnergy Corp	X		X	X	X	X				

Additional Member	Additional Organization	Region	Segment Selection
1. Rob Martinko	FirstEnergy Corp	RFC	1, 3, 4, 5, 6

9.	Group	Mike Garton	Electric Market Policy	X		X		X	X				

Additional Member	Additional Organization	Region	Segment Selection
1.	Michael Gildea	Dominion Resources Services, Inc.	NPCC	5
2.	Louis Slade	Dominion Resources Services, Inc.	SERC	3
3.	Connie Lowe	Dominion Resources Services, Inc.	RFC	5
4.	John Loftis	Dominion Virginia Power	SERC	1

10.	Group	Jim Case	SERC OC Standards Review Group	X		X							

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10

Additional Member	Additional Organization	Region	Segment Selection
1.	Gerald Beckerle	Ameren	SERC	1, 3
2.	Andy Burch	EEI	SERC	1, 5
3.	Randy Castello	Mississippi Power	SERC	1, 3, 5
4.	Dan Roethemeyer	Dynegy	SERC	5
5.	Melinda Montgomery	Entergy	SERC	1, 3
6.	Sam Holeman	Duke Energy	SERC	1, 3, 5
7.	Joel Wise	TVA	SERC	1, 3, 5, 9
8.	Alvis Lanton	SIPC	SERC	1, 3, 5
9.	Hamid Zakery	Dynegy	SERC	5
10.	John Neagle	AECI	SERC	1, 3
11.	Mike Hirst	Cogentrix	RFC	5, 6
12.	Tim Hattaway	PowerSouth	SERC	1, 3, 5, 9
13.	Robert Thomasson	BREC	SERC	1, 3, 5, 9
14.	Shardra Scott	Gulf Power	SERC	1, 3, 5
15.	Patrick Woods	EKPC	SERC	1, 3, 5, 9
16.	Alisha Ankar	Prairie Power	SERC	1, 3, 5
17.	Bill Hutchison	SIPC	SERC	1, 3, 5
18.	J. T. Wood	Southern	SERC	1, 3, 5
19.	John Troha	SERC	SERC	10

11.	Individual	Sandra Shaffer	PacifiCorp	X		X		X	X				
12.	Individual	Sylvain Clermont / Alain Pageau	Hydro-QuÃ©bec	X									
13.	Individual	William J. Gallagher	Transmission Access Policy Study Group	X		X	X	X	X				
14.	Individual	John Cummings	PPL Energy Plus					X	X				

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
15.	Individual	Jack Cashin	Competitive Suppliers			X		X	X				
16.	Individual	Marty Kaufman	ExxonMobil Research and Engineering	X				X		X			
17.	Individual	John Seelke	NERC Staff										
18.	Individual	Janet Smith	Arizona Public Service Company	X		X		X	X				
19.	Individual	Brian J. Murphy	NextEra Energy Inc.	X		X		X	X				
20.	Group	David Dworzak	Edison Electric Institute	X									
http://www.eei.org/whoweare/ourmembers/USElectricCompanies/Pages/USMemberCoLinks.aspx													
21.	Individual	Brent Ingebrigtson	LG&E and KU Energy LLC	X		X		X	X				
22.	Individual	Steve Alexanderson	Central Lincoln			X	X						
23.	Individual	David Thorne	Pepco Holdings Inc.	X		X							
24.	Individual	Martyn Turner	LCRA Transmission Services Corporation	X									
25.	Individual	David W Proebstel	PUD No.1 of Clallam County			X							
26.	Individual	Joe Petaski	Manitoba Hydro	X		X		X	X				
27.	Individual	Kevin Koloini	American Municipal Power				X						
28.	Individual	Robert Beadle	North Carolina EMC			X	X	X					
29.	Individual	Jim Uhrin	ReliabilityFirst										X

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
30.	Individual	Elroy Switlishoff	on behalf of Teck Metals Ltd.	X				X					
31.	Individual	Rex A Roehl	Indeck Energy Services					X					
32.	Individual	Samuel Stonerock	Southern California Edison	X		X		X					
33.	Individual	Patrick Farrell	Southern California Edison Company	X		X		X	X				
34.	Individual	E Switlishoff	on behalf of Catalyst Paper Corporation	X		X							
35.	Individual	Jeff Mead	City of Grand Island					X					
36.	Individual	Michelle D'Antuono	Occidental Energy Ventures Corp					X					
37.	Individual	Manny Robledo	City of Anaheim			X	X						
38.	Individual	Josh Dellinger	Glacier Electric Cooperative	X		X							
39.	Individual	Kathleen Goodman	ISO New England Inc.		X								
40.	Individual	Ed Davis	Entergy Services	X		X		X	X				
41.	Individual	John D. Martinsen	Snohomish County PUD	X		X	X		X				
42.	Individual	Rick Paschall	PNGC Power			X							
43.	Individual	Bud Tracy	Blachly-Lane Electric Co-op			X					X		
44.	Individual	Dave Hagen	Clearwater Power Co.			X					X		
45.	Individual	Dave Sabala	Douglas Electric Cooperative			X							

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
46.	Individual	Dave Markham	Central Electric Cooperative, Inc. (Redmond Oregon)			X							
47.	Individual	Heber Carpenter	Raft River Rural Electric Cooperative			X							
48.	Individual	Jon Shelby	Northern Lights Inc.			X							
49.	Individual	Ken Dizes	Salmon River Electric Cooperative	X		X							
50.	Individual	Ray Ellis	Okanogan Country Electric Cooperative			X							
51.	Individual	Richard Reynolds	Lost River Electric			X							
52.	Individual	Rick Crinklaw	Lane Electric Cooperative			X							
53.	Individual	Roger Meader	Coos-Curry Electric Cooperative			X							
54.	Individual	Roman Gillen	Consumer's Power Inc.	X		X							
55.	Individual	Steve Eldrige	Umatilla Electric Co-op	X		X							
56.	Individual	Marc Farmer	West Oregon Electric Cooperative			X							
57.	Individual	Michael Henry	Lincoln Electric Cooperative			X							
58.	Individual	Bryan Case	Fall River Electric Cooperative			X							
59.	Individual	Jonathan Appelbaum	United Illuminating Company	X									
60.	Individual	David Burke	Orang and Rockland Utilities, Inc.	X		X							

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
61.	Individual	Andrew Z. Pusztai	american Transmission company	X									
62.	Individual	John A. Gray	The Dow Chemical Company										
63.	Individual	Brian Evans-Mongeon	Utility Services	X		X	X	X	X		X	X	
64.	Individual	Barry Lawson	National Rural Electric Cooperative Association (NRECA)			X	X						
65.	Individual	Andrew Gallo	City of Austin dba Austin Energy	X		X	X	X	X				
66.	Individual	Laura Lee	Duke Energy	X		X		X	X				
67.	Individual	Hertzel Shamash	The Dayton Power and Light Company	X		X		X					
68.	Individual	Michael Moltane	ITC Holdings Corp	X									
69.	Individual	Bill Keagle	BGE	X									
70.	Individual	Amir Hammad	Constellation Power Source Generation, Inc. (“CPSG”) filing on behalf of Constellation Energy Group, Inc. (“CEG”), Constellation Energy Commodities Group, Inc. (“CCG”), Constellation Energy Control and Dispatch, LLC (“CDD”), Constellation NewEnergy, Inc., (“CNE”) and Constellation Energy Nuclear Group, LLC, (“CENG”)			X		X	X				
71.	Individual	Shaun Anders	City Water Light and Power (CWLP) - Springfield, IL	X		X		X					

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
72.	Individual	Steven Grega	Lewis County PUD					X					
73.	Individual	Thad Ness	American Electric Power (AEP)	X		X		X	X				
74.	Individual	Marc M. Butts	Southern Company	X		X		X	X				
75.	Individual	David Angell	Idaho Power	X		X		X					
76.	Individual	John P. Hughes	Electricity Consumers Resource Council (ELCON)							X			
77.	Individual	Dan Rochester	Independent Electricity System Operator		X								
78.	Individual	Jeff Nelson	Springfield Utility Board			X							
79.	Individual	Jack Stamper	Clark Public Utilities	X									
80.	Individual	Allen Mosher	APPA			X	X						
81.	Individual	Alice Ireland	Xcel Energy	X		X		X	X				
82.	Individual	Paul Cummings	City of Redding			X	X	X	X				
83.	Individual	Manny Robledo	City of Anaheim			X	X						

1. Should the following be classified as part of the BES?

- **Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, with both primary and secondary windings of 100 kV or higher**

Summary Consideration: Stakeholders who responded to this question were evenly divided with about half the respondents indicating support for the proposal, and the other half disagreeing with at least some part of the proposal.

The SDT has clarified the definition based on industry comments regarding the classification of transformers.

Included in the BES: I1 - Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings of 100 kV or higher unless excluded under Exclusions E1 and E3.

Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and:

a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or,
b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or,
c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.

Excluded from the BES: E3 - Local distribution networks (LDN): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:

a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;
b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;
c) Power flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN;
d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and
e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Organization	Yes or No	Question 1 Comment
Northeast Power Coordinating Council	No	1. Exclusions should be applied to radial non-transmission facilities serving a distribution function. Step-down transformers with the low-side terminals serving non-BES facilities, which are serving a distribution function, should not be part of the definition of BES. 2. Transformers, other than GSUs, with both primary and secondary winding above 100kV, and performing a transmission function, should be classified as BES. 3. Transformers other than GSUs, with both primary and secondary windings above 100kV, and only providing a distribution function should be classified as non-BES. 4. Transformers other than GSUs, with their secondary windings or both primary and secondary windings operated below 100kV should not be included in the definition of BES.

Response:

1. The SDT has excluded local distribution networks as shown:

- Excluded from the BES: E3 - Local distribution networks (LDNs): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:
  a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;
  b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;
  c) Power flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN;
  d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and
  e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

The SDT agrees with your suggestion and has incorporated it in its latest proposal.

2. The SDT agrees with your suggestion and has incorporated it in its latest proposal:

Included in the BES: I1 - Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, with two windings of 100 kV or higher unless excluded under items E1 and E3.

Excluded from the BES: Any radial system which is described as connected from a single Transmission source originating with an automatic interruption

Organization	Yes or No	Question 1 Comment
device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5. 3. The SDT feels that your comment does not illustrate a readily identifiable bright-line designation as there is no definition for distribution. However, the SDT has determined that such transformers on a radial system will be non-BES. 4. The SDT agrees with your suggestion and has incorporated it in its latest proposal.		
Electric Market Policy	No	Dominion could respond yes if the sentence read "All transformers, including Generator Step-up (GSU) transformers and Phase Angle Regulators, with both primary and secondary windings of 100 kV or higher.
ExxonMobil Research and Engineering	No	Transformers like all elements should be included based on their function; however, the use of an element's rating or operating voltage may provide a good guideline for selecting elements to review for inclusion in the BES.
Response: The SDT does not share your view on the inclusion of all transformers and feels that transformers used in Transmission and generation should be included. The SDT agrees that operating voltage is a good guideline for applying the definition of BES.		
PacifiCorp	No	In Order No. 743, the Commission directed NERC to adopt an exemption process for excluding facilities from the definition of the BES that are not necessary to operate an interconnected electric transmission network. In order to determine which facilities may be excluded, there must be criteria and a methodology that may be applied to identify which facilities are "necessary" to operate an interconnected electric transmission network and which "transmission and generation" facilities are not. In other words, there must be a clear way to determine what makes a particular facility is "necessary" for bulk system operation. Application of the criteria and methodology will result in the identification of the facilities that may be excluded. The comment questions asked in this questionnaire cannot be answered in a meaningful way absent this methodology. Significant efforts have been undertaken by the WECC Bulk Electric System Definition Task Force (BESDTF) over the course of the past year to identify some initial criteria and methodologies. These efforts are ongoing and should be supported by the NERC drafting team. For example: Transformers should not be included or excluded solely based on their voltage classifications (high side and low side). Transformers which are necessary to operate the interconnected network should be included as part of the regulated BES. Transformers which are not "necessary for the operation of the interconnected network" should be excluded. A methodology needs to be developed to determine which transformers may be excluded as part of the

Organization	Yes or No	Question 1 Comment
		regulated BES.
Response: The SDT is aware of the WECC Bulk Electric System Definition Task Force's efforts and has considered that work. The SDT has revised the definition and included specific inclusion and exclusion designations. Bright-line designations will be developed as part of this project and the process will handle any exceptions and those will be addressed through the revision of the Rules of Procedure which is a separate parallel effort to the development of the BES definition by another team. Your comments will be forwarded to the Rules of Procedure Team.		
Hydro-Québec	No	For questions 1 to 10, refer to questions 11 to 13.
Response: Please see responses to questions 11 to 13.		
National Rural Electric Cooperative Association (NRECA)	No	This should not be dependent only on the voltage, but also on where the transformer, etc., is located on the system. For example, if such a transformer is on a radial line of any transmission voltage that is serving only load, then it should not be considered part of the BES.
Orange and Rockland Utilities, Inc.	No	Exclusions should be applied to radial non-transmission facilities serving a distribution function. Step-down transformers with the low-side terminals serving non-BES facilities, which are serving a distribution function, should not be part of the definition of BES. Transformers, other than GSUs, with both primary and secondary winding above 100kV should be classified as BES. However, it is our belief that transformers with either a primary or secondary winding below 100kV should not be included directly or through the separate BES Definition Exception Process.
City of Anaheim	No	Transformers with secondary windings of 100kV or less should not be part of the BES if they feed radial load or radial distribution systems; provided, however, to eliminate any reliability gaps, such transformers should be classified as "Distribution" equipment subject to DP standards, and the PRC and vegetation management standards should be made applicable to Distribution Providers and including this equipment. This is consistent with the NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for radial transmission facilities that function as Distribution and are not required for the reliable operation of the BES.
Southern California Edison Company	No	The presence of an Automatic Fault Interrupting Device (or in the instance of a ring bus or breaker-and-a-half configuration) allows the transformer to be considered as a separate unit serving the function of providing connection and transformation of the high-side to the low-side. Where the electric facilities on the low-side are below 100kV, the transformer is simply an extension of non-BES facilities, providing delivery and connectivity from the BES sources.

Organization	Yes or No	Question 1 Comment
PPL Energy Plus	No	Certain transformers with primary and secondary windings greater than 100 kV may serve transmission lines with only radial load and should therefore be excluded from the BES definition (without requiring application for an exemption on a case-by-case basis). The BES definition should be modified to incorporate this exclusion.
LG&E and KU Energy LLC	No	Certain transformers connected with both primary and secondary windings of 100 kV or higher serving only radial load should be excluded from the BES definition (without requiring application for an exemption on a case-by-case basis). The BES definition should be modified to incorporate this exclusion.
Central Lincoln	No	While we believe the SAR is on the right track here, we note that many transformers with both windings above 100 kV may be installed on radial systems. We also note that the FERC order excepted "defined radial facilities," and expect NERC to provide a definition for "radial" so that facilities that meet this criteria may be excluded by inspection rather than by going through an exemption process. It should also be clarified that transformer protection systems are part of the BES only if installed to protect BES transformers.
PUD No.1 of Clallam County	No	
Lewis County PUD	No	
Response: The SDT agrees with your suggestion and has incorporated it in its latest proposal. • Included in the BES: I1 - Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings of 100 kV or higher unless excluded under Exclusions E1 and E3. Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.		
American Municipal Power	No	
Occidental Energy Ventures Corp	No	This would require further study in order to answer in the affirmative.
Response: Thank you for your comment.		

Organization	Yes or No	Question 1 Comment
Indeck Energy Services	No	The threshold issue is whether the equipment affects the reliability of the Bulk Power System, as defined in the FPA. By requesting a BES definition that greatly expands the jurisdiction of the NERC Standards beyond the scope of the BPS, FERC and NERC are outside of their legal jurisdiction. NERC is responsible to the FPA through the FERC, but not to the FERC instead of the FPA. NPCC had the correct approach until FERC required it to register every entity down to 20 MW. Reliability is the issue, and in a 30,000+ MW system like NYISO, a 20, 50 or 150 MW piece of equipment cannot cause a Reportable Disturbance (under NERC's definition), so how can it have a significant impact on reliability? Deferring the development of the exemption process to a separate, and possibly much delayed, process of modifying the Rules of Procedure is disingenuous.
Response: The SDT has been tasked with coming up with a revised definition of the Bulk Electric System. The SDT is following through on this charge. Bright-line designations will be developed as part of this project and the ROP process will handle any exemptions or inclusions and those will be addressed through the revision of the Rules of Procedure which is a separate parallel effort to the development of the BES definition utilizing a different team.		
Glacier Electric Cooperative	No	I think it depends on the transformer. If the loss of the transformer would significantly affect the reliability of the grid, then, yes, it should be included. However, if the loss of the transformer would not significantly affect the reliability of the grid, then, no, it should not be included no matter what voltage it is connected at.
ReliabilityFirst	Yes	In some cases, facilities that need included do not have both windings operated at 100 kV or higher. This needs further detail and definition to be helpful in determining if the facility is included or excluded. An example of this is a distribution transformer (e.g. 138/34 kV) tapped from a BES line with a high side protective device (such as a circuit switcher or ground switch), in which case the BES line to which it is connected will trip (and may or not lockout) for a fault in the transformer. Should the distribution transformer lockout the BES line to which it is connected, and then it should be included in the BES. If the distribution transformer only trips the BES line to which it is connected (and successfully recloses), it could be argued whether it should be included in the BES or not. But this issue needs to be addressed in the revised BES definition.
Response: The SDT feels that your comment does not illustrate a readily identifiable bright-line designation. Bright-line designations will be developed as part of this project and the ROP process will handle any exemptions or inclusions and those will be addressed through the revision of the Rules of Procedure; which is a separate parallel effort to the development of the BES definition. Your comments will be forwarded to the Rules of Procedure Team.		
Snohomish County PUD	No	We note that many transformers with both windings above 100 kV may be installed on radial systems or local networks used to provide local distribution service. Transformers installed on such systems should not be part of the BES regardless of operating voltage. We also note that in Order No. 743, FERC made clear that it
PNGC Power	No	

Organization	Yes or No	Question 1 Comment
Blachly-Lane Electric Co-op	No	does not intend the Standards Drafting Team to change the exception for radial facilities, and expects the standards development process to provide a definition for “radial” so that facilities that meet this criteria may be excluded by inspection rather than by going through an exemption process. The Standards Drafting Team should also clarify that transformer protection systems are part of the BES only if installed to protect “BES transformers” (transformer with both windings above 200kV).
Clearwater Power Co.	No	
Douglas Electric Cooperative	No	
Central Electric Cooperative, Inc. (Redmond Oregon)	No	
Raft River Rural Electric Cooperative	No	
Northern Lights Inc.	No	
Salmon River Electric Cooperative	No	
Okanogan Country Electric Cooperative	No	
Lost River Electric	No	
Lane Electric Cooperative	No	
Coos-Curry Electric Cooperative	No	
Consumer's Power Inc.	No	
Umatilla Electric Co-op	No	
West Oregon Electric Cooperative	No	
Lincoln Electric Cooperative	No	

Organization	Yes or No	Question 1 Comment
Fall River Electric Cooperative	No	
Response: The SDT agrees with your suggestion and has incorporated it in its latest proposal. • Included in the BES: I1 - Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings of 100 kV or higher unless excluded under Exclusions E1 and E3. Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5. The SDT has discussed this issue and will be seeking guidance from FERC staff in regards to the directives in FERC Order No. 743 and how they potentially apply to Protection Systems. Protection Systems are not currently within the scope of the SAR for this project and any significant expansion could potentially jeopardize the ability of the SDT to complete this project and file in accordance with the Commission directed time requirements in FERC Order No. 743.		
Utility Services	No	Initially, yes; however, such a classification could be exempted upon a NERC review of the technical justification for exemption. We suggest that the BES definition be changed to: All Transmission and Generation Elements operated at voltages of 100 kV or higher; unless modified by the BES Exemption Process. We note that the term Facility, as defined in the NERC Glossary, implies that it is part of the BES. We suggest that the BES definition just use the term Element since Facility is already defined as being a part of the BES. We envision the BES Exemption Process containing 3 sub-processes; one for Exclusion, one for Exemption, and one for Inclusion. Each sub-process will establish provisions and guidelines for the three different tasks. In order to ensure consistency across the continent, it is our view that NERC will be the facilitator of these processes. We believe that NERC may choose to provide that some of these tasks may be performed at the regional levels through the existing delegation agreements. For "Exclusion", we envision NERC establishing a first set of Exclusions, with FERC's acceptance, that Registered Entities can utilize as a means to justify not registering within the ERO or as a means to not have

Organization	Yes or No	Question 1 Comment
		to meet the compliance obligations of specific reliability standards and or requirements. NERC would also be in a position to add or remove Exclusions provided such was performed through notification to the industry and industry's acceptance. If a Registered Entity uses a listed accepted Exclusion, it would be our expectation that the RE would be treated in a manner similar to an unregistered organization, in that penalties or sanctions could not be assessed during the exclusionary period. NERC would have the ability to revoke an RE's use of an Exclusion prospectively only. However, If NERC or the Regional Entity determined that a Registered Entity intentionally claimed an accepted Exclusion; and it turned out to be knowingly false, the Registered Entity would be subject to penalties and or sanctions appropriate to the period of the falsehood. In order for Elements to be "Included" or "Exempted", we envision that NERC will establish a set of criteria including outlining the types of permissible technical studies or documentation necessary to seek inclusion or an exemption. We feel that any inclusion or exemption should be handled on an Element by Element basis, not by broad application of a set of Elements. Each should be judged based upon its technical merits of the Element(s) involved. While an inclusion or exemption is pending, the Registered Entity shall not be subject to the performance obligations under the any reliability standard(s) associated with the Element(s) being considered. For Inclusion, any Registered Entity may submit Element(s) with the appropriate materials meeting the criteria for Inclusion. For there to be consistency within the ERO, NERC must be the evaluator of the requests. We believe there must be a measurable, not subjective, improvement in the reliability of the transmission system for the Element(s) to be included. All Registered Entities, including applicable RCs, BAs, TOPs, and Regional Entities, who would be impacted by the proposed Inclusion must be provided sufficient notice and time to participate in the consideration process. NERC shall render a decision following the timely submission from the potentially impacted Registered Entities. For an Exemption to be granted, any Registered Entity may submit Element(s) with the appropriate materials meeting the criteria for Exemption. For there to be consistency within the ERO, NERC must be the evaluator of the requests. We believe there must be no measurable, not subjective, decrease in the reliability of the transmission system for the Element(s) to be included. All Registered Entities, including applicable RCs, BAs, TOPs, and Regional Entities, who would be impacted by the proposed exemption must be provided sufficient notice and time to participate in the consideration process. NERC shall render a decision following the timely submission from the potentially impacted

Organization	Yes or No	Question 1 Comment
		Registered Entities. We note that BES Exemption Process must be an active and ongoing aspect of the ERO program. With the addition of new or deletion of existing Transmission and Generation Elements, Facilities, or systems; it needs to be recognized that Exclusions, Inclusions, and Exemptions could possibly need alteration over time. By establishing appropriate guidelines and processes, the ERO will be able to monitor and maintain information of what is the bulk electric system or BES.
Response: The SDT thanks you for your comments on the inclusion of transformers. The SDT agrees with your view that a briefer, more concise definition is beneficial and has incorporated it in the latest proposal. The SDT agrees with the use of the term, "Elements" rather than "Facilities" and has corrected its use throughout the proposal. The SDT does not share your view of the BES exception process. Bright-line designations will be developed as part of this project and the ROP process will handle any exceptions and those will be addressed through the revision of the Rules of Procedure which is a separate parallel effort to the development of the BES definition utilizing a different team. Your comments will be forwarded to the Rules of Procedure Team.		
The Dow Chemical Company		The Dow Chemical Company ("Dow") recommends that NERC finalize a basic framework for identifying BES facilities before evaluating individual facilities or types of facilities. Such a framework is recommended by Dow in response to questions #11 and #12 below.
Response: See response to Q11 & 12.		
Constellation Power Source Generation, Inc. ("CPSG") filing on behalf of Constellation Energy Group, Inc. ("CEG"), Constellation Energy Commodities Group, Inc. ("CCG"), Constellation Energy Control and Dispatch, LLC ("CDD"), Constellation NewEnergy, Inc., ("CNE") and Constellation Energy Nuclear Group, LLC, ("CENG")	Yes	Constellation firmly believes that the classifications found in the Compliance Registry Criteria - Section III (Rules of Procedure Appendix 5B), such as that cited in this question, provide a useful basis to create a comprehensive, revised BES definition. Further, we propose that the BES drafting team incorporate the criteria directly into the revised BES definition, replacing the term "bulk power system" in each criterion with "greater than 100 kV." This would then include assets that are currently registered as BES elements as well as those that may have been previously excluded due to Regional exemption variances. Structuring the revised BES definition to clarify both the inclusions and exclusions, can, ideally, eliminate the need for an onerous exemption process as well as eliminate the need for Section III of the Registry Criteria. Please see our response to question 12 for more detail on a proposed alternative approach to structuring the BES definition revision.
Response: The SDT agrees and has incorporated as one of its goals that it will not drive a change in the registry criteria if at all possible. .		

Organization	Yes or No	Question 1 Comment
The SDT agrees with your suggestion and has incorporated it in its latest proposal. Please see response to Question 12.		
Florida Municipal Power Agency	Yes	In general, yes, unless it is part of a radial Element that is excluded from the BES. See FMPA response to Question 12 below. Throughout these comments, FMPA refers to "Elements" and not to "facilities." This is because "Facility" is defined in the NERC Glossary as "[a] set of electrical equipment that operates as a single Bulk Electric System Element...." Because these comments (and the BES definition) address whether Elements are or are not part of the BES, it is incorrect to refer to the Elements in question as "Facilities," because a Facility is defined as a BES Element.
Transmission Access Policy Study Group	Yes	
Response: The SDT agrees with your suggestion and has incorporated it in its latest proposal. • Included in the BES: I1 - Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings of 100 kV or higher unless excluded under Exclusions E1 and E3. Excluded from the BES: Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5. See response to Q12. The SDT agrees with the use of the term, "Elements" rather than "Facilities" and has corrected its use throughout the proposal.		
NERC Staff	Yes	Please see additional comments in Attachment 3 at the end of this report.
Response: Please see response to Q13.		
Public Service Enterprise Group Company	Yes	The PSEG Companies consider transformers with primary and secondary windings of greater than 100 kV, and which are not GSU transformers to be part of the BES.

Organization	Yes or No	Question 1 Comment
Competitive Suppliers	Yes	EPSA believes that it is appropriate that transformers other than generator step-up transformers, including Phase Angle Regulators, with primary and secondary windings of 100 kV or higher should be classified as part of the BES under the proposed definition for Project 2010-17.
SERC EC Planning Standards Subcommittee	Yes	
MRO's NERC Standards Review Subcommittee	Yes	Yes, since FERC has directed the bright-line criteria is 100kV or above.
IRC Standards Review Committee	Yes	
Bonneville Power Administration	Yes	
FirstEnergy Corp	Yes	
SERC OC Standards Review Group	Yes	
Arizona Public Service Company	Yes	AZPS agrees that Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, with both primary and secondary windings of 100 kV or higher should be classified as part of the BES.
Pepco Holdings Inc.	Yes	Transformers with primary greater than 100kv (connected to a BES facility) but a secondary less than 100kv are not specially addressed. They should be specially “excluded” and not part of an exemption process.
LCRA Transmission Services Corporation	Yes	ERCOT, this would include the 138:345-kV autotransformers.
Manitoba Hydro	Yes	
North Carolina EMC	Yes	

Organization	Yes or No	Question 1 Comment
on behalf of Teck Metals Ltd.	Yes	
Southern California Edison	Yes	SCE currently reports on many of its transformers with both primary and secondary windings of 100kV or higher.
on behalf of Catalyst Paper Corporation	Yes	
City of Grand Island	Yes	
ISO New England Inc.	Yes	
Entergy Services	Yes	
United Illuminating Company	Yes	
American Transmission company	Yes	
City of Austin dba Austin Energy	Yes	
Duke Energy	Yes	Only those transformers that are not a radial Transmission Element should be included.
The Dayton Power and Light Company	Yes	
ITC Holdings Corp	Yes	
BGE	Yes	No comment.
City Water Light and Power (CWLP) - Springfield, IL	Yes	
American Electric Power (AEP)	Yes	

Organization	Yes or No	Question 1 Comment
Southern Company	Yes	Only non-radial networked transformers with both primary and secondary voltages >_100kV should be included in the BES definition.
Idaho Power	Yes	
Independent Electricity System Operator	Yes	Conditional on having an exemption criteria/process which must still be developed.
Springfield Utility Board	Yes	If BOTH primary AND secondary windings are 100kV or higher
Clark Public Utilities	Yes	
Xcel Energy	Yes	
City of Redding	Yes	Only if the elements or facilities are shown through engineering studies to be necessary to reliably operate an interconnected transmission system.
Response: Thank you for your response. Please see the summary consideration immediately under the question. Several stakeholders made suggestions that were adopted by the drafting team.		

2. Should the following be classified as part of the BES?

- **Individual generation resources (including GSU transformers and the associated generator interconnecting line lead(s)) greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above**

Summary Consideration: Most Stakeholders who responded to this question disagreed with at least some part of the proposal.

The SDT has discussed the history and determination of the 20 MVA threshold for inclusion of generating units in the Statement of Compliance Registry Criteria and subsequently into a draft definition of the BES. Two Regional Entities (FRCC and RFC) specifically use this criterion in each of their current BES definitions. The 20 MVA unit is a low enough level to capture most generating units that have an effect on the reliability of the BES and that may be dispatched by Balancing Authorities, but allows for the exclusion of smaller units, such as 10 MVA units, connected to the BES that may not be dispatched by Balancing Authorities. The SDT believes that the 20 MVA threshold for inclusion of generating units connected at 100 kV and above is proper for inclusion in the BES since there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria. The SDT also has carefully discussed the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable. The SDT believes it does not make sense to include generation in the BES without including the Facilities to transfer power from a generating unit to the BES. The GSUs and line leads must be a part of the BES the same as other Facilities are part of the BES.

Commenters have suggested other thresholds (anywhere from 0 to 100 MVA) for generation plants to be included into the BES definition. However, as of this date commenters have not submitted technical justification upon which to base a significant departure from the generation MVA thresholds included in the NERC Statement of Compliance Registry Criteria.

Included in the BES: I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above.

Included in BES: I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.

Included in the BES: I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.

Excluded from the BES: E2 - A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing

Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	Some generators act as a local load modifier, regardless of connected voltage. The power generated is consumed locally and does not flow up onto the BES, nor does its operation materially impact any BES transmission facilities. If a generator functions as a local load modifier and does not materially impact the BES, meaning that it is not necessary to maintain BES reliability, then it should be excluded from the definition of BES under the BES Exemption Process.
Orange and Rockland Utilities, Inc.	No	Some generators act as a local load modifier, regardless of connected voltage. The power generated is consumed locally and does not flow up onto the BES, nor does its operation materially impact any BES transmission facilities. If a generator functions as a local load modifier and does not materially impact the BES, meaning that it is not necessary to maintain BES reliability, then it should be excluded from the definition of BES under the BES Exemption process.
Response: The SDT has discussed the behind-the-meter customer generation issues and has addressed it in the revised BES definition. Excluded from the BES: E2 - A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in items I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
Public Service Enterprise Group Company	No	The concept of a stand-alone generator connected through a single GSU transformer to the grid at greater than 100kV should be included as part of the BES. However, the term "generation resources" is too vague leading to possible misinterpretation as to what associated generator resource elements are to be included within the BES. All those "resources" and any connected element would be part of the BES? The definition should clearly describe (with examples) of the intent of what should be included within the BES scope.. (e.g. Would a station service transformer connected at 26kV which is part of the generation "resource" be included as a BES element)?
Response: The SDT has discussed what constitutes a "generation resource" including balance of generation plant controls and auxiliary equipment and believes that balance of plant equipment is not within the scope of this project. The term "generation resource" is no longer used in the revised definition. Certain equipment, such as protection systems and under-frequency Load shed controls, may not be part of the BES, but may be subject to specific NERC standards requirements. Generation plant controls should be treated in a similar fashion.		

Organization	Yes or No	Question 2 Comment
Electric Market Policy	No	Dominion does not agree that a generation resource should be classified as part of the BES.Dominion supports the criteria for registering owners, operators, and users of the bulk power system, as indicated in the current Statement of Compliance Registry Criteria .
Response: The SDT has carefully considered this matter, and believes that generating units and plants are an integral part of the BES, without which it could not function, and therefore, should be included in the BES.		
SERC OC Standards Review Group	No	We do not agree with the inclusion of GSU transformers and associated interconnecting line leads. Lines and transformers should be included based upon the voltage and not the function they serve. We support the inclusion of all non-radial lines operated at a voltage of 100 kV or higher as well as all transformers with both primary and secondary windings operated at 100 kV or higher. We do not support generic inclusions of any radial lines or transformers with primary or secondary windings operated below 100kV. Our response in question 13 amplifies this statement.
Response: The SDT has carefully discussed the inclusion of GSU transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable. The SDT believes it does not make sense to include generation in the BES without including the Facilities to transfer power from a generating unit to the BES. The GSUs and line leads must be a part of the BES the same as other Facilities are part of the BES. Please also see the response to Q13.		
PacifiCorp	No	In Order No. 743, the Commission directed NERC to adopt an exemption process for excluding facilities from the definition of the BES that are not necessary to operate an interconnected electric transmission network. In order to determine which facilities may be excluded, there must be criteria and a methodology that may be applied to identify which facilities are “necessary” to operate an interconnected electric transmission network and which “transmission and generation” facilities are not. In other words, there must be a clear way to determine what makes a particular facility is “necessary” for bulk system operation. Application of the criteria and methodology will result in the identification of the facilities that may be excluded. The comment questions asked in this questionnaire cannot be answered in a meaningful way absent this methodology. Significant efforts have been undertaken by the WECC Bulk Electric System Definition Task Force (BESDTF) over the course of the past year to identify some initial criteria and methodologies. These efforts are ongoing and should be supported by the NERC drafting team. For example: Generation units should not be included or excluded solely based on a their gross nameplate rating and the operating voltage at which they are connected to transmission facilities. Generation resources which are necessary to operate the interconnected network should be included as part of the regulated BES. Generating units which are not “necessary for the operation of the interconnected network” should be excluded. A methodology needs to be developed to

Organization	Yes or No	Question 2 Comment
		determine which generating units may be excluded as part of the regulated BES.
Central Lincoln	No	The generation resources so described should be presumed to be part of the BES unless or until they have been through the exemption process and as a result have been classified as non-BES.
PUD No.1 of Clallam County	No	The generation resources so described should be presumed to be part of the BES unless or until they have been through the exemption process and as a result have been classified as non-BES. The 20 MVA threshold is too low for many parts of the system. The interconnecting source impedance and adjacent facilities may have a more significant impact on the BES than the MVA of a machine. A 100 MVA plant connected to a high fault duty/low source impedance system may create little to thermal or transient stability concerns even under delayed clearing. However a 25 MVA plant connected to a low fault duty/high source impedance system may create concerns on a weak system. or above.
Snohomish County PUD	No	The generation resources described should not be presumed to be part of the BES. The criteria above are intended to identify GO/GOP registration as a user/owner/operator rather than to identify BES elements. On this score, we note there has been considerable confusion between the NERC Statement of Registry Criteria, which is merely intended to establish a list of entities that may presumptively be required to comply with Reliability Standards, and the BES definition, which defines which facilities are ultimately protected by Reliability Standards. In defining the BES, those concepts should be kept separate.
Response: The SDT believes the revised definition contains enough criteria (both for exceptions and inclusions) to determine most, if not all, of the Elements that will be part of the BES. The SDT also believes that the criteria for including generating units 20 MVA and greater that are connected to the BES at 100 kV and above provides the "bright-line" criteria that will eliminate the ambiguity the Commission cited in Order 743. The separate exception process will be drafted by the Rules of Procedure Drafting Team with the DBES SDT developing the bright-line criteria. There will be coordination between the two groups in this effort.		
Hydro-Québec		For questions 1 to 10, refer to questions 11 to 13.
Response: Please see response to Q11 to Q13.		
City of Redding	No	The NERC Registration Criteria thresholds were a good start at the time of implementation of the compliance program, however there is no engineering evidence that all of the facilities are necessary to reliably operate an interconnected transmission system.
Independent Electricity System	No	To be totally consistent with the 100 kV bright line approach, any Elements and Facilities that are not operated at voltages of 100 kV or higher should be excluded unless otherwise determined to be included

Organization	Yes or No	Question 2 Comment
Operator		through the exemption/inclusion process being developed.
Lewis County PUD	No	20MVA generation resources should not be part of the BES. This size generating resource is too small to affect the BES. Suggest the minimum size BES resource be changed to 100MVA for a single generator. If a smaller threshold is used then the RE or BA should demonstrate to the GO than this resource is critical to the BES
ITC Holdings Corp	No	20 MVA is too small a unit to be included in the BES definition. The definition should include units or plants with 75 MVA or more
Glacier Electric Cooperative	No	Once again, I believe it depends on the facility and whether or not it has a significant impact on the grid.
American Municipal Power	No	Suggest 50 MVA
Arizona Public Service Company	No	The minimum size should be 50 MVA connected to 200 kV or higher. Small generators or plants do not materially impact the reliability of the BES and do not need to be included.
PPL Energy Plus	No	The 20 MVA threshold appears to be arbitrary and will include many small generation facilities that have minimal impact on BES reliability, A 200 MVA aggregate threshold for generating units at the same site would be more appropriate. Generators that are smaller than 200 MVA are not likely to have a significant impact on the BES and should be excluded from the definition (without requiring application for an exemption on a case-by-case basis). The BES definition should be modified to incorporate this exclusion.(See also response to Question 8.)
LG&E and KU Energy LLC	No	
Response: The SDT has carefully considered this threshold, and believes that the 20 MVA unit is a low enough level to capture most generating units that have an effect on the reliability of the BES and may be dispatched by Balancing Authorities, but allows the exclusion of smaller units, such as 10 MVA units, connected to the BES that may not be dispatched by Balancing Authorities. The SDT believes the 20 MVA threshold for inclusion of generating units connected to the BES is proper.		
ExxonMobil Research and Engineering	No	I have reservations about the removal of the ability to use the net rating of a generation asset as the generator rating (i.e. the use of gross rating of a machine instead of net rating of the energy provided to the BES). Many industrial companies have back up power agreements with utilities to cover the loss of internal generation assets. The requirement to ensure that this back up power can be provided should be part of the NERC requirements for Transmission Operators and Balancing Authorities (e.g. the VAR-001 requirement for TOPs to obtain the necessary reactive resources to cover normal and contingency operations). The reliability goals and strategy of some large electricity consumers that this change is targeting differ from the bulk

Organization	Yes or No	Question 2 Comment
		electric system. For instance, a petrochemical facility that utilizes generation to offset the load seen by the BES may desire to disconnect from the bulk electric system during an event in order to preserve the stability of the private use network that supplies electricity to the equipment that control its chemical processes. As history has demonstrated, the most dangerous activities that petrochemical facilities undertake are the shutdown and startup of their processes. As a side note, the term 'directly connected' should be added to the NERC glossary. The concept of 'directly connected' is the key to understanding which generators are included in the BES and which generators are exempted.
Response: The SDT has carefully considered "behind-the-meter" generation, and considers it to be an exclusion to the BES. The SDT agrees with the language currently contained in the Statement of Compliance Registry Criteria regarding the exemption of net capacity associated with a retail meter. Excluded from the BES: A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority. With the revised definition and designations, the SDT does not believe that the term 'directly connected' needs to be utilized or defined.		
on behalf of Teck Metals Ltd.	No	
Indeck Energy Services	No	Same response as Question 1
on behalf of Catalyst Paper Corporation	No	
Clark Public Utilities	No	
Response: Please see response to Question 1.		
City of Grand Island	No	This is a registration criteria issue. Can this project directly cause changes in the registration criteria? 20 MVA is too low. That size of generator can not affect the Adequate Level of Reliability of the BES. 100 MVA is appropriate for this region.
Response: The goal of the SDT is not to change registration criteria if at all possible. In this case, the SDT has adopted the registration criteria and no changes are necessary.		

Organization	Yes or No	Question 2 Comment
The SDT has carefully considered this threshold, and believes that the 20 MVA unit is a low enough level to capture most generating units that have an effect on the reliability of the BES and may be dispatched by Balancing Authorities, but allows the exclusion of smaller units, such as 10 MVA units, directly connected to the BES that may not be dispatched by Balancing Authorities. The SDT believes the 20 MVA threshold for inclusion of generating units directly connected to the BES is proper.		
City of Anaheim	No	Unless the generator is required to maintain BES reliability, i.e. black start, etc., the GSU and gen tie should be excluded from the BES; provided, however, to eliminate any reliability gaps, such generation-tie equipment should be classified as "Generator" equipment subject to GO/GOP standards, and the PRC and vegetation management standards should be made applicable to GO/GOPs and this equipment. This is consistent with the NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for non-critical generation-tie transmission elements that are not required for the reliable operation of the BES.
Response: The SDT has carefully discussed the inclusion of GSU transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable. The SDT believes it does not make sense to include generation in the BES without including the Facilities to transfer power from a generating unit to the BES. The GSUs and line leads must be a part of the BES the same as other Facilities are part of the BES. The SDT has carefully considered additional Facilities that may be included in the BES due to this project and the ramifications on registration of GO/GOPs and TO/TOPs. However, the SDT must satisfy the Commission Order and do what is best for reliability of the BES. The development of the BES definition is not meant to result in registration of GO/GOPs as TO/TOPs. That issue will be addressed as needed in Project 2010-07: Generator Requirements at the Transmission Interface.		
PNGC Power	No	The generation resources described should not be presumed to be part of the BES. The criteria above are intended to identify GO/GOP registration as a user/owner/operator rather than to identify BES elements. On this score, we note there has been considerable confusion between the NERC Statement of Registry Criteria, which is merely intended to establish a list of entities that may presumptively be required to comply with Reliability Standards, and the BES definition, that defines which facilities are ultimately protected by Reliability Standards. In defining the BES, those concepts should be kept separate. In general, we do not believe that every generator rated at, or greater than, 20MVA should automatically be 'assumed' to be part of the BES. We do believe that some of the Mandatory Reliability Standards should apply however. This leads to an issue which might be somewhat philosophical, but, in this case, has real-world implications. We do not believe that the BES is contiguous. That is, say every generator which is greater than 20MVA is assumed to be part of the BES, does that mean that all the lines and equipment associated with this generator are also part of the BES? We do not think so, hence the possibility that the BES is non-contiguous. We also believe that some of the Mandatory Reliability Standards can apply to non-BES facilities, and equipment. A good example is the UFLS standards. As you might realize some UFLS relays are on lines rated well below 100kV. So in this case, a generator rated at 20MVA might not be part of the BES, but still the standards that apply to
Blachly-Lane Electric Co-op	No	
Clearwater Power Co.		
Douglas Electric Cooperative		
Central Electric Cooperative, Inc. (Redmond Oregon)	No	
Raft River Rural Electric Cooperative	No	
Northern Lights Inc.	No	

Organization	Yes or No	Question 2 Comment
Salmon River Electric Cooperative	No	a generator could still apply.
Okanogan Country Electric Cooperative	No	
Lost River Electric	No	
Lane Electric Cooperative	No	
Coos-Curry Electric Cooperative	No	
Consumer's Power Inc.	No	
Umatilla Electric Co-op	No	
West Oregon Electric Cooperative	No	
Lincoln Electric Cooperative	No	
Fall River Electric Cooperative	No	
Response: The SDT has carefully considered this threshold, and believes that the 20 MVA unit is a low enough level to capture most generating units that have an effect on the reliability and adequacy of the BES and may be dispatched by Balancing Authorities, but allows the exclusion of smaller units, such as 10 MVA units, directly connected to the BES that are not dispatched by Balancing Authorities. The SDT believes the 20 MVA threshold for inclusion of generating units directly connected to the BES is proper. The SDT also believes that the criteria of including generating units 20 MVA and greater that are connected to the BES at 100 kV and above provides the "bright-line" criteria that will eliminate the ambiguity the Commission cited in Order 743. The SDT has carefully discussed the inclusion of GSU transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable. The SDT believes it does not make sense to include generation in the BES without including the Facilities to transfer power from a generating unit to the BES. The GSUs and line leads must be a part of the BES the same as other Facilities are part of the BES.		
United Illuminating Company	No	Any Generator connected at 100 kV or above should be part of BES. There should not be a MVA threshold
Response: The SDT has carefully considered this threshold, and believes that the 20 MVA unit is a low enough level to capture most generating units that have		

Organization	Yes or No	Question 2 Comment
an effect on the reliability of the BES and may be dispatched by Balancing Authorities, but allows the exclusion of smaller units, such as 10 MVA units, directly connected to the BES that may not be dispatched by Balancing Authorities. The SDT believes the 20 MVA threshold for inclusion of generating units directly connected to the BES is proper. The SDT also believes that the criteria of including generating units 20 MVA and greater that are connected to the BES at 100 kV and above provides the "bright-line" criteria that will eliminate the ambiguity the Commission cited in Order 743.		
Southern Company	No	Lines and transformers should be included based upon the voltage and not the function they serve. We support the inclusion of all non-radial lines operated at a voltage of 100 kV or higher as well as all transformers with both primary and secondary windings operated at 100 kV or higher. We do not support generic inclusions of any radial lines or transformers with primary or secondary windings operated below 100kV. Our response in question 13 amplifies this statement. Individual, non-blackstart, generator resources of 20MVA are too small to impact the reliability of the BES. We recommend single resource (unit) inclusion threshold be increased to 75MVA to match the threshold indicated in Q3 below for the aggregated case. Units smaller than 75MVA could be included using the "exemption process" or the NERC Compliance Registry Criteria could be changed.
Response: Lines and transformers are discussed as part of Questions 1 and 5. The SDT has carefully considered this threshold, and believes that the 20 MVA unit is a low enough level to capture most generating units that have an effect on the reliability of the BES and may be dispatched by Balancing Authorities, but allows the exclusion of smaller units, such as 10 MVA units, directly connected to the BES that may not be dispatched by Balancing Authorities. The SDT believes the 20 MVA threshold for inclusion of generating units connected to the BES is proper.		
The Dow Chemical Company		As discussed in response to question #12 below, issues relating to the registry criteria applicable to generation resources should not be revisited at this time.
Response: See response to Q12.		
Bonneville Power Administration	Yes	Generation resources should also define how wind generation is included in this clarification (by turbine, by string, etc)
Response: Wind generating units would be included or excluded based upon the criteria for dispersed generation, generating units, and multiple generating units. Included in the BES: I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.		
Florida Municipal Power Agency	Yes	1. For the sake of clarity and consistency, the BES should track the Statement of Compliance Registry Criteria

Organization	Yes or No	Question 2 Comment
Transmission Access Policy Study Group	Yes	wherever possible. In this case, for example, generation resources with respect to which an entity is registered as a Generator Owner or Generator Operator should be included in the BES, while non-registered generation resources should not be included in the BES. 2. FMPA' proposal, as further explained in response to the questions below, is introduced here in the interests of clarity. FMPA proposes that the BES definition should establish the universe of Elements that are, absent other factors, considered part of the BES. FMPA supports continuing to use a general 100 kV threshold, and basing the inclusion of generators in the BES on whether the generation is registered pursuant to the Statement of Compliance Registry Criteria. There is one "exclusion" in the definition proposed by FMPA, i.e., the existing exclusion for radial transmission serving only load with one transmission source (with a proposed clarification). Unlike the definition proposed in the draft SAR, therefore, but like the current definition, FMPA' proposal treats radial transmission Elements serving only load with one transmission source like sub-100 kV Elements, in that they are presumed to be non-BES unless a showing has been made, on a case-by-case basis, that a particular radial Element is necessary for operating the interconnected electric transmission network. The current definition of the BES excludes "radial transmission facilities serving only load with one transmission source," and FERC stated in Order 743 that it did not intend to require a change to that exclusion. It is very important that radial transmission serving only load with one transmission source remain excluded from the BES; if such radials instead had to go through an exemption process, as the SDT's proposed definition suggests, the burden on small entities and on NERC and the Regional Entities would be staggering since it would be presumed that the radial would be part of the BES until exempted (opt-out), where it should be that the radial should be excluded from the BES unless there is a determination that it should be part of the BES (opt-in). 3. As explained in more detail in response to Question 8 below, FMPA supports adding the clarification that radials serving generation that is not registered pursuant to the Statement of Compliance Registry Criteria are covered by the exclusion of radials serving only load with one transmission source. Of course, the application of the definition of the BES is dynamic. For example, in considering whether new generation connected by what had previously been a radial to load should be registered, NERC may also reevaluate the exclusion of the radial. 4. FMPA' proposed definition of the BES is: In general, the Bulk Electric System includes all Transmission Elements operated at voltages of 100 kV or higher, and all generation resources registered pursuant to the Statement of Compliance Registry Criteria. Radial Transmission Elements serving only load with one Transmission source are generally not included in this definition. A radial Transmission Element may be considered as "serving only load" for purposes of the foregoing general exclusion even if it connects generation, so long as that generation is not registered pursuant to the Statement of Compliance Registry Criteria. An Element that nominally meets the general BES criteria, but which an entity demonstrates, on a case-by-case basis, is not necessary for operating the interconnected electric transmission network, shall be exempted from the BES pursuant to the NERC exemption process. An Element that does not nominally meet the general BES criteria, but which NERC demonstrates, on a case-by-case basis, is necessary for

Organization	Yes or No	Question 2 Comment
		operating the interconnected electric transmission network, shall be included in the BES pursuant to the NERC inclusion process. 5. As FMPA' proposed definition suggests, FMPA proposes that entities be able to seek "exemptions" for Elements nominally included in the BES; obtaining an exemption would require a demonstration that the Element to be exempted is not necessary for operating the interconnected electric transmission network. Elements for which NERC has approved exemptions would not be part of the BES. Conversely, FMPA proposes that NERC have the authority, upon a case-by-case demonstration that a particular Element that is not nominally included in the BES is necessary for operating the interconnected electric transmission network, to add such an Element to the BES. 6. Please see also FMPA' Official Comment Form for BES Definition Exception Process, submitted today.
Response: **1.** The SDT agrees that the definition should track the registry criteria. One of the basic tenets of the SDT scope is to not expand the registry criteria if at all possible. **2.** The SDT has revised the definition and included specific inclusion and exclusion criteria that address these issues. The SDT also believes that the revised definition provides the "bright-line" criteria that will eliminate the ambiguity the Commission cited in Order 743. The separate exception process will be drafted by the Rules of Procedure Team with the DBESSDT developing the criteria. There will be coordination between the two groups in this effort. **3.** See response to Q8. **4.** See response to #2 above. **5.** The separate exception process will be drafted by the Rules of Procedure Team with the DBESSDT developing the criteria. There will be coordination between the two groups in this effort. **6.** See response to definition exception process.		
ReliabilityFirst	Yes	It is recommended that the term "directly connected" be defined and examples of this term are included in the ERO definition. Also, most wind farms have multiple transformations when connected to the BES and the intent should be to capture these wind farms in the BES, so more specific language is most likely needed in the definition to capture them.
Response: The SDT has revised the definition and "directly connected" is no longer utilized in the revised draft definition. The SDT has addressed the issue of wind generation in the revised draft definition. Included in the BES: I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.		

Organization	Yes or No	Question 2 Comment
NERC Staff	Yes	Please see additional comments at the end of this report.
Response: Please see response to Q13.		
Constellation Power Source Generation, Inc. (“CPSG”) filing on behalf of Constellation Energy Group, Inc. (“CEG”), Constellation Energy Commodities Group, Inc. (“CCG”), Constellation Energy Control and Dispatch, LLC (“CDD”), Constellation NewEnergy, Inc., (“CNE”) and Constellation Energy Nuclear Group, LLC, (“CENG”)	Yes	Constellation firmly believes that the classifications found in the Compliance Registry Criteria - Section III (Rules of Procedure Appendix 5B), such as that cited in this question, provide a useful basis to create a comprehensive, revised BES definition. Further, we propose that the BES drafting team incorporate the criteria directly into the revised BES definition, replacing the term “bulk power system” in each criterion with “greater than 100 kV.” This would then include assets that are currently registered as BES elements as well as those that may have been previously excluded due to Regional exemption variances. Structuring the revised BES definition to clarify both the inclusions and exclusions, can, ideally, eliminate the need for an onerous exemption process as well as eliminate the need for Section III of the Registry Criteria. Please see our response to question 11 for more detail on a proposed alternative approach to structuring the BES definition revision.
Response: The SDT agrees that the definition should track the registry criteria. One of the basic tenets of the SDT scope is to not expand the registry criteria if at all possible The SDT agrees and has made the suggested change. See response to Q11.		
Occidental Energy Ventures Corp	Yes	Many generator interconnection lines are operated at voltages greater than 100KV, but have traditionally not been considered part of the the transmission system. Rather these lines have been considered part of the generation system and, for quite some time, have been constructed and operated according to interconnection agreements which specify design and protection criteria. The BES definition should not be constructed in either a direct or implied manner that would alter the interconnection line status as being part of the Generation Facilities. Otherwise, it could result in registration of GO/GOPs as TO/TOPs. The issue of what additional standards, if any, should apply to these generation interconnection lines is the subject of Project 2010-07 and should be resolved by that standards development effort, not by a definition change. The proposed definition appears not to violate the inclusion of the interconnection line as part of the Generation Facility while still providing for these lines to be part of the BES, however, some clarification might be advisable (e.g., a statement that interconnection lines are part of the Generation Facility or are Generation Elements).

Organization	Yes or No	Question 2 Comment
Response: The SDT has carefully considered additional Facilities that may be included in the BES due to this project and the ramifications on registration of GO/GOPs and TO/TOPs. However, the SDT must satisfy the Commission Order and do what is best for reliability of the BES. The development of the BES definition is not meant to result in registration of GO/GOPs as TO/TOPs. That issue will be addressed as needed in Project 2010-07: Generator Requirements at the Transmission Interface.		
American Transmission company	Yes	For clarity, ATC suggests that the (gross nameplate rating) be changed to read "(gross generator nameplate rating)" and further classified as part of the BES given that a fault or outage of the individual generator resource greater than 20 MVA would not maintain an Adequate Level of Reliability of the BES.
Response: The SDT discussed this and does not agree with the suggested wording change.		
LCRA Transmission Services Corporation	Yes	The 20 MVA threshold is too low. Should consider the region's or area's reserve margin to determine the appropriate level of individual generator loss. Leave this to the region to determine.
Response: The SDT has carefully considered this threshold, and believes that the 20 MVA unit is a low enough level to capture most generating units that have an effect on the reliability of the BES and may be dispatched by Balancing Authorities, but allows the exclusion of smaller units, such as 10 MVA units, connected to the BES that may not be dispatched by Balancing Authorities. The SDT believes the 20 MVA threshold for inclusion of generating units connected to the BES is proper. The SDT's goal is to "eliminate the regional discretion in the ERO's current definition", which is specifically stated in the Commission's Order.		
Utility Services	Yes	Initially, yes; however, such a classification could be exempted upon a NERC review of the technical justification for exemption.
Response: The SDT believes the revised definition will contain enough criteria to determine most, if not all, of the Facilities that will be part of the BES. The exception process will be handled through the revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. Your comments will be forwarded to the Rules of Procedure Team.		
Xcel Energy	Yes	Xcel Energy believes that clarity should be added as to what constitutes an individual generation resource and a generating plant, especially as it pertains to multiple owner facilities and aggregating facilities such as wind or solar farms (which may also have multiple owners for discreet facilities that tie into a common bus). Discussion and controversy in other NERC and regional forums and standard development teams indicates that this is not well defined. It may be that the Statement of Compliance Registry needs to be enhanced if it forms the foundation for which these items are to be understood.

Organization	Yes or No	Question 2 Comment
Response: The new wording for generating units in the revised definition has addressed this issue. The Statement of Compliance Registry Criteria should agree with the BES definition, as they are intended not to be in conflict with each other. Included in the BES: I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above. Included in BES: I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above. Included in the BES: I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.		
MRO's NERC Standards Review Subcommittee	Yes	The SAR DT should use caution if the above statement is to be used within a guideline or rational box. The use of the word “interconnecting line leads may be somewhat ambiguous and lead to other confusion. GSU should be spelled out as a “generator step up transformer” and properly used within the statement: Individual generation resources (including Generator Step Up transformers and the associated generator interconnecting line lead(s)) greater than 20 MVA (gross nameplate rating) directly connected via a Generator Step-Up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above. For clarity, the NSRS suggests that the (gross nameplate rating) be changed to read “(gross generator nameplate rating)” and further classified as part of the BES given that a fault or outage of the individual generator resource greater than 20 MVA would not maintain an Adequate Level of Reliability of the BES.
Response: The term “interconnecting lines leads” has been deleted in the revised definition. Included in the BES: I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above. Included in BES: I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above. All acronyms used in the definition and supporting materials will be spelled out. The SDT discussed the wording change to the term “gross generator nameplate rating” and does not agree with the suggested wording change.		
SERC EC Planning Standards Subcommittee	Yes	
IRC Standards Review	Yes	

Organization	Yes or No	Question 2 Comment
Committee		
FirstEnergy Corp	Yes	
Competitive Suppliers	Yes	
Pepco Holdings Inc.	Yes	
Manitoba Hydro	Yes	Increasing numbers of small generators could create reliability issues if excluded.
North Carolina EMC	Yes	
Southern California Edison	Yes	SCE currently reports on individual generation resources (including GSU transformers and the associated generator interconnecting line lead(s)) greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above. SCE does not feel a blanket inclusion of all the listed equipment is needed.
Southern California Edison Company	Yes	A GSU transformer is clearly an extension of the functionality provided by the Generator Interconnection Elements, namely, to move bulk power from the BES generator to the BES network, and hence, the classification of the GSU transformer should match that of the Generator Interconnection Elements.
Entergy Services	Yes	
City of Austin dba Austin Energy	Yes	
Duke Energy	Yes	
The Dayton Power and Light Company	Yes	
BGE	Yes	No comment.
City Water Light and Power (CWLP) - Springfield, IL	Yes	

Organization	Yes or No	Question 2 Comment
American Electric Power (AEP)	Yes	
Idaho Power	Yes	
Springfield Utility Board	Yes	"directly connected" is important.
Response: Thank you for your response. Please see the summary consideration immediately under the question. Several stakeholders made suggestions that were adopted by the drafting team.		

3. Should the following be classified as part of the BES?

- **Generation plants (including GSU transformers and the associated generator interconnecting line lead(s))with aggregate capacity greater than 75 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above**

Summary Consideration: While many commenters did agree with the proposal, most commenters who responded to this question disagreed with some aspect of the proposal.

The SDT believes that generation plants larger than 75 MVA connected above 100kV need to be included within the BES definition. This threshold is based on the generation threshold values found in the NERC Statement of Compliance Registry Criteria. Also, two Regional Entities (FRCC and RFC) specifically use this criterion in each of their current BES definitions. The 75 MVA plant is a low enough level to capture most generating plants that would have an effect on the reliability of the interconnected Transmission network.

Commenters have suggested other thresholds (anywhere from 0 to 300 MVA) for generation plants to be included into the BES definition. However, as of this date commenters have not submitted technical justification upon which to base a significant departure from the generation MVA thresholds included in the NERC Statement of Compliance Registry Criteria.

Included in BES: I3 – Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.

Included in BES: I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.

Excluded from BES: E2 - A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.

Organization	Yes or No	Question 3 Comment
Northeast Power Coordinating Council	No	Refer to the response Question 2 above. The answer depends on whether the generator output is consumed locally or is necessary to maintain the reliability of the BES.
PUD No.1 of Clallam County	No	See comments to question2.
Orange and Rockland Utilities, Inc.	No	Refer to the response Question 2 above. The answer depends on whether the generator output is consumed locally or is necessary to maintain the reliability of the BES.

Organization	Yes or No	Question 3 Comment
City of Redding	No	As in question 2, there is no engineering evidence that all of the facilities are necessary to reliably operate an interconnected transmission system.
Response: Please see response to Q2.		
Electric Market Policy	No	Dominion does not agree that generation plants should be classified as part of the BES.Dominion supports the criteria for registering owners, operators, and users of the bulk power system, as indicated in the current Statement of Compliance Registry Criteria .
Response: Dominion makes the suggestion that all generators be excluded from the BES, however, Dominion does not provide a technical justification for this significant departure. The SDT believes that generation plants larger than 75 MVA connected above 100kV need to be included within the BES definition. The exception process should allow for the possibility that certain generating plants larger than 75 MVA can be excluded if it can be proven that such plants are not necessary for operating the interconnected Transmission network. Additionally, the Commission in its Order 743 suggests that the revised BES definition should include exception processes for exclusion/inclusion of various Elements. The process for such exclusions/inclusions will be developed as part of the revision to the NERC Rules of Procedure by a different team in a parallel effort to the development of this BES definition.		
SERC OC Standards Review Group	No	We do not agree with the inclusion of GSU transformers and associated interconnecting line leads. Lines and transformers should be included based upon the voltage and not the function they serve. We support the inclusion of all non-radial lines operated at a voltage of 100 kV or higher as well as all transformers with both primary and secondary windings operated at 100 kV or higher. We do not support generic inclusions of any radial lines or transformers with primary or secondary windings operated below 100kV. Our response in question 13 amplifies this statement.
Response: SERC has not provided justification for excluding all GSU transformers and associated interconnecting lines leads from the BES. The SDT believes that generation plants larger than 75 MVA connected above 100kV including GSU transformers and interconnecting line leads need to be included within the BES. The SDT has revised the definition and included specific inclusion and exclusion criteria that address these issues. Included in BES: I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.		
PacifiCorp	No	In Order No. 743, the Commission directed NERC to adopt an exemption process for excluding facilities from the definition of the BES that are not necessary to operate an interconnected electric transmission network.

Organization	Yes or No	Question 3 Comment
		In order to determine which facilities may be excluded, there must be criteria and a methodology that may be applied to identify which facilities are "necessary" to operate an interconnected electric transmission network and which "transmission and generation" facilities are not. In other words, there must be a clear way to determine what makes a particular facility is "necessary" for bulk system operation. Application of the criteria and methodology will result in the identification of the facilities that may be excluded. The comment questions asked in this questionnaire cannot be answered in a meaningful way absent this methodology. Significant efforts have been undertaken by the WECC Bulk Electric System Definition Task Force (BESDTF) over the course of the past year to identify some initial criteria and methodologies. These efforts are ongoing and should be supported by the NERC drafting team. For example: Generation plants should not be included or excluded solely based on a their gross nameplate rating and the operating voltage at which they are connected to transmission facilities. Generation plants which are necessary to operate the interconnected network should be included as part of the regulated BES. Generating plants which are not "necessary for the operation of the interconnected network" should be excluded. A methodology needs to be developed to determine which generating plants may be excluded as part of the regulated BES.
Response: The SDT acknowledges that commenters will need to reserve judgment on the exception process, which is being developed as a modification to the NERC Rules of Procedure (ROP). This exception process will be a parallel effort to this BES definition development. The SDT further acknowledges the work of WECC and other regional entities (e.g., RFC, FRCC, and NPCC) in proposing the BES definition, bright lines, and exclusion/inclusion criteria and processes. The work of these regional entities has greatly helped the SDT. The SDT believes that generation plants larger than 75 MVA connected above 100kV need to be included within the BES definition. The exception process should allow for the possibility that certain generating plants larger than 75 MVA can be excluded if it can be proven that such plants are not necessary for operating the interconnected Transmission network. Additionally, the Commission in its Order 743 suggests that the revised BES definition should include exception processes for exclusion/inclusion of various Elements. The process for such exclusions/inclusions will be developed as part of the revision to the NERC Rules of Procedure by a different team in a parallel effort to the development of this BES definition.		
PPL Energy Plus	No	See response to Questions 2 and 8.
LG&E and KU Energy LLC	No	See response to Questions 2 and 8.
Response: See response to Q2 & Q8.		
ExxonMobil Research and Engineering	No	I have reservations about the removal of the ability to use the net rating of a generation asset as the generator rating (i.e. the use of gross rating of a machine instead of net rating of the energy provided to the BES). Many industrial companies have back up power agreements with utilities to cover the loss of internal generation assets. The requirement to ensure that this back up power can be provided should be part of the NERC requirements for Transmission Operators and Balancing Authorities (e.g. the VAR-001 requirement for

Organization	Yes or No	Question 3 Comment
		TOPs to obtain the necessary reactive resources to cover normal and contingency operations). The reliability goals and strategy of some large electricity consumers that this change is targeting differ from the bulk electric system. For instance, a petrochemical facility that utilizes generation to offset the load seen by the BES may desire to disconnect from the bulk electric system during an event in order to preserve the stability of the private use network that supplies electricity to the equipment that control its chemical processes. As history has demonstrated, the most dangerous activities that petrochemical facilities undertake are the shutdown and startup of their processes. As a side note, the term 'directly connected' should be added to the NERC glossary. The concept of 'directly connected' is the key to understanding which generators are included in the BES and which generators are exempted.
Response: The SDT's proposed BES definition has exclusion criteria that address these issues. Excluded from BES: E2 - A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
Arizona Public Service Company	No	The minimum plant size should be 300 MVA. Smaller plants do not materially impact the reliability of thle BES.
Response: The SDT appreciates the suggestion of a 300 MVA generation threshold for materiality of impact, however, as of this date sufficient technical justification has not been submitted upon which to base a significant departure from the generation MVA thresholds included in the NERC Statement of Compliance Registry Criteria. The SDT believes that generation plants larger than 75 MVA connected above 100kV need to be included within the BES definition. The exception process should allow for the possibility that certain generating plants larger than 75 MVA can be excluded if it can be proven that such plants are not necessary for operating the interconnected Transmission network. Additionally, the Commission in its Order 743 suggests that the revised BES definition should include exception processes for exclusion/inclusion of various Elements. The process for such exclusions/inclusions will be developed as part of the revision to the NERC Rules of Procedure by a different team in a parallel effort to the development of this BES definition.		
Central Lincoln	No	The generation resources so described should be presumed to be part of the BES unless or until they have been through the exemption process and as a result have been classified as non-BES.
Response: Thank you for your response. The SDT agrees.		
American Municipal Power	No	Suggest 125 MVA

Organization	Yes or No	Question 3 Comment
Response: The SDT appreciates the suggestion of a 125 MVA generation threshold, however, as of this date sufficient technical justification has not submitted upon which to base a significant departure from the generation MVA thresholds included in the NERC Statement of Compliance Registry Criteria. The SDT believes that generation plants larger than 75 MVA connected above 100kV need to be included within the BES definition. The exception process should allow for the possibility that certain generating plants larger than 75 MVA can be excluded if it can be proven that such plants are not necessary for operating the interconnected Transmission network. Additionally, the Commission in its Order 743 suggests that the revised BES definition should include exception processes for exclusion/inclusion of various Elements. The process for such exclusions/inclusions will be developed as part of the revision to the NERC Rules of Procedure, in a parallel effort to the development of this BES definition.		
Indeck Energy Services	No	Same Response as Question 1
Response: See response to Q1.		
City of Grand Island	No	75 MVA aggregate is too low. 200 MVA aggregate is appropriate for this region.
Response: The SDT appreciates the suggestion of a 200 MVA generation threshold however, as of this date sufficient technical justification has not been submitted upon which to base a significant departure from the generation MVA thresholds included in the NERC Statement of Compliance Registry Criteria. The SDT believes that generation plants larger than 75 MVA connected above 100kV need to be included within the BES definition. The exception process should allow for the possibility that certain generating plants larger than 75 MVA can be excluded if it can be proven that such plants are not necessary for operating the interconnected Transmission network. Additionally, the Commission in its Order 743 suggests that the revised BES definition should include exception processes for exclusion/inclusion of various Elements. The process for such exclusions/inclusions will be developed as part of the revision to the NERC Rules of Procedure by a different team in a parallel effort to the development of this BES definition.		
City of Anaheim	No	Unless the generator is required to maintain BES reliability, i.e. black start, etc., the GSU and gen tie should be excluded from the BES; provided, however, to eliminate any reliability gaps, such generation-tie equipment should be classified as "Generator" equipment subject to GO/GOP standards, and the PRC and vegetation management standards should be made applicable to GO/GOPs and this equipment. This is consistent with the NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for non-critical generation-tie transmission elements that are not required for the reliable operation of the BES.
Response: The SDT appreciates the City's suggestions, however; the City's recommendations go beyond the SAR scope of work given to the SDT. The SDT has not been charged with determining the applicability of various standards. Also, as of this date sufficient justification has not been submitted demonstrating that GSU transformers and interconnecting generation ties should be excluded from the BES. The SDT believes that generation plants larger than 75 MVA connected above 100kV need to be included within the BES definition. The exception process		

Organization	Yes or No	Question 3 Comment
should allow for the possibility that certain generating plants larger than 75 MVA can be excluded if it can be proven that such plants are not necessary for operating the interconnected Transmission network. Additionally, the Commission in its Order 743 suggests that the revised BES definition should include exception processes for exclusion/inclusion of various Elements. The process for such exclusions/inclusions will be developed as part of the revision to the NERC Rules of Procedure by a different team in a parallel effort to the development of this BES definition.		
Snohomish County PUD	No	The generation resources described should not be presumed to be part of the BES. The criteria above are intended to identify those entities that are required to register as user, owner or operator of the bulk system, and not to define a BES device. As noted in our response to question 2, Snohomish is concerned that the enforcement process to date has frequently conflated registry criteria and definitions of the BES.
Response: Snohomish has not provided justification for varying from a 75 MVA bright line for determining BES generation plants. Further, as of this date, the SDT has not received sufficient technical justification upon which to base a significant departure from the generation MVA thresholds included in the NERC Statement of Compliance Registry Criteria. The SDT believes that generation plants larger than 75 MVA connected above 100kV need to be included within the BES definition. The exception process should allow for the possibility that certain generating plants larger than 75 MVA can be excluded if it can be proven that such plants are not necessary for operating the interconnected Transmission network. Additionally, the Commission in its Order 743 suggests that the revised BES definition should include exception processes for exclusion/inclusion of various Elements. The process for such exclusions/inclusions will be developed as part of the revision to the NERC Rules of Procedure by a different team in a parallel effort to the development of this BES definition.		
PNGC Power	No	Please see our response to Question 2 .
Blachly-Lane Electric Co-op	No	
Clearwater Power Co.	No	
Douglas Electric Cooperative	No	
Central Electric Cooperative, Inc. (Redmond Oregon)	No	
Raft River Rural Electric Cooperative	No	
Northern Lights Inc.	No	

Organization	Yes or No	Question 3 Comment
Salmon River Electric Cooperative	No	
Okanogan Country Electric Cooperative	No	
Lost River Electric	No	
Lane Electric Cooperative	No	
Coos-Curry Electric Cooperative	No	
Consumer's Power Inc.	No	
Umatilla Electric Co-op	No	
West Oregon Electric Cooperative	No	
Lincoln Electric Cooperative	No	
Fall River Electric Cooperative	No	
Response: See response to Q2.		
Glacier Electric Cooperative	No	Once again, I believe it depends on the facility and its importance to the grid. Some 75 MVA plants will have a greater impact than others. The ones that are truly important to the grid should be include, but the ones that are not should not be. I believe more of an analytical approach would be much more accurate in determing which facilities truly should be part of the BES than the bright-line approach that is being attempted.
United Illuminating Company	No	Any goupr of Generators connected at 100 kV or above should be part of BES. There should not be a MVA threshold
Response: The SDT believes that generation plants larger than 75 MVA connected above 100kV need to be included within the BES definition. The exception process – for exclusions/inclusions – should allow for the possibility that certain generating plants larger than 75 MVA can be excluded if it can be proven that such		

Organization	Yes or No	Question 3 Comment
plants are not necessary for operating the interconnected Transmission network. Additionally, the Commission in its Order 743 suggests that the revised BES definition should include exception processes for exclusion/inclusion of various Elements. The process for such exclusions/inclusions will be developed as part of the revision to the NERC Rules of Procedure, in a parallel effort to the development of this BES definition.		
Lewis County PUD	No	75MVA generation resources should not be part of the BES. This size generating resource is too small to affect the BES. Suggest the minimum size BES resource be changed to 150MVA. If a smaller threshold is used then the RE or BA should demonstrate to the GO than this resource is critical to the BES.
Response: The SDT appreciates the suggestion of a 150 MVA threshold for materiality of impact, however, sufficient technical justification has not been submitted upon which to base a significant departure from the generation MVA thresholds included in the NERC Statement of Compliance Registry Criteria. The SDT believes that generation plants larger than 75 MVA connected above 100kV need to be included within the BES definition. The exception process should allow for the possibility that certain generating plants larger than 75 MVA can be excluded if it can be proven that such plants are not necessary for operating the interconnected Transmission network. Additionally, the Commission in its Order 743 suggests that the revised BES definition should include exception processes for exclusion/inclusion of various Elements. The process for such exclusions/inclusions will be developed as part of the revision to the NERC Rules of Procedure by a different team in a parallel effort to the development of this BES definition.		
Independent Electricity System Operator	No	Same comment as in Q3, above.
Response: It is assumed that the commenter is referring to Q2. See SDT response to Q2.		
The Dow Chemical Company		As discussed in response to question #12 below, issues relating to the registry criteria applicable to generation resources should not be revisited at this time.
Response: See response to Q12.		
Constellation Power Source Generation, Inc. (“CPSG”) filing on behalf of Constellation Energy Group, Inc. (“CEG”), Constellation Energy Commodities Group, Inc. (“CCG”), Constellation Energy Control and Dispatch, LLC (“CDD”), Constellation	Yes	Constellation firmly believes that the classifications found in the Compliance Registry Criteria - Section III (Rules of Procedure Appendix 5B), such as that cited in this question, provide a useful basis to create a comprehensive, revised BES definition. Further, we propose that the BES drafting team incorporate the criteria directly into the revised BES definition, replacing the term “bulk power system” in each criterion with “greater than 100 kV.” This would then include assets that are currently registered as BES elements as well as those that may have been previously excluded due to Regional exemption variances. Structuring the revised BES definition to clarify both the inclusions and exclusions, can, ideally, eliminate the need for an onerous exemption process as well as

Organization	Yes or No	Question 3 Comment
NewEnergy, Inc., ("CNE") and Constellation Energy Nuclear Group, LLC, ("CENG")		eliminate the need for Section III of the Registry Criteria. Please see our response to question 11 for more detail on a proposed alternative approach to structuring the BES definition revision.
Response: the SDT agrees that the Registry Criteria is a valuable resource for deliberations on a BES definition and has utilized it whenever possible. The SDT agrees and has made the suggested change. See response to Question 11.		
Occidental Energy Ventures Corp	Yes	Many generator interconnection lines are operated at voltages greater than 100KV, but have traditionally not been considered part of the the transmission system. Rather these lines have been considered part of the generation system and, for quite some time, have been constructed and operated according to interconnection agreements which specify design and protection criteria. The BES definition should not be constructed in either a direct or implied manner that would alter the interconnection line status as being part of the Generation Facilities. Otherwise, it could result in registration of GO/GOPs as TO/TOPs. The issue of what additional standards, if any, should apply to these generation interconnection lines is the subject of Project 2010-07 and should be resolved by that standards development effort, not by a definition change. The proposed definition appears not to violate the inclusion of the interconnection line as part of the Generation Facility while still providing for these lines to be part of the BES, however, some clarification might be advisable (e.g., a statement that interconnection lines are part of the Generation Facility or are Generation Elements).
Response: The SDT appreciates the Occidental's suggestions, however; the recommendations go beyond the SAR scope of work given to the SDT. The SDT has not been charged with determining the applicability of various standards.		
American Transmission company	Yes	For clarity, ATC suggests that the ". . . aggregate capacity greater than 75 MVA . . . " wording be changed to read, ". . . aggregate generator capacity greater than 75 MVA. . . and further classified as part of the BES given that a fault or outage of the aggregate generator capacity greater than 75 MVA would not maintain an Adequate Level of Reliability of the BES.
Response: The SDT appreciates the ATC's concern; however, ATC has not provided rationale for the change.		
Xcel Energy	Yes	Xcel Energy believes that clarity should be added as to what constitutes an individual generation resource and a generating plant, especially as it pertains to multiple owner facilities and aggregating facilities such as wind or solar farms (which may also have multiple owners for discreet facilities that tie into a common bus). Discussion and controversy in other NERC and regional forums and standard development teams indicates

Organization	Yes or No	Question 3 Comment
		that this is not well defined. It may be that the Statement of Compliance Registry needs to be enhanced if it forms the foundation for which these items are to be understood.
Response: The SDT has revised the BES definition and has included specific inclusion and exclusion criteria that addresses dispersed generation plants (including wind and solar farms, which may contain multiple owners). Included in BES: I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above. The SDT has not been charged with making changes to NERC's Statement of Compliance Registry Criteria and has adopted a goal of not changing that criteria if at all possible.		
Bonneville Power Administration	Yes	There needs to be additional clarity on the definition of generation plant. Wind generation needs to be incorporated.
Response: The SDT has revised the BES definition and has included specific inclusion and exclusion criteria that addresses dispersed generation plants (including wind and solar farms). Included in BES: I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.		
NERC Staff	Yes	Please see additional comments at the end of this document.
Response: These comments were submitted in response to the concepts paper and were considered		
MRO's NERC Standards Review Subcommittee	Yes	See question 2 for similar comments and it is apparent that the SDT is trying to model the BES definition on the Statement of Compliance Registry Criteria (v5). Recommend that this question be struck. Question 2 above addresses connection requirements of Generators. For clarity, NSRS suggests that the ". . . aggregate capacity greater than 75 MVA . . . " wording be changed to read, ". . . aggregate generator capacity greater than 75 MVA. . . and further classified as part of the BES given that a fault or outage of the aggregate generator capacity greater than 75 MVA would not maintain an Adequate Level of Reliability of the BES.
Response: The SDT appreciates the comments; however, the SDT has not received sufficient technical justification upon which to base a significant departure from the generation MVA thresholds included in the NERC's Statement of Compliance Registry Criteria. MRO has not provided a rationale for making the language change.		
ReliabilityFirst	Yes	It is recommended that the term "directly connected" be defined and examples of this term are included in the

Organization	Yes or No	Question 3 Comment
		ERO definition.
Response: The SDT has revised the definition and the term "directly connected" is no longer utilized.		
SERC EC Planning Standards Subcommittee	Yes	
Public Service Enterprise Group Company	Yes	Yes, but see comments in section 2 above.
IRC Standards Review Committee	Yes	
Florida Municipal Power Agency	Yes	See FMPA response to Question 2 above.
FirstEnergy Corp	Yes	
Transmission Access Policy Study Group	Yes	See TAPS response to Question 2 above.
Competitive Suppliers	Yes	
Pepco Holdings Inc.	Yes	
LCRA Transmission Services Corporation	Yes	See comment to item 2 above.
Manitoba Hydro	Yes	
North Carolina EMC	Yes	
on behalf of Teck Metals Ltd.	Yes	
Southern California Edison	Yes	SCE currently reports on generation plants (including GSU transformers and the associated generator interconnecting line lead(s))with aggregate capacity greater than 75 MVA (gross nameplate rating) directly

Organization	Yes or No	Question 3 Comment
		connected via a step-up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above. SCE does not feel a blanket inclusion of all the listed equipment is needed.
Southern California Edison Company	Yes	A GSU transformer is clearly an extension of the functionality provided by the Generator Interconnection Elements, namely, to move bulk power from the BES generator to the BES network, and hence, the classification of the GSU transformer should match that of the Generator Interconnection Elements.
on behalf of Catalyst Paper Corporation	Yes	
Entergy Services	Yes	
Utility Services	Yes	Initially, yes; however, such a classification could be exempted upon a NERC review of the technical justification for exemption.
City of Austin dba Austin Energy	Yes	
Duke Energy	Yes	
The Dayton Power and Light Company	Yes	
ITC Holdings Corp	Yes	
BGE	Yes	No comment.
City Water Light and Power (CWLP) - Springfield, IL	Yes	
American Electric Power (AEP)	Yes	
Southern Company	Yes	However, considering today's transmission network and typical plant size, the plant size that can impact the reliability should be reevaluated. Particularly Wind Farms with dozens of small generators could have an impact on the BES if enough exist. Therefore, the 75 MVA threshold should work in this instance.

Organization	Yes or No	Question 3 Comment
Idaho Power	Yes	
Springfield Utility Board	Yes	"directly connected" is important.
Clark Public Utilities	Yes	
Response: Thank you for your response. Please see the summary consideration immediately under the question. Several stakeholders made suggestions that were adopted by the drafting team.		

4. Should the following be classified as part of the BES?

- **Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's (TOP's) restoration plan**

Summary Consideration: There was no consensus amongst commenters who responded to this question. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, to meet a Transmission Operator's restoration plan requirements for real and reactive power capability, frequency, and voltage control. The portion of the electric system that can be isolated and then energized to deliver electric power from a Blackstart Resource is essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT has included Blackstart Resources and the corresponding designated blackstart Cranking Paths indentified in the Transmission Operator's restoration plan as BES Elements.

Organization	Yes or No	Question 4 Comment
SERC EC Planning Standards Subcommittee	No	A blackstart designation should not necessarily make it part of the BES.
Southern Company	No	
Response: The SDT disagrees. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for real and reactive power capability, frequency, and voltage control. The portion of the electric system that can be isolated and then energized to deliver electric power from Blackstart Resources are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT has included Blackstart Resources and the corresponding designated blackstart Cranking Paths indentified in the Transmission Operator's restoration plan as BES Elements.		
Public Service Enterprise Group Company	No	Including these in the definition of BES would impose compliance obligations for these assets even if below 100kV at the same level as assets at or above the 100kV level. Blackstart Resources and Cranking Paths below 100kV do not impact the reliability of the BES and thus should not be required to comply with all standards as if they did. For example, 26kV cranking path protection systems typically only trip the 26kV, not 100kV or higher BES transmission facilities, thus do not impact the BES, and should not be required to meet

Organization	Yes or No	Question 4 Comment
		BES compliance standards for system protection. That assets can have different impacts and thus different levels of required compliance is expressly recognized in the recently stakeholder approved CIP-002-4 draft standard where blackstart cranking paths must be included as critical assets subject to CIP protections only to the point where two or more path options exist. Rather than include all Blackstart Resources and the designated Blackstart Cranking Paths indentified in the Transmission Operator's (TOP's) restoration plan in the blanket definition of BES, the drafting team should be directed to develop a definition that states that these assets are not part of the BES except where specifically identified in a requirement of a standard as needing to be compliant. For example, a standard requiring testing of Blackstart units would result in a Blackstart unit being deemed BES for purposes of that standard only.
FirstEnergy Corp	No	Blackstart generation and cranking paths do not need to be defined as being part of the BES. Rather, they are more appropriately reflected as supporting and restoring operation of the BES. Not all aspects of the BES reliability standards pertain to BES facilities. For example, UFLS and UVLS installed on a distribution system are important to arrest BES reliability concerns but they are not needed in what defines the BES. Similarly, blackstart generation and Cranking Paths do not need to be inclusive of what defines the BES but are important aspects of a restoration plan to re-establish a functioning BES.
American Transmission company	No	Blackstart Resources and designated blackstart Cranking Paths should not be classified as part of the BES, except those Elements and/or Facilities that are rated 100 kV or more and with a gross generator nameplate rating of 20 MVA or more.
City of Austin dba Austin Energy	No	Just because a unit can be used for black start should not - by definition - mean it is part of the BES. For example, there may be a very small unit which can be used for black start and the operating utility should not have to comply with all the NERC Standards all the time when that asset becomes "important" only during a black start event. Additionally, protective systems associated with small black start units would have to fulfill the same reliability requirements as any other BES generator even though those protective systems would have little purpose during a black start event.
Response: The SDT disagrees. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for real and reactive power capability, frequency, and voltage control. The portion of the electric system that can be isolated and then energized to deliver electric power from Blackstart Resources are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT has included Blackstart Resources and the corresponding designated blackstart Cranking Paths indentified in the Transmission Operator's restoration plan as BES Elements.		

Organization	Yes or No	Question 4 Comment
Again, Facilities identified as necessary for blackstart capability (both Blackstart Resources and the blackstart Cranking Path) in a Transmission Operator's restoration plan should be designated as part of the BES, and be subject to the corresponding NERC Standards referencing the BES. A review of the NERC Reliability Standards will be undertaken once the BES Definition is finalized to clearly delineate responsibilities for owners and operators of BES designated Facilities.		
MRO's NERC Standards Review Subcommittee	No	This question is irrelevant to the scope of this project. A Blackstart Resource may be a 10 MVA unit connected at the distribution level of voltage and within the TOP's Restoration Plan. Just because the unit is within the TOP's Restoration Plan does not make it a BES connected asset. CIP-002-4 is already industry approved and may "push" both large and small entities to remove these units from the TOP's Restoration Plan due to the Critical Asset label. If the Blackstart Resource is connected via GSU at 100 kV then it would be part of the BES. If the SDT is worried that a Blackstart Resource will not be maintained or tested, those requirements are within EOP-005-1 (and yet to be approved EOP-005-2). Blackstart Resources and designated blackstart Cranking Paths should not be classified as part of the BES, except those Elements and/or Facilities that are rated 100 kV or more and with a gross nameplate rating of 20 MVA or more.
Response: The SDT disagrees. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for real and reactive power capability, frequency, and voltage control. The portion of the electric system that can be isolated and then energized to deliver electric power from Blackstart Resources are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT has included Blackstart Resources and the corresponding designated blackstart Cranking Paths indentified in the Transmission Operator's restoration plan as BES Elements. For example, BES generation may require external Interconnections and Facilities in order to provide power to auxiliary equipment within the plant during times of system restoration.		
IRC Standards Review Committee	No	NERC Standards EOP-00-2 stipulates the requirements for testing Blackstart Resource and Cranking Paths. This testing requirement ensures that the facilities critical to system restoration are functional when needed. Inclusion of any resources or transmission paths as BES Elements/Facilities intended for use for system restoration should be determined using the criteria 1-3, above.
Response: The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without		

Organization	Yes or No	Question 4 Comment
connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for real and reactive power capability, frequency, and voltage control. The portion of the electric system that can be isolated and then energized to deliver electric power from Blackstart Resources are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT has included Blackstart Resources and the corresponding designated blackstart Cranking Paths indentified in the Transmission Operator's restoration plan as BES Elements. A review of the NERC Reliability Standards will be conducted once the BES Definition is finalized in order to clearly delineate responsibilities for owners and operators of BES designated Facilities.		
PacifiCorp	No	In Order No. 743, the Commission directed NERC to adopt an exemption process for excluding facilities from the definition of the BES that are not necessary to operate an interconnected electric transmission network. In order to determine which facilities may be excluded, there must be criteria and a methodology that may be applied to identify which facilities are "necessary" to operate an interconnected electric transmission network and which "transmission and generation" facilities are not. In other words, there must be a clear way to determine what makes a particular facility is "necessary" for bulk system operation. Application of the criteria and methodology will result in the identification of the facilities that may be excluded. The comment questions asked in this questionnaire cannot be answered in a meaningful way absent this methodology. Significant efforts have been undertaken by the WECC Bulk Electric System Definition Task Force (BESDTF) over the course of the past year to identify some initial criteria and methodologies. These efforts are ongoing and should be supported by the NERC drafting team. For example: Blackstart Resources and designated blackstart Cranking Paths should be included only if they are deemed necessary to restore the interconnected electric transmission network.
ISO New England Inc.	No	1. Revise the statement, "Blackstart Resources and the designated blackstart Cranking identified in the Transmission Operator's (TOP's) restoration plan." to "Blackstart Resources "material to" and designated as part of a Transmission Operator's (TOPs) restoration plan." Reason - Some regions have many blackstart units that are not material to a TOPs restoration plan. These units need not register and be subjected to the NERC Standards. Only those deemed material (i.e., "key facilities") should be classified as part of the BES. See NERC Registry Criteria for reference to "material" in describing, and qualifying, what constitutes Blackstart Resources." 2. NERC Standard EOP-00-2 stipulates the requirements for testing Blackstart Resources and Cranking Paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed. Designating these facilities as BES Elements or Facilities beyond the 100 kV bright line criterion will impose unnecessary requirements for these facilities which may not contribute to the BES reliability for everyday operations. If indeed any of these facilities are deemed necessary to support BES reliability for everyday operation, they will be identified through either the 100 kV bright line criterion or the

Organization	Yes or No	Question 4 Comment
		exemption/inclusion process.
Response: The SDT disagrees. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for real and reactive power capability, frequency, and voltage control. The portion of the electric system that can be isolated and then energized to deliver electric power from Blackstart Resources are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT has included Blackstart Resources and the corresponding designated blackstart Cranking Paths indentified in the Transmission Operator's restoration plan as BES Elements. The SDT assumes that the Blackstart Resources and designated blackstart Cranking Paths included in the Transmission Operator's restoration plans are those deemed necessary or required to reliably restore the system, or they wouldn't be included in the plan, subjecting them to the NERC Standard testing requirements.		
Arizona Public Service Company	No	With all of the new NERC Standards in place, a blackout should be an extremely rare event; therefore, classifying Blackstart units or Cranking Paths is not needed.
Response: The SDT disagrees. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for real and reactive power capability, frequency, and voltage control. The portion of the electric system that can be isolated and then energized to deliver electric power from Blackstart Resources are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT has included Blackstart Resources and the corresponding designated blackstart Cranking Paths indentified in the Transmission Operator's restoration plan as BES Elements. Again, the Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. This determination is based on the reliable restoration of the system, independent of likelihood of the assumed occurrence of the need for restoration.		
Independent Electricity System Operator	No	NERC Standards EOP-00-2 stipulates the requirements for testing Blackstart Resource and Cranking Paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed. Designating these facilities as BES Elements or Facilities beyond the 100 kV bright line criterion will impose unnecessary requirements for these facilities which may not contribute to the BES reliability at times other than during system restoration. If indeed any of these facilities are deemed necessary to support bulk power system reliability at times other than during system restoration, they will be identified through either the 100 bright line criterion or the exemption/inclusion process.

Organization	Yes or No	Question 4 Comment
American Electric Power (AEP)	No	Should be re-written to state that only those Blackstart Resources in the Transmission Operator's (TOP's) restoration plan be classified as part of the BES.
City Water Light and Power (CWLP) - Springfield, IL	No	CWLP feels that blackstart resources and cranking paths not otherwise qualified as a part of the BES based on other criteria should not be included in the definition of BES solely based on their status as blackstart-capable units. Requirements for blackstart resources and cranking paths are already addressed by existing and proposed EOP standards and we feel that arbitrarily classifying these elements as part of the BES may create undue burden on Transmission Owners when the same reliability result can be achieved through more directed effort in the EOP standards. Further, while such blackstart resources and cranking paths may support operation of the BES, they need not be strictly included in the definition of BES to achieve the desired reliability result.
City of Grand Island	No	Not across the board. Generator criteria from questions 2 and 3 can apply to blackstart generators as well. Otherwise the exception process can be used.
Southern California Edison	No	SCE does not feel a blanket inclusion of all the listed equipment is needed.
Pepco Holdings Inc.	No	To remain consistent with the proposed definition of facilities 100kv and above, this should not be included. Inclusion would not result in a more reliable system or reduce risk.
Electric Market Policy	No	Dominion does not agree that Blackstart Resources should be classified as part of the BES.Dominion supports the criteria for registering owners, operators, and users of the bulk power system, as indicated in the current Statement of Compliance Registry Criteria .
Central Lincoln	No	The generation resources so described should be presumed to be part of the BES unless or until they have been through the exemption process and as a result have been classified as non-BES.
Lewis County PUD	No	
Entergy Services	No	
The Dayton Power and Light Company	No	
Snohomish County PUD	No	The generation resources so described should be presumed to be part of the BES unless they have been

Organization	Yes or No	Question 4 Comment
PNGC Power	No	demonstrated through performance-based studies to present no substantial threat of separation events, cascading outages, or voltage instability on the bulk system.
Blachly-Lane Electric Co-op	No	
Clearwater Power Co.	No	
Douglas Electric Cooperative	No	
Central Electric Cooperative, Inc. (Redmond Oregon)	No	
Raft River Rural Electric Cooperative	No	
Northern Lights Inc.	No	
Salmon River Electric Cooperative	No	
Okanogan Country Electric Cooperative	No	
Lost River Electric	No	
Lane Electric Cooperative	No	
Coos-Curry Electric Cooperative	No	
Consumer's Power Inc.	No	
Umatilla Electric Co-op	No	
West Oregon Electric Cooperative	No	

Organization	Yes or No	Question 4 Comment
Lincoln Electric Cooperative	No	
Fall River Electric Cooperative	No	
Response: The SDT disagrees. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for real and reactive power capability, frequency, and voltage control. The portion of the electric system that can be isolated and then energized to deliver electric power from Blackstart Resources are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT has included Blackstart Resources and the corresponding designated blackstart Cranking Paths indentified in the Transmission Operator's restoration plan as BES Elements. Again, Facilities critically identified as necessary for blackstart capability (both Blackstart Resources and the blackstart Cranking Path) in a Transmission Operator's restoration plan should be designated as part of the BES, and be subject to the corresponding NERC Standards referencing the BES.		
BGE	No	This proposal as written could lead to a reduction in the number of blackstart units which rely on cranking paths of less than 100 kV and not currently classified as BES, thereby reducing BES reliability.
Response: The SDT disagrees. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for real and reactive power capability, frequency, and voltage control. The portion of the electric system that can be isolated and then energized to deliver electric power from Blackstart Resources are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT has included Blackstart Resources and the corresponding designated blackstart Cranking Paths indentified in the Transmission Operator's restoration plan as BES Elements. The Transmission Operator will remain responsible for maintaining a viable restoration plan, regardless of the BES definition.		
Constellation Power Source Generation, Inc. ("CPSG") filing on behalf of Constellation Energy Group, Inc. ("CEG"), Constellation Energy Commodities Group, Inc. ("CCG"), Constellation Energy Control and Dispatch, LLC	No	This proposal as written could lead to a reduction in the number of blackstart units which rely on cranking paths of less than 100 kV and not currently classified as BES, thereby reducing BES reliability. To account for this potential gap, Constellation firmly believes that the classifications found in the Compliance Registry Criteria - Section III (Rules of Procedure Appendix 5B), such as that cited in this question, provide a useful basis to create a comprehensive, revised BES definition. Further, we propose that the BES drafting team incorporate the criteria directly into the revised BES definition, replacing the term "bulk power system" in each criterion with "greater than 100 kV." This would then include

Organization	Yes or No	Question 4 Comment
("CDD"), Constellation NewEnergy, Inc., ("CNE") and Constellation Energy Nuclear Group, LLC, ("CENG")		assets that are currently registered as BES elements as well as those that may have been previously excluded due to Regional exemption variances. As an example, the Compliance Registry Criteria includes any generator, regardless of size, that is a blackstart unit material to and designated as part of a transmission operator entity's restoration plan. The Compliance Registry also includes transmission as elements above 100kV or that is critical as defined by the Regional Entity (excluding radial facilities as described in the current BES definition). Structuring the revised BES definition to clarify both the inclusions and exclusions, can, ideally, eliminate the need for an onerous exemption process. Please see our response to question 12 for more detail on a proposed alternative approach to structuring the BES definition revision.
Response: The SDT disagrees. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all Facilities necessary for operating an interconnected electric Transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for real and reactive power capability, frequency, and voltage control. The portion of the electric system that can be isolated and then energized to deliver electric power from Blackstart Resources are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT has included Blackstart Resources and the corresponding designated blackstart Cranking Paths indentified in the Transmission Operator's restoration plan as BES Elements. The SDT agrees and has made the suggested change and replaced the term "bulk power system" in each criterion with "greater than 100 kV." Please see response to Q12.		
The Dow Chemical Company		As discussed in response to question #12 below, issues relating to the registry criteria applicable to generation resources should not be revisited at this time.
Response: Please see response to Q12.		
ReliabilityFirst	Yes	It is recommended that the term "cranking path" be defined and examples of this term be provided. Also, does the term "cranking paths" include all paths or just the primary path if there are multiple paths available?
Response: The NERC Glossary of Terms defines 'Cranking Path' as "A portion of the electric system that can be isolated and then energized to deliver electric power from a generation source to enable the startup of one or more other generating units".		
NERC Staff	Yes	Please see additional comments at the end of this document.

Organization	Yes or No	Question 4 Comment
Response: See response to Q13.		
Springfield Utility Board	Yes	
Clark Public Utilities	Yes	
Xcel Energy	Yes	
City of Redding	Yes	
City of Anaheim	Yes	
Northeast Power Coordinating Council	Yes	
Florida Municipal Power Agency	Yes	See FMPA response to Question 2 above.
Bonneville Power Administration	Yes	Blackstart resources should never be allowed to be excluded through any technical studies.
SERC OC Standards Review Group	Yes	
Transmission Access Policy Study Group	Yes	See TAPS response to Question 2 above.
PPL Energy Plus	Yes	Blackstart Resources and the designated blackstart Cranking Paths identified in the TOP's restoration plan are a special case and warrant inclusion in the BES definition regardless of voltage because of their importance to BES reliability. However, this would not be the case for other facilities operated below 100 kV.
LG&E and KU Energy LLC	Yes	
Competitive Suppliers	Yes	
ExxonMobil Research and Engineering	Yes	

Organization	Yes or No	Question 4 Comment
LCRA Transmission Services Corporation	Yes	This is critical for system restoration.
PUD No.1 of Clallam County	Yes	Based on the current Reliability Standards practices it may be advantageous to reduce the number of blackstart generation and cranking paths to limit exposure to BES applicable standards. At this time if a registered entity has multiple blackstart units, it may be advantageous to reduce or decommission the number to avoid compliance risks. The current requirements may ultimately reduce the number of blackstart units and reduce BES electric reliability. It may make more sense to identify subset of critical blackstart projects and associated cranking paths as BES elements. The generation resources so described should be presumed to be part of the BES unless or until they have been through the exemption process and as a result have been classified as non-BES.
Manitoba Hydro	Yes	
American Municipal Power	Yes	
North Carolina EMC	Yes	
on behalf of Teck Metals Ltd.	Yes	
Indeck Energy Services	Yes	
Southern California Edison Company	Yes	
on behalf of Catalyst Paper Corporation	Yes	
Occidental Energy Ventures Corp	Yes	
City of Anaheim	Yes	
Glacier Electric Cooperative	Yes	These resources are significant to the BES and should be included.

Organization	Yes or No	Question 4 Comment
United Illuminating Company	Yes	
Orange and Rockland Utilities, Inc.	Yes	
Utility Services	Yes	
Duke Energy	Yes	
ITC Holdings Corp	Yes	Yes, but the Blackstart Resources identified as the PRIMARY resources in the System Restoration Plan should be the focus.
Idaho Power	Yes	
Response: Thank you for your response.		

5. Should the following be classified as part of the BES?

- **Transmission Elements or Facilities operated at voltages below 100kV where the exemption process deems the Element or Facility to be included in the BES**

Summary Consideration: Most commenters who responded to this question indicated disagreement with the proposal however there was no consensus amongst the alternate proposals offered, and the proposals suggesting other thresholds were not supported with any technical justification. The SDT has reviewed the industry comments on this issue, debated the topic, and has come to an agreement that the bright-line designation for Transmission Elements is 100kV and above. Any deviations from the bright-line designation (beyond those identified in the revised definition of BES), including Transmission Elements operated below 100kV, will be handled through the Rules of Procedure process that is being developed by a separate team.

Organization	Yes or No	Question 5 Comment
SERC EC Planning Standards Subcommittee	No	We prefer a bright-line rule of 100 kV. The exception process should not be used to include facilities operated at voltages below 100 kV.
Arizona Public Service Company	No	There are no practical cases where the facilities below 100 kV impact the major load centers or BES.
North Carolina EMC	No	Transmission elements or facilities operated at voltages below 100kV should only be included in the BES if identified by the RRO as critical to the BES.
Southern California Edison Company	No	The Exemption Process should apply to transmission elements or facilities greater than 100kV only. Facilities operated below 100kV are generally used for distribution purposes.
BGE	No	This proposal as written could lead to the inclusion of elements or facilities which have no material reliability impact on the interconnected transmission system.
Southern Company	No	We prefer a bright-line rule of 100 kV. The exception process should not be used to include facilities operated at voltages below 100 kV.
ExxonMobil Research and Engineering	Yes	It is conceivable that, in some areas, the Bulk Electric System may include transmission assets that are rated and operated at 69kV or below.
Response: The SDT appreciates the preference of several entities to utilize strict bright-line criteria of Facilities at 100kV and above that would be considered for inclusion in the BES. The SDT has carefully considered this matter, and believes that the exception process must allow for the possibility that certain Facilities		

Organization	Yes or No	Question 5 Comment
operated at voltages below 100kV could have appreciable influence over the reliable operation of the interconnected network Transmission grid, thereby warranting examination through an exception process for inclusion in the BES. The SDT expects that these exceptions for Facilities operated at voltages below 100kV will be relatively rare. The criteria for such inclusion will be developed as part of this project and the ROP process will be handled by a separate team through the revision to the Rules of Procedure, in an effort parallel to the development of the BES definition.		
ITC Holdings Corp	No	PRC023 has developed a process for specification of critical lines below 100 kV. This same process should be used to include below 100 kV lines in the BES
Florida Municipal Power Agency	No	This Question refers to including an Element in the BES through the exemption process, suggesting that the SDT is contemplating a single process for including nominally non-BES Elements in the BES and for exempting nominally BES Elements from the BES. While it would make sense for the two processes to be similar, they cannot be identical: The burden should be on the entity requesting an exemption to show that an Element that is nominally part of the BES is nevertheless not necessary for operating the interconnected electric transmission network and thus should be exempted from the BES. In contrast, with respect to transmission operated at voltages below 100 kV, it is NERC that must show, on a case-by-case basis, that transmission that is not nominally part of the BES is nevertheless necessary for operating the interconnected electric transmission network and thus should be included in the BES.Transmission operated at voltages below 100 kV should only be classified as part of the BES if the inclusion process, assessing each Element on a case-by-case basis, based on a uniform set of criteria, results in a finding that the particular Element should be included in the BES.
Transmission Access Policy Study Group	No	
Response: The process for inclusions and exclusions will be developed by a separate team as part of the revision to the Rules of Procedure, in an effort parallel to the development of the BES definition. Your comments will be forwarded to the Rules of Procedure Team.		
FirstEnergy Corp	No	We do not agree with an "exemption process" being associated with "including facilities". We suggest keeping the exemption process separate from the identification of critical sub 100kV facilities that will be included in the BES. We do agree that a consistent continent-wide approach for identifying these facilities is a worthwhile goal but should be a secondary priority to establishing the BES definition and BES exemption process.
Response: The SDT envisions an “exception process”, and regrets the use of “exemption” in the original SAR. The processes for inclusions and exclusions will be developed by a separate team as part of the revision to the Rules of Procedure, in an effort parallel to the development of the BES definition. Your comments will be forwarded to the Rules of Procedure Team.		
American Electric Power (AEP)	No	Exemption processes are distinctly different than inclusion processes, and clarification is needed to address their differences. There should be two distinct processes. Until details of such processes and their related criteria are better defined, it is difficult to provide substantive comments.

Organization	Yes or No	Question 5 Comment
MRO's NERC Standards Review Subcommittee	No	FERC has directed (in section 30 of FERC Order 743) that NERC have an established "exemption" process to remove this judgment from the Regions in defining what the BES is. However, the applicable process should be called an "exception" process, not an "exemption" process that infers the concept of "exclusion" and further classified as part of the BES given that a fault or an outage on the Transmission Element or Facility at voltages below 100kV would not maintain an Adequate Level of Reliability of the BES.
PacifiCorp	No	In paragraph 121 of Order No. 743, the Commission states that it agrees that the ERO should develop a parallel process for including as part of the bulk electric system "critical" facilities, operated at less than 100 kV, that the Regional Entities determine are necessary for operating the interconnected transmission network. (emphasis added) Further, the Commission stated that "[w]e believe that it would be worthwhile for NERC to consider formalizing the criteria for inclusion of critical facilities operated below 100 kV in developing the exemption process." (emphasis added) PacifiCorp believes that it is appropriate to use the same criteria to determine what elements or facilities should be included in the definition of Bulk Electric System as those used to determine what elements or facilities should be excluded from the definition. However, the formal process used for exclusion (i.e. the exemption process) of facilities above 100 kV should not be the same process as the process for inclusion of sub-100 kV facilities. As PacifiCorp understands it, per the Commission, the exemption process will require a facility-by-facility approval by NERC for exemption whereas inclusion of sub-100 kV facilities will involve a Regional Entity determination that such facilities must be included. These should therefore be separate processes.
Central Lincoln	No	Including elements through an exemption process is bound to create confusion and misunderstandings between the registrants and REs. Please include such elements through an inclusion process. It should also be clarified that registrants are not required to put all sub-100 kV elements through this process; the burden should be on the RE to include elements of particular concern.
PUD No.1 of Clallam County	No	
Response: The SDT acknowledges that the term "exemption" is inappropriate in the context of these proposed "inclusions", and subsequent drafts will refer to the "exception" process suggested by the Commission in its Order 743. The process for such inclusions will be developed by a separate team through the revision to the Rules of Procedure, in an effort parallel to the development of the BES definition.		
Pepco Holdings Inc.	No	Some details on the exemption process must be known before accepting this. Who can submit an exemption (DP, GO, GOP, TO, TOP, RC, etc)? How do interested parties get informed? Can others intervene?
Occidental Energy Ventures Corp	No	Until the expemtion process is finalized, it is not prudent to answer in the affirmative.
Entergy Services	No	Our response to this question depends on the details of the "exemption process", including what entity has the

Organization	Yes or No	Question 5 Comment
		final decision and how it is implemented. Please see our response to Q13 below.
City Water Light and Power (CWLP) - Springfield, IL	No	While CWLP agrees with the general concept of inclusion by exception (as opposed to exemption), we have concerns regarding the lack of detailed definition of this process, especially the administrative process for disputes regarding inclusion of elements in the BES. Without firm administrative rules for resolving disputes based on technical justification, we cannot support this measure currently.
Manitoba Hydro		It is confusing to use the term "exemption process" to determine what is included. Abstain until exemption process has been defined.
Duke Energy		There is not enough information available at this time to adequately evaluate this question. It would be necessary to have a list of exemption criteria or more detail on the exemption process to address this question. This is one of the reasons that the exemption criteria should be developed through the standards development process along with the definition.
Xcel Energy		Xcel Energy does not disagree that there may be situations where elements below 100KV may need to be included, but we have concerns about the exemption process. This undeveloped process presents itself as a wild card to entities, and will most likely present inconsistencies between regions based upon each Region's preference. Additionally, does the Regional Methodology require any approval (e.g. ERO) other than the Region's own process? The "exclusions" process indicates that the ERO has the final approval authority to exclude an item from the BES. Why would the same not apply for including something into the BES based on the Region's Methodology?
IRC Standards Review Committee	Yes	We generally support the concept but we need to assess the criteria for the exception, which have not been developed. Further, the wording seems to present a circular argument. We suggest the following revised wording to more clearly convey this criterion:Transmission Elements or Facilities operated at voltages below 100kV that are deemed to be included in the BES as determined by the exception/inclusion process.
Response: The SDT acknowledges that commenters will need to reserve judgment on the exception process, which is being developed by a separate team as a modification to the Rules of Procedure in an effort parallel with the development of the BES definition.		
American Municipal Power	No	
on behalf of Teck Metals Ltd.	No	

Organization	Yes or No	Question 5 Comment
on behalf of Teck Metals Ltd.	No	
on behalf of Catalyst Paper Corporation	No	
Idaho Power	No	
Response: Thank you for your response.		
Indeck Energy Services	No	Same Response as Question 1
Utility Services	Yes	See the answer to Question 1.
Response: See Response to Question 1.		
Snohomish County PUD	No	Snohomish agrees that certain Elements or Facilities operated at voltages below 100 kV may need to be classified as part of the BES if engineering studies demonstrate those Elements or Facilities to be necessary to the reliable operation of the bulk transmission system. We disagree, however, that inclusion of such facilities should be part of the exemption process. The exemption process should be focused on facilities operating at voltages above 100 kV that nonetheless are exempt because they are local distribution facilities or are demonstrated by engineering analysis to be unnecessary for the reliable operation of the interconnected bulk transmission grid. The inclusion of facilities below 100 kV should be a separate process in which the RRO is required to demonstrate that the facility has a material impact on the interconnected bulk transmission system despite its low operating voltage
Response: The SDT acknowledges that the term "exemption" is inappropriate in the context of proposed "inclusions" and "exclusions", and subsequent drafts will refer to the "exception" process suggested by the Commission in its Order 743. The process for such inclusions and exclusions will be developed as part of the revision to the Rules of Procedure by a separate team, in an effort parallel to the development of the BES definition. The SDT appreciates the preference of several entities to utilize strict bright-line criteria of facilities greater than 100kV that would be considered for inclusion in the BES. The SDT has carefully considered this matter, and believes that the exception process must allow for the possibility that certain Facilities operated at voltages below 100kV could have appreciable influence over the reliable operation of the interconnected network Transmission grid, thereby warranting examination through an exception process for inclusion in the BES. The SDT expects that these exceptions for Facilities operated at voltages below 100kV will be relatively rare.		
Lewis County PUD	No	Including elements through an exemption process is bound to create confusion and misunderstandings between the registrants and REs. Please include such elements through an inclusion process. It should also be clarified that registrants are not required to put all sub-100 kV elements through this process; the burden of

Organization	Yes or No	Question 5 Comment
		proof should be on the RE to include elements less than 100kV.
PNGC Power	No	Including elements through an exemption process is bound to create confusion and misunderstandings between the registrants and REs. Please include such elements through an inclusion process. It should also be clarified that registrants are not required to put all sub-100kV elements through this process; the burden should be on the RE to include elements of particular concern.
Blachly-Lane Electric Co-op	No	
Clearwater Power Co.	No	
Douglas Electric Cooperative	No	
Central Electric Cooperative, Inc. (Redmond Oregon)	No	
Raft River Rural Electric Cooperative	No	
Northern Lights Inc.	No	
Salmon River Electric Cooperative	No	
Okanogan Country Electric Cooperative	No	
Lost River Electric	No	
Lane Electric Cooperative	No	
Coos-Curry Electric Cooperative	No	
Consumer's Power Inc.	No	
Umatilla Electric Co-op	No	
West Oregon Electric	No	

Organization	Yes or No	Question 5 Comment
Cooperative		
Lincoln Electric Cooperative	No	
Fall River Electric Cooperative	No	
Central Lincoln	No	
PUD No.1 of Clallam County	No	
Response: The SDT acknowledges that the term "exemption" is inappropriate in the context of these proposed "inclusions", and subsequent drafts will refer to the "exception" process suggested by the Commission in its Order 743. The process for such inclusions will be developed by a separate team through the revision to the Rules of Procedure, in an effort parallel to the development of the BES definition.		
Constellation Power Source Generation, Inc. ("CPSG") filing on behalf of Constellation Energy Group, Inc. ("CEG"), Constellation Energy Commodities Group, Inc. ("CCG"), Constellation Energy Control and Dispatch, LLC ("CDD"), Constellation NewEnergy, Inc., ("CNE") and Constellation Energy Nuclear Group, LLC, ("CENG")	No	Although Constellation believes that it may be appropriate to include some of the elements above in the BES, this proposal will lead to the inclusion of elements or facilities which have no material impact on the interconnected transmission system. Furthermore, the use of an exemption process to include assets is confusing. Constellation proposes that the BES drafting team structure the revised BES definition to clarify both the inclusions and exclusions as completely as possible. If a separate "opt-in" process is deemed necessary (in anticipation of a few exceptions to the definition) then the drafting team should develop criteria for such a process.Using this approach the sentence above would then read "Transmission Elements or Facilities operated at voltages below 100kV where a Regional Entity deems the Element or Facility to be included in the BES."
Response: The SDT appreciates the preference of several entities to utilize strict bright-line criteria of Facilities at 100kV or above that would be considered for inclusion in the BES. The SDT has carefully considered this matter, and believes that the exception process must allow for the possibility that certain Facilities operated at voltages below 100kV could have appreciable influence over the reliable operation of the interconnected network Transmission grid, thereby warranting examination through an exception process for inclusion in the BES. The SDT expects that these exceptions for Facilities operated at voltages below 100kV will be relatively rare. The criteria for such inclusion will be developed as part of this project and the ROP process will be handled by a separate team through the revision to the Rules of Procedure, in an effort parallel to the development of the BES definition. The SDT acknowledges that the term "exemption" is inappropriate in the context of proposed "inclusions" and "exclusions", and subsequent drafts will refer to the "exception" process suggested by the Commission in its Order 743.		

Organization	Yes or No	Question 5 Comment
Springfield Utility Board	No	Why would an entity want to include an element in the definition of the BES? If an entity has a 69kV line that the ERO believes should be part of the BES but the entity does not want it part of the BES who initiates and pays for the exemption process? Does the ERO have the ability to initiate the process? If the owner of the Transmission Element or Facility is the only one that can initiate and exemption process and they do not want to what is the remedy if the line is necessary for bulk electric system reliability?
Response: The bright-line designation will be developed as part of this project and the ROP process will be handled through the revision to the Rules of Procedure by a separate team in an effort parallel to the development of the BES definition. Your comments will be forwarded to the Rules of Procedure Team.		
National Rural Electric Cooperative Association (NRECA)		Without exemption criteria to review, it is too early to explicitly answer this question. However, the concept appears to be logical as long as it is also paired with the ability of an entity that owns facilities above 100kV to appeal the inclusion of its facilities as part of the BES. Such an appeal would need to be supported by a technical justification demonstrating why certain facilities should not be classified as part of the BES.In addition, it is critical for exemption criteria to be based on operating voltage, not design voltage. Using design voltage in the criteria would provide a disincentive to build for future expansion. This could have significant negative impacts on BES reliability.
Response: The process for such inclusions and exclusions will be developed by a separate team as part of the revision to the Rules of Procedure, in an effort parallel to the development of the BES definition. Your comments will be forwarded to the Rules of Procedure Team.		
The Dow Chemical Company		Dow recommends that NERC finalize a basic framework for identifying BES facilities before evaluating individual facilities or types of facilities. Such a framework is recommended by Dow in response to questions #11 and #12 below.
Response: See responses to Q11 & 12.		
Orange and Rockland Utilities, Inc.		Refer to the response to Question 13.
Northeast Power Coordinating Council		Refer to the response to Question 13.
NERC Staff	Yes	Please see additional comments at the end of this document.
Response: See response to Q13.		

Organization	Yes or No	Question 5 Comment
SERC OC Standards Review Group	Yes	We think the process should be an “exception” rather than an “exemption”.
City of Grand Island	Yes	Exemption process should be termed “exception” process. Exception means not conforming to general rule, whereas exemption primarily means exclusion. This process will be difficult to develop and administer and is counter productive to “bright line” philosophy. Thus the bright lines should be at a high level resulting in fewer challenges. The exception process must consider the impact of a fault or outage of that facilities on the Adequate Level of Reliability (NERC defined term) of the BES.
American Transmission company	Yes	However, the applicable process should be called an “exception” process, not an “exemption” process that infers the concept of “exclusion” and further classified as part of the BES given that a fault or an outage on the Transmission Element or Facility at voltages below 100kV would not maintain an Adequate Level of Reliability of the BES.
Response: The SDT acknowledges that the term “exemption” is inappropriate in the context of these proposed “inclusions”, and subsequent drafts will refer to the “exception” process suggested by the Commission in its Order 743. The process for such inclusions will be developed by a separate team through the revision to the Rules of Procedure, in an effort parallel to the development of the BES definition.		
City of Redding	Yes	If the exemption process is based on reliable engineering studies.
City of Anaheim	Yes	
Public Service Enterprise Group Company	Yes	No Comment
Bonneville Power Administration	Yes	
Electric Market Policy	Yes	Dominion conceptually supports an exemption process whereby NERC or the RRO could apply to have an element included or excluded from the BES definition. Such process recognizes that it may be necessary to include elements that do not meet the bright line criteria but are necessary for operating an interconnected transmission network. Such process should be developed through the existing NERC standards development process and include a robust appeals process for the owner/operator of any element so included or excluded.
LCRA Transmission Services Corporation	Yes	

Organization	Yes or No	Question 5 Comment
PPL Energy Plus	Yes	Yes, PPL Energy Plus supports an exemption process provided the Exemption process follows FERCs Order 743 paragraph 115: "NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid."
LG&E and KU Energy LLC	Yes	
ReliabilityFirst	Yes	It is recommended that the exemption process be defined and criteria setup so that a common approach across the ERO can be used to include these facilities.
Southern California Edison	Yes	SCE currently reports on transmission elements or facilities operated at voltages below 100kV that are interconnected with other utilities.
Glacier Electric Cooperative	Yes	Yes - this is assuming that the exemption process is an accurate way to truly determine whether or not a facility is significant to the grid.
ISO New England Inc.	Yes	
United Illuminating Company	Yes	
City of Austin dba Austin Energy	Yes	This answer assumes that an appropriate engineering study is performed to determine that the asset is necessary for the reliability of the BES.
The Dayton Power and Light Company	Yes	
Independent Electricity System Operator	Yes	We generally support the concept but we need to assess the criteria for the exception, which have not been developed. Further, the wording seems to present a circular argument. We suggest the following revised wording to more clearly convey this criterion:Transmission Elements or Facilities operated at voltages below 100kV that are deemed to be included in the BES as determined by the exception/inclusion process
Clark Public Utilities	Yes	
Response: The SDT thanks you for your comments.		

6. Should the following be classified as part of the BES?

- **Individual generation resources greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where the exemption process deems the generation resources to be included in the BES**

Summary Consideration: Most commenters who responded to this question indicated disagreement with the proposal, however there was no consensus amongst the alternate proposals offered, and the proposals suggesting other thresholds were not supported with any technical justification. The SDT has reviewed the industry comments on this issue, debated the topic, and come to an agreement that the bright-line designation for individual generating units is 20 MVA and 100 kV. Any deviations from the bright-line designation would be handled through the pending Rules of Procedure process. Included in the BES: I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above.

Organization	Yes or No	Question 6 Comment
SERC EC Planning Standards Subcommittee	No	We prefer a bright-line rule of 100 kV. The exception process should not be used to include facilities operated at voltages below 100 kV.
Public Service Enterprise Group Company	No	The intent of the BES definition is to address the reliability of the bulk electric system and associated elements. The generation connected at less than 100kV should not be classified as BES - it should be considered to be within the same category as radial connected facilities serving load (which is not included as part of the BES).
Response: In Order No. 743, the Commission directed NERC to adopt an inclusion process for including in the BES definition Facilities operated at voltages below 100 kV. The Commission believes that NERC should "consider formalizing the criteria for inclusion of critical facilities operated below 100 kV in developing the exemption process." The DBES SDT and NERC Rules of Procedure team are responding to FERC's directive.		
Florida Municipal Power Agency	No	See FMPA response to Question 5 above. Generation resources of any size directly connected via a step-up transformer(s) to transmission operated at voltages below 100 kV should only be classified as part of the BES if the generation resource is registered pursuant to the Statement of Compliance Registry Criteria or if the inclusion process, assessing each generation resource on a case-by-case basis based on a uniform set of criteria, results in a finding that the particular generation resource should be included in the BES. The standards for registering a generator should be the same as those for including it in the BES.
Transmission Access Policy Study Group	No	
Response: The SDT agrees with the comment that designation of these generators as BES would occur only if the pending Rules of Procedure process deems them to be BES, and such a designation would necessarily warrant registration per the terms of the NERC Statement of Compliance Registry Criteria (SCRC).		

Organization	Yes or No	Question 6 Comment
The scope of the SDT does not extend to revisions of the SCRC; however, recommendations for revision of the SCRC may result from the definition development.		
PacifiCorp	No	In Order No. 743, the Commission directed NERC to adopt an exemption process for excluding facilities from the definition of the BES that are not necessary to operate an interconnected electric transmission network. In order to determine which facilities may be excluded, there must be criteria and a methodology that may be applied to identify which facilities are "necessary" to operate an interconnected electric transmission network and which "transmission and generation" facilities are not. In other words, there must be a clear way to determine what makes a particular facility is "necessary" for bulk system operation. Application of the criteria and methodology will result in the identification of the facilities that may be excluded. The comment questions asked in this questionnaire cannot be answered in a meaningful way absent this methodology. Significant efforts have been undertaken by the WECC Bulk Electric System Definition Task Force (BESDTF) over the course of the past year to identify some initial criteria and methodologies. These efforts are ongoing and should be supported by the NERC drafting team. For example: Generation units should not be included or excluded solely based on a their gross nameplate rating and the operating voltage at which they are connected to transmission facilities. Generation units which are necessary to operate the interconnected network should be included as part of the regulated BES. Generating units which are not "necessary for the operation of the interconnected network" should be excluded. A methodology needs to be developed to determine which generating units may be excluded as part of the regulated BES.
Response: The SDT believes that the criteria enumerated in the current Statement of Compliance Registry Criteria should be the template (or "methodology" as used in the comment) for defining the bright-line exception criteria in Project 2010-17. The SDT plans to review past efforts of Regional Entities to develop their own BES definition.		
ExxonMobil Research and Engineering	No	See comments on questions 2 and 3.
Response: See response to Q2 & Q3.		
Arizona Public Service Company	No	Individual generation resources less than 50 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100 kV do not materially impact the reliability of the BES and therefore, should not be classified as part of the BES.
Response: The SDT believes that the criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the bright-line exception criteria in Project 2010-17. The comment provides no technical justification for departing from existing practices defined by the Statement of Compliance Registry Criteria.		

Organization	Yes or No	Question 6 Comment
Pepco Holdings Inc.	No	Some details on the exemption process must be known before accepting this. Who can submit an exemption (DP, GO, GOP, TO, TOP, RC, etc)? How do interested parties get informed? Can others intervene? Would the other facilities completing the connection to a BES facility be automatically included?
Response: The SDT acknowledges that commenters will need to reserve judgment on the pending Rules of Procedure process, which is to be developed in an effort parallel with this BES definition development. The SDT believes that the criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the bright-line criteria in Project 2010-17. The SDT will coordinate its efforts with the NERC ROP team developing the Rules of Procedure process to develop a single coordinated implementation plan that will define the responsibilities of various parties.		
American Municipal Power	No	
on behalf of Teck Metals Ltd.	No	
on behalf of Catalyst Paper Corporation	No	
Idaho Power	No	
Clark Public Utilities	No	
Response: Thank you for your response.		
Indeck Energy Services	No	Same Response as Question 1
Response: See response to Q1.		
Southern California Edison	No	SCE currently reports on generation resources greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages above 100kV. SCE does not feel it is necessary to report on generation below 100kV.
Response: In Order No. 743, the Commission directed NERC to adopt an inclusion process for including in the BES definition Facilities operated at voltages below 100 kV. The Commission believes that NERC should "consider formalizing the criteria for inclusion of critical facilities operated below 100 kV in developing the exemption process."		
Southern California Edison Company	No	In SCE's system, generation resources are used to offset load being served by distribution facilities. This means that generation does not flow through step-up transformers into the 100kV and above system.

Organization	Yes or No	Question 6 Comment
		Therefore, those generation resources which are used to provide power to local load within a distribution system should not be included as part of the BES. The Exemption Process should not be applied to such resources.
Response: The SDT believes that such generation resources will be excluded as part of the BES unless the Facilities are otherwise deemed material to the reliability of the BES by a ROP to the pending Rules of Procedure exception process. In a section in the revised BES definition on Local Distribution Networks, the SDT is considering the issue of generation resources used to offset Load being served by distribution Facilities.		
ISO New England Inc.	No	1. Yes - There are situations as envisioned in the Registry Criteria clause, i.e., "Any generator, regardless of size, that is material to the reliability of the bulk power system" where reliability would be threatened without such inclusion. Similarly, cases can be made for materiality to the reliability of the bulk power system for units < 20 MVA directly connected at 100 kV or greater and for units < 20 MVA connected at any voltage level. The exemption process developed should account for any and all situations where a generator, or group of generators, may be deemed material to support a BES function such as riding through an UFLS event. Just as UFLS Relays have been stated to be material to the reliability of the bulk power system, despite their location on the lower voltage distribution systems, any size generator at any voltage level may be found, through an analysis, to have a supporting role in protecting the BES during a postulated system disturbance. 2. No - In general small generators connected at voltages of 100 kV and greater and those larger generators connected at voltages less than 100 kV do not impact the reliability of the BES and to classify them as BES and require them to register with NERC and abide by all NERC Reliability Standards would place an undue burden on the Generator Owners/Operators with little or no perceived reliability benefit. A more reasonable process would allow a systematic analysis to define the material need of such otherwise exempted generators and allow these generators to be registered on a "requirement basis", a process which FERC has encouraged, and is an approach recognized in NERC's "Statement of Registry Criteria" (See "Notes to Above Criteria" #4, page 10).
Electric Market Policy	No	Dominion does not agree that a generation resource should be classified as part of the BES. Dominion supports the criteria for registering owners, operators, and users of the bulk power system, as indicated in the current Statement of Compliance Registry Criteria.
Constellation Power Source Generation, Inc. ("CPSG") filing on behalf of Constellation Energy Group, Inc. ("CEG"), Constellation Energy Commodities Group, Inc.	No	Although Constellation believes that it may be appropriate to include some of the elements above in the BES, this proposal will lead to the inclusion of elements or facilities which have no material impact on the interconnected transmission system. Furthermore, the use of an exemption process to include assets is confusing. Constellation proposes that the BES drafting team structure the revised BES definition to clarify both the inclusions and exclusions as completely as possible. If a separate "opt-in" process is deemed necessary (in anticipation of a few exceptions to the definition) then the drafting team should develop criteria

Organization	Yes or No	Question 6 Comment
("CCG"), Constellation Energy Control and Dispatch, LLC ("CDD"), Constellation NewEnergy, Inc., ("CNE") and Constellation Energy Nuclear Group, LLC, ("CENG")		for such a process. Using this approach the sentence above would then read "Individual generation resources greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where a Regional Entity deems the generation resources to be included in the BES."
Response: The SDT agrees that criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the bright-line exception criteria in Project 2010-17. FERC Order No. 743 states that changes to the BES definition "will not significantly increase the scope of the present definition, which applies to transmission, generation and interconnection facilities."		
Snohomish County PUD	No	The NERC GOTO Task Force considered the issue of whether dedicated interconnection facilities connecting BES generation to the BES transmission system should also be classified as BES. The Task Force concluded that it is unnecessary to classify such facilities as part of the BES and that reliability would not be compromised as long as those interconnection facilities are required to comply with few reliability standards, primarily those related to vegetation management. The standards drafting group should follow the recommendation of the GOTO Task Force when considering the status of interconnection facilities and should consider those recommendations when considering related questions such as the status of radial lines that both interconnect a generator and serve distribution functions.
Response: The SDT acknowledges the work of Project 2010-07 Generator Requirements at the Transmission Interface regarding the classification rationale for generation interconnection Facilities and has considered it in the development process of the BES definition. The subject of this question was focused upon the generating elements themselves, rather than the associated interconnection Facilities. The SDT has carefully considered this matter, and believes that the pending Rules of Procedure exception process must allow for the possibility that certain generating units larger than 20 MVA yet connected below 100kV could have appreciable influence over the reliable operation of the interconnected network Transmission grid, thereby warranting a submittal through the ROP process for inclusion in the BES. The SDT expects that these exceptions for generating units larger than 20 MVA, yet connected to the grid at below 100kV, will be relatively rare. Additionally, the Commission in its Order No. 743 suggests that the revised BES definition should include exception processes for inclusion of these sorts of Elements. The process for such inclusions will be developed as part of the revision to the Rules of Procedure, in an effort parallel to the development of this BES definition.		
Central Lincoln	No	Including elements through an exemption process is bound to create confusion and misunderstandings between the registrants and REs. Please include such elements through an inclusion process. It should also be clarified that registrants are not required to put all sub-100 kV elements through this process; the burden should be on the RE to include elements of particular concern.
PUD No.1 of Clallam County	No	
PNGC Power	No	

Organization	Yes or No	Question 6 Comment
Blachly-Lane Electric Co-op	No	
Clearwater Power Co.	No	
Douglas Electric Cooperative	No	
Central Electric Cooperative, Inc. (Redmond Oregon)	No	
Raft River Rural Electric Cooperative	No	
Northern Lights Inc.	No	
Salmon River Electric Cooperative	No	
Okanogan Country Electric Cooperative	No	
Lost River Electric	No	
Lane Electric Cooperative	No	
Coos-Curry Electric Cooperative	No	
Consumer's Power Inc.	No	
Umatilla Electric Co-op	No	
West Oregon Electric Cooperative	No	
Lincoln Electric Cooperative	No	

Organization	Yes or No	Question 6 Comment
Fall River Electric Cooperative	No	
Response: The SDT agrees. In Order No. 743, the Commission directed NERC to adopt an inclusion process for including in the BES definition Facilities operated at voltages below 100 kV. The Commission believes that NERC should "consider formalizing the criteria for inclusion of critical facilities operated below 100 kV in developing the exemption process."		
ITC Holdings Corp	No	The lower limit for BES generators should be 75 MVA. As long as this Plant is connected to the 100 kV or greater, it should be included. Below 100 kV, only if it meets the critical test.
Response: The SDT believes that criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the bright-line exception criteria in Project 2010-17. FERC Order No. 743 states that changes to the BES definition "will not significantly increase the scope of the present definition, which applies to transmission, generation and interconnection facilities." As envisioned, Regional Entities will be able to request the inclusion of Elements below 100 kV in the pending Rules of Procedure exception process and will bear the burden of proof that such Elements are critical Facilities.		
BGE	No	This proposal as written could lead to the inclusion of elements or facilities which have no material reliability impact on the interconnected transmission system.
Response: The SDT believes that criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the bright-line exception criteria in Project 2010-17. In addition, potential registrants may use the pending Rules of Procedure exception process to demonstrate the lack of materiality.		
City Water Light and Power (CWLP) - Springfield, IL	No	While CWLP agrees with the general concept of inclusion by exception (as opposed to exemption), we have concerns regarding the lack of detailed definition of this process, especially the administrative process for disputes regarding inclusion of elements in the BES. Without firm administrative rules for resolving disputes based on technical justification, we cannot support this measure currently.
Response: NERC is obligated under Order No. 743 to develop an exception process (including revisions to the NERC ROP) and implementation plan to administer a revised BES definition and associated exception criteria, and a dispute resolution process. The SDT acknowledges that commenters will need to reserve judgment on the pending Rules of Procedure exception process, which is to be developed in an effort parallel with this BES definition development.		
Lewis County PUD	No	I find it hard to believe that elements connected at less than 100kV are part of the BES. The burden of proof to include elements in the BES should be on the RE not the owner of such facilities.
Response: In Order No. 743, the Commission directed NERC to adopt an inclusion process for including in the BES definition Facilities operated at voltages below 100 kV. The Commission believes that NERC should "consider formalizing the criteria for inclusion of critical facilities operated below 100 kV in developing the exemption process." Thus, as envisioned, Regional Entities will be able to request the inclusion of Elements below 100 kV in the pending Rules of Procedure		

Organization	Yes or No	Question 6 Comment
exception process and will bear the burden of proof that such Elements are critical Facilities.		
American Electric Power (AEP)	No	Please see response provided to question 5.
Response: See response to Q5.		
Southern Company	No	We prefer a bright-line rule of 100 kV. The exception process should not be used to include facilities operated at voltages below 100 kV.
Response: The SDT believes that the criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the "bright-line" exception criteria in Project 2010-17. In Order No. 743, the Commission also directed NERC to adopt an inclusion process for including in the BES definition Facilities operated at voltages below 100 kV. The Commission believes that NERC should "consider formalizing the criteria for inclusion of critical facilities operated below 100 kV in developing the exemption process." As envisioned, Regional Entities will be able to request the inclusion of Elements below 100 kV in the pending Rules of Procedure exception process and will bear the burden of proof that such Elements are critical Facilities.		
Independent Electricity System Operator	No	Again, we need to assess the criteria for the exception, which have not been developed. Also, the proposed wording seems to present a circular argument. We suggest to change the wording as follows: Individual generation resources greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV that are deemed to be included in the BES as determined by the exception/inclusion process.
Response: The SDT acknowledges that commenters will need to reserve judgment on the exception process, which is to be developed as a modification to the Rules of Procedure in an effort parallel with this BES definition development. The SDT notes the suggested language in this comment, and has considered it in the development of the revised definition of BES.		
Springfield Utility Board	No	"directly connected" is important.
Response: The SDT has revised the definition and that term is no longer utilized. Included in the BES: I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above.		
Manitoba Hydro		Abstain until exemption process has been defined.
Occidental Energy Ventures Corp	No	Until the exemption process is finalized, it is not prudent to answer in the affirmative.

Organization	Yes or No	Question 6 Comment
Duke Energy		There is not enough information available at this time to adequately evaluate this question. It would be necessary to have a list of exemption criteria or more detail on the exemption process to address this question. This is one of the reasons that the exemption criteria should be developed through the standards development process along with the definition.
Response: The SDT acknowledges that commenters will need to reserve judgment on the pending Rules of Procedure exception process, which is to be developed in a parallel effort with this BES definition development. Nonetheless, the SDT believes that criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the bright-line exception criteria in Project 2010-17. The exception criteria (now included in the revised definition of BES) provides for both inclusions and exclusions. FERC Order No. 743 states that changes to the BES definition "will not significantly increase the scope of the present definition, which applies to transmission, generation and interconnection facilities."		
Northeast Power Coordinating Council		Refer to the response to Question 13.
Response: See response to Q13.		
Entergy Services		Our response to this question depends on the details of the "exemption process", including what entity has the final decision and how it is implemented. Please see our response to Q13 below.
Orange and Rockland Utilities, Inc.		The purpose of this question is hard to ascertain. The BES exemption process has not yet been finalized or approved. So, it is somewhat difficult to know a priori whether any individual generation resources greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV should or should not be classified as part of the BES definition. This document uses both "exemption process" and "exception process". Recommend that the phraseology be standardized on "exception process" as the exception (not the exemption) can be to include or exclude elements and facilities. Refer to the response to Question 13.
Response: The SDT acknowledges that commenters will need to reserve judgment on the pending Rules of Procedure exception process, which is to be developed in an effort parallel with this BES definition development. Nonetheless, the SDT believes that criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the bright-line exception criteria in Project 2010-17. The exception criteria will provide for both inclusions and exclusions. FERC Order No. 743 states that changes to the BES definition "will not significantly increase the scope of the present definition, which applies to transmission, generation and interconnection facilities." See response to Q13.		

Organization	Yes or No	Question 6 Comment
Xcel Energy		Xcel Energy does not disagree that there may be situations where generators greater than 20 MVA individually or 75 MVA in aggregate are connected via step up Transformers below 100 KV that may need to be included, but we have concerns about the exemption process. This undeveloped process presents itself as a wild card to entities, and will most likely present inconsistencies between regions based upon each Region's preference. Additionally, does the Regional Methodology require any approval (e.g. ERO) other than the Region's own process? The "exclusions" process indicates that the ERO has the final approval authority to exclude an item from the BES. Why would the same not apply for including something into the BES based on the Region's Methodology?
Response: The SDT acknowledges that commenters will need to reserve judgment on the pending Rules of Procedure exception process, which is to be developed in an effort parallel with this BES definition development. Nonetheless, the SDT believes that criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the bright-line exception criteria in Project 2010-17. The exception criteria will provide for both inclusions and exclusions. The SDT notes that a stated purpose of Order No. 743 was to eliminate the regional discretion allowed in the existing definition of BES and remove any ambiguity regarding who is required to comply and accomplish the goal of reducing inconsistencies across regions. As per FERC Order No. 672, any regional variations must be approved by FERC, and generally must be more "stringent" than NERC criteria. As envisioned, Regional Entities will be able to question the outcome of bright-line criteria in the BES definition in the pending Rules of Procedure exception process and will bear the burden of proof that such Elements are critical Facilities or not. FERC Order No. 743 states that changes to the BES definition "will not significantly increase the scope of the present definition, which applies to transmission, generation and interconnection facilities."		
The Dow Chemical Company		As discussed in response to question #12 below, issues relating to the registry criteria applicable to generation resources should not be revisited at this time.
Response: See response to Q12.		
City of Grand Island	Yes	See comments for items 2 and 5.
Response: See response to Q2 & Q5.		
NERC Staff	Yes	Please see additional comments at the end of this document.
Response: See response to Q13.		
PPL Energy Plus	Yes	Yes, PPL Energy Plus supports an exemption process provided the Exemption process follows FERCs Order 743 paragraph 115: "NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid." As written, however, the 20 MVA threshold does not appear to have been developed per FERC's requirements
LG&E and KU Energy LLC	Yes	

Organization	Yes or No	Question 6 Comment
		for the reasons discussed in the response to Questions 2 and 8.
Response: The SDT is committed to drafting a BES definition and exception criteria that will enable the pending Rules of Procedure exception process "that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid." The SDT believes that the criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the bright-line exception criteria in Project 2010-17.		
Utility Services	Yes	See the answer to Question 1.
Response: See response to Q1.		
American Transmission company	Yes	However, the applicable process should be called an "exception" process, not an "exemption" process that infers the concept of "exclusion" and further classified as part of the BES given that a fault or an outage on individual generation resources greater than 20MVA would not maintain an Adequate Level of Reliability of the BES.
Response: The SDT has adopted the use of the terms "exception criteria" and "exception process."		
SERC OC Standards Review Group	Yes	We think the process should be an "exception" rather than an "exemption". This question seems illogical since the last part of the question assumes the generator is already part of the BES through the determination of the exemption process. If the question was actually generators less than 20 MVA, we don't agree.
Response: The SDT has adopted the use of the terms "exception criteria" and "exception process." The SDT believes that the criteria enumerated in the current Statement of Compliance Registry Criteria should be the template for defining the bright-line exception criteria in Project 2010-17.		
IRC Standards Review Committee	Yes	Again, we need to assess the criteria for the exception, which have not been developed. Also, the proposed wording seems to present a circular argument. We suggest to change the wording as follows: Individual generation resources greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV that are deemed to be included in the BES as determined by the exception/inclusion process.
Response: The SDT acknowledges that commenters will need to reserve judgment on the pending Rules of Procedure exception process, which is to be developed in an effort parallel with this BES definition development. The SDT notes the suggested language in this comment, and has considered it in the development of the revised definition of BES., Included in the BES: I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage		

Organization	Yes or No	Question 6 Comment
of 100 kV or above.		
MRO's NERC Standards Review Subcommittee	Yes	FERC has directed (in section 30 of FERC Order 743) that NERC have an established “exemption” process to remove this judgment from the Regions in defining what the BES is. However, the applicable process should be called an “exception” process, not an “exemption” process that infers the concept of “exclusion” and further classified as part of the BES given that a fault or an outage on individual generation resources greater than 20MVA would not maintain an Adequate Level of Reliability of the BES.
Response: The SDT has adopted the use of the terms “exception criteria” and “exception process” in its work. Note, however, that neither term is used in the proposed definition of BES.		
City of Redding	Yes	If the exemption process is based on engineering studies targeted to identify those facilities necessary to reliably operate the interconnected transmission system.
City of Anaheim	Yes	
Bonneville Power Administration	Yes	
LCRA Transmission Services Corporation	Yes	
North Carolina EMC	Yes	
ReliabilityFirst	Yes	It is recommended that the exemption process be defined and criteria setup so that a common approach across the ERO can be used to include these facilities.
Glacier Electric Cooperative	Yes	Yes - Once again, this is assuming that the exemption process is an accurate way to truly determine whether or not a facility is significant to the grid.
United Illuminating Company	Yes	Any Generator directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where the exemption process deems the generation resources to be included in the BES should be part of BES . There should not be a MVA threshold
City of Austin dba Austin Energy	Yes	This answer assumes that an appropriate engineering study is performed to determine that the asset is necessary for the reliability of the BES.

Organization	Yes or No	Question 6 Comment
The Dayton Power and Light Company	Yes	
Response: Thank you for your response. This criterion was not changed, but is now embedded in the revised definition of BES.		

7. Should the following be classified as part of the BES?

- **Generation plants with aggregate capacity greater than 75 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where the exemption process deems the generation plants to be included in the BES**

Summary Consideration: Most commenters who responded to this question indicated disagreement with the proposal however there was no consensus amongst the alternate proposals offered, and the proposals suggesting other thresholds were not supported with any technical justification. The SDT has reviewed the industry comments on this issue, debated the topic, and come to an agreement that the bright-line designation for multiple generating units is 75 MVA and 100 kV as shown below. Any deviations from the bright-line designation would be handled through the Rules of Procedure process.

Included in BES: I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.

Several comments indicated that local distribution networks should be excluded, and the drafting team adopted this suggestion and added the following to the list of "Exclusions" from the 100 kV threshold that are included in the revised definition of BES.

Excluded from the BES: E3 - Local distribution networks (LDN): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the Interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:

a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;
b) Limits on connected generation: The LDN, nor its underlying Elements, includes no more than a total of 75 MVA generation;
c) Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN;
d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and
e) Not part of a Flowgate or Transfer Path: The LDN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Organization	Yes or No	Question 7 Comment
SERC EC Planning Standards Subcommittee	No	We prefer a bright-line rule of 100 kV. The exception process should not be used to include facilities operated at voltages below 100 kV.

Organization	Yes or No	Question 7 Comment
BGE	No	This proposal as written could lead to the inclusion of elements or facilities which have no material reliability impact on the interconnected transmission system.
Response: The SDT has reviewed the industry comments on this issue, debated the topic, and come to an agreement that the bright-line designation for multiple generating units is 75 MVA and 100 kV. Any deviations from the bright-line designation will be handled through the Rules of Procedure process. The process for such inclusions will be developed as part of the revision to the Rules of Procedure by another team, in an effort parallel to the development of this BES definition.		
IRC Standards Review Committee	No	Same comment as in Q6, above.
Public Service Enterprise Group Company	No	See the response to item 6 above.
Snohomish County PUD	No	See response to question 6
Independent Electricity System Operator	No	Same comment as in Q6, above.
Response: See response to Q6.		
Florida Municipal Power Agency	No	See FMPA responses to Questions 5 and 6 above.
Transmission Access Policy Study Group	No	
Response: See responses to Q5 & Q6.		
Electric Market Policy	No	Dominion does not agree that generation plants should be classified as part of the BES.
Response: The SDT finds no basis for the exclusion of generation plants from the BES, and continues to believe that generation is an integral part of the BES which any core BES definition must necessarily include.		
PacifiCorp	No	In Order No. 743, the Commission directed NERC to adopt an exemption process for excluding facilities from the definition of the BES that are not necessary to operate an interconnected electric transmission network.

Organization	Yes or No	Question 7 Comment
		In order to determine which facilities may be excluded, there must be criteria and a methodology that may be applied to identify which facilities are "necessary" to operate an interconnected electric transmission network and which "transmission and generation" facilities are not. In other words, there must be a clear way to determine what makes a particular facility is "necessary" for bulk system operation. Application of the criteria and methodology will result in the identification of the facilities that may be excluded. The comment questions asked in this questionnaire cannot be answered in a meaningful way absent this methodology. Significant efforts have been undertaken by the WECC Bulk Electric System Definition Task Force (BESDTF) over the course of the past year to identify some initial criteria and methodologies. These efforts are ongoing and should be supported by the NERC drafting team. For example: Generation plants should not be included or excluded solely based on a their gross nameplate rating and the operating voltage at which they are connected to transmission facilities. Generation plants which are necessary to operate the interconnected network should be included as part of the regulated BES. Generating plants which are not "necessary for the operation of the interconnected network" should be excluded. A methodology needs to be developed to determine which generating plants may be excluded as part of the regulated BES.
Response: The SDT acknowledges that commenters will need to reserve judgment on the process, which is to be developed as a modification to the Rules of Procedure by another team in an effort parallel with this BES definition development. The SDT acknowledges the work of the WECC BESDTF, and in keeping with the concepts of that work, envisions that the process will identify for inclusion in the BES only those generators that are necessary to operate the interconnected network.		
ExxonMobil Research and Engineering	No	See comments on questions 2 and 3.
Response: See responses to Q2 & Q3.		
Arizona Public Service Company	No	Generation plants with aggregate capacity of less than 300 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100 kV do not materially impact the reliability of the BES and therfore, should not be classified as part of the BES.
Response: The SDT appreciates the suggestion of a 300 MVA threshold for materiality of impact; however, it sees no technical justification upon which to base a significant departure from the generation MVA thresholds included in the NERC Statement of Compliance Registry Criteria. The SDT has reviewed the industry comments on this issue, debated the topic, and come to an agreement that the bright-line designation for multiple generating units is 75 MVA and 100 kV. Any deviations from the bright-line designation will be handled through the Rules of Procedure process. The process for such inclusions will be developed as part of the revision to the Rules of Procedure by another team, in an effort parallel to the development of this BES definition.		

Organization	Yes or No	Question 7 Comment
Pepco Holdings Inc.	No	Some details on the exemption process must be known before accepting this. Who can submit an exemption (DP, GO, GOP, TO, TOP, RC, etc)? How do interested parties get informed? Can others intervene? Would the other facilities completing the connection to a BES facility be automatically included?
American Municipal Power	No	
on behalf of Teck Metals Ltd.	No	
on behalf of Catalyst Paper Corporation	No	
Occidental Energy Ventures Corp	No	Until the exemption process is finalized, it is not prudent to answer in the affirmative.
Idaho Power	No	
Springfield Utility Board	No	
Clark Public Utilities	No	
Response: The SDT acknowledges that commenters may need to reserve judgment on the exception process, which is to be developed as a modification to the Rules of Procedure in an effort parallel with this BES definition development.		
North Carolina EMC	No	Generation facilities operated at voltages below 100kV should only be included in the BES if identified by the RRO as critical to the BES.
Response: The SDT envisions that the exception process that would be used to possibly include such Facilities will identify for inclusion in the BES only those generating plants that are essential to the reliable operation of the interconnected system. This process is being developed as a revision to the NERC Rules of Procedure by another team in an effort parallel to the development of this BES definition.		
Indeck Energy Services	No	Same Response as Question 1
Utility Services	Yes	See the answer to Question 1.

Organization	Yes or No	Question 7 Comment
Response: See response to Q1.		
Southern California Edison	No	SCE currently reports on generation plants with aggregate capacity greater than 75 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages above 100kV. SCE does not feel it is necessary to report on generation below 100kV.
Response: While the definition of the BES is a different matter than data reporting for generation plants, the SDT has incorporated a BES designation it believes will address your concerns. Included in BES: I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.		
Southern California Edison Company	No	In SCE's system, generation resources are used to offset load being served by distribution facilities. This means that generation does not flow through step-up transformers into the 100kV and above system. Therefore, those generation resources which are used to provide power to local load within a distribution system should not be included as part of the BES. The Exemption Process should not be applied to such resources.
Response: In its latest revision of the BES definition, the SDT has incorporated a designation for local distribution networks (LDN) for exclusion from the BES. • Excluded from the BES: E3 - Local distribution networks (LDNs): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following: a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices; b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation; c) Power flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN; d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
ISO New England Inc.	No	See the comments provided in response to question 7.

Organization	Yes or No	Question 7 Comment
Response: This is Q7. The SDT assumes that this is a typo and should have referred to a different question.		
PUD No.1 of Clallam County	No	Including elements through an exemption process is bound to create confusion and misunderstandings between the registrants and REs. Please include such elements through an inclusion process. It should also be clarified that registrants are not required to put all sub-100 kV elements through this process; the burden should be on the RE to include elements of particular concern.
Central Lincoln	No	
PNGC Power	No	
Blachly-Lane Electric Co-op	No	
Clearwater Power Co.	No	
Douglas Electric Cooperative	No	
Central Electric Cooperative, Inc. (Redmond Oregon)	No	
Raft River Rural Electric Cooperative	No	
Northern Lights Inc.	No	
Salmon River Electric Cooperative	No	
Okanogan Country Electric Cooperative	No	
Lost River Electric	No	
Lane Electric Cooperative	No	
Coos-Curry Electric Cooperative	No	

Organization	Yes or No	Question 7 Comment
Consumer's Power Inc.	No	
Umatilla Electric Co-op	No	
West Oregon Electric Cooperative	No	
Lincoln Electric Cooperative	No	
Fall River Electric Cooperative	No	
Response: The SDT acknowledges that the term "exemption" is inappropriate in the context of these proposed "inclusions", and subsequent drafts will refer to the "exception" process suggested by the Commission in its Order 743. The process for such inclusions will be developed as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition.		
ITC Holdings Corp	No	Only included if the plant is deemed Critical by the PRC023 test.
Response: The SDT is aware of the test proposed under PRC-023, however, in this definition, the SDT is striving to develop "bright-line" characteristic criteria that will be used to make definitional inclusions and exclusions, and this will be paired with an "exception process" which will be developed as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition. The SDT will forward the suggestion of a "PRC-023 test" to the team tasked with development of the revision to the Rules of Procedure.		
Constellation Power Source Generation, Inc. ("CPSG") filing on behalf of Constellation Energy Group, Inc. ("CEG"), Constellation Energy Commodities Group, Inc. ("CCG"), Constellation Energy Control and Dispatch, LLC ("CDD"), Constellation NewEnergy, Inc., ("CNE") and Constellation Energy Nuclear Group, LLC, ("CENG")	No	Although Constellation believes that it may be appropriate to include some of the elements above in the BES, this proposal will lead to the inclusion of elements or facilities which have no material impact on the interconnected transmission system. Furthermore, the use of an exemption process to include assets is confusing. Constellation proposes that the BES drafting team structure the revised BES definition to clarify both the inclusions and exclusions as completely as possible. If a separate "opt-in" process is deemed necessary (in anticipation of a few exceptions to the definition) then the drafting team should develop criteria for such a process. Using this approach the sentence above would then read "Generation plants with aggregate capacity greater than 75 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where a Regional Entity deems the generation plants to be included in the BES."
Response: The SDT has reviewed the industry comments on this issue, debated the topic, and come to an agreement that the bright line designation for multiple		

Organization	Yes or No	Question 7 Comment
generating units is 75 MVA and 100 kV. Any deviations from the bright line designation will be handled through the Rules of Procedure process. The SDT is striving to develop "bright-line" characteristic criteria that will be used to make definitional inclusions and exclusions, and this will be paired with the "exception process" which will be developed as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition. The SDT acknowledges that the term "exemption" is inappropriate in the context of these proposed "inclusions", and subsequent drafts will refer to the "exception" process suggested by the Commission in its Order 743. The process for such inclusions will be developed as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition.		
City Water Light and Power (CWLP) - Springfield, IL	No	While CWLP agrees with the general concept of inclusion by exception (as opposed to exemption), we have concerns regarding the lack of detailed definition of this process, especially the administrative process for disputes regarding inclusion of elements in the BES. Without firm administrative rules for resolving disputes based on technical justification, we cannot support this measure currently.
Response: The SDT acknowledges that the term "exemption" is inappropriate in the context of these proposed "inclusions", and subsequent drafts will refer to the "exception" process suggested by the Commission in its Order 743. The SDT is striving to develop "bright-line" characteristic criteria that will be used to make definitional inclusions and exclusions as part of the revised definition of BES. The SDT acknowledges that commenters may need to reserve judgment on the process until more clarity is provided via the development of the revision to the Rules of Procedure.		
Lewis County PUD	No	I find it hard to believe that elements connected at less than 100kV are part of the BES. The burden of proof to include elements in the BES should be on the RE not the owner of such facilities.
Southern Company	No	We prefer a bright-line rule of 100 kV. The exception process should not be used to include facilities operated at voltages below 100 kV.
Response: The SDT agrees that the bright-line designation for multiple generating units is 75 MVA and 100 kV. Any deviations from the bright-line designations identified in the final BES definition will be handled through the Rules of Procedure process. (The SDT is striving to develop "bright-line" characteristic criteria that will be used to make definitional inclusions and exclusions as part of the revised definition of BES.) The process for approving such inclusions will be developed as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition.		
American Electric Power (AEP)	No	Please see response provided to question 5.
Response: See response to Q5.		
Orange and Rockland Utilities,		The purpose of this question is hard to ascertain. The BES exemption process has not yet been finalized or approved. So, it is somewhat difficult to know a priori whether any generation plants with aggregate capacity

Organization	Yes or No	Question 7 Comment
Inc.		greater than 75MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV should or should not be classified as part of the BES definition. This document uses both "exemption process" and "exception process". Recommend that the phraseology be standardized on "exception process" as the exception (not the exemption) can be to include or exclude elements and facilities. Refer to the response to Question 13.
Response: The SDT acknowledges that commenters may need to reserve judgment on the exception process until more clarity is provided via the development of the revision to the Rules of Procedure. The SDT acknowledges that the term "exemption" is inappropriate in the context of these proposed "inclusions", and subsequent drafts will refer to the "exception" process suggested by the Commission in its Order 743. Any deviations from the bright-line designations identified in the final BES definition will be handled through the Rules of Procedure process. (The SDT is striving to develop "bright-line" characteristic criteria that will be used to make definitional inclusions and exclusions as part of the revised definition of BES.) Also, see response to Q13.		
The Dow Chemical Company		As discussed in response to question #12 below, issues relating to the registry criteria applicable to generation resources should not be revisited at this time.
Response: See response to Q12.		
Manitoba Hydro		Abstain until exemption process has been defined.
Duke Energy		There is not enough information available at this time to adequately evaluate this question. It would be necessary to have a list of exemption criteria or more detail on the exemption process to address this question. This is one of the reasons that the exemption criteria should be developed through the standards development process along with the definition.
Response: Thank you for your response. The revised definition of BES includes both a "bright-line" characteristic and a list of criteria that will be used to make definitional inclusions and exclusions to that bright line,		
Entergy Services		Our response to this question depends on the details of the "exemption process", including what entity has the final decision and how it is implemented. Please see our response to Q13 below.
Northeast Power Coordinating Council		Refer to the response to Question 13.

Organization	Yes or No	Question 7 Comment
NERC Staff	Yes	Please see additional comments at the end of this document.
Response: See response to Q13.		
Xcel Energy		Xcel Energy does not disagree that there may be situations where generators greater than 20 MVA individually or 75 MVA in aggregate are connected via step up Transformers below 100 KV that may need to be included, but we have concerns about the exemption process. This undeveloped process presents itself as a wild card to entities, and will most likely present inconsistencies between regions based upon each Region's preference. Additionally, does the Regional Methodology require any approval (e.g. ERO) other than the Region's own process? The "exclusions" process indicates that the ERO has the final approval authority to exclude an item from the BES. Why would the same not apply for including something into the BES based on the Region's Methodology?
Response: A separate Rules of Procedure (ROP) team is undertaking to develop a process for Facilities that do not fit within the bright-line definition. The details of the process are still under discussion and development. However, the SDT expects that ERO will have an oversight role on the Regional Process.		
ReliabilityFirst	Yes	It is recommended that the exemption process and the term "directly connected" be defined and criteria setup so that a common approach for including plants of this size be used across the ERO for reviewing these facilities and making this determination.
Response: The SDT believes that the phrase "directly connected" has been addressed in the latest revision. The SDT replaced this term with more descriptive language. Included in BES: I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.		
City of Grand Island	Yes	See comments for items 3 and 5.
Response: See responses to Q3 & Q5.		
PPL Energy Plus	Yes	Yes, PPL Energy Plus supports an exemption process provided the Exemption process follows FERCs Order 743 paragraph 115: "NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid." As written, however, the 75 MVA does not appear to have been developed per FERC's requirements for the reasons discussed in the response to Questions 2 and 8.
LG&E and KU Energy LLC	Yes	

Organization	Yes or No	Question 7 Comment
Response: The exception process will be developed as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition. Also, see response to Questions 2 and 8.		
SERC OC Standards Review Group	Yes	We think the process should be an "exception" rather than an "exemption". This question seems illogical since the last part of the question assumes the generation plant is already part of the BES through the determination of the exemption process If the question was actually generation plants less than75 MVA, we don't agree.
American Transmission company	Yes	The applicable process should be called an "exception" process, not an "exemption" process that infers the concept of "exclusion" and further classified as part of the BES given that a fault or an outage on the generation resource with aggregate capacity greater than 75 MVA would not maintain an Adequate Level of Reliability of the BES.
MRO's NERC Standards Review Subcommittee	Yes	However, the applicable process should be called an "exception" process, not an "exemption" process that infers the concept of "exclusion" and further classified as part of the BES given that a fault or an outage on the generation resource with aggregate capacity greater than 75 MVA would not maintain an Adequate Level of Reliability of the BES.
Response: The SDT acknowledges that the term "exemption" is inappropriate in the context of these proposed "inclusions", and subsequent drafts will refer to the "exception" process suggested by the Commission in its Order 743. The process for such inclusions will be developed as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition.		
City of Redding	Yes	See question 6 comments
Response: See response to Q6.		
City of Anaheim	Yes	
Bonneville Power Administration	Yes	
LCRA Transmission Services Corporation	Yes	

Organization	Yes or No	Question 7 Comment
Glacier Electric Cooperative	Yes	Yes - Once again, this is assuming that the exemption process is an accurate way to truly determine whether or not a facility is significant to the grid.
United Illuminating Company	Yes	Generation Plants directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where the exemption process deems the generation resources to be included in the BES should be part of BES . There should not be a MVA threshold
City of Austin dba Austin Energy	Yes	This answer assumes that an appropriate engineering study is performed to determine that the asset is necessary for the reliability of the BES.
The Dayton Power and Light Company	Yes	
Response: Thank you for your response.		

8. Should the following be excluded from the Elements and Facilities classified as part of the BES?

- **Any radial Transmission Element or System, connected from one Transmission source to a Load-serving Element and/or generation resources not included in items 2, 3, 4, 6, and 7 above are excluded from the BES**

Summary Consideration: Most commenters who responded to this question indicated agreement with the proposal. The SDT agrees with the majority of industry comments and has developed "bright-line" exclusions for designated radial systems (only serving Load and designated generation resources) as part of the revised BES definition in the NERC Glossary without going through the exception process being developed separately as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition.

The revised definition includes a list of "Inclusions" and "Exclusions" from the 100 kV threshold and no longer references any 'exemption process'. Based on stakeholder comments, the following "Exclusions," relative to radial systems, has been added to the revised definition of BES:

- Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and:
  - d) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or,
  - e) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or,
  - f) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.

Based on stakeholder comments, the following "Exclusions," relative to local distribution networks, has been added to the revised definition of BES:

- Excluded from the BES: E3 - Local distribution networks (LDNs): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:
  - a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;
  - b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;
  - c) Power flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN;
  - d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and
  - e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Organization	Yes or No	Question 8 Comment
Electric Market Policy	No	Dominion supports bright line exclusions of radial lines regardless of their kV rating. Radial lines to/from solely generation facilities and radial lines to/from load are comparable in terms of their impact on an interconnected transmission network. There are situations where these radials make a meaningful and required contribution to the operation of an interconnected transmission network and there are other locations/situations where these radials do not. Therefore, radial lines should only be specifically included in the definition of BES after the RRO has demonstrated that inclusion of the radial is necessary to operate an interconnected transmission network and the owner/operator of the radial line has had the opportunity to exercise its aforementioned appeal rights.
Independent Electricity System Operator	Yes	Classification of all radial facilities operated at voltages of 100 kV and above as part of the BES by default would be unnecessary and administratively inefficient, and could potentially lead to delays in the review and approval of other exemption requests. As such, the proposed definitions should be revised to clearly define what radial Transmission Elements will not be included as part of the BES. This would be consistent with FERC's intention expressed in Paragraph 55 of Order 743 to not alter the part of the approved definition that deals with "radial transmission facilities serving only load". Additionally, to ensure a common understanding of the meaning of "radial" and to promote consistency in its application, we believe "radial" should be defined after seeking stakeholder input and added to the NERC Glossary.
MRO's NERC Standards Review Subcommittee	Yes	However, the NSRS agrees that a radial transmission element or system directly connected from one Transmission source to a Load-serving Element and/or generation resources are excluded as part of the BES given that a fault or an outage of the radial transmission element or system would not impact the Adequate Level of Reliability of the BES.
SERC EC Planning Standards Subcommittee	Yes	The definition should clearly state that these elements are excluded. It currently implies that the exception process would have to be applied to exclude radial elements.
Florida Municipal Power Agency	Yes	Radial Transmission Elements connected from one Transmission source to a Load-serving Element and/or generation resources not included in items 2, 3, 4, 6, and 7 above should be excluded from the BES. It is very important that the exclusion of radial transmission serving only load with one transmission source be recognized as a categorical exclusion from the BES definition, not merely as grounds for requesting an exemption. In that way, such radials do not have to go through an exemption process, but are treated the same as sub-100 kV Transmission, as they are today. In other words, such Elements could be included in the BES only if a case-by-case assessment pursuant to the inclusion process demonstrates that a particular radial Element is necessary for operating the interconnected electric transmission network. If every such Element instead had to go through a case-by-case exemption process in order to be exempted from the BES, there would be a staggering burden on small entities and on NERC to process exemption requests for all of
Transmission Access Policy Study Group	Yes	

Organization	Yes or No	Question 8 Comment
		the radials serving only load with one transmission source that are excluded from the BES under the current definition. Order 743 does not require NERC to impose any new burdens on entities who own radials serving only load that are currently excluded from the BES.FMPA supports adding to the current exclusion a specification that "A radial Transmission Element may be considered as 'serving only load' for purposes of the foregoing general exclusion even if it connects generation, so long as that generation is not registered pursuant to the Statement of Compliance Registry Criteria." We believe that this formulation captures the generation intended in this Question's reference to "generation resources not included in items 2, 3, 4, 6, and 7 above." The FERC-approved Compliance Registry Criteria recognize that a small generator, so long as it is not a "blackstart unit material to and designated as part of a transmission operator entity's restoration plan," is not material to the reliability of the BES. It follows, therefore, that if a radial line would not be included in the BES but for the presence of this inconsequential generation, the presence of such non-registered generation does not cause the line to become necessary for operating an interconnected electric transmission system. For example, rooftop photovoltaic cells are now common enough that allowing their presence to prevent a radial from being excluded would render the exclusion of radials to load meaningless. Of course, the application of the definition of the BES is dynamic. For example, in considering whether new generation connected by what had previously been a radial to load should be registered, NERC may also reevaluate the exclusion of the radial.There is no basis for differentiating between radials serving only load, and radials serving load with insignificant generation. Neither is necessary for operating an interconnected electric transmission network, and so both should be excluded from the BES absent a specific demonstration as to the materiality of a particular radial.Finally, it may be appropriate for Registered Entities to have the option of submitting to NERC an informational filing listing their excluded radials. Whether or not a Registered Entity submits such an informational filing to NERC, a Registered Entity's claimed exclusion of a radial serving only load and/or unregistered generation should apply unless and until the radial is added to the BES through the inclusion process (see FMPA comments on BES exemption process submitted today).
SERC OC Standards Review Group	Yes	We assume the question was meant to read: Any radial Transmission Element or System, connected from one Transmission source to a Load-serving Element and/or generation resources not included in items 2, 3, 4, 6 and 7 above. Any ac transmission Facility composed of Transmission Line(s), substation Facilities, and transformers that is connected to BES ac Transmission Facilities at only one point by automatic interruption devices (e.g., circuit breaker or fuse), and is not capable of being switched so as to be simultaneously connected to BES ac transmission Facilities at a second point, should be considered an "excluded radial transmission Facility."
Southern Company	Yes	
Response: The SDT agrees and has developed "bright-line" exclusions for designated radial systems (only serving Load and designated generation resources) as part of the revised BES definition in the NERC Glossary without going through the exemption process being developed separately as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition.		

Organization	Yes or No	Question 8 Comment
Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5. Any deviations from the bright-line designation would be handled through the Rules of Procedure process.		
PPL Energy Plus	No	a) By not allowing exclusion of the generators listed under Items 2,3,4,6,&7, this exclusion is really a blanket inclusion of all generators over 20MVA. This blanket inclusion is discriminatory because it does not take into consideration FERC's orders in Order 743 paragraph 38 that states it is the parallel nature of the lines (and generator lead lines are not parallel to the Interconnected Network) that justify their inclusion in the BES, NOT the radial nature of their service. The blanket inclusion of items 2,3,4,6&7 also does not appear to account for FERC Order 743 in paragraph 120 that encourages exclusion of radial facilities. b)Further, for the reasons provided in brackets beside the quoted text below, the stated exemption (which is really a blanket inclusion of items 2,3,4,6&7) appears to ignore FERC Order 743 paragraph 73 which recognizes that Network Transmission Facilities with specific characteristics should be included in the BES and most generator lead lines fail to meet the criteria laid out by FERC: i.most 100 kV lines are parallel to other HV/EHV lines and are significantly loaded by failure of the HV/EHV lines. [this is not the case with 20 MVA generators] ii.connect "significant" generation. [less than 200 MVA is generally not significant to the BES] iii.may be part of a defined transfer path or flowgate. [rarely if ever for a generator] iv.are capable of causing or contributing to major disturbances. [rarely if ever will this apply to a generator since an N-1 will take out most generators and the reliability of the Interconnected Network is rarely affected by an N-1.]
LG&E and KU Energy LLC	No	
PacifiCorp	No	In Order No. 743, the Commission stated that it believes that the best way to address their concerns is to eliminate the Regional Entities' discretion to define "bulk electric system" without ERO or Commission review, maintain a bright-line threshold that includes all facilities operated at or above 100 kV except defined radial facilities, and adopt an exemption process and criteria for excluding facilities that are not necessary to operate an interconnected electric transmission network. PacifiCorp believes that the correct interpretation of this

Organization	Yes or No	Question 8 Comment
		sentence is that certain defined radial facilities may be excluded from the definition of BES without going through the exemption process. The Commission, in paragraph 119 of Order No. 743, does state that the ERO "could track exemptions for radial facilities," however, PacifiCorp believes that this step is unnecessary and would be unduly burdensome for both NERC and registered entities. Therefore a clear definition of excluded radial transmission elements must be developed and should be defined in the NERC Glossary or in the BES definition itself.
Springfield Utility Board	No	This question is unclear. There is no NERC definition of "radial" or "Radial". Does this mean transmission systems normally operated radially but that could be operated in such a way that the system was not radial that are owned by an LSE/DP and not a TOP/TO (for example) or transmission system? If radial includes systems "normally operated radial" then "Yes".
Lewis County PUD	No	We note that "radial" and "one Transmission source" are not presently defined. Any radial Transmission Element or System, connected from one Transmission source to a Load-serving Element and/or generation resources less than 150MVA should be excluded from the BES.We object to requiring such elements to go through an exemption process to become excluded.
Constellation Power Source Generation, Inc. ("CPSG") filing on behalf of Constellation Energy Group, Inc. ("CEG"), Constellation Energy Commodities Group, Inc. ("CCG"), Constellation Energy Control and Dispatch, LLC ("CDD"), Constellation NewEnergy, Inc., ("CNE") and Constellation Energy Nuclear Group, LLC, ("CENG")	Yes	Constellation believes that the BES definition should incorporate exclusions where possible to eliminate the need for going through an exclusion process for common facilities that should not be classified as BES.
FirstEnergy Corp	Yes	Needs to be directly identified in the BES definition and not subject to the exemption process.
Response: The SDT agrees and has developed "bright-line" exclusions for designated radial systems (only serving Load and designated generation resources) as part of the revised BES definition in the NERC Glossary without going through the exception process being developed separately as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition.		

Organization	Yes or No	Question 8 Comment
Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.		
United Illuminating Company	No	Generator Resources should not be excluded. Load connected by a single radial line can be excluded.
Response: The current Compliance Registry Criteria already excludes certain generator resources from registration. The SDT agrees with this concept and is continuing that line of thought in the revised definition. The SDT agrees.		
ITC Holdings Corp	No	
National Rural Electric Cooperative Association (NRECA)		Without explicit exemption criteria to review, it is too early to answer this question. Final exemption criteria must provide for consistency across all Regional Entities when determining the inclusion or exclusion of radial facilities as part of the BES. All exemption criteria must be explicit and unambiguous in order to provide as much certainty as possible. Work done by the Regional Entities on exemption criteria should be reviewed to determine is usefulness to the SDT.The SDT should consider that load-serving radial transmission lines of any voltage should be excluded from the BES, especially since these lines are localized and do not affect the integrity of the BES, i.e., load flow, power flow and short circuit studies.The SDT must also pay particular attention to the PRC standards and it applicability to radial facilities.
Response: Thank you for your response.		
The Dow Chemical Company		Dow recommends that NERC finalize a basic framework for identifying BES facilities before evaluating individual facilities or types of facilities. Such a framework is recommended by Dow in response to questions #11 and #12 below.
Response: See responses to Q11 & 12.		

Organization	Yes or No	Question 8 Comment
Central Lincoln	Yes	We note, however, that “radial” and “one Transmission source” are not presently defined and are not treated the same way by the various REs. Please define “radial” in terms of a normal operating mode and clarify that “one Transmission source” may branch out to have multiple paths to generation upstream of the radial tap.As noted elsewhere, we object to requiring such elements to go through an exemption process to become excluded.
PUD No.1 of Clallam County	Yes	
PNGC Power	Yes	
Blachly-Lane Electric Co-op	Yes	
Clearwater Power Co.	Yes	
Douglas Electric Cooperative	Yes	
Central Electric Cooperative, Inc. (Redmond Oregon)	Yes	
Raft River Rural Electric Cooperative	Yes	
Northern Lights Inc.	Yes	
Salmon River Electric Cooperative	Yes	
Okanogan Country Electric Cooperative	Yes	
Lost River Electric	Yes	
Lane Electric Cooperative	Yes	
Coos-Curry Electric Cooperative	Yes	
Consumer's Power Inc.	Yes	

Organization	Yes or No	Question 8 Comment
Umatilla Electric Co-op	Yes	
West Oregon Electric Cooperative	Yes	
Lincoln Electric Cooperative	Yes	
Fall River Electric Cooperative	Yes	
Response: The SDT agrees and has developed "bright-line" exclusions for designated radial systems (only serving Load and designated generation resources) as part of the revised BES definition in the NERC Glossary without going through the exception process being developed separately as part of the revision to the Rules of Procedure by another team in an effort parallel to the development of this BES definition. Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5. Radial systems will be clearly described in the exclusion designations.		
Xcel Energy		Xcel Energy has provided a diagram to Ed Dobrowolski on 1/21/11 that lays out a scenario that should be considered and worked through as part of the development of the definition and exemptions. As stated in questions 2 & 3 it is unclear as to how treatment of facilities would occur, especially if there are multiple/separate owners of each wind farm, even thought they aggregate to a common bus that connects to the transmission system. Treatment of the bus and breakers between each wind farm and the transformer also needs to be contemplated and addressed in the definition or exclusion process.
Response: See responses to Q2 & Q3.		
Indeck Energy Services	Yes	Same Response as Question 1

Organization	Yes or No	Question 8 Comment
Response: See response to Q1.		
NERC Staff		Please see additional comments at the end of this document.
Response: See response to Q13.		
ExxonMobil Research and Engineering	Yes	NERC should follow the model of RFC and provide an appendix that provides examples of what type of radial feeds are exempted. NERC should also utilize IEEE C37.95: Guide for the Protective Relaying of Utility-Consumer Interconnections Section 4, which details typical interconnection facilities, as a reference when developing their concept of the BES. Addressing typical interconnection facility configurations will assist the NERC SDT in developing a clear and concise definition that provides a precise line of demarcation between elements of the BES and end use customer facilities.
Response: The SDT believes that a bright-line definition such as provided in the latest revision is more useful than examples in appendices.		
Pepco Holdings Inc.	Yes	Radial transmission element or system and load-serving elements need to be defined.
Manitoba Hydro	Yes	Radial tranmission elements and systems should be excluded, but a clear NERC definition of radial is required.
Duke Energy	Yes	Radial Transmission Element or System needs to be more clearly defined.
Response: The SDT believes that with the revisions made to the proposed definition that no other definitions will be required.		
Idaho Power	Yes	This should be expanded to transmission elements or systems that source load servering stations.Two examples are: 1.) The non-radial transmission system serving a metro area load at 138 kV where 230 kV and higher voltage systems surround the area and provide the bulk electric system transfer, and 2.) The non-radial transmission loops that serve rural area load at 138 kV that are essentially tangential to the bulk electric transfer path.
Response: The SDT has discussed this at length and has drafted exclusions for local distribution networks that should address these concerns and that will be available for review and comments. Excluded from the BES: E1 - Local Distribution Networks (LDN): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the Interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level		

Organization	Yes or No	Question 8 Comment
of service to retail customer Load. The LDN is characterized by all of the following: a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices; b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation; c) Power flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN; d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Public Service Enterprise Group Company	Yes	See the response to item 6 above.
Response: See response to Q6.		
Northeast Power Coordinating Council	Yes	
City of Redding	Yes	However, the NERC GO/TO work should incorporated.
City of Anaheim	Yes	Transmission elements serving radial load, radial distribution systems, or non-GO/GOP generation connected to such radial lines and excluded from BES; provided, however, to eliminate any reliability gaps, such radial transmission elements should be classified as "Distribution" equipment subject to DP standards, and the PRC and vegetation management standards should be made applicable to Distribution Providers and this equipment. This is consistent with the NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for radial transmission facilities that function as Distribution and are not required for the reliable operation of the BES.
IRC Standards Review Committee	Yes	
Bonneville Power Administration	Yes	

Organization	Yes or No	Question 8 Comment
Competitive Suppliers	Yes	The consideration and criteria about whether radials should be included as elements of the BES or not, needs to ensure consistency across the Regional Entities, based upon the future revised BES definition and the exemption criteria. Much of the consideration from the prior questions is based on generators and their size as measured by their capacity and connection voltage. While EPSA believes that there are some facilities that should be included (but not all) the "Yes" response to this question is really dependent on the exemption criteria developed by the Standard Drafting Team for radial lines. The "bright-line" criteria from earlier questions are not sufficient to make an assertion about what is necessary for reliability with respect to radial lines. Criteria about generators and their connections is one piece for ensuring reliability. Further bright-line criteria need to be determined for load-serving elements on par with the generator criteria relevant for reliability. The BES definition additionally needs to recognize that load and generation can have similar affects on the BES because both can affect BES voltage and frequency. As written, the BES definition appears to apply to generation but not load when in fact the BES sees the difference between load and generation mainly as the direction of power flow.
Arizona Public Service Company	Yes	
LCRA Transmission Services Corporation	Yes	
American Municipal Power	Yes	
North Carolina EMC	Yes	Radial facilities meeting the above criteria should be automatically exempted from classification as a part of the BES and should not be required to go through a separate exemption process.
ReliabilityFirst	Yes	As long the facility is purely radial and could under no circumstance or system topology (i.e. via switching or re-configuration) trip/lockout a BES facility.
on behalf of Teck Metals Ltd.	Yes	Parallel transmission lines from a single source (substation) to a singe load should be excluded from the BES, with the consent/request of the owner of the connected load (and/or all customers that constitute the connected load).
Southern California Edison	Yes	SCE currently does not report on any radial Transmission Element or System, connected from one Transmission source to a Load-serving Element and/or generation resources not included in items 2, 3, 4, 6, and 7 and believes the above should be excluded.

Organization	Yes or No	Question 8 Comment
Southern California Edison Company	Yes	
on behalf of Catalyst Paper Corporation	Yes	Parallel transmission lines from a single source (substation) to a singe load should be excluded from the BES, with the consent/request of the owner of the connected load (and/or all customers that constitute the connected load).
City of Grand Island	Yes	
Occidental Energy Ventures Corp	Yes	The existing exclusion for radial lines serving load should be maintained. If clarification of the existing language concerning radials is required, the exclusion and definition of “radial systems,” including the explanation of “normal operations,” contained in the BES Concept Document seems to accurately reflect radials serving load or small generators that should be excluded from the BES. FERC orders directing change in the BES definition support maintaining this exclusion.
City of Anaheim	Yes	Transmission elements serving radial load, radial distribution systems, or non-GO/GOP generation connected to such radial lines and excluded from BES; provided, however, to eliminate any reliability gaps, such radial transmission elements should be classified as "Distribution" equipment subject to DP standards, and the PRC and vegetation management standards should be made applicable to Distribution Providers and this equipment. This is consistent with the NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for radial transmission facilities that function as Distribution and are not required for the reliable operation of the BES.
Glacier Electric Cooperative	Yes	I don't think a radial transmission system would ever have a significant impact on the BES, so they should be excluded.
ISO New England Inc.	Yes	Per FERC Order 743, paragraph 55, the Commission declared, "As we stated in the NOPR, we do not seek to modify the second part of the definition through this Final Rule, which states that "radial transmission facilities" serving only load with one transmission source are generally not included in this definition.” ISO-NE maintains that this definition of radial should be the default position and only in cases where other radial configurations are to be considered should they be examined as part of any exemption or exclusion methodology that is developed by NERC in accordance with Order 743.
Entergy Services	Yes	

Organization	Yes or No	Question 8 Comment
Snohomish County PUD	Yes	FERC Order No. 743 is clear that FERC did not intend to disturb the existing exemption for radial facilities. Accordingly, radial systems should be excluded from the BES. This should not change if the radial system is used to interconnect a BES generator for reasons set forth in the GOTO Task Force report.
Orange and Rockland Utilities, Inc.	Yes	
American Transmission company	Yes	ATC agrees that a radial transmission element or system directly connected from one Transmission source to a Load-serving Element and/or generation resources are excluded as part of the BES given that a fault or an outage of the radial transmission element or system would not maintain an Adequate Level of Reliability of the BES.
Utility Services	Yes	
City of Austin dba Austin Energy	Yes	
The Dayton Power and Light Company	Yes	
BGE	Yes	BGE believes that the BES definition should incorporate exclusions where possible to eliminate the need for going through an exclusion process for common facilities which should not be classified as BES.
City Water Light and Power (CWLP) - Springfield, IL	Yes	
American Electric Power (AEP)	Yes	Yes, and we believe that this exclusion should be applied to both Transmission and Generation.
Clark Public Utilities	Yes	
Response: Thank you for your comments. The revised definition includes a list of “Inclusions” and “Exclusions” from the 100 kV threshold and no longer references any ‘exemption process’. Based on stakeholder comments, the drafting team added “Exclusions,” to the BES definition relative to radial systems and local distribution networks.		

9. Should the following be excluded from the Elements and Facilities classified as part of the BES?

- **Elements and Facilities identified through application of the exemption process, consistent with the criteria, where the exemption process deems that the Element or Facility should be excluded from the BES (with concurrence from the ERO)**

Summary Consideration: The majority of the industry responded positively to this question. However, the SDT understands that the process is still in development and that may affect actual responses. The SDT is striving to develop a revised "bright-line" definition that contains certain inclusions/exclusions and that should remove any confusion. A separate Rules of Procedure (ROP) team is undertaking to develop a separate process for Facilities that entities may choose to follow for their unique/special circumstances that do not fit within the definition and its designation.

Organization	Yes or No	Question 9 Comment
IRC Standards Review Committee	No	We find this exclusion criteria to be redundant. We believe that the proposed definition together with the basic inclusion criteria suffice to provide a bright line framework for determining Elements/Facilities that should be included as BES. Having this exclusion criteria confuses the bright line approach and does not add any value to the basic definition and inclusion criteria.
Independent Electricity System Operator	No	We find this exclusion criteria to be redundant. We believe that the proposed definition together with the basic inclusion criteria suffice to provide a bright line framework for determining Elements/Facilities that should be included as BES. Having this exclusion criteria confuses the bright line approach and does not add any value to the basic definition and inclusion criteria.
Electric Market Policy	Yes	Dominion conceptually supports an exemption process whereby NERC or the RRO could apply to have an element included or excluded from the BES definition. Such process recognizes that it may be necessary to include elements that do not meet the bright line criteria but are necessary for operating an interconnected transmission network. Such process should be developed through the existing NERC standards development process and include a robust appeals process for the owner/operator of any element so included or excluded.
Constellation Power Source Generation, Inc. ("CPSG") filing on behalf of Constellation Energy Group, Inc. ("CEG"), Constellation Energy Commodities Group, Inc. ("CCG"), Constellation Energy Control and Dispatch, LLC	Yes	Constellation recognizes the value in clarifying the Definition of Bulk Electric System into a bright line threshold consistently applied across the regions. However, we are concerned that the current approach of a simple, all inclusive definition coupled with an exception criteria and process will not draw on the fundamentals underpinning the existing definition and create a cumbersome and unnecessary exception process. As an alternative, we propose that the standard drafting team utilize the -Section III (Rules of Procedure Appendix 5B) along with definition threshold language to develop a more comprehensive definition. Regardless of approach, any elements and facilities found to meet the criteria for exemption should be exempted. The development of such criteria should be part of the BES drafting team's

Organization	Yes or No	Question 9 Comment
("CDD"), Constellation NewEnergy, Inc., ("CNE") and Constellation Energy Nuclear Group, LLC, ("CENG")		responsibility.
Response: Your comments are noted. The SDT is striving to develop a "bright-line" definition that will contain certain inclusions/exclusions and that should remove any confusion. A separate Rules of Procedure (ROP) team is undertaking to develop a separate process for Facilities that entities may choose to follow for their unique/special circumstances that do not fit within the definition and its designation.		
Occidental Energy Ventures Corp	No	Until the exemption process is finalized, it is not prudent to answer in the affirmative.
Manitoba Hydro		Abstain until exemption process has been defined.
Response: The SDT understands that the process is still in development and how that may affect your response.		
National Rural Electric Cooperative Association (NRECA)		Without specific exemption criteria to review, it is too early to explicitly answer this question. However, the concept appears to be logical. All exemption criteria must be explicit and unambiguous in order to provide as much certainty as possible. Work done by the Regional Entities on exemption criteria should be reviewed to determine is usefulness to the SDT.
PacifiCorp	Yes	In Order No. 743, the Commission directed NERC to adopt an exemption process for excluding facilities from the definition of the BES that are not necessary to operate an interconnected electric transmission network. In order to determine which facilities may be excluded, there must be criteria and a methodology that may be applied to identify which facilities are "necessary" to operate an interconnected electric transmission network and which "transmission and generation" facilities are not. In other words, there must be a clear way to determine what makes a particular facility is "necessary" for bulk system operation. Application of the criteria and methodology will result in the identification of the facilities that may be excluded. The comment questions asked in this questionnaire cannot be answered in a meaningful way absent this methodology. Significant efforts have been undertaken by the WECC Bulk Electric System Definition Task Force (BESDTF) over the course of the past year to identify some initial criteria and methodologies. These efforts are ongoing and should be supported by the NERC drafting team.
Response: The SDT is striving to develop a "bright-line" definition that will contain certain inclusions/exclusions and that should remove any confusion. A separate Rules of Procedure (ROP) team is undertaking to develop a separate process for Facilities that entities may choose to follow for their unique/special		

Organization	Yes or No	Question 9 Comment
circumstances that do not fit within the definition and its designation. Work done by Regional Entities is one of many inputs to the SDT deliberations.		
Xcel Energy		This undeveloped process presents itself as a wild card to entities, and will most likely present inconsistencies between regions based upon each Region's preference. Additionally, does the Regional Methodology require any approval (e.g. ERO) other than the Region's own process? The "exclusions" process indicates that the ERO has the final approval authority to exclude an item from the BES. Why would the same not apply for including something into the BES based on the Region's Methodology?
MRO's NERC Standards Review Subcommittee	Yes	This will give the industry a clear set of criteria to follow which is FERC approved. If a Regional Entity has a need to alter this process there are processes in place for them to pursue a variance. However, the applicable process should be called an "exception" process to avoid the connotation that "exemption" process has for the "inclusion" aspect of the process. NSRS believes the exemption process, review and approval, would be best handled by the Regional Entity (RE) since they have more knowledge on the transmission system in their region. The "who" and "what" will have to be spelled out clearly in the criteria for the exception process.
Response: A separate Rules of Procedure (ROP) team is undertaking to develop a process for Facilities that do not fit within the bright-line definition. The details of the process are still under discussion and development. However, the SDT expects that ERO will have an oversight role on the Regional Process.		
The Dow Chemical Company		Dow recommends that NERC finalize a basic framework for identifying BES facilities before evaluating individual facilities or types of facilities. Such a framework is recommended by Dow in response to questions #11 and #12 below.
Response: See responses to Q11 & 12.		
Entergy Services		Our response to this question depends on the details of the "exemption process", including what entity has the final decision and how it is implemented. Please see our response to Q13 below.
Northeast Power Coordinating Council	Yes	Refer to the response to Question 13.
FirstEnergy Corp	Yes	Yes, but the process should be simple, rarely used with a high threshold for removing any 100kV and above facility from the normally defined BES. Please see our Question 13 response for further views.

Organization	Yes or No	Question 9 Comment
NERC Staff	Yes	Please see additional comments at the end of this document.
Orange and Rockland Utilities, Inc.	Yes	Refer to the response to Question 13.
Response: See response to Q13.		
Florida Municipal Power Agency	Yes	It is important to maintain the distinction between "exclusions" and "exemptions." The SDT seems at times to use the words interchangeably. An exclusion is a categorical carve-out from the BES definition, such that excluded Elements are treated the same as sub-100 kV Transmission. FMPA proposes the following exclusion, which would retain the existing exclusion of radials serving only load with one Transmission source, clarified to add radials serving inconsequential generation to the exclusion:Radial Transmission Elements serving only load with one Transmission source are generally not included in this definition. A radial Transmission Element may be considered as "serving only load" for purposes of the foregoing general exclusion even if it connects generation, so long as that generation is not registered pursuant to the Statement of Compliance Registry Criteria. To obtain an exemption, on the other hand, an entity must go through the NERC exemption process. If the owner or operator of an Element that is nominally part of the BES can demonstrate to NERC that the particular Element meets the criteria for demonstrating that it is not necessary for operating the interconnected electric transmission network, that Element should be granted an exemption and thus considered non-BES. (See also FMPA comments on BES exemption process submitted today.)Requests for exemptions should be decided by NERC, not the Regional Entities, in order to foster continent-wide uniformity.
Transmission Access Policy Study Group	Yes	
Response: Your comments are noted. The SDT is striving to develop a "bright-line" definition that will contain certain inclusions/exclusions and that should remove any confusion. A separate Rules of Procedure (ROP) team is undertaking to develop a separate process for Facilities that entities may choose to follow for their unique/special circumstances that do not fit within the definition and its designation.		
Pepco Holdings Inc.	Yes	1. The proposed BES definition should be expanded to contain more specific criteria for what is excluded (and included) to minimize the need for exemptions. The exemption process should only be needed for a few special situations that are not covered in the criteria. 2. The exemption process should rest with the regional entity.
Response: 1. Your comments are noted. The SDT is striving to develop a "bright-line" definition that will contain certain inclusions/exclusions and that should remove any confusion. **2**. A separate Rules of Procedure (ROP) team is undertaking to develop a process. Regional entities are expected to have an important role in the exception		

Organization	Yes or No	Question 9 Comment
process. However, as directed by FERC, it is expected that the ERO would have an oversight and/or approval role. The details of the process are still under discussion and development.		
Indeck Energy Services	Yes	Same Response as Question 1
Utility Services	Yes	See the answer to Question 1.
Response: see response to Q1.		
PUD No.1 of Clallam County	Yes	We agree with this except for the parenthetical. If the exemption process itself is approved by the ERO, there should be no reason to get ERO concurrence on every exempted element. Such a process will bog down the system so that the process will take years. Concurrence with the RE should be sufficient. The ERO should only become involved in the event of disagreement between the registrant and the RE.
Central Lincoln	Yes	
PNGC Power	Yes	
Blachly-Lane Electric Co-op	Yes	
Clearwater Power Co.	Yes	
Douglas Electric Cooperative	Yes	
Central Electric Cooperative, Inc. (Redmond Oregon)	Yes	
Raft River Rural Electric Cooperative	Yes	
Northern Lights Inc.	Yes	
Salmon River Electric Cooperative	Yes	
Okanogan Country Electric Cooperative	Yes	

Organization	Yes or No	Question 9 Comment
Lost River Electric	Yes	
Lane Electric Cooperative	Yes	
Coos-Curry Electric Cooperative	Yes	
Consumer's Power Inc.	Yes	
Umatilla Electric Co-op	Yes	
West Oregon Electric Cooperative	Yes	
Lincoln Electric Cooperative	Yes	
Fall River Electric Cooperative	Yes	
Lewis County PUD	Yes	
Response: A separate Rules of Procedure (ROP) team is undertaking to develop an exception process. Regional entities are expected to have an important role in the exception process. However, as directed by FERC, it is expected that the ERO would have an oversight and/or approval role. The details of the process are still under discussion and development.		
United Illuminating Company	Yes	NERC should specify the technical criteria to determine the exemption of a facility. NERC could either directly or delegate to the The Regional Entity to oversee the exemption process and verify consistency and maintain lists.
Response: A separate Rules of Procedure (ROP) team is undertaking to develop an exception process. Regional entities are expected to have an important role in the exception process. However, as directed by FERC, it is expected that the ERO would have an oversight and/or approval role. The details of the process are still under discussion and development.		
American Transmission company	Yes	However, the applicable process should be called an “exception” process to avoid the connotation that “exemption” process has for the “inclusion” aspect of the process. ATC believes the exemption process, review and approval, would be best handled by the Regional Entity (RE) since they have more knowledge on the transmission system in their region. The “who” and “what” will have to be spelled out clearly in the criteria

Organization	Yes or No	Question 9 Comment
		for the exception process. For consistency, it is appropriate for the ERO to monitor and concur with the exceptions.
Response: A separate Rules of Procedure (ROP) team is undertaking to develop an exception (inclusion/exclusion) process. Regional entities are expected to have an important role in the exception process. However, as directed by FERC, it is expected that the ERO would have an oversight and/or approval role. The details of the process are still under discussion and development.		
City Water Light and Power (CWLP) - Springfield, IL	Yes	CWLP generally agrees with this point, but would like to see a firm, detailed administrative process for resolving disputes for exemptions with technical justification as the guiding principle.
Response: A separate Rules of Procedure (ROP) team is undertaking to develop an exception process for Facilities that do not fit within the bright-line definition. The details of the process are still under discussion and development.		
American Electric Power (AEP)	Yes	As noted in our response to question 5, we believe that an exemption process is needed, though substantive comments cannot be made until details of such a process and its related criteria are provided.
Response: See response to Q5.		
Springfield Utility Board	Yes	Who can apply? Who pays for the process? Is there a time frame for approval? Is the registered entity required to meet reliability requirements for the Element or Facility while it is in the exemption process? Part of the concern is that there are Elements and Facilities that are not necessary for the reliability for the BES but if they were included as part of the BES definition would significantly harm the entity financially to meet compliance with no measurable impact to reliability.
Response: A separate Rules of Procedure (ROP) team is undertaking to develop an exception process for Facilities that do not fit within the bright-line definition. The details of the process are still under discussion and development. The SDT will forward your comments to the ROP team for consideration as part of their process.		
City of Redding	Yes	The key element is a good exemption process based on sound engineering principles.
City of Anaheim	Yes	
SERC EC Planning Standards Subcommittee	Yes	

Organization	Yes or No	Question 9 Comment
Public Service Enterprise Group Company	Yes	No Comment
Bonneville Power Administration	Yes	
PPL Energy Plus	Yes	Yes, PPL Energy Plus support an exemption process for facilities (such as radial generation service and 100 kV looped load service) provided the Exemption process follows FERCs Order 743 paragraph 115: "NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid."
LG&E and KU Energy LLC	Yes	
ExxonMobil Research and Engineering	Yes	There should be an exemption process. There should also be a documented process for appealing the determination of whether or not a facility is part of the BES.
Arizona Public Service Company	Yes	
LCRA Transmission Services Corporation	Yes	
American Municipal Power	Yes	
North Carolina EMC	Yes	If elements or facilities meet one of the BES definition classifications identified in Questions 1-7 above, the owner of the facility or element should be able to apply for an exemption through the exemption process. In other words, the criteria outlined in Questions 1-7 should be considered a "bright-line" criteria for inclusion in the BES. If a facility meets one or more of these criteria, it can only be excluded from the BES by applying for an exemption through the exemption process.
ReliabilityFirst	Yes	However, the exemption process and criteria needs to be clearly defined so that a common approach across the ERO is used when this determination is made.
on behalf of Teck Metals Ltd.	Yes	
Southern California Edison	Yes	SCE agrees Elements and Facilities identified through application of the exemption process, consistent with the criteria, where the exemption process deems that the Element or Facility should be excluded from the BES (with concurrence from the ERO).

Organization	Yes or No	Question 9 Comment
Southern California Edison Company	Yes	
on behalf of Catalyst Paper Corporation	Yes	
City of Grand Island	Yes	
Glacier Electric Cooperative	Yes	Yes - This is assuming that the exemption process is an accurate way to truly determine whether or not a facility is significant to the grid. I think such an analytical method will be much more effective and accurate than a bright-line approach.
ISO New England Inc.	Yes	We generally support this approach, subject to the assessment of the detailed exemption/inclusion criteria and process.
Snohomish County PUD	Yes	If the Element or Facility is demonstrated through engineering studies performed as part of the exemption process to be unnecessary for the reliable operation of the interconnected bulk transmission system, the Element or Facility should not be classified as part of the BES regardless of its operating voltage.
City of Austin dba Austin Energy	Yes	
Duke Energy	Yes	
The Dayton Power and Light Company	Yes	
ITC Holdings Corp	Yes	
BGE	Yes	No comment.
Southern Company	Yes	Yes, provided the evaluation method is clear, understandable, and technically based.
Idaho Power	Yes	

Organization	Yes or No	Question 9 Comment
Clark Public Utilities	Yes	
Response: Thank you for your response.		

10. Should the following be excluded from the Elements and Facilities classified as part of the BES?

- **Generating plant control and operation functions which include relays and systems that control and protect the unit for boiler, turbine, environmental, and/or other plant restrictions**

Summary Consideration: Most commenters who responded to this question indicated agreement with the proposal. The SDT has discussed generator plant controls and operation functions and feels that they should not be included in the BES definition. It was determined that balance of plant equipment, including control and operation functions, fall within the scope of existing reliability standards. However, the SDT believes the inclusion of generator leads and the GSU for some configurations have been established by the SDT through discussions of the elements and resources material integral to the reliable operation of the BES. The bright-line designation will be developed as part of this project and the ROP process will be handled through the revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition.

The revised BES definition includes the following "Inclusions" as elements of the BES:

Included in the BES: I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above.

Included in the BES: I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.

Organization	Yes or No	Question 10 Comment
Bonneville Power Administration	No	However, if the generator is not part of BES, then the plant control and operation functions should not be included in the BES as well.
Glacier Electric Cooperative	No	Once again, it depends on the facility's significant impact to the grid.
Manitoba Hydro		If there is an impact to frequency or voltage response or facility ratings it should be included.
City of Austin dba Austin Energy	Yes	This response assumes the question refers to devices within the plant itself. In other words, the relays, etc. within the plant and used to protect the generation assets should not be included in the definition of BES. Additionally, many generation units have a design basis allowing some equipment to trip without impact to the generation output.
City of Redding	Yes	Only the relays and protection schemes that protect BES equipment (example is a BES substation bus), not power plant equipment. Exception could be a RMR unit.

Organization	Yes or No	Question 10 Comment
Response: The SDT has discussed generator plant controls and operation functions and feels that they should not be included in the BES definition. It was determined that balance of plant equipment, including control and operation functions, fall within the scope of existing reliability standards.		
Duke Energy	No	Boiler, turbine, environmental or other control systems that are designed to automatically trip a BES facility in the normal system configuration, when operating correctly for their intended function, should be included in the BES definition.
ReliabilityFirst		Several of these examples listed could in fact force a unit or units out of service, thereby causing a negative impact (such as lowering frequency, etc.) to the BES. However, there should be some additional thought for exclusion of balance of plant facilities, such as the boiler, turbine, and environmental and auxiliary equipment (i.e. scrubber, baghouse, precipitator, fuel/ash coal handling, cooling water, etc.), if they cannot trip the unit off-line.
Response: The SDT has discussed generator plant controls and operation functions including those associated with balance of plant equipment such as boiler, turbine, environmental and other control systems and feels that they should not be included in the BES definition. It was determined that balance of plant equipment, including control and operation functions, fall within the scope of existing reliability standards.		
LCRA Transmission Services Corporation	No	
American Municipal Power	No	
Response: Thank you for your response.		
NERC Staff	No	Please see additional comments at the end of this document.
Response: See response to Q13.		
The Dow Chemical Company		As discussed in response to question #12 below, issues relating to the registry criteria applicable to generation resources should not be revisited at this time.
Response: See response to Q12.		
Competitive Suppliers		Plant controls and other systems on the generation side from the point of interconnection should not be included in the BES definition because they do not significantly affect the reliability of the interconnected

Organization	Yes or No	Question 10 Comment
		electric network. EPSA recommends that the standards drafting team develop a BES exemption criteria that considers the impact of all equipment (including lead lines and GSUs) on the generator side from the point of interconnection on the reliability of the BES.
Response: The SDT has discussed generator plant controls and operation functions and feels that they should not be included in the BES definition. It was determined that balance of plant equipment, including control and operation functions, fall within the scope of existing reliability standards. The bright-line designation will be developed as part of this project and the process will be handled through the revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. Your comments will be forwarded to the Rules of Procedure Team.		
Arizona Public Service Company	Yes	The above description for defining the exclusion is vague and too difficult to determine where the exclusion applies for a Generator. AZPS recommends identifying exclusions for all systems which are not electrically/magnetically connected to generation elements including the GSU, line leads and the generator or its protection systems.
City of Anaheim	Yes	Unless the generator is required to maintain BES reliability, i.e. black start, etc., the GSU and gen tie should be excluded from the BES; provided, however, to eliminate any reliability gaps, such generation-tie equipment should be classified as "Generator" equipment subject to GO/GOP standards, and the PRC and vegetation management standards should be made applicable to GO/GOPs and this equipment. This is consistent with the NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for non-critical generation-tie transmission elements that are not required for the reliable operation of the BES.
Response: The inclusion of generator leads and the GSU for some configurations have been established by the SDT through discussions of the elements and resources material integral to the reliable operation of the BES. Included in the BES: I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above. Included in the BES: I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.		
Indeck Energy Services	Yes	Same Response as Question 1
Response: See response to Q1.		
Springfield Utility Board	Yes	Individual loads equal to or below 25 MW (one customer on a line) served by Transmission Facilities greater than 100kV and the Transmission Facilities themselves should be excluded for the same reason. Entity registration is based on aggregate loads. But a 10 MW load may served by an LSE that has a 200 MW peak

Organization	Yes or No	Question 10 Comment
		is part of the BES while the same 10 MW load served by a 20 MW LSE would not be part of the BES. From a reliability perspective this is inconsistent. Either a facility is or isn't necessary for the reliability of the BES. If a facility isn't necessary because an entity does not meet registration thresholds then the same facility should be excluded from the BES for an entity that is registered.
Response: The SDT has decided to stay with the limits in the NERC Statement of Compliance Registry Criteria with regard to the size of generators that will be included in the BES.		
City of Anaheim	Yes	Unless the generator is required to maintain BES reliability, i.e. black start, etc., the GSU and gen tie should be excluded from the BES; provided, however, to eliminate any reliability gaps, such generation-tie equipment should be classified as "Generator" equipment subject to GO/GOP standards, and the PRC and vegetation management standards should be made applicable to GO/GOPs and this equipment. This is consistent with the NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for non-critical generation-tie transmission elements that are not required for the reliable operation of the BES.
Northeast Power Coordinating Council	Yes	These systems are internal protection systems and will not impact the reliability of the BES.
SERC EC Planning Standards Subcommittee	Yes	
Public Service Enterprise Group Company	Yes	The relays and systems described above should not be classified as part of the BES. The intent of the BES definition and applicable standards should not include these items as this would further confuse the BES boundary scope rather than clarify what should be included. The described functions and controls by themselves do not add to BES reliability.
MRO's NERC Standards Review Subcommittee	Yes	This will give our industry a clear defining line of what is a BES Facility and what it is comprised of.
IRC Standards Review Committee	Yes	
Florida Municipal Power Agency	Yes	Excluding such generating plant control and operation functions, which have to do with mechanical energy, rather than electric energy, would be consistent with Section 215 of the Federal Power Act, which states that the Bulk Power System includes “electric energy from generation facilities needed to maintain transmission system reliability.” There are standards, such as PRC-024, FAC-008, and FAC-009, regulating total unit performance and ratings, which necessarily covers component performance as well. Therefore, no purpose
Transmission Access Policy Study Group	Yes	

Organization	Yes or No	Question 10 Comment
		would be served by including these types of items in a granular way in the BES definition.
FirstEnergy Corp	Yes	Yes these should be excluded from the BES definition. If there is a reliability need related to these devices a standard could be written even though they are not included within the BES definition. Our position is similar to our prior stated view on the blackstart and cranking path.
Electric Market Policy	Yes	
SERc OC Standards Review Group	Yes	
PacifiCorp	Yes	
PPL Energy Plus	Yes	Excluding these generator components is correct.
LG&E and KU Energy LLC	Yes	
Central Lincoln	Yes	
Pepco Holdings Inc.	Yes	
PUD No.1 of Clallam County	Yes	
North Carolina EMC	Yes	Only relay elements and systems for generating units that meet or exceed the 20 MVA nameplate BES criteria should be included in this classification.
on behalf of Teck Metals Ltd.	Yes	
Southern California Edison	Yes	SCE believes generating plant control and operation functions which include relays and systems that control and protect the unit for boiler, turbine, environmental, and/or other plant restrictions should not be included in the BES definition.
Southern California Edison Company	Yes	

Organization	Yes or No	Question 10 Comment
on behalf of Catalyst Paper Corporation	Yes	
City of Grand Island	Yes	
Occidental Energy Ventures Corp	Yes	
ISO New England Inc.	Yes	
Entergy Services	Yes	
Snohomish County PUD	Yes	The BES by statutory definition can include only those Facilities and Elements that are necessary for the reliable operation of the interconnected bulk transmission system. While the facilities identified in question 10 may be necessary for the protection of plant equipment or to meet regulatory obligations related to environmental protection, they cannot be classified as BES facilities in the absence of a clear demonstration that the facilities are material to the reliable operation of the bulk system because the failure of those facilities could threaten cascading failures, separation events, or instability on the interconnected bulk transmission system.
PNGC Power	Yes	
Blachly-Lane Electric Co-op	Yes	
Clearwater Power Co.	Yes	
Douglas Electric Cooperative	Yes	
Central Electric Cooperative, Inc. (Redmond Oregon)	Yes	
Raft River Rural Electric Cooperative	Yes	
Northern Lights Inc.	Yes	

Organization	Yes or No	Question 10 Comment
Salmon River Electric Cooperative	Yes	
Okanogan Country Electric Cooperative	Yes	
Lost River Electric	Yes	
Lane Electric Cooperative	Yes	
Coos-Curry Electric Cooperative	Yes	
Consumer's Power Inc.	Yes	
Umatilla Electric Co-op	Yes	
West Oregon Electric Cooperative	Yes	
Lincoln Electric Cooperative	Yes	
Fall River Electric Cooperative	Yes	
United Illuminating Company	Yes	The Generator Protection systems for the Electrical Interconnection should not be excluded from the BES.
Orange and Rockland Utilities, Inc.	Yes	These systems are internal protection systems and will not impact the reliability of the BES.
American Transmission company	Yes	
Utility Services	Yes	Utility Services believes that these systems are internal protection systems and will not impact the reliability the BES. .
The Dayton Power and Light	Yes	

Organization	Yes or No	Question 10 Comment
Company		
ITC Holdings Corp	Yes	
BGE	Yes	No comment.
Constellation Power Source Generation, Inc. (“CPSG”) filing on behalf of Constellation Energy Group, Inc. (“CEG”), Constellation Energy Commodities Group, Inc. (“CCG”), Constellation Energy Control and Dispatch, LLC (“CDD”), Constellation NewEnergy, Inc., (“CNE”) and Constellation Energy Nuclear Group, LLC, (“CENG”)	Yes	
City Water Light and Power (CWLP) - Springfield, IL	Yes	
Lewis County PUD	Yes	These elements have little to do with the BES and should be excluded.
American Electric Power (AEP)	Yes	Given the vast diversity of plant auxiliary systems, together with their built-in redundancies, component failures in these systems would have negligible impact on BES reliability. In support of this, RFC’s definition of BES does well by seeking to maintain electric system reliability without over-reaching, by allowing the exemption of the devices mentioned in question 10.
Southern Company	Yes	Generator protection systems and operational control systems for generating plants are not critical to the BES operation. Generator protection systems should be included. However, we do not believe that other plant control systems such as boiler controls and operational control systems, etc should be included for generating plants as they are not critical to the BES operation.
Idaho Power	Yes	

Organization	Yes or No	Question 10 Comment
Independent Electricity System Operator	Yes	
Clark Public Utilities	Yes	
Xcel Energy	Yes	
Response: Thank you for your response.		

11. Do you believe that the proposed definition of BES, accompanied by a separate BES Definition Exception Process meets the reliability-related intent of the directives in Order 743?

Summary Consideration: Most commenters who responded to this question indicated disagreement with the proposal, indicating a preference to have more details in the definition. The SDT will develop the BES definition and associated criteria. The SDT intends to develop criteria that will be explicit enough so that the owners/operators of the vast majority of Facilities will not have to seek a case-by-case exception on whether their Facilities are part of the BES. This includes addressing radial Transmission serving only Load.

A separate ROP team will develop the procedures for seeking an exception that is not clearly addressed by the definition and criteria. The SDT understands the importance of the exception process being developed in parallel with the BES definition and associated criteria and will closely coordinate with the ROP team that is responsible for developing that process. As the SDT develops the modified BES definition and associated criteria, it will carefully consider Canadian-specific issues and the current NERC Statement of Compliance Registry Criteria.

Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and:

a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or,
b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or,
c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.

Excluded from the BES: E3 - Local distribution networks (LDNs): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:

a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;
b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;
c) Power flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN;
d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and
e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Organization	Yes or No	Question 11 Comment
Public Service Enterprise Group Company	No	There is still room for misinterpretation. The definition of the BES should be as explicit as possible since it affects the majority of the standards.
Response: The SDT is developing a bright-line BES definition and associated criteria that will address as many Facilities as possible.		
Florida Municipal Power Agency	No	The proposed definition abandons the current exclusion of radials serving only load with one transmission source that Order 743 specifically left in place, and instead conflates "excluded" Elements with Elements for which an "exemption" can be sought. The proposed definition would thus require entities to seek an exemption, presumably on a case-by-case basis, for every > 100 kV radial serving only load with one transmission source. FERC did not intend to direct such a result in Order 743, but rather intended to allow the current exclusion of such radials to load to continue.Furthermore, to comply with Order 743, the new BES definition and exemption/inclusion processes must ensure uniformity throughout the United States. Thus there must be a uniform process; clear criteria for exemption and inclusion; and a right to appeal decisions to a higher body within NERC and/or to FERC.
Transmission Access Policy Study Group	No	
Response: The SDT has proposed the following radial exclusion from the BES as part of its revised definition. The SDT believes that this will address your concern. Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.		
Electric Market Policy	No	See comments at bottom of questionnaire (Q13).
Response: See response to Q13.		
PPL Energy Plus	No	For the reasons discussed above, the proposed BES definition does not take into account FERC's desire to only include Facilities in the BES that have an impact on the reliability of the Interconnected Electric Network.
LG&E and KU Energy LLC	No	

Organization	Yes or No	Question 11 Comment
Response: The SDT assumes that you are referring to responses that you provided to earlier questions. See above responses.		
Competitive Suppliers	No	The intent of the directives in Order 743 is to, "direct NERC to develop a uniform modified definition of Bulk-electric system [that] will eliminate regional discretion and ambiguity". In Order 743 the Commission also finds that the exemption process needs to work with the definition. Paragraph 115 from the BES final rule states "NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid. The ERO also should determine any related changes to its Rules of Procedures (ROP) that may be required to implement the exemption process, and file the proposed exemption process and rule changes with the Commission." This section does not direct NERC to use the ROP modification process to develop "separate" exemption criteria. It only recommends that NERC modify its ROP for any related changes to implement the exemption process, not for developing the exemption criteria. BES exemption criteria need to be developed through the NERC standards development procedure by the Standard Drafting Team (SDT) that is modifying the BES definition. The exemption criteria need to be done by the same group that forms the definition so that the exemptions are crafted to fit with the new BES definition. The definition and the exemption criteria need to be meshed and work together.
Response: The SDT will develop the BES definition and associated criteria. A separate Rules of Procedure (ROP) team will develop the procedures for seeking an exception that is not clearly addressed by the definition and criteria. The SDT will closely coordinate with the ROP team.		
PacifiCorp	No	The proposed definition does not meet the reliability-related intent of the directives in Order 743 in two respects. First, the second clause of the first sentence of the proposed definition re-introduces the ambiguity that the Commission believes a bright-line threshold will eliminate. The first sentence states that the BES is "all Transmission and Generation Elements and Facilities operated voltages of 100 kV or higher necessary to support bulk power system reliability." (emphasis added). PacifiCorp understands that the intent of this language is to indicate that only some subset of 100 kV facilities (those necessary for reliability) are included in the definition of the BES. However, this language is ambiguous in that it does not make it clear that the only way to exempt 100 kV and above facilities (other than certain defined radial facilities) from the definition is to utilize the exemption process. Second, the proposed definition does not make it clear that certain defined radial facilities may be excluded from the definition without utilizing the exemption process. PacifiCorp proposes the following:Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher except [defined radial facilities]. Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher may be excluded if they are not necessary to operate an interconnected electric transmission network. Transmission and Generation Elements and Facilities operated at voltages of 100 kV or lower must be included if they are necessary to operate an interconnected electric transmission network. The criteria for determining whether Elements and

Organization	Yes or No	Question 11 Comment
		Facilities are necessary to operate an interconnected electric transmission network are defined in the BES definition exemption process.
Response: The SDT is developing criteria that will be explicit enough so that the owners/operators of the vast majority of Facilities will not have to seek a case-by-case decision on whether their Facilities are part of the BES. This includes addressing radial Transmission serving only Load. Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.		
ExxonMobil Research and Engineering	No	The proposed definition is over reaching and can potentially expand the scope of the BES beyond the point to which NERC was intended to have the authority to govern. The proposed definition does not directly address the line of demarcation between customer owned facilities and elements of BES.
Response: The SDT is developing a BES definition and associated criteria that it believes will address your concerns and those of others in this regard.		
NERC Staff	No	Please see additional comments at the end of this document.
Entergy Services	No	Please see our response to Q13 below.
Response: See response to Q13.		
Arizona Public Service Company	No	Radial transmission systems operated below 100 kV should not be included as part of the BES and should not have to go through the exception process.
Response: The SDT is developing a BES definition and associated criteria that it believes will address your concerns and minimize the need for owners/operators to have to have to go through an exception process. Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and:		

Organization	Yes or No	Question 11 Comment
a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.		
Xcel Energy	No	
Manitoba Hydro	No	No. The proposed definition includes the wording '...necessary to support bulk power system reliability' which increases ambiguity and reduces the 100kV and above bright line distinction. This wording should be removed. Manitoba Hydro suggests the following: Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher except defined radial facilities. Elements and Facilities operated at voltages of 100kV or higher, including Radial Transmission systems, may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process.
Response: The SDT has revised the definition and the wording is no longer utilized.		
Indeck Energy Services	No	Same Response as Question 1
Response: See response to Q1.		
Southern California Edison	No	SCE believes that the 100kV brightline threshold is sufficient.
Response: Thank you for your comment. Please see the revised definition – it includes a detailed list if inclusions/exclusions to minimize the need to use the BES Exception Process.		
City of Grand Island	No	This question is premature given that the BES Exception Process has not been developed.
Occidental Energy Ventures Corp	No	Until the expemtion process is finalized, it is not prudent to answer in the affirmative.
Response: The SDT understands the importance of this process being developed in parallel with the BES definition and associated criteria.		
Central Lincoln	No	The order was to provide a definition that excepted radial facilities and to create an exemption process for

Organization	Yes or No	Question 11 Comment
PUD No.1 of Clallam County	No	other facilities not necessary for operating the interconnected network. The SAR proposes to treat the two the same. This will cause unneeded expense, delay, and uncertainty for those radial facilities that could simply be eliminated by inspection. This would work against reliability by misdirecting resources toward the elements tied up in the process, and possibly away from the elements that should be included.The SAR also fails to meet the order by failing to apply it to all entity types. We fail to see how a bright line is achieved if DPs, PSEs, and IAs work from a definition different from all the other types of registered entities. Please edit the SAR to include all entity types.
PNGC Power	No	
Blachly-Lane Electric Co-op	No	
Clearwater Power Co.	No	
Douglas Electric Cooperative	No	
Central Electric Cooperative, Inc. (Redmond Oregon)	No	
Raft River Rural Electric Cooperative	No	
Northern Lights Inc.	No	
Salmon River Electric Cooperative	No	
Okanogan Country Electric Cooperative	No	
Lost River Electric	No	
Lane Electric Cooperative	No	
Coos-Curry Electric Cooperative	No	
Consumer's Power Inc.	No	
Umatilla Electric Co-op	No	

Organization	Yes or No	Question 11 Comment
West Oregon Electric Cooperative	No	
Lincoln Electric Cooperative	No	
Fall River Electric Cooperative	No	
Lewis County PUD	No	
Response: The SDT is developing criteria that will be explicit enough so that the owners/operators of the vast majority of Facilities will not have to seek a case-by-case decision on whether their Facilities are part of the BES. This includes addressing radial Transmission serving only Load. Excluded from the BES: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in inclusions I2, I3, I4 and I5.		
The Dow Chemical Company	No	Order No. 743 correctly recognizes that local distribution facilities are expressly excluded from the definition of "Bulk-Power System" set forth in Section 215 of the Federal Power Act. See Order No. 743 at P 37. As such, local distribution facilities must also be excluded from the definition of BES adopted by NERC. That is not the case with respect to the proposed definition, which makes no mention whatsoever of local distribution facilities. Instead, the proposed definition simply provides that certain facilities, including "Radial Transmission systems, may be excluded . . . if approved through the BES definition exemption process." While this language presumably is an acknowledgement that Radial Transmission lines perform a local distribution function and should be excluded, numerous other types of facilities also perform a local distribution function and should also be excluded regardless of their voltage.For example, Dow and certain of its subsidiaries, including Union Carbide Corporation, own and operate electrical facilities at a number of industrial sites within the U.S. In all cases, a tie line or lines connect the industrial site to the electric transmission grid. Power is delivered from the electric transmission grid to the industrial site through the tie line(s). Lines within the industrial site then deliver power to individual manufacturing plants within the site. Additionally, cogeneration facilities are located at a number of industrial sites owned by Dow and Union

Organization	Yes or No	Question 11 Comment
		Carbide Corporation, principally in Texas and Louisiana. These cogeneration facilities generate power that is primarily distributed within the industrial site and used for manufacturing plant operations. In some instances, excess power not required for plant operations is delivered into the electric transmission grid through the tie line(s) connecting the industrial site to the grid.While the tie lines and internal lines at these industrial sites can be fairly significant in terms of voltage, they do not perform anything that resembles a transmission function. Rather than transmit power long distances from generation to load centers, the tie lines and internal lines perform a local distribution function consisting of the distribution of power brought in from the grid or generated internally to different manufacturing plants within each industrial site. In some cases, the facilities also perform an interconnection function to the extent they enable excess power from cogeneration facilities to be delivered into the grid. The voltage of the tie lines and internal lines at these industrial sites is dictated by the load and basic configuration of each site. Higher voltage lines (>100 kV) are used to reduce line losses while meeting applicable load requirements. That does not mean that such lines perform a transmission function. Indeed, just as a line that delivers power into a home, or from a home to an accompanying garage, is considered a distribution facility and not a transmission facility, the same is true of lines that deliver power into industrial sites owned by Dow or its subsidiaries (even though such lines also may be used to deliver excess power to the transmission grid) or within those sites. The definition of BES adopted by NERC should explicitly provide for these types of local distribution facilities to be categorically excluded.
City of Redding	No	The current definition goes to far; local goverments, cities, and citizens have been given the right to decide the level of reliability of their distribution system. FERC & NERC were not given jurisdiction over local distribution facilities. Note: many local distribution facilities are operated above 100 kV.

Response: The SDT is developing a BES definition and associated criteria that it believes will address your concerns.

- Excluded from the BES: E3 - Local distribution networks (LDNs): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:
  a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;
  b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;
  c) Power flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN;
  d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and
  e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and

Organization	Yes or No	Question 11 Comment
is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
National Rural Electric Cooperative Association (NRECA)	No	It is too early to determine the effectiveness of the proposed BES definition and BES criteria included in the draft SAR. However, the concept of a BES definition and BES criteria, along with BES exemption criteria, appears, at least from a preliminary standpoint, to be a satisfactory direction to begin the process. The concepts presented in the draft SAR should not preclude any other potential direction for the SDT to explore at this point in the process.The proposed BES definition in the SAR should be considered only as an alternative for the SDT to consider in its work, not a final definition or a definition that precludes other proposed definitions.
Response: The SDT considers the proposed BES definition in the SAR as a starting point for SDT consideration.		
Duke Energy	No	The high level direction does, but the details need to be defined before this question can be answered affirmatively.
Response: The SDT is developing a BES definition and associated criteria that it believes will address your concerns.		
American Electric Power (AEP)	No	It's not clear how the criteria in the concept paper will be related back to the overall definition of BES. We recommend that the finalized criteria be included verbatim in the definition, or that the definition refer to an official companion document. The definition cannot automatically include all equipment (both primary-voltage and the associated auxiliary equipment) by default.
Response: The SDT considers the concept paper one of the starting points for SDT consideration. The finalized criteria will be included in the definition.		
Springfield Utility Board	No	SUB appreciates the work to provide a clearer definition of the BES, but the proposed language is ambiguous.The existing definition is:"As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition."The proposed definition is: "Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher necessary to support bulk power system reliability. Elements and Facilities operated at voltages of 100kV or higher, including Radial Transmission systems, may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process."Looking at the first sentence, 100kV or higher facilities are part of the BES ONLY if they are necessary to support bulk power system reliability. As written, if an registered entity determines that a 100kV or higher facility is not necessary for BPS system reliability then the facility may be excluded. If the intent is to

Organization	Yes or No	Question 11 Comment
		assume that all 100kV and above facilities are necessary for BPS reliability, SUB strongly disagrees.To avoid confusion, SUB suggests that the first sentence state: "Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher." The language "necessary to support bulk power system reliability." should be deleted. Turning to the second sentence:"Elements and Facilities operated at voltages of 100kV or higher, including Radial Transmission systems, may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process."The approved April 2010 NERC Glossary of Terms includes definitions for "Elements", "Facilities", and "Transmission", but does not have a definition for "Radial" or "Radial Transmission", "Radial Transmission systems", Transmission systems", or "systems". SUB does not know what this language is intended to mean.If the language "Radial Transmission systems" means an Transmission Element or Facility normally operated open then SUB agrees with this language. If all Elements or Facilities are outright excluded from being excluded from the BES because they could "potentially" be operated closed, this language has little value as most facilities have the "potential" to operated closed.SUB has concerns that EROs are making interpretation of language, such as "radial", without going through a required interpretation public process and are just "announcing" what language means. Is is not uncommon for an ERO to announce a definition for an undefined term and then tell registered entities that they need to request a formal interpretation from NERC in order to modify an informal ERO interpretation. SUB would like to eliminate this confusion - starting with the BES definition which is confusing and may perpetuate an informal interpretation process. SUB proposes that the second sentence read:"Elements and Facilities operated at voltages of 100kV or higher, including Radial Transmission systems, may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process. Radial Transmission systems include Elements or Facilities normally operated open." Lastly, why would an entity want to include an Element or Facility that would otherwise be excluded? If an ERO determines that an Element or Facility below 100kV is necessary for reliability would the ERO be ability to initiate an exemption process to include the Element or Facility without the owners knowledge or consent? What if the owner is not a Registered Entity? This inclusion language for elements below 100kV is unclear in terms of the application, implementation, or intent.
Response: The proposed BES definition included in the SAR is only a starting point for the SDT. The SDT intends to address the issues you have identified in its efforts to develop a BES definition and associated criteria. The initial thinking is that for Facilities captured as BES by the definition/criteria, if an owner/operator believed those Facilities should not be considered BES, that owner/operator would need to technically demonstrate why such Facilities should be excluded. In addition, for Facilities that are not captured as BES by the definition/criteria, if the ERO or a Regional Entity believed those Facilities should be considered as BES, then the ERO or the Regional Entity would need to technically demonstrate why such Facilities should be included. It is the intent of the SDT that the BES definition and associated criteria it develops will address the vast majority of Facilities and minimize the need for technical demonstration by owners/operators or		

Organization	Yes or No	Question 11 Comment
the ERO and regional Entities.		
Electricity Consumers Resource Council (ELCON)	No	The Electricity Consumers Resource Council (ELCON) appreciates the opportunity to submit the following comments on the draft concept document prepared by the Regional Bulk Electric System Definition Coordination Group (RBESCG), a team of representatives of the Regional Entities (REs).ELCON is the national group representing the interests of large industrial consumers of electricity. Many ELCON member facilities are Registered Entities. One or more ELCON members are registered as: BA, IA, GO, GOP, TO, TOP, TSP, PA, RP, LSE, and PSE. However, the most common registered functions of large industrial end users are GO, GOP and PSE by virtue of the need to supply a complex industrial process with low-cost thermal energy and/or low-cost electric energy.The stated purpose of the concept document is to provide a "common approach" for: o Defining the BES and therefore improve the clarity, reduce ambiguity and establish a universal method (i.e., bright line) for distinguishing between BES and non-BES Elements and Facilities. o Identifying BES Elements and Facilities so as to establish a "repeatable" method for applying NERC Reliability Standard requirements and facilitate consistent application of compliance efforts across regional boundaries.CommentsELCON members have always supported fair and effective reliability efforts at NERC. However, the expansion of the standards compliance responsibility implied by the NERC Concept Document goes too far. As written, this proposal could have the effect of devaluing a large number of industrial owned electrical power assets by forcing industrials to meet new and unnecessary compliance obligations. Many will be forced to choose to either accept a significant new cost or fire sale their assets to local providers increasing the purchaser's market power in the process. ELCON feels the addition of new compliance obligations should not be done in such a wholesale manner but instead done on an exception and as needed basis that factors in both a realistic appraisal of the underlying risk and the economic burden imposed on the registered entity relative to the expected benefits. Specific recommendations and concerns are: 1. An Overarching "Principle" for the Identification of BES Elements and Facilities Must be the Guidance Provided by FERC That Significant Expansion of the Compliance Registry is Not Contemplated.In FERC's March 18, 2010 Notice of Proposed Rulemaking (NOPR) on the Revision to Electric Reliability Organization Definition of Bulk Electric System, the Commission stated regarding the revision to the BES definition:"This proposal would eliminate the discretion provided in the current definition for a Regional Entity to define "bulk electric system" within a region. Importantly, however, we emphasize that we are not proposing to eliminate all regional variations and we do not anticipate that the proposed change would affect most entities." Â¶ 16."... the Commission does not believe that the proposal would have an immediate effect on entities in any Regional Entity other than NPCC." Â¶ 27.Similarly, in Order No. 743, the Commission stated:"We expect that our decision to direct NERC to develop a uniform modified definition of 'bulk-electric system' will eliminate

Organization	Yes or No	Question 11 Comment
		regional discretion and ambiguity. The change will not significantly increase the scope of the present definition, which applies to transmission, generation and interconnection facilities. The proposed exemption process will provide sufficient means for entities that do not believe particular facilities are necessary for operating the interconnected transmission system to apply for an exemption." Â¶ 144.One area where the proposed BES definition and exception process will significantly expand the Compliance Registry is the criteria applicable to behind-the-meter generation (primarily cogeneration facilities). We urge that the BES definition should not change the currently applicable 20 MVA / 75 MVA generation size threshold applicable to generation facilities or the manner in which that threshold is currently applied, with behindâ€theâ€meter cogeneration facilities evaluated based on the net capacity actually provided to the grid. 2. A Second Overarching "Principle" for the Identification of BES Elements and Facillities Is the Need to Clarify Which Facilities Perform a True Transmission Function and Excluding Facilities That Perform a Local Distribution Function, As Required by Law.Congress stated in Federal Power Act section 215:SEC. 215. ELECTRIC RELIABILITY.''(a) DEFINITIONS.-For purposes of this section:''(1) The term 'bulk-power system' means-''(A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and''(B) electric energy from generation facilities needed to maintain transmission system reliability.The term does not include facilities used in the local distribution of electric energy.There has been little attempt by NERC to clarify what in fact are "facilities used in the local distribution of electric energy" even though any plain English application of the term makes such a determination self-evident. The proposed BES definition should expressly exclude facilities used in the local distribution of electric energy, and the identification of such facilities is independent of the identification of BES transmission. Facilities used for local distribution are NOT the residual of any determination of what are BES transmission facilities. 3. A Third Overarching "Principle" for the Identification of BES Elements and Facilities Must be Recognition of the Risk Imposed by the Element or Facility, and the Economic Burden of the Owner/Operator of the Element of Facility.The efforts of the BES Standards Drafting Team follow the release of two important policy documents. First, on January 18, 2011, the White House issued an Executive Order ("Improving Regulation and Regulatory Review") by President Obama regarding improvements to federal regulations and the review of existing regulations to ensure, among other things, that a regulation be proposed or adopted "only upon reasoned determination that its benefits justify its costs," and that regulations be tailored "to impose the least burden on society." Second, the NERC Planning Committee issued on January 10, 2011, "Risk-Based Reliability Compliance - White Paper Concept Discussion," which attempts to advance "processes and procedures to prioritize [NERC's] efforts and 'tiering' elements of its programs to maximize their value and optimize the benefit/cost of effort from stakeholders." This white paper complements the President's Executive Order.ELCON believes that BES exclusion criteria and process should recognize and exclude elements and facilities in which the risk to bulk electric system reliability is at most theoretical or speculative, and where the compliance burden clearly outweighs the benefits. Such a determination should recognize the

Organization	Yes or No	Question 11 Comment
		historical record of the element or facility in terms of the owner or operator's coordination with the BA or control area, and transmission operators. This principle should be applied to the development of exclusion/inclusion criteria for private lines that connect loads and behind-the-meter generation to true BES Elements and Facilities. 4. An Additional Principle for the Identification of BES Elements and Facilities Should Be the Explicit Recognition on How the Element or Facility is Actually Operated or Used, Not Its Physical or Nominal Rating That May be Irrelevant to Reliability Considerations.In Order No. 743, FERC clarified that it did not intend to require NERC to utilize the term "rated at" rather than the term "operated at" for the voltage threshold in the revised BES definition. A principle for the identification of BES Elements and Facilities should be such recognition and not exclusively on the rated value of an Element or Facility. This principle should be used to retain the exclusion in the Statement of Compliance Registry Criteria (Revision 5.0) for "net capacity provided to the bulk power system" in the context of the 20 MVA generating unit and 75 MVA generating plant thresholds. The "net capacity" applies to capacity "put" of a behind-the-meter generator whose predominant function is to serve load at the same site. 5. An Additional Principle for the Identification of BES Elements and Facilities Should be the Exclusion of PSEs That Do Not Own or Operate Physical Assets and Whose Power Transactions Are Exclusively Financial in Nature.Many PSEs that operate in FERC jurisdictional organized wholesale markets (i.e., ISOs and RTOs) do not own, operate or lease physical assets and are currently bombarded with data requests that assume that they own or control such assets. An example of a superfluous data request is to prove that adequate reactive power has been procured to support the load. This is a question that should not have been asked and displays a profound ignorance of the operation of ISO/RTO markets. One potential solution to this problem is to create two subsets of PSEs: one that owns and operates physical assets that are used to serve their loads, and a second that does not.Some Regional Entities have also begun to ask questions that require PSEs to reveal the details of specific commercial transactions. This raises a broader question on what NERC and regional compliance staffs and auditors "need to know" and whether such questions are an abuse of their enforcement authority. 6. Any Attempt to Make Demand Side Management (DSM) Measures an Element or Facility of BES Will Be Shortsighted and Counterproductive.Proposals that unilaterally and arbitrarily remove exclusions for generation and transmission, including the application of new compliance obligations to DSM programs, go far beyond what FERC intended in its guidance for revisions. Any new requirement concerning voluntary DSM adds cost to a process that so far has only acted to support reliability with performance equal to and sometimes superior to traditional providers. How is it that a potential resource that can contribute to maintaining reliability is now so quickly identified as a risk? We warn against the overzealous pursuit of control over every asset and resource on the electric system. This mindset will only breed cynicism and end the willingness of potentially dispatchable loads to cooperate with the real operators and owners of the BES.A recently issued FERC study highlights the potential value to reliability of DSM (in the form of dispatchable

Organization	Yes or No	Question 11 Comment
		demand response) (See Joseph H. Eto et al., Use of Frequency Response Metrics to Assess the Planning and Operating Requirements for Reliable Integration of Variable Renewable Generation, LBNL-4142E, December 2010). To reliably integrate greater amounts of wind energy resources to the bulk electric system, the study recommended the:"Expanded use of demand response that is technically capable of providing frequency control (potentially including smart grid applications), starting with broader industry appreciation of the role of demand response in augmenting primary and secondary frequency control reserves." 7. Revising the Definition of BES Does Not Justify Shifting the Plenary Burden for BPS Reliability from Utilities to Utility Customers. A BES Principle Should Recognize That the Obligation to Serve Applies in One Direction.The only reason the bulk power system exists is to deliver electric power to residential households, commercial businesses, government facilities and industrial facilities of all sizes. The value of a reliable BPS is dependent on the needs of end use customers. Nothing in the legislative history of section 215 of the Federal Power Act suggests that Congress wittingly intended to change that relationship. The burden of complying with NERC Reliability Standards is a cost of doing business for utility providers of generation, transmission and distribution services. Generation and interconnection facilities of industrial customers are almost never intended for or used to "operate the interconnected transmission network." Those facilities are integral to a manufacturing process, including purchasing power from the grid. They were built in expectation that the BPS was prudently planned and operated by utilities. The rare exceptions are administered under applicable tariffs or contracts, and are already Registered Entities. Part of NERC's effort should include defining the line between a BES asset that is used to deliver power and an End User asset that's sole purpose is to serve the End User's load. The NERC Functional Model includes a vague definition of End-use Customer. The problem is determining the scope of an end-use device. If an industrial company owns a 138 kV to 13.8 kV transformer that feeds its plant, is that an end-use device or a transmission asset that is used to transmit power to the low voltage distribution network within the manufacturing facility? Any work to revise the definition of the BES should also include a clarification of its boundaries. We believe that NERC should not expand the scope of the BES to include assets within end-use customer's private use networks. (See our recommendation #2 above) 8. An Additional BES Principle Should be that BES Elements and Facilities be Limited to Only Functions Currently Specified in the NERC Functional Model (Version 5).NERC's development of the revised BES definition and exclusion/inclusion criteria and processes should be limited to functions specified in the NERC Functional Model (Version 5). 9. NERC is Encouraged to Propose a "Different Solution" That is as Effective as, or Superior to, the Commission's Proposed Approach. The Proposed Principles for the Exclusion of Elements and Facilities from the BES Should Include a Process for Categorical Exclusion Based on Common Physical Characteristics.The Commission stated in Order No. 743 regarding its proposed revision of the BES definition (and presumably the exclusion/inclusion criteria and processes):"... NERC may propose a different solution that is as effective as, or superior to, the Commission's proposed approach in addressing the Commission's

Organization	Yes or No	Question 11 Comment
		technical and other concerns so as to ensure that all necessary facilities are included within the scope of the definition." Â¶ 16.In addition, specific to the exclusion of Elements and Facilities from the BES, the Final Rule did not adopt the exclusion process proposed in the NOPR (i.e., facility-by-facility review). In the Final Order, FERC directed NERC to develop an exclusion process "with practical application that is less burdensome than the NOPR proposal." FERC has also allowed NERC to consider concerns (mainly industrials') regarding "exclusion categories" in developing the exclusion process and criteria. Â¶ 120.ELCON interprets the Commission's statements to mean that the agency is open to developing a more efficient compliance process, including processes that minimize unnecessary regulatory burdens on potential Registered Entities and the administrative costs of NERC and RE compliance operations. In the spirit of "streamlining" NERC and the REs' review of smaller entities, ELCON recommends the addition of a principle on the exclusion of Elements and Facilities from the BES that encourages a process for categorical exclusion of entities based on common physical characteristics.
Response: The SDT considers the proposed BES definition in the SAR as a starting point for SDT consideration. As it develops a modified BES definition and associated criteria, it is carefully reviewing and considering the NERC Statement of Compliance Registry Criteria. The SDT has considered your comments in developing a modified BES definition and associated criteria. The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions while addressing most, if not all, of the provided suggestions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. NERC will follow the due process established for changes to the Glossary of terms. This new definition addresses radial Loads, generation, and local distribution networks.		
Constellation Power Source Generation, Inc. ("CPSG") filing on behalf of Constellation Energy Group, Inc. ("CEG"), Constellation Energy Commodities Group, Inc. ("CCG"), Constellation Energy Control and Dispatch, LLC ("CDD"), Constellation NewEnergy, Inc., ("CNE") and Constellation Energy Nuclear Group, LLC, ("CENG")	Yes	Paragraph 115 from the BES final rule states "NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid. The ERO also should determine any related changes to its Rules of Procedures (ROP) that may be required to implement the exemption process, and file the proposed exemption process and rule changes with the Commission." This section does not direct NERC to use the ROP modification process to develop "separate" exemption criteria. It only recommends that NERC modify its ROP for any related changes to implement the exemption process, not the exemption criteria itself. The compliance implications and technical nature of such criteria make it imperative that industry input be considered in a transparent stakeholder process. It is appropriate for NERC to develop aspects such as the administrative management, the role and interaction of the regions, an appeal process, etc. However, due to the technical aspects of BES operation, the drafting team members are best suited to devise criteria for non-BES facilities to warrant inclusion in the BES.As currently proposed, the definition language and the exception criteria are not being developed in the properly coordinated fashion. This should change. Further, Constellation is not convinced that creation of a definition and an exception process is the best course to respond to the FERC directives. In question 12, an alternative approach is proposed.

Organization	Yes or No	Question 11 Comment
City Water Light and Power (CWLP) - Springfield, IL	Yes	CWLP feels, again, that the lack of a firm, detailed administrative process for exemptions hampers the proposed BES definition in meeting the intent of Order 743
American Transmission company	Yes	However, ATC does not want to appear to endorse any separate BES Definition Exception and Inclusion Processes until one has been clearly proposed and meets the reliability-related intent of the Order 743 directives. Furthermore, ATC believes the separate Exception and Inclusion Processes should be subject to the same Standards Development review and approval process as the associated BES definition.
MRO's NERC Standards Review Subcommittee	Yes	However, NSRS does not want to appear to endorse any separate BES Definition Exception Process until one has been clearly proposed and meets the reliability-related intent of the Order 743 directives. Furthermore, NSRS believes the separate Exception Process should be subject to the Standards ("Definition") Development Process as the associated BES definition.
Response: The SDT is developing the BES definition and associated criteria. A separate Rules of Procedure (ROP) team will develop the procedures for seeking an exception that is not clearly addressed by the definition and criteria. The SDT will closely coordinate with the ROP team.		
APPA	Yes	I agree that the proposed definition meets the intent of Order 743. However, the separate development of exception criteria ouside of the standards development process does raise concerns. See response to Question 12.
Response: See response to Q12.		
Pepco Holdings Inc.		See comments above and below.
Response: See responses above and below.		
Hydro-QuÃ©bec		For the Canadian entities, it is important to consider that the definition of the Bulk Electric System must also be approved by the Canadian regulators.
Response: The SDT is aware of the issues related to Canadian utilities and regulators and will consider those as it develops a modified BES definition and associated criteria.		
Utility Services	Yes	However, Utility Services would like to suggest alternative definitions for Bulk Electric System and BES Exemption Process. We have presented our proposed definitions in the answer to Question 1. While the proposed definition may meet the Order, Utility Services believes that the definition can be made cleaner and

Organization	Yes or No	Question 11 Comment
		easier to read
Response: See response to Q1.		
United Illuminating Company	Yes	Order 743 focused on the definition of BES and the exemption process. Although not part of the SAR or ORDER 743, UI suggests NERC provide an explanation in the implementation plan of the impact on the registry criteria. Will the Registry Criteria serve as another filter for identifying which entities willbe part of Compliance Monitoring
Response: As the SDT develops a modified BES definition and associated criteria, it will be carefully reviewing and considering the NERC Statement of Compliance Registry Criteria.		
Northeast Power Coordinating Council	Yes	A qualified "Yes". The BES exemption process has not yet been written. So, it is somewhat difficult to know in advance that this approach meets the reliability-related intent of the directives in Order 743. While in general agreement with this conclusion, there is concern that the BES definition and BES exception process do not yet adequately address a "point-of-demarcation" between the BES Facilities and Elements and non-BES facilities and elements (lower case). Propose to add two new terms for the NERC Glossary of Terms in our reply to Question 13, in order to identify a point-of-demarcation and more fully respond to this question.
Orange and Rockland Utilities, Inc.	Yes	
Response: The SDT will consider your concerns in its deliberations as it moves forward in revising the definition. .		
City of Anaheim	Yes	
IRC Standards Review Committee	Yes	The definition is critically dependent on the detailed exemption/inclusion criteria and process, which has not been developed.
Bonneville Power Administration	Yes	
FirstEnergy Corp	Yes	However, BES definition changes are needed to establish a bright-line for the BES.
SERc OC Standards Review Group	Yes	
LCRA Transmission Services Corporation	Yes	

Organization	Yes or No	Question 11 Comment
American Municipal Power	Yes	
North Carolina EMC	Yes	
ReliabilityFirst	Yes	A single and uniform definition that includes exemption criteria and an exemption process must be the result of this effort. Then this material must be consistently used by all of the Regional Entities across the ERO in order to achieve the directives set forth in Order 743.
on behalf of Teck Metals Ltd.	Yes	
Southern California Edison Company	Yes	
on behalf of Catalyst Paper Corporation	Yes	
City of Anaheim	Yes	
Glacier Electric Cooperative	Yes	I have not seen the BES Definition Exception Process, but I trust it will be an accurate method.
ISO New England Inc.	Yes	
Snohomish County PUD	Yes	While Snohomish believes FERC substantially overstepped its statutory authority in Order No. 743 for the reasons set forth in its comments and petition for rehearing filed with FERC in that docket, we nonetheless support FERC's underlying goal to assure reliable operation of the interconnected bulk transmission system. Within the constraints imposed by FERC, we believe the approach of defining the BES and then establishing an exemption process to exclude Facilities and Elements that are not necessary for the reliable operation of the interconnected bulk transmission system should meet FERC's reliability goals while mitigating the excessive compliance costs that will arise from blunt application of a 100-kV brightline threshold. Nothing stated in these comments, however, should be interpreted as withdrawing or waiving any objection Snohomish has made to Order No. 743.
City of Austin dba Austin Energy	Yes	
The Dayton Power and Light	Yes	

Organization	Yes or No	Question 11 Comment
Company		
ITC Holdings Corp	Yes	As long as the PRC023 Critical criteria is used for below 100 kV is used for inclusion.
BGE	Yes	No comment.
Southern Company	Yes	The framework appears to be in place to respond to the directive; however, the details of the “exemption process” remain to be fully developed.
Idaho Power	Yes	
Independent Electricity System Operator	Yes	The definition is critically dependent on the detailed exemption/inclusion criteria and process, which has not been developed. We advocate that the revised BES definition and the exemption/inclusion process and criteria be developed at the same time and preferably by the same drafting team to ensure consistency in approach, since these issues are very closely interrelated.
Clark Public Utilities	Yes	
Response: Thank you for your response. Please see the revised definition –it includes a detailed list if inclusions/exclusions to minimize the need to use the BES Exception Process.		

12. If you have a proposal for an equally efficient and effective method of achieving the reliability- related intent of the directives in Order 743, please provide your proposal here.

Summary Consideration: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations (included within the body of the definition), will provide a bright-line definition, clarity, and consistency across the regions while addressing most, if not all, of the provided suggestions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. NERC will follow the due process established for changes to the Glossary of terms. This new definition addresses radial Loads, generation, and local distribution networks. Furthermore, the SDT has utilized many resources to provide this clarity including the Compliance Registry Criteria and the WECC BESDTF recommendations.

Organization	Question 12 Comment
Public Service Enterprise Group Company	The BES definition impacts many standards and has been the source of misunderstanding with subsequent requests for interpretations. In this one case, a stand alone interpretive descriptive document with clear lines of demarcation using example one lines and associated notes in lieu of a three sentence description that attempts to describe all elements of the BES could be considered.
Manitoba Hydro	Manitoba Hydro supports a true bright-line threshold that includes all facilities operated at or above 100kV except defined radial facilities. There should be no regional differences in the definition or exemption process and the regional discretion should be removed from the BES definition.
ReliabilityFirst	The ERO and the Regional Entities should develop and propose the common BES definition and exemption process, submit it to FERC, and allow for the FERC process, whereby the industry provides its comments, etc., to be used to finalize this definition, exemption process and criteria.
United Illuminating Company	The BES definition should be very clear and simple.
ITC Holdings Corp	Exclusion criteria should be determined at the NERC level and implemented continent wide by the Regions, rather than allowing each Region to come up with their own policy and criteria on exclusions.
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition.	
MRO's NERC Standards Review	Proposed Bulk Electric System definition: Facilities operated at voltages of 100 kV or higher necessary to support the

Organization	Question 12 Comment
Subcommittee	interconnected transmission network reliability (Note see the NERC approved exemption process for Facilities that are and are not considered part of the BES). Rational:1. NERC defines Facilities as "a set of electrical equipment that operates as a single BES Element. Since Element is part of the Facilities NERC definition it is not needed to be repeated. 2. Section 30 of FERC Order 743 "all facilities operated at or above 100kV" should be included in the bright-line criteria. 3. This new language eliminates the ambiguity as directed in FERC Order 743 whereby the Region cannot establish other bright-line criteria for what the BES is. 4. This reinforces foot note 41 by stating exactly what "reliability" of the BES needs to be reinforced. The "interconnected transmission reliability should also be used in any "exemption criteria" that the SDT formulates in the future. 5. The removal of bulk power system reliability is still a somewhat ambiguous term and FERC has stated that the BPS definition is not within the scope of this FERC Order. 6. Note that the NERC defined term of Facility contains the word BES. So, as written, a Facility is energized at 100kV or above. The capitalized word of Facility cannot be used in the inclusion process since those facilities would be below the 100kV level.
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. Section 30 of FERC Order 743 directs the ERO to include exclusions as deemed appropriate, such as radials. The SDT agrees that the term BPS is not in scope and also stipulates that this work is focused on defining the BES. The SDT recognized the problem with Facility and has corrected that in the revised work.	
City of Anaheim	Transmission elements serving radial load, radial distribution systems, or non-GO/GOP generation connected to such radial lines and excluded from BES; provided, however, to eliminate any reliability gaps, such radial transmission elements should be classified as "Distribution" equipment subject to DP standards, and the PRC and vegetation management standards should be made applicable to Distribution Providers and this equipment. This is consistent with the NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for radial transmission facilities that function as Distribution and are not required for the reliable operation of the BES. Transformers with secondary windings of 100kV or less should not be part of the BES if they feed radial load or radial distribution systems; provided, however, to eliminate any reliability gaps, such transformers should be classified as "Distribution" equipment subject to DP standards, and the PRC and vegetation management standards should be made applicable to Distribution Providers and including this equipment. This is consistent with the NERC Reliability Functional

Organization	Question 12 Comment
	Model and is more efficient than requiring TO/TOP registration for radial transmission facilities that function as Distribution and are not required for the reliable operation of the BES. Unless the generator is required to maintain BES reliability, i.e. black start, etc., the GSU and gen tie should be excluded from the BES; provided, however, to eliminate any reliability gaps, such generation-tie equipment should be classified as "Generator" equipment subject to GO/GOP standards, and the PRC and vegetation management standards should be made applicable to GO/GOPs and this equipment. This is consistent with the NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for non-critical generation-tie transmission elements that are not required for the reliable operation of the BES.
Florida Municipal Power Agency Transmission Access Policy Study Group	FMPA proposes that the BES be defined as:In general, the Bulk Electric System includes all Transmission Elements operated at voltages of 100 kV or higher, and all generation resources registered pursuant to the Statement of Compliance Registry Criteria. Radial Transmission Elements serving only load with one Transmission source are generally not included in this definition. A radial Transmission Element may be considered as "serving only load" for purposes of the foregoing general exclusion even if it connects generation, so long as that generation is not registered pursuant to the Statement of Compliance Registry Criteria. An Element that nominally meets the general BES criteria, but which an entity demonstrates, on a case-by-case basis, is not necessary for operating the interconnected electric transmission network, shall be exempted from the BES pursuant to the NERC exemption process. An Element that does not nominally meet the general BES criteria, but which NERC demonstrates, on a case-by-case basis, is necessary for operating the interconnected electric transmission network, shall be included in the BES pursuant to the NERC inclusion process. There should be an exemption process with clear criteria pursuant to which an entity can attempt to demonstrate that although a particular Element is nominally part of the BES, it is not necessary for operating the interconnected electric transmission network. Elements for which an exemption is granted would be considered non-BES. FMPA's proposed criteria and exemption process are discussed in FMPA' comments on BES exemption process submitted today. There should be an inclusion process with clear criteria pursuant to which NERC may show, on a case-by-case basis, that although a particular non-BES Element is nominally not part of the BES, it is necessary for operating the interconnected electric transmission network and should therefore be considered part of the BES. FMPA' proposed criteria and inclusion process are discussed in FMPA' comments on BES exemption process submitted today.
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. This new definition addresses radial Loads.	
PacifiCorp	See respons #11.

Organization	Question 12 Comment
Response: See response to Q11.	
PPL Energy Plus	The determination of whether or not a facility is part of the BES should consider FERC's Order 743 paragraph 73 which clearly states the network nature of the BES. FERC states that the ability to overload parallel facilities (Order 743 paragraph 73) is a key feature of an element in the BES.
LG&E and KU Energy LLC	
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. Elements such as Transmission lines are included and excluded in the BES based on this bright-line definition. Furthermore, entities will need to continue to meet all the performance of Facilities per the applicable NERC standards.	
Competitive Suppliers	Initial EPSA suggestions for meeting the directives for Order 743 are included in the answer to question 11. Additionally, EPSA recommends that the drafting team can benefit from utilizing the Compliance Registry Criteria in the BES definition. By using the classifications found in the Compliance Registry Criteria - Section III (Rules of Procedure Appendix 5B), of which much is alluded to in the questions included on this comment form, can provide a useful basis to create a comprehensive, revised BES definition. Further, competitive suppliers recommend that the BES drafting team incorporate the criteria directly into the revised BES definition, replacing the term "bulk power system" in each criteria with "100 kV." Structuring the revised BES definition to clarifying that aligns with the Compliance Registration criteria will ensure against complex exemption process as well as eliminate the need for Section III of the Registry Criteria.
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. Furthermore, the SDT has utilized many resources during the development of this definition including the Compliance Registry Criteria.	
NERC Staff	Please see additional comments at the end of this document. .
Entergy Services	Please see our response to Q13 below.
Response: See response to Q13.	
NextEra Energy Inc.	Based on the information posted by the North American Electric Reliability Corporation (NERC) on its plans to address Order No. 743 of the Federal Energy Regulatory Commission (FERC), NextEra Energy, Inc. (NextEra) believes that NERC (and associated drafting teams) should slightly modify its direction to more closely align with FERC's proposed framework. In Order No. 743, at paragraph 30, FERC stated that:The Commission believes the best way to address these concerns is to

Organization	Question 12 Comment
	eliminate the regional discretion in the ERO's current definition, maintain the bright-line threshold that includes all facilities operated at or above 100 kV except defined radial facilities, and establish an exemption process and criteria for excluding facilities the ERO determines are not necessary for operating the interconnected transmission network. It is important to note that Commission is not proposing to change the threshold value already contained in the definition, but rather seeks to eliminate the ambiguity created by the current characterization of that threshold as a general guideline.FERC also provided NERC with the opportunity to propose an alternative approach. NextEra believes, however, that FERC's proposed framework is appropriately designed to enhance the definition of the Bulk Electric System (BES) in the NERC glossary, and to separately develop a process to apply for and receive, as appropriate, an exemption from the BES definition. Although it appears that NERC and the drafting teams may also be inclined to proceed as suggested by FERC, there are indications in the questionnaire and BES concept paper that there may be some thought to deviating from FERC's proposal. A review of the information posted by NERC seems to indicate NERC's intention to have a drafting team develop a revised BES definition via the standards development process (i.e., Appendix 3A of the NERC Rules of Procedure). It also seems that NERC is interested in assigning a "working group" to separately develop an exemption process that would be implemented as a new process in the NERC Rules of Procedure. NextEra agrees with this approach. NextEra's concerns stem from some of the words in the proposed BES definition, the BES concept paper and the questions asked, which seem to suggest an unnecessarily overlapping definition and exemption process, and a movement toward an exemption process based on categories rather than criteria. Thus, to address these concerns NextEra proposes the following enhancements to more clearly separate the BES definition and exemption process, and align each more closely with Order No. 743. As for the BES definition, NextEra encourages the drafting team to solely focus its efforts on the definition. The currently posed revised BES definition reads as follows:Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher necessary to support bulk power system reliability. Elements and Facilities operated at voltages of 100kV or higher, including Radial Transmission systems, may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process.NextEra maintains that this is not the correct starting point, nor consistent with Order No. 743 or the other material posted by NERC, that suggests a more definitive separation of the BES definition from the exemption process. Thus, NextEra proposes that the definition be revised to read as follows:Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher, unless a Transmission or Generation Element or Facility has been exempted pursuant to the exemption process set forth in the NERC Rules of Procedure. This proposed BES definition more clearly and cleanly separates the BES definition from the exemption process. It also does not add unnecessary qualifiers or verbiage that may result in confusion. NextEra is also concerned that the working group assigned to the exemption process may initially be more focused on developing categories, instead of an exemption process and associated criteria. Given the unique circumstances of the interconnected BES, including system topology, NextEra does not believe that it would be a productive exercise for the exemption working group to focus on types, groups or categories of equipment; instead, its efforts should focus on developing specific objective criteria to judge the reasonableness of a request or application for an exemption. This approach also seems more in line with FERC's statement in Order No. 743 at paragraph 115: NERC should develop an

Organization	Question 12 Comment
	exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid. The ERO also should determine any related changes to its Rules of Procedures that may be required to implement the exemption process, and file the proposed exemption process and rule changes with the Commission. The challenges of developing an exemption process also include ensuring than any applicant is afforded due process and balanced decision-making, as required by section 215 of the Federal Power Act. Thus, the exemption process must address legal, regulatory and technical issues. Accordingly, NextEra requests that NERC assemble a working group (perhaps via the Standards Committee) to develop the exemption process that is comprised of stakeholders with legal, regulatory and technical experience. Without this balance of disciplines, NextEra is concerned that a technical-heavy working group will attempt to develop a "fix," instead of a process whereby applicants may request an exemption, and have that exemption judged by specific criteria and pursuant to a process that affords due process and balanced decision-making. It is not clear whether an exemption working group has already been assembled. If it has, NextEra requests that NERC consider restructuring of the group consistent with NextEra's proposal.In summary, NextEra requests that the BES definition drafting team adopt NextEra's proposed definition of BES. NextEra also requests that NERC assemble a cross-functional working group to develop an exemption process based on specific criteria (rather than categories), and a process that affords applicants due process and balanced decision-making.
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. The new definition removes the term "general" and provides more specific wording. NERC will follow the due process established for changes to the Glossary of Terms.	
Pepco Holdings Inc.	The RFC BES Definition and Clarifications could be used as a model for definition. It specifically incorporates additional detail of what is included and what is excluded.
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. The SDT has utilized many resources during the development of this definition including the work done by RFC.	
Indeck Energy Services	The BES definition should be the same as the FPA Bulk Power System definition! It will not be a bright line, like >100 kV. It will focus NERC's efforts on the real reliability issues rather than chasing many small entities through paper exercises that make someone feel that they are punishing unreliable behavior. Such exercises over the last 3 years have not measurably improved reliability, in fact, NERC doesn't seem to know how to measure reliability in its purest form. It can monitor operating and planning parameters of the BPS, but none of them truly measure reliability. The July, 2010 FERC Technical Conference showed how far off NERC is when a FERC Commissioner had to state that preventing "loss of load" does not define reliability. As referred to in the FPA, preventing cascading outages defines reliability. How does having a Sabotage

Organization	Question 12 Comment
	and Bomb Threat procedure at a 100 MW wind farm prevent cascading outages?
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions.	
Snohomish County PUD	Snohomish has worked extensively with the WECC Bulk Electric System Task Force ("BESDTF") over the last two years and, while we disagree with certain details of the BESDTF approach (in particular, we believe a 200-kV threshold rather than a 100-kV threshold more appropriately reflects conditions in the Western Interconnection), we believe the approach developed by the BESDTF will achieve the reliability goals laid down by FERC in Order No. 743 while at the same time excluding facilities from the BES that have no meaningful impact on the reliable operation of the bulk transmission system, which thereby minimizes unnecessary compliance costs. Accordingly, we commend the work of the BESDTF to the standards drafting team. Given the relatively short deadline imposed by FERC for completion of work on the revised definition, we believe it will be necessary for the standards drafting team to rely on existing work of groups like the BESDTF rather than re-inventing the wheel.
Central Lincoln	The WECC Bulk Electric System Definition Task Force has made significant progress in defining the BES. We encourage the SAR to look at the work they've done.
PUD No.1 of Clallam County	
PNGC Power	
Blachly-Lane Electric Co-op	
Clearwater Power Co.	
Douglas Electric Cooperative	
Central Electric Cooperative, Inc. (Redmond Oregon)	
Raft River Rural Electric Cooperative	
Northern Lights Inc.	
Salmon River Electric	

Organization	Question 12 Comment
Cooperative	
Okanogan Country Electric Cooperative	
Lost River Electric	
Lane Electric Cooperative	
Coos-Curry Electric Cooperative	
Consumer's Power Inc.	
Umatilla Electric Co-op	
West Oregon Electric Cooperative	
Lincoln Electric Cooperative	
Fall River Electric Cooperative	
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. The SDT has utilized many resources during the development of this definition including the work done by the WECC BESDTF.	
The Dow Chemical Company	As discussed above, the proposed definition of BES is flawed because it fails to expressly exclude local distribution facilities. It is also confusing, particularly with respect to its use and application of the 100 kV standard. As the definition is written, the 100 kV standard would apply to both transmission and generation facilities - i.e., "All Transmission and Generation Elements and Facilities" - even though voltage is primarily a measure of transmission capability with little applicability to generation. Such a standard would, depending on how it is applied, be inconsistent with the generation criteria already set forth in the NERC Statement of Compliance Registry Criteria. In the case of Dow and Union Carbide Corporation, these criteria establish a generally-applicable 20 MVA threshold applicable to exports of electricity to the transmission grid from individual generating units and a 75 MVA threshold applicable to exports of electricity to the transmission grid from generating plants/facilities.

Organization	Question 12 Comment
	The BES definition should not change the currently applicable 20 MVA / 75 MVA generation size threshold applicable to generation facilities or the manner in which that threshold is currently applied, with behind-the-meter cogeneration facilities evaluated based on the net capacity actually provided to the grid. The best approach might be to define BES as simply consisting of three types of facilities: (1) BES Generation; (2) BES Transmission; and (3) BES Protection and Controls. Those terms would then be defined by reference to criteria set forth in NERC's Statement of Compliance Registry Criteria. For example, the term BES Generation would be defined as individual generating units or generating plants or facilities that meet the criteria set forth in the Statement of Compliance Registry Criteria. This approach would provide greater clarity. It would also generally preserve the status quo, which is particularly important in the context of generation. NERC and the Regional Entities have already made significant progress in deciding what generators should be subject to compliance with mandatory reliability standards and what generators should be exempted. Nothing in Order No. 743 requires that those determinations be revisited. The issues raised in Order No. 743 will, however, likely require revisions to the transmission-related criteria set forth in NERC's Statement of Compliance Registry Criteria. Dow is not in principle opposed to the retention of the 100 kV standard that is already set forth in the registry criteria, but it must be clarified to apply to facilities that perform a transmission function while excluding facilities that perform a local distribution function. The criteria should also preserve the "material to reliability" standard that is set forth in the proposed definition, i.e., that facilities must be "necessary to support bulk power system reliability" in order to be considered part of the BES. This standard is particularly important in the context of interconnection facilities that connect generation resources to the transmission grid. FERC has recognized that such facilities do not neatly qualify as either transmission facilities or distribution facilities, but that such facilities should nevertheless be considered part of the BES and subject to mandatory reliability standards only if they are determined to be "material to the reliability of the bulk power system." See New Harquahala Generating Company, LLC, 123 FERC Â¶ 61,173 at P 44 (2008), clarified, 123 FERC Â¶ 61,311 (2008).Based on these considerations, the criteria set forth in the NERC Statement of Compliance Registry Criteria should be structured so as to define "BES Transmission" as including: (1) facilities that perform a transmission function, that are operated at voltages of 100 kV or higher, and that are materially necessary to support bulk power system reliability; and (2) any other facility that performs a transmission function that is found to be materially necessary to support bulk power system reliability. To the extent an interconnection line from a BES Generation facility is materially necessary to support bulk power reliability, that interconnection line should be treated as part of the BES Generation facility, rather than a BES Transmission facility. Such a structure would preserve the bright-line 100 kV standard preferred by FERC, while defining and applying the standard in a manner that appropriately preserves the distinctions that are recognized for local distribution and interconnection facilities, and that ensures that all facilities that materially affect reliability are covered by the standards. Of course, once a definition for BES Transmission is adopted, the next step is to develop a process for applying that definition so as to identify specific facilities that qualify as BES Transmission facilities, and that are subject to mandatory reliability standards. Owners and operators should be afforded an opportunity in the process to demonstrate that their facilities should be excluded because they either: (1) perform a distribution function; (2) are not materially necessary to support bulk power system reliability; or (3) are included as part of BES Generation facilities. Such an opportunity must be

Organization	Question 12 Comment
	provided before facilities become subject to mandatory BES Transmission reliability standards.
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. This new definition addresses radial Loads and generation. Furthermore, the SDT has utilized many resources to provide this clarity including the Compliance Registry Criteria.	
Utility Services	We believe our answers to the questions above provide for sufficient means to meet the intent of Order 743.
Response: Please see responses to questions above.	
BGE	It is preferable that non-BES facilities be excluded by the definition language rather than to define BES broadly and require non-BES facilities go through an exception process. For those special case facilities that may exist, an "opt-in" evaluation could be conducted. We find that this approach to revising the BES definition would satisfy the FERC directives in Order 743 by encompassing all facilities necessary for operating an interconnected electric transmission network into a national level, bright-line definition. This approach will improve the clarity and consistency of the BES definition for application by Industry and NERC as well as avoiding creation of a potentially cumbersome exception process. The rules of procedure process may be used to develop the "opt-in" process that would replace the proposed exception concept; however, the drafting team, perhaps in collaboration with regional entities, should develop any opt-in criteria needed for the process. It is appropriate for NERC to develop aspects such as the administrative management, the role and interaction of the regions, an appeal process, etc. However, due to the technical aspects of BES operation, the drafting team members are best suited to devise criteria for non-BES facilities to warrant inclusion in the BES.
Constellation Power Source Generation, Inc. ("CPSG") filing on behalf of Constellation Energy Group, Inc. ("CEG"), Constellation Energy Commodities Group, Inc. ("CCG"), Constellation Energy Control and Dispatch, LLC ("CDD"), Constellation NewEnergy, Inc., ("CNE") and Constellation Energy Nuclear	Constellation recognizes the value in clarifying the Definition of Bulk Electric System into a bright line threshold consistently applied across the regions. However, we are concerned that the current approach of a simple, all inclusive definition coupled with an exception criteria and process will not draw on the fundamentals underpinning the existing definition and create a cumbersome and unnecessary exception process. As an alternative, we propose that the standard drafting team utilize the Compliance Registry Criteria-Section III (Rules of Procedure Appendix 5B) along with definition threshold language (such as 100 kV) to develop a more comprehensive definition. Further, we propose that the BES drafting team incorporate the criteria directly into the revised BES definition, replacing the term "bulk power system" in each criterion with "greater than 100 kV." This will make for a longer definition, but by aligning the facilities requiring registration as those defined as BES, the definition will more clearly determine the line between BES and non-BES. It is preferable that non-BES facilities be excluded by the definition language rather than to define BES broadly and require non-BES facilities go through an exception process. Ideally, this approach can eliminate the need for an onerous exemption process as well as eliminate the need for Section III of the Registry Criteria in the Rules of Procedure. For special case facilities deemed non-BES by the revised definition that

Organization	Question 12 Comment
Group, LLC, ("CENG")	may warrant consideration for inclusion, an "opt-in" evaluation could be conducted. The rules of procedure process may be used to develop the "opt-in" process that would replace the proposed exception concept; however, the drafting team, perhaps in collaboration with regional entities, should develop any opt-in criteria needed for the process. Again, it is appropriate for NERC to develop aspects such as the administrative management, the role and interaction of the regions, an appeal process, etc. However, due to the technical aspects of BES operation, the drafting team members are best suited to devise criteria for non-BES facilities to warrant inclusion in the BES.We find that this approach to revising the BES definition would satisfy the FERC directives in Order 743 by encompassing all facilities necessary for operating an interconnected electric transmission network into a national level, bright-line definition. This approach will improve the clarity and consistency of the BES definition for application by Industry and NERC as well as avoiding creation of a potentially cumbersome exception process.
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. Furthermore, the SDT has utilized many resources to provide this clarity including the Compliance Registry Criteria.	
Springfield Utility Board	See suggested language in the comment to Question 11. (This e-survey process is confusing as one does not know what will be asked to know the right context to provide a response. Can you please post all questions in advance of an entity walking through the survey. Also - seeing the responses at the conclusion of the survey is great, but it would be convenient to be able to edit responses at the conclusion as well)
Response: See response to Q11. The SDT has no control over the logistics of the system for providing comments. However, a Word version was posted on the project web page for review.	
APPA	The Concept Paper states at page 1 that in Order 743, FERC directed NERC to do the following: A. Utilize the NERC Standard Development Process to revise the definition of Bulk Electric System (BES) contained in the NERC Glossary of Terms. B. Develop a single Implementation Plan to address the application of the revised definition of the BES and the implementation of the exemption process. C. Utilize the NERC Rules of Procedure to develop and implement an 'exemption process' used to identify Elements and Facilities which will be included in or excluded from the BES. The Concept Paper continues to state that: This project will address items 'A' and 'B' and will coordinate efforts between the Standard Drafting Team (SDT) and the group working to develop the exemption process for inclusion in the NERC Rules of Procedure to ensure that the revised BES definition and exemption process result in an accurate, repeatable, and

Organization	Question 12 Comment
	transparent method for the identification of BES and non-BES Elements and Facilities. APPA agrees that the standards process must be used to develop the revised BES definition and that NERC has been directed to use its Rules of Procedure process to develop an ROP-based procedure to implement an exemption/exclusion/inclusion process. However, the FERC directives do not speak to how and by whom the technical methodology, study criteria and data requirements for requesting and receiving approval for an exemption should be developed. To the maximum extent possible, subject to time constraints imposed by FERC, this inherently technical methodology needs to be developed through the NERC standards development process, in conjunction with development of the revised definition of BES. Separate development will significantly hamper development of industry consensus in support of the revised BES definition and the yet to be developed ROP modifications for the exemption process. The most critical question is how do we arrive at a commonly agreed upon, widely accessible, transparent, and replicable continent-wide methodology to determine whether each specific facility is or is not “necessary to operate an interconnected electric transmission network” to quote from paragraph 16 of Order 743. While each region may have a separate model reflecting its topology and system performance characteristics, a continent-wide approach is required to address FERC concerns about inconsistency across regions that are not the result of physical differences. The statutory definition of the term bulk-power system defines the outer extent of facilities that can be included (at least within the United States) within the NERC definition of BES. FPA section 215(a)(1) states that the bulk-power system includes “(A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability.” Further, the term BPS “does not include facilities used in the local distribution of electric energy.” [emphasis added].Similarly, “reliable operation” is defined at 215(a)(4) to mean “operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure of system elements.” These definitions appear to point to two basic questions for the classification of each facility or element as BES or non-BES: 1. Is the facility or element necessary for reliable operation because it contributes significant capability to the interconnected transmission network? 2. Will the misoperation or unanticipated failure of the facility or element adversely affect the reliable operation of the interconnected transmission network? APPA suggests that the BES SDT or separate study teams should be directed to establish the outline for this study methodology. APPA further suggests that BES sub-teams be established to address the Proposed BES Criteria in the Concept Paper. Separate sub-teams should be established to address detailed system configuration and study methodology issues affecting:

Organization	Question 12 Comment
	1. Radials serving load (with and without distribution voltage generation not subject to registration) 2. Other transmission elements that entities seek to include in or exclude from the BES. 3. Generating plant equipment that entities seek to include in or exclude from the BES. 4. Technical issues raised by the FERC Seven Factor Test for Local Distribution Facilities. Separate sub-teams are appropriate because the study issues are likely to be quite distinct. For example, radials serving only load do not provide alternative pathways for reliable BES operations, as might some sub-100 kV facilities. Mixing the two teams together might slow progress on identification of various commonly used radial to load center configurations that with proper protection schemes do not have the potential to adversely affect the BES. A focused effort on permissible exclusions of radials serving load is essential to prevent distribution providers from adopting less reliable system configurations to serve their loads because they are concerned that the preferred configuration will make them subject to registration as TOs and/or TOPs. Note that the proposed sub-teams do not necessarily have to be populated by members of the SDT. The new standards process allows SDTs to gather informal input from a variety of sources. However, development and posting for industry comment of the minimum acceptable characteristics of the study methodology to be used in the Exceptions Process should be the responsibility of the BES SDT. The Comment Form on the Exclusion Process poses reasonable questions and it is my hope that registered entities and regional entities identify numerous candidate facilities and elements for inclusion or exclusion from the BES, accompanied by one-line diagrams that lay out each of the permutations for such facilities that are candidates for exclusion/inclusion. These facilities range from simple radial transmission lines and distribution step-down transformers to 100 kV class distribution networks that operate radially from the BES. I also hope that entities submit extensive technical documentation to explain why such facilities should be excluded from or included in the BES. Good luck!
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. NERC will follow the due process established for changes to the Glossary of Terms. This new definition addresses radial Loads, generation, and local distribution networks.	
Xcel Energy	Xcel Energy agrees that the FERC Order 743 directs NERC to modify the Rules of Procedure to include the process for how an entity or region may initiate an exclusion or inclusion. However, we do not agree that FERC also directed that the actual criteria and technical specifics for inclusion or exclusion be developed as part of the Rules of Procedure. Furthermore, since

Organization	Question 12 Comment
	the inclusion/exclusion criteria is a key component to the definition of BES, we feel the criteria should be treated as part of the definition development and developed in the same manner as the definition itself. (Preferably by the same drafting team.)
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. NERC will follow the due process established for changes to the Glossary of Terms.	
City of Redding	Please consider the WECC Bulk Electric Defination Task Force work to date. See Attachment 1 at the end of this document. See Attachment 2 at the end of this document.
Response: The SDT appreciates these observations and believes that our new definition with the exclusion and inclusion designations will provide a bright-line definition, clarity, and consistency across the regions that will address many, if not all, of the issues in the provided examples. This definition will eliminate regional discretion and any questions on this bright-line definition will be handled through a revision to the Rules of Procedure by a separate team in an effort parallel to the development of this BES definition. Furthermore, the SDT has utilized many resources to provide this clarity including the Compliance Registry Criteria and the work in the WECC BESDTF recommendations.	

13. Please provide any other information that you feel would be helpful to the drafting team working on the definition of BES.

Summary Consideration: The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements. The exception criteria use the same bright-line criteria to provide further guidance as to whether an Element is considered BES or non-BES. The SDT believes that this is the best method to address the Commission's concerns of establishing a bright-line definition of the BES that is clear, unambiguous, and provides for consistent application across the continent.

The SDT acknowledges the comments and concerns related to the Exception Process and recognizes that the forum for providing these comments to the NERC Rules of Procedure Team was not established prior to this posting. The revision process for the NERC ROP to develop the Exception Process will be coordinated by NERC staff and governed by current practice for administering such revisions. All comments pertaining to the Exception Process, the NERC ROP Team, and the ROP revision process will be forwarded to the appropriate parties for consideration.

The SDT acknowledges the industry's concerns surrounding the separation of work to different teams in response to the directives in FERC Order No. 743. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743 the decision was made to establish two teams working in close coordination to address the issues related to the project. The SDT is committed to that close coordination between the development of the core definition of the BES and the exception criteria by the SDT and the development of the Exception Process by the NERC ROP Team. The goal is to have parallel postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition exception criteria with its associated lists of "inclusions" and "exclusions" and the Exception Process.

Organization	Yes or No	Question 13 Comment
Northeast Power Coordinating Council		a.) Proposed definitions to be added to the NERC Glossary of Terms: BES Exemption Process: The review processes for (a) excluding or exempting facilities and Elements from the BES that are determined not to be necessary to support bulk power system reliability (e.g., radial elements), and (b) including Elements operated at voltages below 100 kV that are determined to be necessary to support bulk power system reliability. By identifying all such BES and non-BES facilities and elements, the BES Exemption Process will establish the Points-of-Demarcation between Facilities and BES Elements and non-BES facilities and Elements. Point-of-Demarcation: A physical point and/or electrical connection between facilities and BES Elements and non-BES facilities and elements, e.g., the upstream terminals of a disconnect switch (or a buss connection) representing the boundary between a BES supply bus and a non-BES radial feeder. The BES exemption process has not yet been written. So, it is somewhat difficult to know a priori whether any element, elements or a group of elements or facilities should or should not be classified as part of the BES definition. b.) This document uses both "exemption process" and "exception process". Recommend that the phraseology be standardized on "exception process" as the exception (not the exemption) can be to include or exclude elements and

Organization	Yes or No	Question 13 Comment
		facilities. c.) It is envisioned that the BES Exception Process will contain 3 sub-processes; one for Exclusion, one for Exemption, and one for Inclusion. Each sub-process will establish provisions and guidelines for the three different tasks. In order to ensure consistency across the continent, it is our view that NERC should be the facilitator of these processes. NERC may choose to have some of these tasks performed at the regional levels through the existing delegation agreements. d.) The BES Exception Process must be an active and ongoing aspect of the ERO program. With the addition of new or deletion of existing Transmission and Generation Elements, Facilities, or systems. It needs to be recognized that Exclusions, Inclusions, and Exemptions might need alteration over time. By establishing appropriate guidelines and processes, the ERO will be able to monitor and maintain information on what is the Bulk Electric System, or BES. e.) The exception (exemption) process should clearly address the process and requirements for FERC non-jurisdictional entities (such as the Canadian entities) with the exception of the interconnections between them and those entities under FERC jurisdiction, and/or those entities having a direct impact on those interconnections. f.) Classification of all radial facilities operated at voltages of 100 kV and above as part of the BES by default would be unnecessary and administratively inefficient, because the operation of all radial facilities do not have a significant operational impact on the BES. Those radial facilities not having a significant impact should be excluded from the BES. If they aren't, it could lead to delays in the review and approval of other exemption requests. As such, the proposed BES definition should be revised to clearly define what radial Transmission Elements will not be included as part of the BES. This would be consistent with FERC's intention expressed in Paragraph 55 of Order 743 to not alter the part of the approved definition that deals with "radial transmission facilities serving only load". g.) Additionally, to ensure a common understanding of the meaning of "radial" and to promote consistency in its application, "radial" should be defined and added to the NERC Glossary.
Response: a.) With the proposed revisions to the definition of BES, at this time, the SDT does not contemplate adding any additional definitions beyond BES. In regards to the term "BES Exception Process'; it has been determined that the process will reside in the NERC Rules of Procedure (ROP) and therefore it seems logical that the purpose of the process would be defined within the boundaries of the NERC ROP. b.) The inconsistency of the use of 'exemption' vs. 'exception' in several documents has been identified by the SDT and the team has determined that 'exception' is the proper term to be used in reference to the Bulk Electric System definition and supporting processes. c.) The 'Exception Process' will be developed by the NERC Rules of Procedure Drafting Team while coordinating with the DBES SDT. The 'Exception Process' and the responsibilities associated with the implementation and oversight will be defined by the NERC Rules of Procedure Team. Based on the		

Organization	Yes or No	Question 13 Comment
		language contained in FERC Order No. 743, there are Commission expectations associated with the process oversight by the ERO and allowances for the delegation of responsibilities to Regional Entities as appropriate, while ensuring the process is clear and capable of being applied consistently, objectively, and uniformly across all regions. d.) The SDT agrees that the Bulk Electric System is dynamic and that the implementation and continued application of the BES Definition and supporting processes will require active oversight and management to ensure that changing conditions (i.e., operational & new construction) surrounding the Bulk Electric System will be addressed and result in proper evaluation and identification of BES & non-BES Elements. The current scope of the Standard Authorization Request (SAR) for Project 2010-17 Definition of Bulk Electric System does not include the development of the 'Exception Process'. The 'Exception Process', including the implementation and continued application of the process will be developed by the NERC ROP Team. e.) The SDT has established non-jurisdictional representation to address the concerns of the applicable entities (i.e., Canadian entities) in regards to the application of a continent-wide 'bright-line' definition of the Bulk Electric System and the exception criteria listed in the definition. NERC Staff has determined the needs of the NERC Rules of Procedure Team in regards to the diversity of the membership and the technical expertise required to appropriately modify the ROP in response to the directives identified in FERC Order No. 743. f.) The SDT has further developed the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements. The 'exception criteria' utilizes the same 'bright-line' approach to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line for identifying Generation Facilities, Radials, etc.). The exception criteria has been listed in the revised definition of BES. g.) With the proposed revisions to the definition of BES, at this time, the SDT does not contemplate adding any additional definitions beyond BES.
MRO's NERC Standards Review Subcommittee		A. What time frame is the SDT considering for the implementation of this definition and process once approved, allowing enough time for the entities to provide justification, and then make the necessary changes to their internal programs? B. Recommend the BES SDT be consistent with the generation registration criteria and the Protection System definition and other documents. For example, what is a "common bus" as stated in the generation registration criteria. C. Please review and update the concept paper. The concept paper does not specifically call out Transmission Lines above 100 kV as in the BES definition (the proposed definition does, however) and there is a circular exemption criteria in the concept paper. In criterion #2, it refers to the exemption process "consistent with the criteria". The criteria exempt generating plant controls and Transmission Elements or Systems that are radial to a load or generator not included in the BES List. However, the BES list is defined prior to the criteria in the concept paper. Exemption criterion #1 points to BES list elements #6 and #7, which in turn, refer to the exemption process. But, the exemption criteria never define how to exempt the elements referred to in #6 and #7. D. How often would a Registered Entity revisit this Exception Process? NSRS can envision a scenario where they are doing that every year or two because of the changes in load, generation, and transmission. The process should also allow for

Organization	Yes or No	Question 13 Comment
		multi-year distinctions for exceptions. In other words, if a Registered Entity gets a facility excluded, then that exclusion should be allowed for 3 or more years. Annual certifications and approval are too restrictive. E. NSRS believes the exception criteria needs to be developed by the SDT. NERC Staff should focus on the process (identification, notification, appeal and rights) but the SDT is in the better position to develop the technical piece of the exception criterion.

Response:

A. The SDT has established basic goals and assumptions that will be used to guide the development of the BES definition and supporting documents. The assumptions include: 'The revised definition will not significantly expand or contract what are currently considered BES Elements, nor will the revised definition drive entity registration or de-registration". Based on these goals and assumptions the overall impact of the revised definition is expected to be minimized for the majority of the Regions and Registered Entities. However, once the definition and supporting documents are nearing completion, the impact of the revised definition will be assessed and the Implementation Plan and Transition Plans will be developed to provide an appropriate time-period for entities to establish compliance with the applicable Reliability Standards.

B. The SDT has established basic goals and assumptions that will be used to guide the development of the BES definition and supporting documents. The assumptions include: 'The revised definition will not significantly expand or contract what is currently considered to be BES Elements, nor will the revised definition drive entity registration or de-registration". Based on these goals and assumptions and in the absence of technical justification, the current generator registration criteria appears to be the logical starting point for assessing BES Elements. The goal of the SDT is to establish a component-based 'bright-line' definition which enables the proper assessment of BES and non-BES Elements. The 'bright-line' associated with the identification of Protection Systems which are applicable to the PRC series of Reliability Standards is not necessarily at the same point. The SDT has discussed this issue and will be seeking guidance from FERC staff in regards to the directives in FERC Order No. 743 and how they potentially apply to Protection Systems. Protection Systems are not currently within the scope of the SAR for this project and any significant expansion could potentially jeopardize the ability of the SDT to complete this project and file in accordance with the Commission directed time requirements in FERC Order No. 743.

C. The SDT is not considering updating the concept paper as future work will be in crafting the actual definition and designations.

D. The SDT agrees that the Bulk Electric System is dynamic and that the implementation and continued application of the BES Definition and supporting processes will require active oversight and management to ensure that changing conditions (i.e., operational & new construction) surrounding the Bulk Electric System will be addressed and result in proper periodic evaluation and identification of BES & non-BES Elements. The current scope of the Standard Authorization Request (SAR) for Project 2010-17 Definition of Bulk Electric System does not include the development of the 'Exception Process'. The specific review/re-assessment 'time periods' associated with the identified exceptions (inclusions & exclusions) will be drafted by the NERC ROP Team and vetted through the ROP Revision Process.

E. The current scope of Project 2010-17 includes the development of the exception criteria. Additionally, the SDT will have representation on the NERC ROP Team to ensure that consistency is maintained throughout the development of the revised definition and the Exception Process.

Organization	Yes or No	Question 13 Comment
IRC Standards Review Committee		a. On the SAR, it indicates an SC approval date of December 8. It is misleading since the SC did not approve the SAR; it only approved posting of the SAR for industry comment. b. We have a concern with the concept paper on the exemption/inclusion criteria/process. Please see other comments on that paper submitted separately. c. We suggest use of consistent term between “exception” and “exemption”. d. We suggest the exception/inclusion criteria to be included in the definition and developed/approved by the balloting body. Determining these criteria via any other processes will not provide the industry the opportunity to fully vet the criteria. e. The SAR indicates that “...the definition drafting team will work closely with the team developing the BES definition exemption process to develop a single coordinated implementation plan. It is also envisioned, that the team working to develop the BES definition exemption process will solicit input from drafting teams, stakeholders....” We find this confusing and have a concern that having two teams working on this definition/criteria package leads to misalignment and confusion. Further, while the definition drafting team is formed by a nomination process and appointed by the NERC Standards Committee, there is no transparency and/or public announcement to solicit nominations for the team working to develop the exemption process. We urge the NERC Standards Committee to direct the definition drafting team to also be responsible for developing the exemption process, and include the exemption criteria as part of the definition hence subjecting them to industry comment and balloting.

Response:

a. The default language in the form is misleading and implies that the NERC Standards Committee’s approval is required. Per the NERC Standard Process Manual the Standards Committee authorizes posting of the SAR for industry comment. The DBES SDT will provide a recommendation to NERC Standards Staff to revise the SAR form to read, "Date SC Authorized Posting the SAR”.

b. Please see comment responses to other questions.

c. The inconsistency of the use of ‘exemption’ vs. ‘exception’ in several documents has been identified by the SDT and the SDT has determined that ‘exception’ is the proper term to be used in reference to the Bulk Electric System definition and supporting processes.

d. The current scope of Project 2010-17 includes the development of the exception criteria and the revised definition of BES includes a proposed list of criteria for “Inclusions” and a proposed list for “Exclusions”. Additionally, the SDT will have representation on the NERC ROP Team to ensure that consistency is maintained throughout the development of the revised definition and the Exception Process.

e. The passage from the SAR that is referenced in the comment is addressing the need for a single Implementation Plan that takes into consideration all

Organization	Yes or No	Question 13 Comment
aspects of this project. The Implementation Plan will need to address the impact of the revised BES definition and exception criteria, the Exception Process (ROP) and the Regional Transition Plans. The current scope of Project 2010-17 includes the development of the exception criteria. Additionally, the SDT will have representation on the NERC ROP Team to ensure that consistency is maintained throughout the development of the revised definition and the Exception Process. The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and include representation from the DBES SDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP Team will be determined and administered by NERC staff.		
Bonneville Power Administration		1. Define the definition of generation resources and plants, specifically wind. 2. Ensure that the exemption process incorporates all lines in service, outage conditions, etc. 3. Ensure that BA's have the ability to recommend inclusion in the BES, if the BA determines the facility has an impact on the BES.
Response: 1. The term is no longer used in the definition. 2. The SDT has developed the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements. The 'exception criteria' utilizes the same type of 'bright-line' criteria approach to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The idea of injecting the 'current operational conditions' (lines in service, outage conditions, etc.) of Elements poses difficulties with the universal application of the definition to achieve consistent results across the continent. Additionally, the idea of 'current operational conditions' (lines in service, outage conditions, etc.) suggests that these conditions are subject to change and therefore could result in different assessments when identifying BES and non-BES Elements. 3. The responsibilities associated with the Exception Process will be determined and established by the NERC ROP Team as part of the Exception Process.		
FirstEnergy Corp		a.) FirstEnergy supports a new BES definition that will provide a clear bright-line of electric facilities deemed inclusive to the BES. The exclusion process should be a simple, continent wide, rarely used with high-thresholds for removing any 100kV and above facility from the BES. The exclusion process and BES definition change should also include a practical means for transition for any affected companies. b.) The BES definition should explicitly contain language to exclude radial to load transmission operated at 100kV and above voltage levels. Presently, it seems that radial transmission to load "may" be excluded, subject to the exemption process. The excluded radial facilities described by the BES definition should be simply defined and avoid overly complicated scenarios for qualify a facility as radial transmission.

Organization	Yes or No	Question 13 Comment
		c.) BES definition clarity can be accomplished by incorporating aspects of the concept paper's proposed "BES Criteria" as being part and parcel of the overall BES definition. Doing so will establish the desired BES bright-line by further describing facilities as "in" or "out" by definition and avoid an overly complicated exclusion process. d.) The exclusion process should be rarely used, having a narrow expectation for removing facilities from the BES and thus avoid an overly burdensome administrative process. From an exclusion view, the BES definition should directly exclude radial 100kV and higher transmission, facilities operated below 100kV unless deemed critical to the BES by the Regional Entity and any 100kV and higher facility qualified by the BES exemption process. e.) Further, we support EEI's views that the BES Definition and the technical aspects of the exemption criteria (outside of the definition) should be treated as a single standards development project and performed by this drafting team. f.) We also support a parallel effort by NERC staff, subject to industry review/comment, of revising the Rules of Procedure to account for the process oriented information that would point to the technical exemption criteria/guidance developed by the standard drafting team. g.) Finally, the concept paper awkwardly describes an "exclusion process" that would identify any sub 100kV facilities that would be "included" in the BES. The criterion developed for potentially including sub 100kV facilities should be separately developed or at least not referenced within an "exclusion process". Additionally care should be taken to not cast the net too wide in this regard. While we propose a high threshold for excluding 100kV facilities from the BES, we similarly propose a high threshold for inclusion of sub 100kV facilities. The primary focus of this drafting team should be the drafting of the new BES definition and the technical BES exemption criteria. The development of continent-wide criteria for including other sub 100kV facilities in the BES should be treated as a secondary priority for meeting the milestone expectations of the FERC compliance filing.

Response:

a.) The SDT agrees with the comments. The Implementation Plan will need to address the impact of the revised BES definition and exception criteria, the Exception Process (ROP) and the Regional Transition Plans on affected entities and provide sufficient time to ensure a smooth transition into the realm of mandatory and enforceable Reliability Standards.

b.) The SDT has further developed the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements with a list of exceptions. The 'exception criteria' utilizes the same 'bright-line' criteria approach to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.).

c.) The SDT agrees with the comments and has established the tight linkage between the core definition of the BES with the component-based 'bright-line' exception criteria.

Organization	Yes or No	Question 13 Comment
d.) The Exception Process will be employed when the bright-line core definition and its associated exception criteria cannot be applied to a specific Element. It is anticipated by the SDT that the 'bright-line' will be the definitive approach to identifying BES and non-BES Elements for the vast majority of the system configurations across the continent and utilization of the Exception Process will be limited to the remaining Elements. e.) The current scope of Project 2010-17 includes the development of the exception criteria and these have been included in the revised definition of BES. Additionally, the SDT will have representation on the NERC ROP Team to ensure that consistency is maintained throughout the development of the revised definition and the Exception Process. f.) The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and will include representation from the DBESSDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP Team will be determined and administered by NERC staff. g.) It is the vision of the SDT that the process to include Elements within the BES and the ability to exclude Elements from the BES should parallel each other and require the same level of technical justification to achieve consistent results.		
Electric Market Policy		Dominion supports, in large part, EEI's response to the draft concept paper. Dominion provides the following comments on the proposed exemption process. NERC should use the FERC-approved standards development process to develop the Bulk Electric System (BES) definition and the exemption process in a single, integrated and stakeholder approved process. To this end, Dominion conceptually supports an exemption process whereby NERC or the RRO could apply to have an element included or excluded from the BES definition. Such process recognizes that it may be necessary to include elements that do not meet the bright line criteria but are necessary for operating an interconnected transmission network. Such process should be developed through the existing NERC standards development process and include a robust appeals process for the owner/operator of any element so included or excluded. Dominion supports bright line exclusions of all elements rated at less than 100 kV, any transformer that has a primary or secondary winding of less than 100 kV, and all radial lines regardless of their kV rating. Radial lines to/from solely generation facilities and radial lines to/from load are comparable in terms of their impact on an interconnected transmission network. There are situations where these radials make a meaningful and required contribution to the operation of an interconnected transmission network and there are other locations/situations where these radials do not. Therefore, radial lines should only be specifically included in the definition of BES after the RRO has demonstrated that inclusion of the radial is necessary to operate an interconnected transmission network and the owner/operator of the radial line has had the opportunity to exercise its aforementioned appeal rights. Adopting this paradigm would prevent a gap in the application of reliability standards. Specifically, all radial lines would either be included in the definition of BES or would be captured via the NERC registry under distribution or generation.

Organization	Yes or No	Question 13 Comment
		Dominion supports the criteria for registering owners, operators, and users of the bulk power system, as indicated in the current Statement of Compliance Registry Criteria . Adoption of the foregoing process would insure confidence in entities that the compliance registration process is equitable and fair.
Response: The NERC Standard Processes Manual is the governing document for the development of the revised BES definition and exception criteria. The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements. The 'exception criteria' use the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e. bright-line criteria for identifying Generation Facilities, Radials, etc.). The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and will include representation from the DBESSDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP Team will be determined and administered by NERC staff. The development of the core definition of the BES and the exception criteria by the SDT will be closely coordinated with the development of the Exception Process by the NERC ROP Team. The goal (identified key to the project's success) is to have parallel postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition, the exception criteria, and the Exception Process. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743, the decision was made to establish two teams working in close coordination to address the issues related to the project. See responses to EEI comments.		
SERC OC Standards Review Group		We agree that Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher that are necessary to support bulk power system reliability should be included. Elements and Facilities operated at voltages of 100kV or higher, including radial elements, may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process."The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."
Competitive Suppliers		EPSA recognizes the value in revising the BES definition so that a bright-line proxy can be consistently applied by the NERC Regional Entities. It is important that this definition be completed so that the drafting team work sequentially by determining the new BES definition and then move on to developing a exemption process that can work efficiently with that new definition
Response: The DBESSDT acknowledges your comments and thanks you for the support of the presented concepts.		
Hydro-Quebec		For Canadian entities, inclusion or exclusion of equipment and facilities in the BES must be also approved by Canadian regulators. Common interconnection between two jurisdictions must be included in BES when at

Organization	Yes or No	Question 13 Comment
		least one Facilities is necessary for the reliability of BES. The transmission lines dedicated to serve the native load in Quebec Interconnection should be excluded, considering that the Quebec Interconnection is one of the four recognized interconnection. Finally, we believe that it is very difficult to propose first a definition for the BES and only after an Exemption process. Both aspects influence each other and both should be conducted together.
Response: The SDT has established non-jurisdictional representation to address the concerns of the applicable entities (e.g., Canadian entities) in regards to the application of a continent-wide 'bright-line' definition of the Bulk Electric System and exception criteria. NERC Staff has determined the needs of the NERC Rules of Procedure Team in regards to the diversity of the membership and the technical expertise required to appropriately modify the ROP in response to the directives identified in FERC Order No. 743. Transmission Lines dedicated to serving native Load are an identified concern in several Regions and Interconnections. The issues surrounding this concern and the development of potential bright-line criteria are currently being considered by the SDT. The development of the core definition of the BES and the exception criteria by the SDT will be closely coordinated with the development of the Exception Process by the NERC ROP Team.		
PPL Energy Plus		Please consider that it is the magnitude of MVA flow on a facility and the subsequent impact on the remaining facilities that defines when a facility is in the BES rather than just the direction of the real power flowing on the facility.
LG&E and KU Energy LLC		
Response: The SDT has developed the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements. The 'exception criteria' (now proposed as part of the definition of BES) utilizes the same 'bright-line' criteria approach to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The idea of injecting the 'current operational conditions' (i.e., MVA flow) of Elements poses difficulties with the universal application of the definition to achieve consistent results across the continent. Additionally, the idea of 'current operational conditions' (i.e., MVA flow) suggests that these conditions are subject to change and therefore could result in different assessments when identifying BES and non-BES Elements.		
ExxonMobil Research and Engineering		Industrial facilities must retain the ability to control their electric facilities in order to ensure that the system is designed to provide for the safest and most reliable source of electric power for the control of their processes. The definition of the bulk electric system and the exemption process should address this fact and exclude or provide a process to exclude industrial facilities from all or a select number of NERC requirements when there is a conflict between the requirements designed to ensure the reliability of BES and the safe operation of chemical processes.
Response: The SDT has established basic goals and assumptions that will be used to guide the development of the BES definition and supporting documents.		

Organization	Yes or No	Question 13 Comment
The assumptions include: 'The revised definition will not significantly expand or contract what are currently considered BES Elements, nor will the revised definition drive entity registration or de-registration". Based on these goals and assumptions the overall impact of the revised definition is expected to be minimized for the majority of the Regions and Registered Entities. The SDT is currently working toward an equitable solution concerning industrial customers based on language currently contained in the Registry Criteria which establishes guidance for addressing 'behind the meter generation'.		
NERC Staff		See Attached.
Response: The SDT will consider your comments in the further development of the core definition and the exception criteria.		
Edison Electric Institute		Order 743 / NERC BES Project Edison Electric Institute Responses to Draft Concept Paper General Issues: On behalf of its member companies, Edison Electric Institute (EEI) appreciates the opportunity to offer the following brief comments on NERC Project 2010-17 for developing response to FERC Order No. 743, definition of Bulk Electric System and an exemptions process for certain facilities. EEI is the association of the nation's shareholder-owned electric companies, international affiliates, and industry associates worldwide. EEI's U.S. members serve approximately 95 percent of the ultimate consumers served by the shareholder-owned segment of the electric utility industry and approximately 70 percent of all electric utility ultimate consumers in the nation. Virtually all EEI members are required to comply with the mandatory electric reliability standards established by the ERO and approved by the Commission, pursuant to section 215 of the Federal Power Act. As a process matter, EEI develops comments such as these through a disciplined and well-practiced process that includes broad distribution of draft documents to member companies, conference calls, and email exchanges, all conducted to ensure that EEI speaks with broad member company support and with as much specificity as possible. For additional information about the roster of membership, NERC staff should contact EEI directly. The concept paper envisions two parts of the project - (1) development of the technical criteria for the BES definition through the NERC Standards Development Process and (2) development of the Rules of Procedure for the exemption process. a.) NERC should use the FERC-approved standards development process for developing the technical criteria for both the BES definition and exemptions. EEI views this as a single exercise, that is, the BES definition and technical aspects relating to exemptions as a single project. b.) EEI members believe that this is a critical project and understands various concerns about timeliness and process efficiency, and therefore recommends that stakeholders make strong commitments now to a project plan that will ensure a timely compliance filing at FERC. The drafting team should also expedite development of a project plan that shows tasks, deliverables, and milestone dates for the entire one-year timeline.

Organization	Yes or No	Question 13 Comment
		c.) EEI reads Order No. 743 as suggesting that NERC should develop appropriate changes to the Rules of Procedure (ROP) to accommodate the process and due process features of the BES exemptions process, including matters such as administrative procedure, decision authority, appeals and other due process matters, and requests for changes. EEI strongly believes that the technical matters are best resolved in the FERC-approved standards development process, which for this project includes the BES definition and the various technical criteria to be used to define exemptions. NERC should manage the development of ROP changes through an open process that considers stakeholder comments and recommendations. d.) Alternatively, if NERC decides to develop various technical criteria for the granting of exemptions through the Rules of Procedure, EEI strongly encourages NERC to plainly describe the process plan, which will help communicate to companies how the process will be open, inclusive, transparent, and ensure due process. e.) Issues recommended for drafting team consideration: Order No. 743 provides that the best way to address its concerns about the definition of BES is to eliminate the regional discretion in the current definition, maintain the bright-line threshold that includes all facilities operated at or above 100 kV except defined radial facilities and establish an exemption process and criteria for excluding facilities that the ERO determines are not necessary for operating the interconnected transmission network. (P 30) Because transmission lines below 100 kV and radial lines are not included in the definition of BES, the standards drafting project should ensure that the definition expressly incorporates these exclusions. Entities should not have to seek an exemption for facilities below 100 kV or for radial lines. They should be clearly excluded in the BES definition itself. f.) Removing regional discretion does not imply that regions have no role. EEI also encourages NERC in the ROP to delegate the authority to grant exemptions in the first instance to the Regional Entities. NERC should maintain oversight authority, including review of decisions for consistent application of the criteria. g.) Applicants for exemptions should be able to appeal adverse Regional Entity decisions to NERC. The NERC Compliance Registry process should serve as a general model. h.) The BES definition must also address the statutory exclusion for facilities used in “local distribution.” Section 215 plainly excludes facilities used in local distribution from jurisdiction and EEI notes that the definition is applied under other provisions of the Federal Power Act. The exemptions process should provide that previous or future regulatory decisions regarding local distribution facilities can serve as an

Organization	Yes or No	Question 13 Comment
		exemption criterion. While Order 743 does not provide explicit guidance on this issue, EEI urges the drafting team to expand the concept paper to include how this issue will be addressed. If the concept paper is not expanded to include this issue, NERC needs to plainly say where the issue will be addressed. i.) Order 743 made references to facilities below 100 kv that might be defined as necessary for operating an interconnected transmission network, and asked that whatever processes are used to make jurisdictional decisions are rolled into the NERC process. In addition, the order referred to several "technical concerns" that might inform jurisdictional decisions on specific facilities greater than 100 kv, which are scattered references throughout the order. For example: operate in parallel with other high voltage and extra-high voltage facilities (P. 73), interconnect significant amounts of generation and (possibly) operate as a defined flowgate (P. 73), will experience similar loadings as high voltage or extra-high voltage facilities at any given time (P. 73), can cause or contribute to significant bulk power system disturbances and cascading outages (P. 73), will be relied upon during contingency operations (P. 73), are not primarily radial in character (P. 39), multiple interconnections of facilities (to other higher voltage facilities) do not constrain an otherwise limited geographical area (P. 39), overall, (implementation of) the proposed definition may not result in a reduction in reliability (P. 74), facilities that, when they fail, cause or influence significant loss of load (PP. 87, 89). Order No. 743 does not explicitly connect these criteria to the process to be developed; however, the drafting team in its plan should explain how it will address them, as required by the order (P 74). EEI encourages the drafting team to seek informal agreement with FERC staff on these various "technical concerns" prior to significantly advancing the project. j.) As a design matter, EEI encourages the drafting team to endorse a principle to seek to maximize the "brightness" of bright line criteria. While this may produce a longer or more detailed definition, EEI believes that greater demarcation at the outset will help reduce companies' uncertainty, and help avoid the need to maintain a costly and bureaucratic exemptions process. EEI has previously offered comments on many occasions to both FERC and NERC in support of a 'simple and clean' TFE process. k.) EEI urges the drafting team to resist the temptation to create a complicated 'Rube Goldberg' device for BES exemptions. Order No. 743 (PP 77-78, 84-85) criticizes the NPCC impact-based study as failing to identify many facilities that are necessary for operating an interconnected transmission network. However, the order does not reject such studies generically, and plainly states that the Commission is not dictating the substance or content of the exemptions process. (P 114) The concept paper needs to clarify whether requests for exemptions may use impact-based studies to support their requests. l.) The concept paper reflects an awkwardly-worded reference (Item #6, proposed BES criteria) to the effect that certain facilities will be deemed included in the BES "...where the exemptions process

Organization	Yes or No	Question 13 Comment
		deems..." In the paragraph at the top of p. 2, the concept paper refers to the exemption process as seeking to determine "...whether a facility should be included or excluded...." EEI requests clarification that an exemptions process will be used to determine facilities for exclusions and not inclusions, and based on a 100 kv bright-line criterion for inclusion. Alternatively, the concept paper should clarify the general intention of this particular criterion. m.) As previously stated, the proposed ROP to be developed should codify the process - and due process - aspects of the exemptions process. The exemptions process should strike the right balance in establishing the criteria for exemptions to ensure that the process does not become mired in attenuated processes such as those developed for the TFE process.

Response:

a.) The NERC Standard Processes Manual is the governing document for the development of the revised BES definition and exception criteria. The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements. The 'exception criteria' (now proposed as part of the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.).

b.) The SDT agrees with the critical nature of the project and the need to provide deliverables within the Commission directed time frame. The SDT has developed and posted a project schedule which identifies the tasks, deliverables, and milestone dates for the entire project. The schedule is publically posted and available on the project page (Project 2010-17 Definition of the Bulk Electric System) of the NERC website.

c.) The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and will include representation from the DBESSDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP Team will be determined and administered by NERC staff.

d.) The SDT has determined that one of the keys to success for this team and the NERC ROP Team is effective communication that provides the industry with an understanding of the project plan and concepts, which will emphasize the development process attributes of openness, inclusiveness, transparency, and due process.

e.) The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying Generation Facilities, Radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as

Organization	Yes or No	Question 13 Comment
		BES (inclusions) or non-BES (exclusions). f.) The 'Exception Process' and the responsibilities associated with the implementation and oversight will be defined by the NERC Rules of Procedure Team. Based on the language contained in FERC Order No. 743, there are Commission expectations associated with the process oversight by the ERO and allowances for the delegation of responsibilities to Regional Entities as appropriate, while ensuring the process is clear and capable of being applied consistently, objectively and uniformly across all regions. g.) The SDT agrees that within the NERC ROP Exception Process, entities should have the opportunity to appeal decisions made by the Regional Entities and the ERO concerning the inclusion or exclusion of Elements in relation to the BES. h.) The SDT agrees that the issues surrounding 'local distribution networks' deserve consideration when developing the BES Designations. See the revised definition as it proposes exclusions for local distribution networks that meet certain criteria. i.) The SDT will consider your comments in the further development of the core definition and the exception criteria and will seek clarity on the issues identified in future discussions with FERC staff. j.) The SDT has developed the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements. The 'exception criteria' utilizes the same 'bright-line' criteria approach to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). k.) The specific methodology associated with establishing the technical justification of inclusions to or exclusions from the BES will be determined and vetted by the NERC ROP Team utilizing the revision process for the NERC ROP and will be coordinated by NERC staff and governed by current practice for administering such revisions. l.) The SDT disagrees with the commenter in that any Exception Process should establish a process for exceptions from and inclusions to the BES. As stated in FERC Order No. 743, P83 "The Commission's proposed approach to addressing these concerns will enable affected entities to pursue exemptions for facilities they believe should not be included in the bulk electric system, and also will allow Regional Entities to add facilities below 100 kV they believe should be included". The Regional Entities currently have the authority to include Elements operated at voltages below 100 kV that are deemed necessary for the reliable operation of the BES. The Order does not eliminate this authority, but rather emphasizes the need to maintain the Regional Entity's ability of establishing inclusions to the BES through the Exception Process. m.) The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. With that in mind, the SDT agrees with the commenter in that the Exception Process should carry the same characteristics as the core definition and exception criteria: clear, unambiguous, repeatable, and establish consistency on a continent-wide basis.
Pepco Holdings Inc.		1. The definition should be expanded to contain what is excluded to minimize the need for exemptions. For example radial facilities should by definition be excluded and not have to go through a formal exemption

Organization	Yes or No	Question 13 Comment
		process. Other "generic" criteria identified should also be excluded. 2. The exemption process needs to be well designed to minimize the effort. The exemption process development should incorporate lessons learned and experience from the TFE process, so that this new process is more manageable. 3. Instead of two separate groups, one working on the definition and one on the exemption process, one group should handle both activities to assure continuity and consistency. 4. Any data required for the exemption process needs to be kept secure and not posted on an open source. 5. PHI is supportive the EEI comments offered on the BES Project.

Response:

1. The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed as part of the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying Generation Facilities, Radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as BES (inclusions) or non-BES (exclusions).

2. The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and will include representation from the DBESSDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP team will be determined and administered by NERC staff. With that in mind, the SDT agrees with the commenter in that the Exception Process should be a manageable process that is clear, unambiguous, repeatable, and establishes consistency on a continent-wide basis.

3. The development of the core definition of the BES and the exception criteria by the SDT will be closely coordinated with the development of the Exception Process by the NERC ROP Team. The goal (identified key to the project's success) is to have postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition, the exception criteria and the Exception Process. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743, the decision was made to establish two teams working in close coordination to address the issues related to the project.

4. The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The current process includes public postings of proposed changes which will allow the industry provide comments. We will forward your comment to the team working on the ROP modifications.

Organization	Yes or No	Question 13 Comment
5. See responses to EEI comments.		
PUD No.1 of Clallam County		Due to the lack of clarity around the current definition of the Bulk Electric System ("BES") the NERC Statement of Compliance Registry Criteria is often used/misused to define elements of the BES. The registration criterion uses many undefined terms as well as “bright line” thresholds that that in many cases have little to no technical basis. One example is using “gross nameplate rating” when the machine size may be significantly limited by boiler capacity on a cogeneration steam plant or water on a hydro plant. In addition there is no technical or reliability bases used to identify the low MVA/MW thresholds used in the load and generation thresholds for the DP, GO, GOp registrations. The Standards Authorization Requests (SARs) should also address how, or if the registration criteria is used in identifying BES elements. We believe the Registration Criteria should not be used to identify BES elements; it should be used as indented, to address functional registration.
Response: The SDT is continuing the development of the concept of a component-based ‘bright-line’ definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The ‘exception criteria’ (now proposed as part of the definition of BES) utilizes the same ‘bright-line’ criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying Generation Facilities, Radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as BES (inclusions) or non-BES (exclusions). Any impact of the revised core definition, the exception criteria, or Exception Process on the current Registry Criteria will be addressed in the Implementation Plan.		
Manitoba Hydro		a.) A NERC definition of ‘radial’ is required to prevent misapplication of the BES definition and exemption process. b.) There should be no regional differences in the BES definition or in the BES definition exemption process. c.) There should be equal representation from the regions to draft this standard and exemption process
Response: a.) With the proposed revisions to the definition of BES, at this time, the SDT does not contemplate adding any additional definitions beyond BES. b.) FERC Order No. 743 provides specific direction on the elimination of the regional discretion which is allowed under the current definition of the Bulk Electric System. The SDT fully intends to be responsive to the Commission directives. c.) In forming the SDT, NERC staff has utilized the criteria established in the NERC Standard Drafting Team Scope Document, which states: ‘Representation		

Organization	Yes or No	Question 13 Comment
from as many NERC Regions as possible'.		
North Carolina EMC		The BES definition for radial facilities serving only load with one source should be clarified to include radial facilities with the potential ability to be served from more than one source, but always operated with an "opening point" that makes it radial. If the entity can demonstrate that it always operates in this fashion, either by producing switching orders indicating such operation or other evidence such as documentation of open and tagged switches, etc., then it should be considered to be in full compliance with the radial BES definition exemption.
Response: The DBES SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed as part of the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The SDT has revised the definition but is retaining the single source designation.		
ReliabilityFirst		• ReliabilityFirst would like to see this as a simple easy-to-follow definition. The exclusion process needs to be clear without room for discussion or interpretation. • There must be a common framework developed to apply the entire process that begins with a single NERC-wide BES definition. • The definition should serve as a common approach for the identification of BES Elements and Facilities that are subject to compliance that is married to the Registration Criteria. • The definition and approach for the determination must be repeatable • The method must clearly identify the BES elements for use by the industry. • In order to obtain consistency, the definition, application and criteria must be used across Regional Entity boundaries. • The revised BES definition should be consistent with the Statement of Compliance Registry Criteria so as not to create a conflict between the two, and could possibly simply reference the Criteria for issues such as size of generating units (e.g., 20 MVA units and 75 MVA plants) included in the BES. • As stated in the FERC Order No. 743, the criteria for exemption should be included within the BES definition, and the exemption process should contain only the procedure for submitting and determination

Organization	Yes or No	Question 13 Comment
		of such. The exemption process should not contain a third set of criteria (in addition to the BES definition and the Statement of Compliance Registry Criteria) in which to make a determination of facilities to be monitored for compliance to standards. • With the revised BES definition containing specific requirements for inclusion in the BES, will the separate Statement of Compliance Registry Criteria be needed?
Response: The SDT agrees and has considered your comments in the further development of the core definition and the exception criteria. The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed as part of the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as BES (inclusions) or non-BES (exclusions). A revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and will include representation from the DBES SDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP Team will be determined and administered by NERC staff. With that in mind, the SDT agrees with the commenter in that the Exception Process should be a manageable process that is clear, unambiguous, repeatable, and establishes consistency on a continent-wide basis. The development of the core definition of the BES and the exception criteria by the SDT will be closely coordinated with the development of the Exception Process by the NERC ROP Team. The goal (identified key to the project's success) is to have postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition, the exception criteria, and the Exception Process. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743 the decision was made to establish two teams working in close coordination to address the issues related to the project. Any impact of the revised core definition, the exception criteria, or Exception Process on the current Registry Criteria will be addressed in the Implementation Plan.		
on behalf of Teck Metals Ltd.		Parallel transmission lines from a single source (substation) to a single load should be excluded from the BES, with the consent/request of the owner of the connected load (and/or all customers that constitute the connected load).
on behalf of Catalyst Paper Corporation		
Response: The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes		

Organization	Yes or No	Question 13 Comment
the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation facilities, radials, etc.). In the development of the exception criteria, the SDT has considered your comments.		
City of Grand Island		a.) The NERC defined Adequate Level of Reliability is the governing factor on whether or not a facility really has an impact on the BES. Currently the standards are applied far too broadly and numerous small entities are needlessly involved. This project should pull the standards/compliance environment back to entities that have a real impact. b.) Exemption process should be termed "exception" process. Exception means not conforming to general rule, whereas exemption primarily means exclusion. This process will be difficult to develop and administer and is counterproductive to "bright line" philosophy. Thus the bright lines should be at a high level resulting in fewer exceptions. The exception process must consider the impact of a fault or outage of that facility on the Adequate Level of Reliability of the BES. c.) The exception process development should be simultaneous to the BES definition project. It's all one, not two pieces. In addition if this is a direct impact on registration criteria, then that should be part of the project as well.
Response: a.) The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The SDT believes that this method of identification will provide the desired clarity requested by the industry and directed by the Commission while ensuring that consistent results will be produced universally across the continent. In the development of the core definition and the exception criteria, the SDT has considered your comments. b.) The inconsistency of the use of 'exemption' vs. 'exception' in several documents has been identified by the SDT and the team has determined that 'exception' is the proper term to be used in reference to the Bulk Electric System definition and supporting processes. The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e. bright-line criteria for identifying generation Facilities, radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as		

Organization	Yes or No	Question 13 Comment
BES (inclusions) or non-BES (exclusions). c.) The development of the core definition of the BES and the exception criteria by the DBES SDT will be closely coordinated with the development of the Exception Process by the NERC ROP Team. The goal (identified key to the project's success) is to have postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition, the exception criteria and the Exception Process. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743, the decision was made to establish two teams working in close coordination to address the issues related to the project. Any impact of the revised core definition, the exception criteria or Exception Process on the current Registry Criteria will be addressed in the Implementation Plan.		
Occidental Energy Ventures Corp		Demand Side Management. One commenter has apparently suggested that "Demand Side Management" relied on to provide Contingency Reserves be included in the BES definition. On the surface, this seems reasonable. However, this would possibly subject aggregators of DSM resources to registration as a yet unknown resource type. The DSM resources could be located on lower voltage distribution systems that should not be part of the BES. Once again, the issue of DSM registration is being pursued under a separate NERC initiative and should be resolved by that process rather than a broadening of the definition of BES which forces registration of entities not currently registered. This also could provide a disincentive for potential DSM development, which the Federal Energy Regulatory Commission (FERC) is on record as trying to foster as a peak shaving resource. When the issues surrounding DSM as a resource are resolved by due process, any recommendations could include a change to the definition of BES, if actually required. Finally, this issue is not part of the FERC directives for changing the BES definition. Self-Generation and Cogeneration. One commenter has apparently suggested that self-generation as currently defined and excluded in the Statement of Compliance Registry should not be excluded from the definition of BES based on the "immediate-term impact on reliability." This same commenter notes that, in order to be excluded under the current BES definition, the self-generation is required to purchase back-up (stand-by) power for the generation in case of an outage. Paying for this standby power (which is essentially "extra" reserve power) is one reason for allowing the self-generation to be excluded from the BES. Once again, subjecting self-generation/cogeneration to NERC regulatory requirements is not one of the directives from the FERC concerning the BES definition and could provide a disincentive for cogeneration, which has been historically supported by FERC and the federal government. Hence, suggestions such as this are out of the scope of this process.
Response: The SDT has established basic goals and assumptions that will be used to guide the development of the BES definition and supporting documents. The assumptions include: 'The revised definition will not significantly expand or contract what are currently considered BES Elements, nor will the revised		

Organization	Yes or No	Question 13 Comment
definition drive entity registration or de-registration. Based on these goals and assumptions the overall impact of the revised definition is expected to be minimized for the majority of the Regions and Registered Entities. The SDT will consider your comments in the further development of the core definition, the exception criteria and the Exception Process.		
Glacier Electric Cooperative		I highly encourage the development of a method that utilizes engineering analyses to more accurately define which elements are truly significant to the BES and which are not. Thanks for taking on the challenge to improve the BES definition.
Response: The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The SDT believes that this method of identification will provide the desired clarity requested by the industry and directed by the Commission while ensuring that consistent results will be produced universally across the continent. exception criteria		
Entergy Services		a.) The following are Entergy's comments concerning the scope and implementation of the requested work, the draft SAR, draft standard, draft criteria, draft exemption criteria, exemption process, and implementation process. We suggest the SAR ad the standard development be revised to reflect the comments below. In particular, we believe there are several parts to the scope of this project. First, the development of the revised definition of the BES including all inclusion / exemption criteria and the development of the implementation plan for that revised definition should be developed through the Standards Development Process. All future inclusion / exemption criteria would also be developed through the Standards Development Process. The process for changing the Rules of Procedure should be used for the development, approval and application of the process for obtaining an exemption of specific facilities. It would be helpful, but not required, that the development of the standard and the changes to the ROP proceed together. b.) We suggest there be one continent-wide definition of BES with no exemption criteria specific to a particular region... DEFINITION OF BES, INCLUSION CRITERIA and EXEMPTION CRITERIA We suggest the definition of BES be the following: Bulk Electric System: All Transmission and Generation Elements and Facilities conforming to the Inclusion Criteria and Exemption Criteria identified below. Elements and Facilities operated at voltages of 100kV or higher may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process included in the NERC Rules of Procedure. INCLUSION CRITERIA1. All transmission and generation elements and facilities operated at voltages of

Organization	Yes or No	Question 13 Comment
		100 kV or higher, 2... Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, with both primary and secondary windings of 100 kV or higher; 3. Individual generation resources (including GSU transformers and the associated generator interconnecting line lead(s)) greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above; 4. Generation plants (including GSU transformers and the associated generator interconnecting line lead(s)) with aggregate capacity greater than 75 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Transmission Facilities operated at voltages of 100 kV or above; 5. Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's (TOP's) restoration plan; 6. Transmission Elements or Facilities operated at voltages below 100kV where the exemption process deems the Element or Facility to be included in the BES; 7. Individual generation resources greater than 20 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where the exemption process deems the generation resources to be included in the BES; and 8. Generation plants with aggregate capacity greater than 75 MVA (gross nameplate rating) directly connected via a step-up transformer(s) to Facilities operated at voltages below 100kV where the exemption process deems the generation plants to be included in the BES. EXEMPTION CRITERIA1. Any radial Transmission Element or System, connected from one Transmission source to a Load-serving Element and/or generation resources not included in items 2, 3, 4, 6, and 7 above are excluded from the BES; 2. Elements and Facilities identified through application of the exemption process, consistent with the criteria, where the exemption process deems that the Element or Facility should be excluded from the BES (with concurrence from the ERO); and 3. Generating plant control and operation functions which include relays and systems that control and protect the unit for boiler, turbine, environmental, and/or other plant restrictions. IMPLEMENTATION PLAN FOR REVISED DEFINITION OF BES The Standard Drafting Team will develop for industry comment an Implementation Plan for the revised definition of BES.
Response:		

Organization	Yes or No	Question 13 Comment
a.) The NERC Standard Processes Manual is the governing document for the development of the revised BES definition and exception criteria. The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements. The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e. bright-line criteria for identifying generation Facilities, radials, etc.). The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and will include representation from the DBES SDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP Team will be determined and administered by NERC staff. The development of the core definition of the BES and the exception criteria by the SDT will be closely coordinated with the development of the Exception Process by the NERC ROP Team. The goal (identified key to the project's success) is to have postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition, the exception criteria and the Exception Process. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743, the decision was made to establish two teams working in close coordination to address the issues related to the project. b) FERC Order No. 743 provides specific direction on the elimination of the regional discretion which is allowed under the current definition of the Bulk Electric System. The SDT fully intends to be responsive to the Commission directives. The SDT has considered your comments in the further development of the core definition and the exception criteria. See the proposed revised definition of BES with its lists of "Inclusions" and "Exclusions."		
Snohomish County PUD		While we recognize that the Standards Drafting Team is a technical body and is not charged with interpreting legal doctrine, we nonetheless urge the Drafting Team to bear in mind the statutory limitations on the definition of the BES. If the BES definition is drafted with these limits in mind, the process will more easily meet with industry acceptance. If the BES definition adopted by the drafting team fails to meet these limits, by contrast, its efforts are likely to result in extended litigation that will be counterproductive to the goal of improving the reliability of the bulk delivery system. The definition of "bulk-power system" adopted by Congress in Section 215 of the Federal Power Act is the ultimate source of the Standards Drafting Team's authority and the Team should therefore pay particular attention to that statutory definition:The term 'bulk-power system' means-(A) Facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and(B) Electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy. This definition, and in particular the language italicized above, imposes clear restrictions on the definition to be developed by the Drafting Team.

Organization	Yes or No	Question 13 Comment
		These restrictions are: a. Only facilities "necessary for" the operation of the interconnected bulk transmission network can be included in the BES. Snohomish believes the most logical way to determine whether facilities are "necessary for" operation of the bulk system is through engineering-based studies demonstrating that particular Facilities or Elements play a material role in the operation of the bulk grid. b. Generation facilities can be included in the BES only if they are "needed to maintain" the reliability of the bulk system. Accordingly, as noted above, the thresholds used in the NERC Statement of Registry Compliance are not determinative of whether a generator is necessary to maintain bulk system reliability. That determination is an engineering-based assessment and the fact that a generator may exceed the 20 MW capacity threshold in the Registry Statement does not mean that the generator is "needed to maintain" bulk system reliability. It may well not be. c. "Reliability" was also given a specific meaning by Congress when it drafted Section 215. Specifically, the statute defines "reliable operation" to mean "operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of sudden disturbances, including . . . unanticipated failure of system elements." Accordingly, the BES definition should focus on facilities that are necessary to ensure that the bulk transmission system does not suffer instability, uncontrolled separation, or cascading failures. Facilities that do not threaten these kinds of severe consequences should not be included in the BES. d. The definition explicitly excludes "facilities used in the local distribution of electric energy." The definition adopted by the Standards Drafting Team must therefore unequivocally exclude all local distribution facilities. In light of these statutory constraints, Snohomish supports as part of the Standards Drafting Team's process the creation of a categorical exclusion from the BES for systems that meet NERC's historical definition of Local Network. As explained in more detail below, Local Networks are operated to provide service to specific, geographically-limited service areas and do not affect the reliable operation of the bulk transmission system. Accordingly, there is no good reason to include Local Networks in the BES and to do so would be contrary to the language in the statute discussed above. Historically, NERC employed a definition of "Local Networks" and NERC's "Bulk Electric System" definition distinguished between the "Bulk Transmission System" and "Sub-transmission." More recently, those distinctions have been lost, diverting attention away from critical elements of the transmission system that, if they fail, threaten cascading outages or other large-scale events, and increasing attention to facilities that, if they fail, threaten only to disrupt service in a localized areas. The Standards Drafting Team can remedy this over breadth problem by categorically excluding facilities meeting the definition of "Local Networks" from the BES definition. Until a few years ago, NERC used the following definition of "Local Network": Local Network- a non-radial portion of a bulk electric system whose customers may be interrupted for the loss of a single transmission element (100 kV or more). This loss of load is only

Organization	Yes or No	Question 13 Comment
		allowed in those rare circumstances when it is impractical (e.g., long transmission distances, extremely high costs with low benefits) to avoid interruption of service to a portion or all of the customers in the network due to the network being directly connected to or supplied by the faulted transmission system element (e.g., generator, transmission circuit, transformer). The resulting customer interruption should be of relatively low probability of occurrence and limited in magnitude (less than 100 MW). The interruption of such local network customers shall not impact the overall security of the interconnected transmission systems. The term Local Network is currently used in the NERC TPL Reliability Standard. However the definition is no longer defined in the NERC Standard Glossary of Terms. The important distinctions between Local Networks and the Bulk Electric System have been further obscured by changes in NERC's BES definition. The "Bulk Electric System" definition that appeared in the Glossary of Terms reference document approved by both the NERC EC and OC at a joint meeting of those committees on July 16, 1996, distinguished between "Transmission" and "Sub-transmission": Bulk Electric System - A term commonly applied to the portion of an electric utility system that encompasses the electrical generation resources and bulk transmission system. Where Transmission - An interconnected group of lines and associated equipment for the movement or transfer of electric energy between points of supply and points at which it is transformed for delivery to customers or is delivered to other electric systems. Bulk Transmission - A functional or voltage classification relating to the higher voltage portion of the transmission system. Sub-transmission - A functional or voltage classification relating to the lower voltage portion of the transmission system. The current version of the BES definition does not, by contrast, make such a distinction: Bulk Electric System - As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition. The definitional changes have diverted attention away from the systems that pose the greatest risks of cascading outages and toward systems that do not threaten such widespread reliability impacts. Protecting the electric system from wide-spread cascading outages and focusing on protecting equipment and isolating cascading outages has historically been the primary goal of NERC reliability efforts and, as FPA Section 215 requires, should remain so now and in the future. It is clear, however, that there are real distinctions between "Bulk Transmission," "Sub-transmission," and "Local Networks" in terms of their impacts on bulk system reliability. We propose that, in order to restore these important distinctions, WECC categorically exclude systems meeting the definition of Local Network from its BES definition. Doing so will refocus the NERC-WECC reliability mission on those systems that most effect bulk system reliability, while excluding from the BES ambit those systems whose impacts are purely local. As noted above, Snohomish has participated in and supports the work of the WECC BESDTF. The BESDTF's current proposal contains a categorical exclusion for Local Networks along the lines of the one we advocate here and the BESDTF has developed an extensive factual and technical record supporting its approach. We urge the Standards Drafting Team to follow that approach.

Organization	Yes or No	Question 13 Comment
Response: The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The SDT believes that this method of identification will provide the desired clarity requested by the industry and directed by the Commission while ensuring that consistent results will be produced universally across the continent. In the development of the core definition and the exception criteria, the SDT has considered your comments.		
United Illuminating Company		Any technical definition should provide the means to differentiate facilities used in local distribution since these facilities are excluded from the statutory definition of bulk-power system. The definition of BES should be very broad or bright.
Response: The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The SDT believes that this method of identification will provide the desired clarity requested by the industry and directed by the Commission while ensuring that consistent results will be produced universally across the continent. In the development of the core definition and the exception criteria, the SDT has considered your comments.		
Orange and Rockland Utilities, Inc.		**a.)** Proposed definitions to be added to the NERC Glossary of Terms: BES Exemption Process: The review processes for (a) excluding facilities and elements from the BES that are determined not to be necessary to support bulk power system reliability (e.g., radial elements), and (b) including Elements operated at voltages below 100 kV that are determined to be necessary to support bulk power system reliability. By identifying all such BES and non-BES facilities and elements, the BES Exemption Process will establish the Points-of-Demarcation between Facilities and BES Elements and non-BES facilities and elements. Point-of-Demarcation: A physical point and/or electrical connection between facilities and BES Elements and non-BES facilities and elements, e.g., the upstream terminals of a disconnect switch (or a buss connection) representing the boundary between a BES supply bus and a non-BES radial feeder. **b.)** The BES exemption process has not yet been finalized or approved. So, it is somewhat difficult to know a priori whether any element, elements or a group of elements or facilities should or should not be classified as part of the BES definition. **c.)** This document uses both "exemption process" and "exception process". Recommend that the phraseology be standardized on "exception process" as the exception (not the exemption) can be to include or exclude elements and facilities.

Organization	Yes or No	Question 13 Comment
		d.) It is envisioned that the BES Exemption Process will contain 3 sub-processes; one for Exclusion, one for Exemption, and one for Inclusion. Each sub-process will establish provisions and guidelines for the three different tasks. In order to ensure consistency across the continent, it is our view that NERC should be the facilitator of these processes. NERC may choose to have some of these tasks performed at the regional levels through the existing delegation agreements. **e.)** The BES Exemption Process must be an active and ongoing aspect of the ERO program. With the addition of new or deletion of existing Transmission and Generation Elements, facilities, or systems. It needs to be recognized that Exclusions, Inclusions, and Exemptions might need alteration over time. By establishing appropriate guidelines and processes, the ERO will be able to monitor and maintain information of what is the Bulk Electric System, or BES.
Response: a.) The SDT is not currently contemplating any additional definitions beyond BES. In regards to the term "BES Exemption Process'; it has been determined that the process will reside in the NERC Rules of Procedure (ROP) and therefore it seems logical that the purpose of the process would be defined within the boundaries of the NERC ROP. b.) Exception criteria Agree. The Exemption Process is being developed by a separate team and will be posted for stakeholder comment. c.) The inconsistency of the use of 'exemption' vs. 'exception' in several documents has been identified by the SDT and the team has determined that 'exception' is the proper term to be used in reference to the Bulk Electric System definition and supporting processes. d.) The 'Exception Process' will be developed by the NERC Rules of Procedure Team while coordinating with the DBESSDT. The 'Exception Process' and the responsibilities associated with the implementation and oversight will be defined by the NERC Rules of Procedure Team. Based on the language contained in FERC Order No. 743, there are Commission expectations associated with the process oversight by the ERO and allowances for the delegation of responsibilities to Regional Entities as appropriate, while ensuring the process is clear and capable of being applied consistently, objectively, and uniformly across all regions. Note, however, that the drafting team has revised the definition of BES so that it now includes the exceptions (both inclusions and exclusions) stakeholders have already proposed be applied to the 100 kV bright line threshold. e.) The SDT agrees that the Bulk Electric System is dynamic and that the implementation and continued application of the BES Definition and supporting processes will require active oversight and management to ensure that changing conditions (i.e., operational & new construction) surrounding the Bulk Electric System will be addressed and result in proper evaluation and identification of BES & non-BES Elements.		
American Transmission company		1. ATC suggests that once the term "exemption" is replaced with the term "exception", then consider modifying the BES definition wording to, "All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher, necessary to support bulk power system reliability. Elements and Facilities

Organization	Yes or No	Question 13 Comment
		operated at voltages of 100kV or higher, including Radial Transmission systems, may be excluded through the BES definition exception process and Elements and Facilities operated at voltages less than 100kV may be included through the BES definition exception process". 2. The "Concept Paper" does not specifically call out Transmission Lines above 100 kV as in the BES definition (the proposed definition does, however) and there is a circular exemption criteria in the concept paper. In criterion #2, it refers to the exemption process "consistent with the criteria". The criteria exempt generating plant controls and Transmission Elements or Systems that are radial to a load or generator not included in the BES List. However, the BES list is defined prior to the criteria in the concept paper. Exception criterion #1 points to BES list elements #6 and #7, which in turn, refer to the exception process. But, the exemption criteria never define how to exempt the elements referred to in #6 and #7. 3. The revised definition of the BES and exception process does not address a timeframe for the implementation of this standard once approved, allowing enough time for the entities to provide justification, and then make the necessary changes to their internal programs? 4. How often would a Registered Entity revisit this Exception Process? ATC can envision a scenario where they are doing that every year or two because the loads, generation and transmission changes. The process should also allow for multi-year distinctions for exceptions. In other words, if a Registered Entity gets a facility excluded, then that exclusion should be allowed for 3 or more years. Annual certifications and approval are two restrictive. 5. ATC believes the exception criteria needs to be developed by the SDT. NERC Staff should focus on the process (identification, notification, appeal and rights) but the SDT is in the better position to develop the technical piece of the exception criterion. 6. ATC also supports the comments as submitted by EEI REAC on the Draft Concept Paper on the Definition of BES Project 2010-17.

Response:

1. The SDT has considered your comments in the further development of the core definition and the exception criteria. The drafting team has revised the definition of BES so that it now includes the exceptions stakeholders have already proposed be applied to the 100 kV bright line threshold. The word, "exemption" is not used in the proposed definition of BES.

2. The SDT has considered your comments in the further development of the core definition and the exception criteria. Please see the revised definition of BES.

3. The Implementation Plan will need to address the impact of the revised BES definition and exception criteria, the Exception Process (ROP), and the

Organization	Yes or No	Question 13 Comment
regional Transition Plans on affected entities and provide sufficient time to ensure a smooth transition into the realm of mandatory and enforceable Reliability Standards. **4.** The 'Exception Process' will be developed by the NERC Rules of Procedure Team while coordinating with the DBESSDT. The DBESSDT recognizes that the Bulk Electric System is dynamic and that the implementation and continued application of the BES Definition and supporting processes will require active oversight and management to ensure that changing conditions (i.e., operational & new construction) surrounding the Bulk Electric System will be addressed and result in proper evaluation and identification of BES & non-BES Elements. The time frames associated with the 'review' processes will be determined by the NERC ROP Team. The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. **5.** The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as BES (inclusions) or non-BES (exclusions). The 'Exception Process' will be developed by the NERC Rules of Procedure Team while coordinating with the DBES SDT. **6.** See responses to EEI comments.		
The Dow Chemical Company		Dow has reviewed and generally supports the comments prepared by The Electricity Consumers Resource Council (ELCON).
Response: See response to ELCON comments.		
National Rural Electric Cooperative Association (NRECA)		**a.)** BES definition exemption criteria must be developed by the same SDT that is modifying the BES definition and through the standards development procedure. The BES exemption criteria must not be developed by a separate group outside of the standard development procedure, e.g., through a NERC Rules of Procedure (ROP) modification process as is currently proposed in the SAR. The BES exemption process, not criteria, can be included in the ROP by utilizing the process for making such modifications to the ROP. The BES definition exemption process should refer to the procedure for applying for such an exemption, not the criteria that such an exemption application would be based upon. It is critical for the final SAR to provide clarity as it relates to what is considered exemption criteria and exemption process.

Organization	Yes or No	Question 13 Comment
		b.) We appreciate the work of the Regional BES Definition Coordination Group, however, this group must conclude its work now that a SAR has been proposed and is posted for comment. This group can provide comment on this SAR and future products from the SDT in same way as any other stakeholder can provide comment. Having a parallel effort led by Regional Entity staff, outside the formal Project 2010-17 SDT process, will create confusion and potentially cause inefficient use of industry resources. All efforts should be focused on the formal standard development activities including related future comment and ballot periods. Compliance registry criteria should only be reviewed and potentially modified if specifically needed to implement a modified BES definition and associated exemption criteria. **c.)** The SDT is tasked with addressing definition modifications to ensure consistent and uniform application of the BES definition across the Regional Entities. The focus of the SDT's work should first be on the BES definition and exemption criteria. Any Compliance Registry Criteria modifications would have to be approached very carefully as it was developed through a lengthy stakeholder consensus process.

Response:

a.) The NERC Standard Processes Manual is the governing document for the development of the revised BES definition and exception criteria. The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements. The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.).

The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and will include representation from the DBESSDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP Team will be determined and administered by NERC staff.

The development of the core definition of the BES and the exception criteria by the SDT will be closely coordinated with the development of the Exception Process by the NERC ROP team. The goal (identified key to the project's success) is to have postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition, the exception criteria, and the Exception Process. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743 the decision was made to establish two teams working in close coordination to address the issues related to the project.

b.) When the NERC Standards Committee accepted the SAR and established the SDT, the RBESDCG acknowledged that the primary development of definition and supporting documents had shifted from the RBESDCG to the SDT. The RBESDCG agrees that parallel efforts will result in inconsistencies and disruption of the SDTs efforts. Therefore, the RBESDCG forwarded all applicable work products to the SDT and to the NERC ROP Team for consideration. Going forward, the RBESDCG will support the development of the definition, supporting documents, and the revisions to the ROP by collectively participating in the respective development processes (i.e., providing consensus comments to posting and participating in the associated

Organization	Yes or No	Question 13 Comment
balloting process). **c.)** Any impact of the revised core definition, the exception criteria, or Exception Process on the current Registry Criteria will be addressed in the Implementation Plan.		
City of Austin dba Austin Energy		The word "exemption" in the last line is confusing. Lines above 100kV would be "exempted" from inclusion as part of the BES. Lines below 100kV would be "added" to the BES (under certain circumstances) which, technically, is not an "exemption." (In fact, the Word document on the NERC web page refers to the process as an "Exception Process") AE recommends the following language: Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher necessary to support bulk power system reliability. Elements and Facilities operated at voltages of 100kV or higher, including Radial Transmission systems, and Elements and Facilities operated at voltages less than 100kV may be included if approved through the process described in the BES Definition Exception Process.
Response: The inconsistency of the use of 'exemption' vs. 'exception' in several documents has been identified by the SDT and the team has determined that 'exception' is the proper term to be used in reference to the Bulk Electric System definition and supporting processes. In the development of the core definition and the exception criteria, the SDT has considered your comments. Please see the revised definition of BES – it now includes a list of both "Inclusions" and "Exclusions" as part of the definition and no longer references an exemption (or exception) process).		
Duke Energy		There should be a provision for the Planning Coordinator or Transmission Planner to include individual generators and generation plants that are not included in these criteria through a technical evaluation, either in the definition or in the inclusion of facilities below 100 kV portion of the exemption process. For example, generating facilities connected to generator step up transformers below 100 kV that have a demonstrated ability to have a significantly adverse affect on the reliability on the bulk power grid or a major urban load center should be included.
Response: The SDT agrees with the commenter, in that any Exception Process should establish a process for exceptions from and inclusions to the BES. As stated in FERC Order No. 743, P83 "The Commission's proposed approach to addressing these concerns will enable affected entities to pursue exemptions for facilities they believe should not be included in the bulk electric system, and also will allow Regional Entities to add facilities below 100 kV they believe should be included". The Regional Entities currently have the authority to include Elements operated at voltages below 100 kV that are deemed necessary for the reliable operation of the BES. The Order does not eliminate this authority, but rather emphasizes the need to maintain the Regional Entity's ability of establishing inclusions to the BES through the Exception Process. Under these circumstances, the SDT feels that a Planning Coordinator or Transmission Planner could pursue inclusion of selected Elements into the BES by lobbying with their Regional Entity. exception criteria		
BGE		**a.)** NERC should use the FERC-approved standards development process for developing the technical criteria for both the BES definition and exemptions process. We view this as a single exercise. BGE

Organization	Yes or No	Question 13 Comment
		feels joint development of the BES Definition & Exception Process under a single SDT would be preferable. The standards drafting project should ensure that the definition expressly incorporates these exclusions for facilities below 100 kV. Entities should not have to seek an exemption for facilities below 100 kV or for radial lines. They should be clearly excluded in the BES definition itself. **b.)** We encourage the drafting team to embrace a design concept that seeks to maximize the "brightness" of bright line criteria. The BES exemptions process should contemplate very few exemptions. The TFE process is an example of a process not to be repeated here.
Response: **a.)** The development of the core definition of the BES and the exception criteria by the SDT will be closely coordinated with the development of the Exception Process by the NERC ROP Team. The goal (identified key to the project's success) is to have postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition, the exception criteria and the Exception Process. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743 the decision was made to establish two teams working in close coordination to address the issues related to the project. **b.)** The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as BES (inclusions) or non-BES (exclusions).		
City Water Light and Power (CWLP) - Springfield, IL		Relative to the BES Definition Exclusion Process, CWLP has chosen to comment on the inclusion/exclusion process as a whole. The current lack of detailed, firm administrative guidelines as well as an unambiguous process for resolving disputes between parties involved in the process of adjudicating inclusions/exclusions is problematic. It is CWLP's belief that developing the proposed administrative framework for the process is needed first. Focusing on the data to be submitted as shown in (1) and (2) above does not address the scope, nature, and criteria applicable to the review of requests for inclusions/exclusions. Regardless, CWLP feels strongly that the sole basis for approval or rejection of a request should be technical justification. Speaking to the process in general, any inclusion or exclusion should be a specific request for a specific facility; continent-wide, interconnect-wide, and region-wide applicability for inclusions/exclusions departs from the intent of FERC Order 743 to establish a definition without regional variances.
Response: The SDT has considered your comments in the further development of the core definition and the exception criteria .		

Organization	Yes or No	Question 13 Comment
The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as BES (inclusions) or non-BES (exclusions). A revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and will include representation from the DBESSDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP Team will be determined and administered by NERC staff. With that in mind, the SDT agrees with the commenter in that the Exception Process should be a manageable process that is clear, unambiguous, and repeatable and establishes consistency on a continent-wide basis. The development of the core definition of the BES and the exception criteria by the SDT will be closely coordinated with the development of the Exception Process by the NERC ROP Team. The goal (identified key to the project's success) is to have postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition, the exception criteria, and the Exception Process. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743 the decision was made to establish two teams working in close coordination to address the issues related to the project.		
Lewis County PUD		The ever increasing regulatory environment does little to improve electric reliability. Suggest that the BES definition only include the most critical elements of the electric system and leave the smaller elements out of the definition, e.g. less than 100kV and less than 150MVA.
Response: The SDT has established basic goals and assumptions that will be used to guide the development of the BES definition and supporting documents. The assumptions include: 'The revised definition will not significantly expand or contract what are currently considered BES Elements, nor will the revised definition drive entity registration or de-registration. Based on these goals and assumptions the overall impact of the revised definition is expected to be minimized for the majority of the Regions and Registered Entities. exception criteria		
American Electric Power (AEP)		There needs to be more comprehensive BES nomenclature established that distinguishes among the applicable primary-voltage equipment, the associated auxiliary equipment having an impact to the BES, and the associated ancillary equipment having no electrical impact to the BES. The draft versions of PRC-005-2, Protection System Maintenance, look to bring into scope "system-connected station service transformers for generators that that are part of the BES". These transformers are not clearly included within the proposed BES criteria, and consistency must be obtained between the two

Organization	Yes or No	Question 13 Comment
		documents.
Response: The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as BES (inclusions) or non-BES (exclusions). The SDT will be reviewing all NERC and Regional Reliability Standards to ensure that no conflicts have been established between the core definition, the supporting documents and procedures, and the applicability or requirements in the standards.		
Southern Company		**a.** The proposed definition includes the phrase "... necessary to support bulk power system reliability". The exemption process should resolve the question related to precisely which transmission and generation elements and facilities are necessary to support reliability of the bulk power system. **b.** A clear definition of what is included in "Generation Elements and Facilities" is needed. Does it include components other than the GSU transformer? As written, does the BES extend beyond the low voltage side of a GSU transformer?
Response: The SDT has considered your comments in the further development of the core definition and the exception criteria. **a.** The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as BES (inclusions) or non-BES (exclusions). A revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and will include representation from the DBESSDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP Team will be determined and administered by NERC staff. With that in mind, the SDT agrees with the commenter in that the Exception Process should be a manageable process that is clear, unambiguous, repeatable, and establishes consistency on a continent-wide basis. We will forward your comment to the NERC ROP Team. The development of the core definition of the BES and the exception criteria by the SDT will be closely coordinated with the development of the Exception		

Organization	Yes or No	Question 13 Comment
Process by the NERC ROP Team. The goal (identified key to the project's success) is to have postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition, the exception criteria, and the Exception Process. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743 the decision was made to establish two teams working in close coordination to address the issues related to the project. **b.** The SDT is not contemplating any further definitions beyond BES based on the latest revision to the definition. Please see the revised definition of BES as this incorporates more details about including specific generation elements.		
Independent Electricity System Operator		a. On the SAR, it indicates an SC approval date of December 8. It is misleading since the SC did not approve the SAR; it only approved posting of the SAR for industry comment. b. We have a concern with the concept paper on the exemption/inclusion criteria/process. Please see other comments on that paper submitted separately. c. We suggest use of consistent term between "exception" and "exemption". d. We suggest the exception/inclusion criteria to be included in the definition and developed/approved by the balloting body. Determining these criteria via any other processes will not provide the industry the opportunity to fully vet the criteria. e. The SAR indicates that "...the definition drafting team will work closely with the team developing the BES definition exemption process to develop a single coordinated implementation plan. It is also envisioned, that the team working to develop the BES definition exemption process will solicit input from drafting teams, stakeholders...." We find this confusing and have a concern that having two teams working on this definition/criteria package leads to misalignment and confusion. Further, while the definition drafting team is formed by a nomination process and appointed by the NERC Standards Committee, there is no transparency and/or public announcement to solicit nominations for the team working to develop the exemption process. We urge the NERC Standards Committee to direct the definition drafting team to also be responsible for developing the exemption process, and include the exemption criteria as part of the definition hence subjecting them to industry comment and balloting.
Response: a. The default language in the form is misleading and implies that the NERC Standards Committee's approval is required. Per the NERC Standard Process Manual the Standards Committee authorizes posting of the SAR for industry comment. The DBES SDT will provide a recommendation to NERC Standards Staff to revise the SAR form to read, "Date SC Authorized Posting the SAR". **b.** The SDT has considered your comments in the further development of the core definition and the exception criteria. Note that the revised definition of BES now includes lists of criteria for both "inclusion" and "exclusion".		

Organization	Yes or No	Question 13 Comment
c. The inconsistency of the use of 'exemption' vs. 'exception' in several documents has been identified by the SDT and the team has determined that 'exception' is the proper term to be used in reference to the Bulk Electric System definition and supporting processes. **d.** The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' (now proposed for inclusion in the definition of BES) utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as BES (inclusions) or non-BES (exclusions). **e.** The SDT is continuing the development of the concept of a component-based 'bright-line' definition which consists of a core definition that establishes the overall starting point for assessing BES and non-BES Elements (100 kV threshold). The 'exception criteria' utilizes the same 'bright-line' criteria to provide further guidance as to whether an Element is considered BES or non-BES (i.e., bright-line criteria for identifying generation Facilities, radials, etc.). The tight linkage between the core definition and the exception criteria provides the framework for identifying BES and non-BES for the vast majority of the Elements under consideration. The remaining Elements that cannot be definitively indentified as BES or non-BES utilizing the core definition and exception criteria would be candidates for application of the Exception Process where the technical justification would be required to identify Elements as BES (inclusions) or non-BES (exclusions). The revision process for the NERC ROP will be utilized to develop the Exception Process and will be coordinated by NERC staff and governed by current practice for administering such revisions. The NERC ROP Team will be established by NERC staff and will include representation from the DBESSDT along with industry experts and NERC staff personnel. The process for establishing the NERC ROP Team will be determined and administered by NERC staff. The development of the core definition of the BES and the exception criteria by the SDT will be closely coordinated with the development of the Exception Process by the NERC ROP Team. The goal (identified key to the project's success) is to have postings from each aspect of the project, which will enable the industry to review the entire project 'package' at one time and effectively provide comments simultaneously on the core definition, the exception criteria and the Exception Process. Based on the Commission imposed time requirements for filing and the amount of work required to be responsive to the directives in Order No. 743, the decision was made to establish two teams working in close coordination to address the issues related to the project.		
APPA		See text submitted under Question 12.
Response: See response to Q12.		
Xcel Energy		It is not clear as to why the Reliability Assurer is included as an applicable entity in the SAR.

Organization	Yes or No	Question 13 Comment
Response: The NERC Functional Model Version 5 defines the role of the Reliability Assurer as: “The functional entity that monitors and evaluates the activities related to planning and operations, and coordinates activities of functional entities to secure the reliability of the Bulk Electric System within a Reliability Assurer area and adjacent areas”. Any revision to the definition of the Bulk Electric System could potentially expand or contract the ‘Reliability Assurer area’ which would have a direct effect on the responsibilities indentified in the Functional Model.		

Summary Consideration: Prior to the issuance of Order 743a**,** the SDT reviewed all of the provided material and used this material and the examples supplied in its consideration of the revised definition of the Bulk Electric System (BES). The goal of the SDT is to provide a bright-line definition of BES which adheres to the guidelines and directives in Order 743. This bright-line definition contains certain inclusions and exclusions for specific equipment and configurations. The SDT believes that this definition now answers many of the questions raised by industry and encompasses most of the examples provided. However, no bright-line definition will be able to capture all of the concerns or situations. Accordingly, and consistent with Order 743, another aspect of this project is to establish an exception process with criteria based on reliability principles for the Interconnected BES that will be incorporated in NERC's Rules of Procedure (ROP) that will allow a process for the inclusion or exclusion of a particular BES Element from the definition. This ROP work effort will be done by a separate team but the DBESSDT will be in close coordination with that team.

Question 1:

If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

- **a.** Identify the Element or Facility recommended for exclusion:
- **b.** Provide a generic one-line diagram depicting the Element or Facility in question (if available).
- **c.** Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).
- **d.** Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

Commenters:

John A. Gray, The Dow Chemical Company 3

Michael Moltane & John Zipp, ITC Holdings 5

Frank Gaffney, Florida Municipal Power Agency, Et all 6

Josh Dellinger, Glacier Electric Cooperative 13

Michelle Mizumori, Western Electricity Coordinating Council 14

Brandy A. Dunn, Western Area Power Administration 16

Alain Pageau, Hydro-Québec TransÉnergie 17

Guy Zito, Northeast Power Coordinating Council 18

Jim Uhrin, ReliabilityFirst Corporation 20

Joe Petaski, Manitoba Hydro 21

John W. Delucca, Lee County Electric Cooperative 22

Paul Cummings, City of Redding 24

Patrick Farrell, Southern California Edison Company 25

Ed Davis, Entergy Services, Inc 27

Manny Robledo, City of Anaheim 28

Lorissa Jones, Bonneville Power Administration 30

David Burke, Orange and Rockland Utilities 31

Jim Case (Entergy), SERC OC Standards Review Group 33

Thad Ness, American Electric Power 34

Amir Hammad, Constellation Power Source Generation, Inc., Et all 36

William J. Gallagher, Vermont Public Power Supply Authority 38

David Angell, Idaho Power 44

Marc M. Butts, Southern Company 45

Andrew Z. Pusztai, American Transmission Company 46

Ronald Sporseen, PNGC Power, Et all 48

Jerome Murray, Oregon Public Utility Commission 50

John D. Martinsen , Public Utility District No. 1 of Snohomish County 51

Steve Alexanderson P.E., Central Lincoln 53

John A. Gray, The Dow Chemical Company

Phone: 281-966-2390
Email: JAGray3@dow.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion:

   As discussed in the comments of The Dow Chemical Company ("Dow") on the recommended definition of BES, the 100 kV standard is inapplicable to generation and should not be used to identify generation facilities that are included in the BES, or that are eligible for an exception or exclusion. Instead, the NERC Statement of Compliance
   Registry Criteria already sets forth criteria for determining when individual generating units and generating plants/facilities are not part of the bulk electrical system. Those existing standards and the generator-specific registration determinations that have been made using those standards should be preserved.

   Dow does not object to retaining a 100 kV standard for identifying transmission facilities that should be considered part of the BES, but exclusions must be made for distribution facilities and interconnection facilities. If owners and/or operators of such facilities are required to secure an "exception" or "exclusion" from the 100 kV standard, then such process must ensure that exceptions or exclusions are available before mandatory reliability standards become applicable.

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

   For a manufacturing site, distribution facilities deliver electricity from the generating plants and or the transmission grid to the manufacturing plants. Interconnection facilities are generally identified by reference to the point of interconnection with the transmission grid. Facilities located on the generator's side of this interconnection up to the site transformers are generally considered interconnection facilities while facilities located at or beyond the point of interconnection are generally considered transmission facilities.

   c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

   Justification: The NERC Statement of Compliance Registry Criteria excludes certain generating facilities, because these generating facilities are not material to the reliability of the BES. Distribution facilities are expressly excluded from the definition of BES pursuant to Section 215 of the Federal Power Act. Distribution facilities are typically operated differently from transmission facilities. As such,

distribution facilities should not be subject to the same reliability standards as transmission facilities. FERC has recognized that interconnection facilities may or may not be material to the reliability of the BES. As such, FERC has held that a facts-and-circumstances analysis should be used to determine whether and to what extent such facilities should be considered part of the BES and, therefore, subject to mandatory reliability standards. *See New Harquahala Generating Company, LLC, 123 FERC ¶ 61,173 at P 44 (2008), clarified, 123 FERC ¶ 61,311 (2008).*

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

Continent-wide

Comments relative to the proposed exclusion(s):

At minimum, the exclusions applicable to distribution facilities and interconnection facilities should apply to all facilities that are subject to FERC's reliability jurisdiction under Section 215 of the Federal Power Act.

Michael Moltane & John Zipp, ITC Holdings

Telephone: 248-946-3093

Email: mmoltane@itctransco.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   Comments relative to the proposed exclusion(s): It is unclear how we would identify an individual element then in part d. declare it Region-wide. This needs to be made more clear

Frank Gaffney, Florida Municipal Power Agency, Et all

Florida Municipal Power Agency is filing the comments below on behalf of its' project participants:

City of New Smyrna Beach
KUA
Lakeland Electric
City of Clewiston
Beaches Energy Services
Ocala Electric Utility

Telephone: 407-355-7767

Email: frank.Gaffney@fmpa.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion:

      This question refers to "exclusions"; we believe, however, that the intent of this comment form is to elicit feedback on the process for "exemptions." It is important to distinguish between the two concepts, as FERC did in Order 743. *See, e.g.*, Paragraph 1, which refers to "maintain[ing] a bright-line threshold that includes all facilities operated at or above 100 kV *except defined radial facilities*," as well as to "establish[ing] an exemption process and criteria." (emphasis added). In other words, in brief, an "exclusion" is outside of the BES by definition, whereas exempt Elements are removed on a case-by-case basis by going through a process.

      FMPA draws the distinction as follows:

      An exclusion is the removal of a category of Elements from the BES definition. The current BES definition explicitly carves out radials serving only load with one transmission source. This is a clear example of an exclusion. There is no "exclusion process" now, nor should there be one in the future; the point of an exclusion is that the class of excluded Elements can—without any process—be treated like sub-100 kV transmission, in that they are presumed to be non-BES unless a particular Element is demonstrated, on a case-by-case basis, to be properly included in the BES (see responses to Questions 5 and 11 in FMPA' comments on BES definition, submitted today, and FMPA response to Question 2 below).

      An exemption, on the other hand, is a finding that a particular Element, although nominally part of the BES, does not need to be included in the BES because it is not necessary for operating an interconnected transmission network.

Because exemptions are less clear-cut than exclusions, each exemption of an Element needs to be approved by NERC so that the Registered Entity and compliance authorities have certainty about the Elements with respect to which compliance is required. In many, perhaps all, cases, this process will likely require a case-by-case examination of each Element for which an exemption is requested.

FMPA responds to this question with respect to the one "exclusion" from the BES definition that we advocate, that of radial Transmission Elements serving only load and/or generation not registered pursuant to the Statement of Compliance Registry Criteria. We also propose uniform criteria for deciding, on a case-by-case basis, whether to grant requested exemptions from the BES, or to include nominally non-BES Elements in the BES. The process that we propose for exemption requests and proposed inclusions is discussed below in response to the invitation of "[c]omments relative to the proposed exclusion(s)."

Exclusion:

FMPA proposes only one exclusion from the BES definition, namely, "Radial Transmission Elements serving only load with one Transmission source are generally not included in this definition. A radial Transmission Element may be considered as 'serving only load' for purposes of the foregoing general exclusion even if it connects generation, so long as that generation is not registered pursuant to the Statement of Compliance Registry Criteria." This formulation, which is discussed in FMPA' comments submitted today on the BES definition, is intended to preserve the current exclusion of radials serving only load with one transmission source, and to clarify that the presence of a generator that is not registered under the Compliance Registry Criteria does not convert a radial into a BES Element. The end result is that radial transmission is excluded unless it connects generation that is registered pursuant to the Statement of Compliance Registry Criteria. Consistent with the Compliance Registry Criteria, a single generator under 20 MVA, or a plant under 75 MVA, if not designated as a Blackstart Resource needed for system restoration, is unlikely to affect the grid. Therefore, the presence of such generation should not require that an otherwise non-BES radial be included in the BES. Rooftop photovoltaic cells, for example, are increasingly common. If FMPA' proposed clarification is not accepted, the presence of such insignificant generation could nullify the exclusion of radials to load with one transmission source, with no benefit to reliability.

Exemption criteria

FMPA has not yet developed a list of criteria that we believe to be exhaustive, though we emphasize that such a list must be an ultimate goal of this process. We propose the following criteria as a start:

FMPA proposes that at least two classes of elements be eligible to request an exemption:

i. Elements that are part of a radial "system" originating from a single BES source serving only load, as in the Florida Keys. Clarifications: a) radial system means any number of series and/or parallel Elements as long as they all originate from a single BES source and do not have another BES source; b) "single BES source" means one BES bus / substation / switching substation at one voltage level, and c) consistent with FMPA' proposed exclusion of radials serving only load and unregistered generation, "serving only load" includes serving generation that is not registered through the Statement of Compliance Registry Criteria.

ii. Elements that are part of a "looped" system that has two transmission sources primarily for local quality of service to the retail customers supplied by the looped system in question and is not used for bulk electric system flow (e.g., the transfer distribution factor of flows across the looped system is low, representing a high impedance path across the looped system). Specific criteria might be: a) a looped system that participate in less than a 5% of transfer (e.g., 5% or less transfer distribution factor); and b) that the looped system in question does not limit transfers.

A radial or looped system to be exempted must meet the following criteria:

1. The radial or looped system may not contribute to any Category D or C contingency resulting in: 1) a supply / demand mismatch greater than the largest loss of source contingency in the Reliability Coordinator area; or 2) an Adverse Reliability Impact where, if the Element were not involved in those Category D or C contingencies, those thresholds would not be exceeded.

Studies to determine whether this criterion is met would be conducted in accordance with TPL-004-0 and TPL 003-0 standards (or corresponding contingencies in revision to the TPL standards) in the Short Term Planning Horizon. Although the above criteria are acceptable responses to a Category D contingency, the concept of the test is to see if a radial or looped system would cause a significantly worse response to Category C or D contingencies by testing the contingency with and without the radial or looped system. FMPA believes that such criteria are good indicators that a radial or looped system should be included in the BES as it highlights whether the protection systems are important for critical clearing times, and whether the radial or looped systems can contribute to an Adverse Reliability Impact in combination with other contingencies;

2. No portion of the radial or looped system may meet any of the conditions of Attachment 1 to CIP-002-4;

3. No portion of the radial or looped system may meet any of the conditions listed in items B1 to B5 of Attachment B to PRC-023-2;

4. No portion of the radial or looped system may be a part of, or be a limiting element of, any Path, Interchange, or Flowgate used in the calculation of ATC in accordance with standards MOD-028, MOD 029 or MOD 030; and

5. No portion of the radial or looped system may include a blackstart resource or cranking path deemed significant to the TOP or RC restoration plans of EOP-005, EOP-006 or EOP-007.

If a Registered Entity demonstrates to NERC that an Element that is nominally in the BES meets *all* of these criteria, the exemption would be granted.

Conversely, if NERC demonstrates that a nominally non-BES Element meets the negative of *any* of these criteria (*e.g.*, if any portion of the radial or looped system meets any of the conditions of Attachment 1 to CIP-002-4 or of Attachment B to PRC-023-2), the Element would be included in the BES.

Throughout these comments, FMPA refers to "Elements" and not to "facilities." This is because "Facility" is defined in the NERC Glossary as "[a] set of electrical equipment that operates as a single Bulk Electric System Element…." Because these comments (and the BES definition) address whether Elements are or are not part of the BES, it is incorrect to refer to the Elements in question as "Facilities," because a Facility is defined as a *BES* Element.

In developing the exemption/inclusion criteria and process, NERC and the SDT should bear in mind the requirement of Order 743: "NERC should develop an exemption process that includes *clear, objective, transparent, and uniformly applicable* criteria for exemption of facilities that are *not necessary for operating the grid*." Paragraph 115 (emphasis added). NERC and the SDT should also bear in mind that FERC anticipates that between the BES definition and the exemption process, there will be only "minimal[]" effect on "small entities." Order 743, Paragraph 169. Order 743 is referring to the Small Business Act definition of a "small electric utility" as one that has a total electric output of less than four million MWh in the preceding year. *See* BES NOPR, 133 FERC ¶ 61,150, Paragraph 35 & footnote 50.

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: Radial Transmission Elements serving only load have been recognized for years as non-BES because such Elements are very unlikely to affect the BES. FERC stated in Order 743 that NERC may retain that exclusion.

Similarly, generators under 20 MVA and generating plants under 75 MVA are not subject to registration pursuant to the Statement of Compliance Registry Criteria, which has been accepted by FERC, because of the recognition that such generators are very unlikely to affect the BES. It is thus consistent with the Compliance Registry Criteria to exclude from the BES definition radials serving load with one

transmission source even if there is some generation on the radial, so long as none of the generation is registered. If the generation is not significant enough to be registered, it is not significant enough to transform an otherwise non-BES radial to load into a BES Element.

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

Continent-wide

The exclusion of radials to load and unregistered generation, as part of the BES definition, should apply on a continent-wide basis.

Each Element proposed for exemption or inclusion should be considered individually, under the same criteria (proposed above), applied uniformly continent-wide.

Comments relative to the proposed exclusion(s):

Exemption and Inclusion Processes:

The exemption and inclusion processes should be designed to ensure continent-wide uniformity to the maximum extent possible. To that end, NERC must use a uniform process; the criteria for approving or denying an exemption, or for including an Element in the BES, must be clear; and entities must be able to appeal decisions to another body within NERC or to FERC.

In order to obtain an exemption, a Registered Entity should be required to demonstrate that the Element for which it is requesting an exemption is not "necessary for operating an interconnected electric transmission network." This is the standard set out in Order 743; it is also part of the definition of the "bulk-power system" in Section 215 of the Federal Power Act, 16 U.S.C. § 824o(a)(1)(A) (the other part of the statutory definition is "electric energy from generation facilities needed to maintain transmission system reliability," 16 U.S.C. § 824o(a)(1)(B)). Application of this standard should be informed by the statutory definitions of "reliability standard" ("a requirement, approved by the Commission under this section, to provide for reliable operation of the bulk-power system") and "reliable operation" ("operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure of system elements").

Conversely, to include a nominally non-BES Element in the BES, NERC should be required to demonstrate that the Element *is* necessary for operating an interconnected electric transmission network.

Criteria for determining whether an Element is or is not "necessary for operating an interconnected electric transmission network" are proposed in response to Question 1(a) above. The criteria should be uniform continent-wide, though they will be applied to each Element on a case-by-case basis.

Exemption requests and proposed inclusions should be decided by NERC staff in the first instance. FMPA does not believe that the exemption and inclusion processes should be delegated to the Regional Entities. In Order 743, FERC emphasized the need for continent-wide uniformity; in fact, it was inconsistency among regions that prompted Order 743. FMPA members' experience with Regional registration processes suggests that Regional implementation of the BES exemption and inclusion processes is unlikely to yield the uniformity that FERC directed. Furthermore, implementing this FERC directive will unavoidably require significant personnel resources, either at NERC or at the Regions. Delegating the process to the Regions would impose additional costs due to the need for NERC to exercise strong oversight to attempt to maintain uniformity. It may be that after the exemption and inclusion processes have been in place for a few years and a body of precedent has been accumulated, delegation will be appropriate. At this time, however, NERC staff should make the initial decision on all exemption requests and proposed inclusions.

FMPA proposes, for the sake of consistency with the registration appeal process, that appeals of decisions on exemptions and inclusions be to the Board of Trustees Compliance Committee (BOTCC), with further appeals to FERC if necessary. Appeals to the BOTCC would consist of the record compiled by NERC Staff, and additional paper submissions by NERC Staff and the Registered Entity demonstrating why the Element(s) in question is or is not "necessary for operating an interconnected electric transmission network." *See* NERC Rules of Procedure, Appendix 5A, "Organization Registration and Certification Manual," at 14-16. Registered Entities should have the option of requesting a hearing. Hearing procedures could be modeled on the Compliance and Certification Committee's "Hearing Procedures for Use in Appeals of Certification Matters," in Appendix 4E of the NERC Rules of Procedure.

FMPA also suggests that decisions on exemptions and inclusions be made available to others, either subject to CEII protection or in a form suitable for public release. As precedent develops, Registered Entities will increasingly be able to judge for themselves the likelihood that a particular exemption will be granted, or that an appeal of an inclusion will succeed. We expect that giving Registered Entities more information on which to base their decisions will significantly reduce the burden on NERC of processing exemptions and inclusions.

We propose that BES Elements for which an exemption request is pending should continue to be included in the BES until the exemption and any appeals are decided,

and that non-BES Elements for which an inclusion is pending should continue to be non-BES until the inclusion and any appeals are decided.

The transition process should include an important exception to the general rule proposed for BES status during the pendency of an exemption request: to allow for a smooth transition, to the extent that Elements that are currently considered non-BES become BES under the new definition, those Elements should be permitted to request exemptions and to continue to be considered non-BES until their exemption requests and any appeals are decided.

Josh Dellinger, Glacier Electric Cooperative

Telephone: 406-873-5566

Email: joshd@glacierelectric.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for exclusion: Our delivery point, which is a loop-fed 115kV switching station.

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: This station's main purpose is to be a delivery point for our system. We are a distribution cooperative that serves mainly residential and small commercial loads. Each year we peak around 35 MW and average around 22 MW. This station is loop fed by two 115 kV lines to give our members more reliability. No transmission planner, balancing authority, transmission operator, reliability coordinator, etc. has included this station in any critical path lists or system restoration plans. This station is not designated as critical asset by its balancing authority or transmission operator. The available short-circuit MVA at this station is 677 MVA. If a fault were to occur at this station, outages would be limited to the local area and the BES as a whole would not be adversely affected at all. It is our belief that facilities such as this are insignificant to the BES and do not need to be considered part of the BES.

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

Michelle Mizumori, Western Electricity Coordinating Council

Telephone: 801-819-7624

Email: mmizumori@wecc.biz

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion: Those elements or facilities above 100 kV that are shown through engineering studies to not be necessary to reliably operate an interconnected transmission system.

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

   c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

   Justification: An element or facility that is not necessary to reliably operate an interconnected transmission system need not be included in the Bulk Electric System (BES). This can be assessed using engineering studies that show the effect of worst-case disturbances on multiple indicators such as frequency, voltage, system flows, operating limits, generator tripping, cascading outages, and/or islanding with the element or facility removed from service. An element or facility is not necessary to reliably operate if the system can maintain acceptable steady-state and dynamic performance during and after a worst-case disturbance with the element removed from service.

   d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

   ☒ Continent-wide

   ☒ Interconnection-wide

   ☒ Region-wide

   Comments relative to the proposed exclusion(s):

   The BES functions to generate bulk power and transfer that bulk power to locations from which it is then distributed to end-use load. Elements that generate bulk power, transfer bulk power, or support the transfer of bulk power are part of the BES.

   An element is necessary to reliably operate an interconnected transmission system if it significantly affects the ability of the BES to generate bulk power or carry bulk power to locations from which is it distributed to end-use load. While operating voltage (i.e.,

the proposed 100 kV bright-line) may be a clear and repeatable proxy for identifying those elements that are necessary to reliably operate an interconnected transmission system, it is a broad approach that may not adequately address specific examples. Moreover, engineering studies can be used to more granularly and accurately identify elements that are not needed to reliably operate an interconnected transmission system.

The thresholds on the indicators listed above may vary between interconnections and regions. For example, voltage deviation may be more relevant in the Western Interconnection (which is primarily stability limited) than in the Eastern Interconnection (which is primarily thermally limited).

Brandy A. Dunn, Western Area Power Administration

Telephone: 720-962-7431

Email: dunn@wapa.gov

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion: Any Element above 100-kV that is shown (through system studies) to NOT be necessary to reliably operate the interconnected transmission system.

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

   c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

      Justification: An Element that is not required to reliably operate the interconnected transmission system does not need to be included in the BES (or specifically called-out in the definition). This can be assessed through engineering system studies that show the worst-case results based on indicators such as voltage, frequency, OTC limits, angular instability and/or cascading outages based on that Element being removed from service.

   d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

      ☒ Continent-wide

      ☒ Interconnection-wide

      ☒ Region-wide

      Comments relative to the proposed exclusion(s): An Element is necessary to reliably operate the interconnected transmission system if it significantly affects the ability of the BES to carry bulk power to end-use load. While a brightline test voltage (such as the proposed >100-kV) may be a clear and repeatable proxy for identifying Elements that are necessary to reliably operate the interconnected transmission system, this broad approach may not adequately address specific examples. Engineering system studies can accurately identify Elements which are not needed to reliably operate the interconnected transmission system.

Alain Pageau, Hydro-Québec TransÉnergie

Telephone: 514 879-4100 #5414

Email: pageau.alain@hydro.qc.ca

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

    a. Identify the Element or Facility recommended for exclusion: The transmission lines dedicated to serve the native load in the Quebec Interconnection.

Guy Zito, Northeast Power Coordinating Council

Telephone: 212-840-1070

Email: gzito@npcc.org

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion:

   All step-down transformers with their low-side terminals operated at below 100 kV.

   Radial taps from a BES feeder or bus connection to loads. All elements or facilities in series with excluded or exempt elements or facilities -- upstream to a designated point-of-demarcation with the BES and downstream to the customer meter or interconnection. (Refer to the response to Question 3, New York Indicator [NY-2] below, and the response to Question 13, proposed definition 'Point-of-Demarcation' in the BES Definition Comments provided separately). For example, upstream from an exempt or excluded feeder to the upstream-side of the disconnect switch connecting the excluded or exempted feeder to the BES, or if no disconnect switch is present, to the upstream BES supply-bus connection. This exclusion or exemption would extend to and also apply to related equipment, such as circuit switchers, circuit breakers, ground switches, disconnect switches, busses, etc. that are down-stream of the point-of-demarcation and in the same circuit with the exempted or excepted feeders and transformers.

   Local generation and any facility associated with local generation serving as a load modifier to local load only. The power generated is demonstrated to be consumed locally and does not flow back into the BES. The operation (or loss) of the local generation and/or associated facilities does not materially impact any BES transmission facilities. If a local generator functions as a load modifier, and does not materially impact the BES, meaning that it is not necessary to maintain BES reliability, then it should be excluded from the definition of BES under the BES Exclusion process.

   The transmission lines dedicated to serve the native load in the Quebec Interconnection.

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available). Not Applicable

   c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

   Justification: The FERC Seven Factor test has been shown to be a reliable, repeatable method for identifying facilities that are local distribution and separating

them from those facilities which perform a transmission function. The indicators of local distribution in the Commission's seven-factor test[1] are:

1) Local distribution facilities are normally in close proximity to retail customers;
2) Local distribution facilities are primarily radial in character;
3) Power flows into local distribution systems, and rarely, if ever flows out;
4) When power enters a local distribution system, it is not reconsigned or transported on to some other market;
5) Power entering a local distribution system is consumed in a comparatively restricted geographic area;
6) Meters are based at the transmission / local distribution interface to measure flow into the local distribution system; and
7) Local distribution systems will be of reduced voltage.

[1] Ref. FERC Order No. 888 at 31,771 and 31,981, e.g., *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities*

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

☒ Less than Region-wide

☒ Unknown

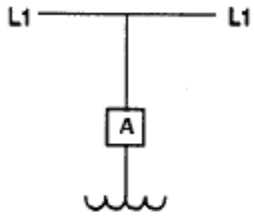
Jim Uhrin , ReliabilityFirst Corporation

Telephone: 330.247.3058
Email: jim.urhin@rfirst.org

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for exclusion: Those that have no impact to the reliability of the BES for any reason or could at anytime. Those that may or could through reconfiguration and or operating procedures must be included.

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).



In the diagram above, any equipment downstream of the "A" breaker that does not or could not trip and lockout a BES facility (e.g. line, transformer, etc.) may be excluded, however if equipment below the "A" breaker could or does trip and lockout a BES facility for any reason, then it should be included.

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: If the facility could never trip and lockout a BES facility, there is no reason to include it. However, caution and careful consideration must be used when exclusions are considered. There maybe times during toplogy changes or system re-configurations that certain facilities could trip and lockout a BES facility and therefore must be included.

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

Joe Petaski, Manitoba Hydro

Telephone: 204-487-5332

Email: jpetaski@hydro.mb.ca

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion: Radial Transmission Elements and Systems - See comment below

      Comments relative to the proposed exclusion(s): Radial Transmission Elements and Systems should be excluded from the Elements and Facilities classified as part of the BES but a clear NERC definition of radial is required to prevent misunderstandings and misapplications of the BES definition and exemption process. Also, there should be no regional differences in the BES definition or in the BES definition exemption process.

John W. Delucca, Lee County Electric Cooperative

Telephone: 239-656-2190

Email: john.delucca@lcec.net

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for exclusion: Radial load serving elements that do not have an adverse effect upon the BES should be excluded. Also Transmission systems that have no adverse impact on the BES as evidenced by engineering design and criteria and load modeling should be excluded such as Non-FERC Jurisdictional Facilities; Radial Non-Transmission Load Serving Elements; Looped Non-Transmission Load Serving Elements; Looped Non-Transmission Load Serving Elements Designed & Installed with No Intent to Provide Transmission Load Service.

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available). Please refer to **Attachment 1b.6 – 1b.9** the draft BES Definition currently under review in the FRCC region. There are multiple single-lines included that represent a fair cross section of elements that should be excluded.

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: The purpose of including facilities in the definition of BES is make them subject to federal regulations that are designed to serve the reliability needs of the BES and to prevent cascading of outages to a broad section of the BES. Certain elements operated at voltages of 100kV or higher have zero measurable impact to the reliable operation of the Interconnected BES. No practical purpose is served by including those elements, and if they are, it unnecessarily increases the cost of delivered power. The following list also should be considered, a). No FERC Jurisdiction; b) Facilities were/are designed, installed, and operated to serve local non-transmission loads; c) Rates are designed to provide revenue to meet local non-transmission service; d) Facilities were never designed or intended to provide capability of entity-to-entity, region-to-region load flows other than that required to meet local non-transmission service loads; e) Reactance resources whose purpose is neutralizing non-transmission inductive loads and/or to compensate for "within entity" losses.

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

Comments relative to the proposed exclusion(s): The submitted diagrams are not intended to represent every possible element that should be excluded Continent-wide. The complete list should be determined by the proposed task force in order that regional differences in system characteristics is taken into account. In addition, to insure continuity, but the final decision as to what meets the exclusion criteria should reside in the Region with appeal process to NERC and possibly FERC.

Paul Cummings, City of Redding

Telephone: 530-245-7016

Email: pcummings@ci.redding.ca.us

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for exclusion: **Those elements or facilities operated at or above 100kV that are shown through engineering studies not to be necessary to reliably operate an interconnected transmission system. Radial elements unless they are shown to be necessary to reliably operate an interconnected transmission system. See Attachment 1. (Refer to Attachment 1b.5)**

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available). **Refer to Attachment 1b.5**

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: **"The impact an Element has on the BES shall be determined by assessing the performance of key measures of BES reliability through power flow, post-transient, and transient stability analysis with (1) the system, and the Subject Element, operating at reasonably stressed conditions that replicate expected system conditions under which the loss of the Subject Element would have the greatest impact on the key measures of reliability, and (2) the Subject Element removed from service, but without allowing for system readjustment."**

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

☒ Interconnection-wide

☒ Region-wide

Patrick Farrell, Southern California Edison Company

Telephone: 626-302-1321

Email: Patrick.Farrell@sce.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion: The elements and facilities above 100kV that are shown through engineering studies to not be necessary to reliably operate an interconnected transmission system should be excluded. Additionally, the transmission facilities at 100kV and above that are radial in nature, used for load serving purposes, and which are not parallel to interconnected transmission systems should be excluded. As an example, in SCE's system, the Valley 115kV system is radial in nature and the power flow is generally from 500kV to 115kV to serve load.

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

   c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

   Justification: An element or facility that is not necessary to reliably operate an interconnected transmission system need not be included in the BES. This can be assessed using engineering studies that show the effect of worst-case disturbances on multiple indicators such as frequency, voltage, system flows, operating limits, generator tripping, and cascading outages and/or islanding with the element or facility removed from service. If a system can maintain acceptable steady-state and dynamic performance during and after a worst-case disturbance with the element removed from service, that element or facility is not necessary to reliably operate the system.

   d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

   X Continent-wide

   X Interconnection-wide

   X Region-wide

   Comments relative to the proposed exclusion(s): The Bulk Electric System (BES) functions to generate bulk power and transfer that bulk power to locations from which it is then distributed to end-use load. Elements that generate bulk power, transfer bulk power, or support the transfer of bulk power are part of the BES.

An element is necessary to reliably operate an interconnected transmission system if it significantly affects the ability of the BES to generate bulk power or carry bulk power to locations from which it is distributed to end-use load. While operating voltage (i.e. the proposed 100kV bright-line) may be a clear and repeatable proxy for identifying those elements that are necessary to reliably operate an interconnected transmission system, it is a broad approach that may not adequately address specific examples. Engineering studies can be used to more granularly and accurately identify elements which are not needed to reliably operate an interconnected transmission system.

The thresholds on the indicators listed above may vary between interconnections and regions. For example, SCE's system has facilities rated at the 115kV level that are radial in nature for load serving purposes. Therefore, applying a 100kV bright-line may unnecessarily bring facilities that could be excluded through an engineering study.

Ed Davis, Entergy Services, Inc

Telephone: 504-576-3029

Email: edavis@entergy.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion:

   These questions and possible responses by entities are appropriate as the questions relate to specific facilities and configurations to be considered for exemption. The questions do not reflect principles (criteria) for the determination of if facilities or configurations to be included / excluded in the definition of BES. We agree the questions and responses may be appropriate here if the responses are to be used as examples to develop exemption principles (criteria). However, we suggest the authors should have also asked the industry for principles (criteria) they believe should be included as exemption criteria.

   These questions and responses also do not address a possible process for determining if facilities or configurations should be included / excluded in the definition of BES. We suggest the authors should have also asked the industry for process suggestions they would like included in the final process.

Manny Robledo, City of Anaheim
Telephone: 714-765-5107
Email: mrobledo@anaheim.net

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for exclusion: City of Anaheim Lewis-Vermont 230kV radial transmission line and seven 230kV to 69kV transformer banks and associated substation equipment, which are also radial transmission elements serving load.

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available). **Refer to attachments:**

1b.1 Anaheim System One-Line,
1b.2 Anaheim 220kV System,
1b.3 Anaheim 69kV Bus Impedance Diagram

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: The 220kV facilities owned and operated by Anaheim are radial transmission elements fed from one transmission source, i.e. Lewis Substation. Southern California Edison Company (SCE) and the California Independent System Operator (CAISO) are the TO/TOPs for the interconnection of Lewis Substation to the BES, including the protection system that de-energizes both Anaheim buses using SCE owned breakers without interrupting any BES transmission lines. The 220kV system owned and operated by the City of Anaheim is radial to the BES at Lewis Substation and feeds a 69kV sub-transmission system through three 220kV/69kV transformer banks. Anaheim is able to reliably serve 100% of its load using only three of the four banks at Lewis; however, to improve reliability within Anaheim, in 2008 Anaheim built a redundant substation (Vermont Substation) 1.5 miles from Lewis, which is connected via a 220kV transmission line. This line is not needed to maintain BES or Anaheim system reliability because it is in parallel with four (4) 69kV lines, which also connect Lewis to Vermont. Its only purpose is to provide backup transformation should there be a catastrophic failure of the Lewis transformer banks. Pursuant to an SCE-Anaheim operating order only three transformer banks may be in service at any time to limit short circuit duty, so the banks at Vermont are truly redundant.

Transmission elements serving radial load, radial distribution systems, or non-GO/GOP generation connected to such radial lines and excluded from BES. To eliminate reliability gaps, such radial transmission elements should be classified as "Distribution" equipment subject to DP standards, and the PRC and vegetation management standards should be made applicable to Distribution Providers and this equipment. This is consistent with the

NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for radial transmission facilities that function as Distribution and are not required for the reliable operation of the BES.

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

Comments relative to the proposed exclusion(s): Transmission elements serving radial load, radial distribution systems, or non-GO/GOP generation connected to such radial lines and excluded from BES. To eliminate reliability gaps, such radial transmission elements should be classified as "Distribution" equipment subject to DP standards, and the PRC and vegetation management standards should be made applicable to Distribution Providers and this equipment. This is consistent with the NERC Reliability Functional Model and is more efficient than requiring TO/TOP registration for radial transmission facilities that function as Distribution and are not required for the reliable operation of the BES.

Lorissa Jones, Bonneville Power Administration

Telephone: 360-418-8978

Email: ljjones@bpa.gov

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for exclusion: Those elements or facilities above 100kV that are shown through engineering studies not to be necessary to reliably operate an interconnected transmission system.

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: An element or facility that is not necessary to reliably operate an interconnected transmission system need not be included in the BES. This can be assessed using engineering studies that show the effect of worst-case disturbances on multiple indicators such as frequency, voltage, system flows, operating limits, generator tripping, cascading outages and/or islanding with the element or facility removed from service. If a system can maintain acceptable steady-state and dynamic performance during and after a worst-case disturbance with the element removed from service, that element or facility is not necessary to reliably operate the system.

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Interconnection-wide

☒ Region-wide

David Burke, Orange and Rockland Utilities

Telephone: 845-577-3076

Email: burkeda@oru.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for exclusion:

All step-down transformers with their low-side terminals operated at below 100 kV. Radial taps from a BES feeder or bus connection to loads. All elements or facilities in-series with excluded or exempt elements or facilities -- upstream to a designated point-of-demarcation with the BES and downstream to the customer meter or interconnection. For example, upstream from an exempt or excluded feeder to the upstream-side of the disconnect switch connecting the excluded or exempted feeder to the BES, or if no disconnect switch is present, to the upstream BES supply-bus connection. This exclusion or exemption would extend to and also apply to related equipment, such as circuit switchers, circuit breakers, ground switches, disconnect switches, busses, etc. that are down-stream of the point-of-demarcation and in the same circuit with the exempted or excepted feeders and transformers.

Local generation and any facility associated with local generation serving as a load modifier to local load only. The power generated is demonstrated to be consumed locally and does not flow back into the BES. The operation (or loss) of the local generation and/or associated facilities does not materially impact any BES transmission facilities. If a local generator functions as a load modifier, and does not materially impact the BES, meaning that it is not necessary to maintain BES reliability, then it should be excluded from the definition of BES under the BES Exclusion process.

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

Not Applicable

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: The FERC Seven Factor test has been shown to be a reliable, repeatable method for identifying facilities that are local distribution and separating them from those facilities which perform a transmission function. The indicators of local distribution in the Commission's seven-factor test[2] are:

1) Local distribution facilities are normally in close proximity to retail customers;

2) Local distribution facilities are primarily radial in character;

3) Power flows into local distribution systems, and rarely, if ever flows out;

4) When power enters a local distribution system, it is not reconsigned or transported on to some other market;

5) Power entering a local distribution system is consumed in a comparatively restricted geographic area;

6) Meters are based at the transmission / local distribution interface to measure flow into the local distribution system; and

7) Local distribution systems will be of reduced voltage.

[1] Ref. FERC Order No. 888 at 31,771 and 31,981, e.g., *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities*

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

X☐ Continent-wide

X☐ Unknown

Jim Case (Entergy), SERC OC Standards Review Group

Telephone: 601-985-2345

Email: jcase@entergy.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   Comments relative to the proposed exclusion(s): We agree

Thad Ness, American Electric Power

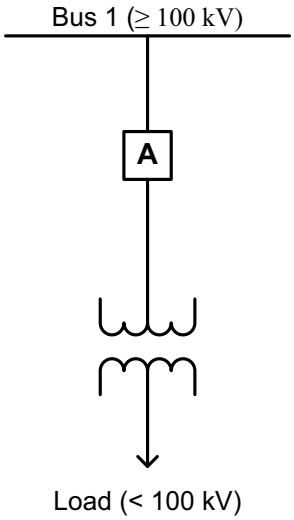
Telephone: 614-716-2053

Email: tkness@aep.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion: Radial facilities and elements operating at or above 100 kV, that are connected to only load serving facilities operated at distribution voltage levels and that include a high side circuit breaker or circuit switcher should be excluded from the BES classification. While protective systems themselves are not by default part of the BES, nor should they be classified as a BES element, the breaker failure schemes associated with the high side circuit breaker or circuit switcher are part of a Protection System and should comply with the appropriate standards.

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).



   c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

   Justification: Facilities such as that described in 1.a. are designed to support only one way power flow; from the BES to the load. Operation of the high side circuit breaker or circuit switcher, Device A, removes the transformer from service interrupting power flow to the load but will not interrupt power flow on the BES nor effect reliability of the BES. While protective systems themselves are not by default

part of the BES, nor should they be classified as a BES element, the breaker failure scheme associated with Device A has the potential of interrupting BES power flow by clearing Bus 1. For this reason, the breaker failure scheme is part of a Protection System and should comply with the appropriate standards.

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

Amir Hammad, Constellation Power Source Generation, Inc., Et all

CPSG is filing the comments below on behalf of:
Constellation Energy Group, Inc.
Baltimore Gas & Electric Company
Constellation Energy Commodities Group, Inc.
Constellation Energy Control and Dispatch, LLC
Constellation NewEnergy, Inc. and its affiliates
Constellation Energy Nuclear Group, LLC,[3]

Telephone: 410-787-5226
Email: amir.hammad@constellation.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for exclusion: Constellation believes that the exclusions mapped out in RFC's BES definition, as well as the diagrams in Appendix A of the RFC BES definition would be a good starting point for the standard drafting team in developing exclusions.

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available). Constellation believes that the exclusions mapped out in RFC's BES definition, as well as the diagrams in Appendix A of the RFC BES definition would be a good starting point for the standard drafting team in developing exclusions.

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: The BES definition in RFC has been vetted through its members and incorporates the essence of NERC's BES definition but includes bright lines for its members to abide by.

RFC Definition of BES:
https://www.rfirst.org/Documents/RFC%20BES%20Definition.pdf

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

[3] On November 6, 2009, EDF, Inc. ("EDF") and Constellation Energy Group, Inc. completed a transaction pursuant to which EDF acquired a 49.99 percent ownership interest in CENG. CENG was previously a wholly owned subsidiary of Constellation Energy Group, Inc.

Comments relative to the proposed exclusion(s):

As described in RFC's BES definition, the following elements should be excluded:

(1) radial facilities connected to load serving facilities or individual generation resources smaller than 20 MVA or a generation plant with aggregate capacity less than 75 MVA where the failure of the radial facilities will not adversely affect the reliable steady-state operation of other facilities operated at voltages of 100 kV or higher and

(2) balance of generating plant control and operation functions (other than protection systems that directly control the unit itself and step-up transformer); these facilities would include relays and systems that automatically trip a unit for boiler, turbine, environmental, and/or other plant restrictions, and

(3) all other facilities operated at voltages below 100 kV.

William J. Gallagher, Vermont Public Power Supply Authority

Telephone: (802) 839-0562

Email: bgallagher@vppsa.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages 100kV and above which should be considered for exclusion from the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for exclusion:

This question refers to "exclusions"; we believe, however, that the intent of this comment form is to elicit feedback on the process for "exemptions." It is important to distinguish between the two concepts, as FERC did in Order 743. *See*, *e.g.*, Paragraph 1, which refers to "maintain[ing] a bright-line threshold that includes all facilities operated at or above 100 kV *except defined radial facilities*," as well as to "establish[ing] an exemption process and criteria" (emphasis added). In other words, in brief, an "exclusion" is outside of the BES by definition, whereas exempt Elements are removed on a case-by-case basis by going through a process.

TAPS draws the distinction as follows:

An exclusion is the removal of a category of Elements from the BES definition. The current BES definition explicitly carves out radials serving only load with one transmission source. This is a clear example of an exclusion. There is no "exclusion process" now, nor should there be one in the future; the point of an exclusion is that the class of excluded Elements can—without any process—be treated like sub-100 kV transmission, in that they are presumed to be non-BES unless a particular Element is demonstrated, on a case-by-case basis, to be properly included in the BES (*see* responses to Questions 5 and 11 in TAPS' comments on BES definition, submitted today, and TAPS response to Question 2 below).

An exemption, on the other hand, is a finding that a particular Element, although nominally part of the BES, does not need to be included in the BES because it is not necessary for operating an interconnected transmission network.

Because exemptions are less clear-cut than exclusions, each exemption of an Element needs to be approved by NERC so that the Registered Entity and compliance authorities have certainty about the Elements with respect to which compliance is required. In many, perhaps all, cases, this process will likely require a case-by-case examination of each Element for which an exemption is requested.

TAPS responds to this question with respect to the one "exclusion" from the BES definition that we advocate, that of radial Transmission Elements serving only load and/or generation not registered pursuant to the Statement of Compliance Registry Criteria. We also propose uniform criteria for deciding, on a case-by-case

basis, whether to grant requested exemptions from the BES, or to include nominally non-BES Elements in the BES. The process that we propose for exemption requests and proposed inclusions is discussed below in response to the invitation of "[c]omments relative to the proposed exclusion(s)."

Exclusion:

TAPS proposes only one exclusion from the BES definition, namely, "Radial Transmission Elements serving only load with one Transmission source are generally not included in this definition. A radial Transmission Element may be considered as 'serving only load' for purposes of the foregoing general exclusion even if it connects generation, so long as that generation is not registered pursuant to the Statement of Compliance Registry Criteria." This formulation, which is discussed in TAPS' comments submitted today on the BES definition, is intended to preserve the current exclusion of radials serving only load with one transmission source, and to clarify that the presence of a generator that is not registered under the Compliance Registry Criteria does not convert a radial into a BES Element. The end result is that radial transmission is excluded unless it connects generation that is registered pursuant to the Statement of Compliance Registry Criteria. Consistent with the Compliance Registry Criteria, a single generator under 20 MVA, or a plant under 75 MVA, if not designated as a Blackstart Resource needed for system restoration, is unlikely to affect the grid. Therefore, the presence of such generation should not require that an otherwise non-BES radial be included in the BES. Rooftop photovoltaic cells, for example, are increasingly common. If TAPS' proposed clarification is not accepted, the presence of such insignificant generation could nullify the exclusion of radials to load with one transmission source, with no benefit to reliability.

Exemption criteria

TAPS has not yet developed a list of criteria that we believe to be exhaustive, though we emphasize that such a list must be an ultimate goal of this process. We propose the following criteria as a start:

TAPS proposes that at least two classes of facilities be eligible to request an exemption:

i. Elements that are part of a radial "system" originating from a single BES source serving only load, as in the Florida Keys. Clarifications: a) radial system means any number of series and/or parallel Elements as long as they all originate from a single BES source and do not have another BES source; b) "single BES source" means one BES bus / substation / switching substation at one voltage level, and c) consistent with TAPS' proposed exclusion of radials serving only load and unregistered generation, "serving only load" includes serving generation that is not registered through the Statement of Compliance Registry Criteria.

ii. Elements that are part of a "looped" system that has two transmission sources primarily for local quality of service to the retail customers supplied by the looped system in question and is not used for bulk power system flow (*e.g.*, the transfer distribution factor of flows across the looped system is low, representing a high impedance path across the looped system). Specific criteria might be: a) a looped system that participates in less than a 5% of transfer (*e.g.*, 5% or less transfer distribution factor); and b) that the looped system in question does not limit transfers.

A radial or looped system to be exempted must meet the following criteria:

1. The radial or looped system may not contribute to any Category D or C contingency resulting in: 1) a supply / demand mismatch greater than the largest loss of source contingency in the Reliability Coordinator area; or 2) an Adverse Reliability Impact where, if the Element were not involved in those Category D or C contingencies, those thresholds would not be exceeded.

Studies to determine whether this criterion is met would be conducted in accordance with TPL-004-0 and TPL-003-0 standards (or corresponding contingencies in revision to the TPL standards) in the Short Term Planning Horizon. Although the above criteria are acceptable responses to a Category D contingency, the concept of the test is to see if a radial or looped system would cause a significantly worse response to Category C or D contingencies by testing the contingency with and without the radial or looped system. TAPS believes that such criteria are good indicators that a radial or looped system should be included in the BES as it highlights whether the protection systems are important for critical clearing times, and whether the radial or looped systems can contribute to an Adverse Reliability Impact in combination with other contingencies;

2. No portion of the radial or looped system may meet any of the conditions of Attachment 1 to CIP-002-4;

3. No portion of the radial or looped system may meet any of the conditions listed in items B1 to B5 of Attachment B to PRC-023-2;

4. No portion of the radial or looped system may be a part of, or be a limiting element of, any Path, Interchange, or Flowgate used in the calculation of ATC in accordance with standards MOD-028, MOD-029 or MOD-030; and

5. No portion of the radial or looped system may include a Blackstart Resource or cranking path deemed significant to the TOP or RC restoration plans of EOP-005, EOP-006 or EOP-007.

If a Registered Entity demonstrates to NERC that an Element that is nominally in the BES meets *all* of these criteria, the exemption would be granted.

Conversely, if NERC demonstrates that a nominally non-BES Element meets the negative of *any* of these criteria (*e.g.*, if any portion of the radial or looped system meets any of the conditions of Attachment 1 to CIP-002-4 or of Attachment B to PRC-023-2), the Element would be included in the BES.

Throughout these comments, TAPS refers to "Elements" and not to "facilities." This is because "Facility" is defined in the NERC Glossary as "[a] set of electrical equipment that operates as a single Bulk Electric System Element…" Because these comments (and the BES definition) address whether Elements are or are not part of the BES, it is incorrect to refer to the Elements in question as "Facilities," because a Facility is defined as a *BES* Element.

In developing the exemption/inclusion criteria and process, NERC and the SDT should bear in mind the requirement of Order 743: "NERC should develop an exemption process that includes *clear, objective, transparent, and uniformly applicable* criteria for exemption of facilities that are *not necessary for operating the grid*." Paragraph 115 (emphasis added). NERC and the SDT should also bear in mind that FERC anticipates that between the BES definition and the exemption process, there will be only "minimal[]" effect on "small entities." Order 743, Paragraph 169. Order 743 is referring to the Small Business Act definition of a "small electric utility" as one that has a total electric output of less than four million MWh in the preceding year. *See* March 18, 2010 BES Notice of Proposed Rulemaking, Paragraph 35 & footnote 50.

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: Radial Transmission Elements serving only load have been recognized for years as non-BES because such Elements are very unlikely to affect the BES. FERC stated in Order 743 that NERC may retain that exclusion.

Similarly, generators under 20 MVA and generating plants under 75 MVA are not subject to registration pursuant to the Statement of Compliance Registry Criteria, which has been accepted by FERC, because of the recognition that such generators are very unlikely to affect the BES. It is thus consistent with the Compliance Registry Criteria to exclude from the BES definition radials serving load with one transmission source even if there is some generation on the radial, so long as none of the generation is registered. If the generation is not significant enough to be registered, it is not significant enough to transform an otherwise non-BES radial to load into a BES Element.

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

The exclusion of radials to load and unregistered generation, as part of the BES definition, should apply on a continent-wide basis.

Each Element proposed for exemption or inclusion should be considered individually, under the same criteria (proposed above), applied uniformly continent-wide.

Comments relative to the proposed exclusion(s):

Exemption and Inclusion Processes:

The exemption and inclusion processes should be designed to ensure continent-wide uniformity to the maximum extent possible. To that end, NERC must use a uniform process; the criteria for approving or denying an exemption, or for including an Element in the BES, must be clear; and entities must be able to appeal decisions to another body within NERC or to FERC.

In order to obtain an exemption, a Registered Entity should be required to demonstrate that the Element for which it is requesting an exemption is not "necessary for operating an interconnected electric transmission network." This is the standard set out in Order 743 (*e.g.*, Paragraph 1); it is also part of the definition of the "bulk-power system" in Section 215 of the Federal Power Act, 16 U.S.C. § 824*o*(a)(1)(A). Application of this standard should be informed by the statutory definitions of "reliability standard" ("a requirement, approved by the Commission under this section, to provide for reliable operation of the bulk-power system," 16 U.S.C. § 824*o*(a)(3)) and "reliable operation" ("operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure of system elements," 16 U.S.C. § 824*o*(a)(4)).

Conversely, to include a nominally non-BES Element in the BES, NERC should be required to demonstrate that the Element *is* necessary for operating an interconnected electric transmission network.

Criteria for determining whether an Element is or is not "necessary for operating an interconnected electric transmission network" are proposed in response to Question 1(a) above. The criteria should be uniform continent-wide, though they will be applied to each Element on a case-by-case basis.

Exemption requests and proposed inclusions should be decided by NERC staff in the first instance. TAPS does not believe that the exemption and inclusion processes should be delegated to the Regional Entities. In Order 743, FERC emphasized the need for continent-wide uniformity; in fact, it was inconsistency among regions that

prompted Order 743. TAPS members' experience with Regional registration processes suggests that Regional implementation of the BES exemption and inclusion processes is unlikely to yield the uniformity that FERC directed. Furthermore, implementing this FERC directive will unavoidably require significant personnel resources, either at NERC or at the Regions. Delegating the process to the Regions would impose additional costs due to the need for NERC to exercise strong oversight to attempt to maintain uniformity. It may be that after the exemption and inclusion processes have been in place for a few years and a body of precedent has been accumulated, delegation will be appropriate. At this time, however, NERC staff should make the initial decision on all exemption requests and proposed inclusions.

TAPS proposes, for the sake of consistency with the registration appeal process, that appeals of decisions on exemptions and inclusions be to the Board of Trustees Compliance Committee (BOTCC), with further appeals to FERC if necessary. Appeals to the BOTCC would consist of the record compiled by NERC Staff, and additional paper submissions by NERC Staff and the Registered Entity demonstrating why the Element(s) in question is or is not "necessary for operating an interconnected electric transmission network." *See* NERC Rules of Procedure, Appendix 5A, Organization Registration and Certification Manual at 14-16. Registered Entities should have the option of requesting a hearing. Hearing procedures could be modeled on the Compliance and Certification Committee's "Hearing Procedures for Use in Appeals of Certification Matters," in Appendix 4E of the NERC Rules of Procedure.

TAPS also suggests that decisions on exemptions and inclusions be made available to others, either subject to CEII protection or in a form suitable for public release. As precedent develops, Registered Entities will increasingly be able to judge for themselves the likelihood that a particular exemption will be granted, or that an appeal of an inclusion will succeed. We expect that giving Registered Entities more information on which to base their decisions will significantly reduce the burden on NERC of processing exemptions and inclusions.

We propose that BES Elements for which an exemption request is pending should continue to be included in the BES until the exemption and any appeals are decided, and that non-BES Elements for which an inclusion is pending should continue to be non-BES until the inclusion and any appeals are decided.

The transition process should include an important exception to the general rule proposed for BES status during the pendency of an exemption request: to allow for a smooth transition, to the extent that Elements that are currently considered non-BES become BES under the new definition, those Elements should be permitted to request exemptions and to continue to be considered non-BES until their exemption requests and any appeals are decided.

David Angell, Idaho Power
Telephone: 208-388-2701
Email: daveangell@idahopower.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion: Non-radial transmission systems which provide reliable service to load-service substations. There are two examples where this applies: 1.) The non-radial transmission system serving a metro area load at 138 kV where 230 kV and higher voltage systems surround the area and provide the bulk electric system transfer, and 2.) The non-radial transmission loops that serve rural area load at 138 kV that are essentially tangential to the bulk electric transfer path.

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available). Refer to Attachment 1b.4

   c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

      Justification: Large load-serving substations require non-radial service to ensure acceptable reliability performance. Such transmission systems do not carry bulk power transfers as there are substantial higher voltage transmission lines that surround the metro area which carry the bulk transfers. Idaho Power has evaluated serving the area from systems that are sourced from only a single bulk substation. Such a configuration would result in requiring an additional 100 miles of transmission to compared to the existing network configuration.

   d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

      Continent-wide

Marc M. Butts, Southern Company

Telephone: 205-257-4839

Email: mmbutts@southernco.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion: Individual Generators ≤ 75 MVA; this threshold also needs to be included in the NERC Compliance Registry Criteria.

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

   c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

   Justification: Generators less than 75 MVA are not large enough to have a significant impact on the bulk electric system.. However, aggregate generation that exceeds 75 MVA should be considered for applications such as wind farms.

   d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

   ☒ Unknown

Andrew Z. Pusztai, American Transmission Company

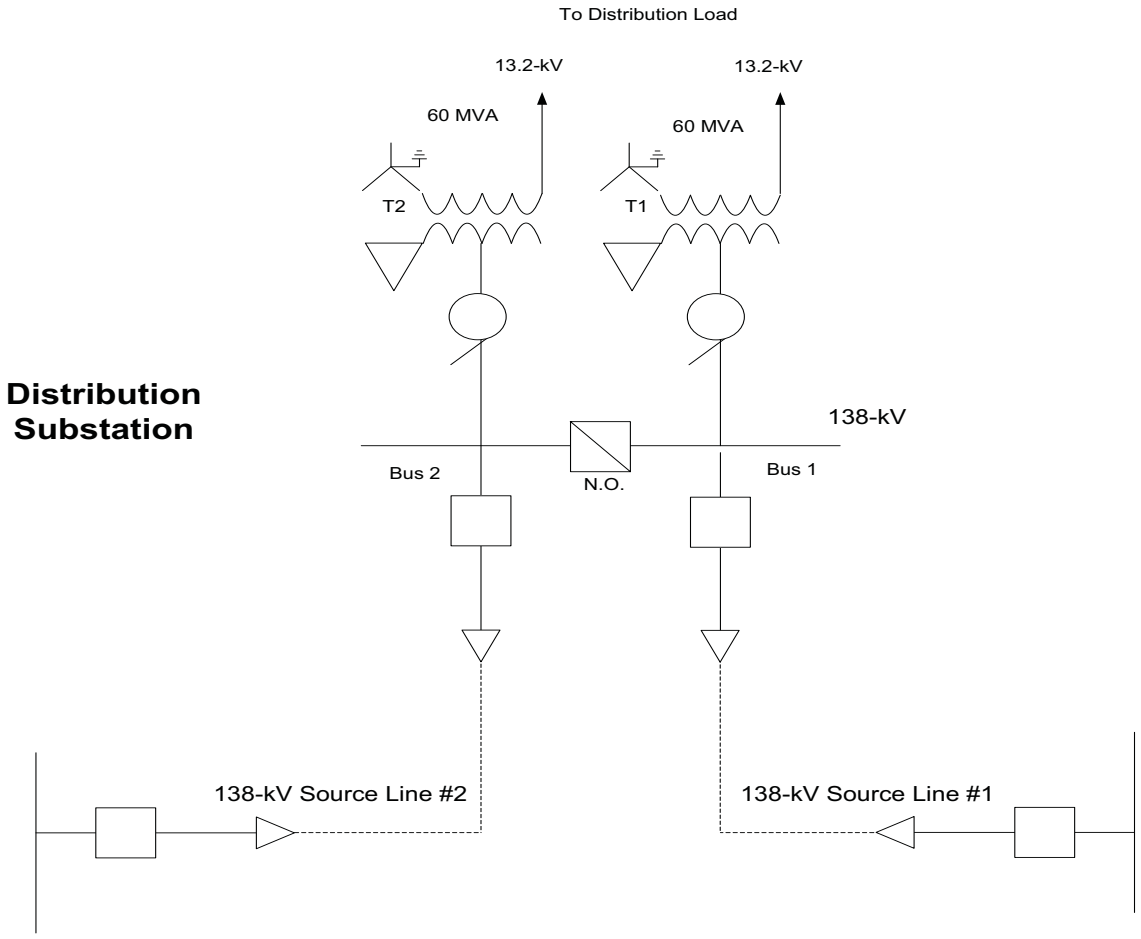
Telephone: 262-506-6913
Email: apusztai@atcllc.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion: Exclude transmission lines that are operated at 100 kV and above that are operationally radial transmission elements because of a operating restriction that prevents the line from being operated as a network transmission element.

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

   The transmission line between Source Line #1 and Sources Line #2 would be a Network element if the bus-tie circuit breaker was closed, However, Operating Procedures require the bus-tie circuit breaker to be normally open (N.O.) So, the load on Bus 1 is served by the radial line segment from Source Line #1 and the load on Bus 2 is served by the radial line segment from Source Line #2.



c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: Although the transmission element (line) between network Source #1 and network Source #2 could be a network element if the bus-tie breaker is closed, the two line sections are normally operated as two different radial elements. So, the radial Transmission Element exclusion should apply.

Ronald Sporseen, PNGC Power, Et all

Email: RSporseen@pngcpower.com

Supporters of the following comments are as follows:

Bud Tracy, Blachly-Lane Electric Cooperative
Dave Hagen, Clearwater Power Cooperative
Dave Sabala, Douglas Electric Cooperative
Heber Carpenter, Raft River Rural Electric Cooperative
Dave Markham, Central Electric Cooperative
Jon Shelby, Northern Lights, Inc.
Ken Dizes, Salmon River Electric Cooperative
Ray Ellis, Okanogan County Electric Cooperative
Richard Reynolds, Lost River Electric Cooperative
Rick Crinklaw, Lane Electric Cooperative
Roger Meader, Coos-Curry Electric Cooperative
Roman Gillen, Consumer's Power Inc.
Steve Eldrige, Umatilla Electric Cooperative
Marc Farmer, West Oregon Electric Cooperative
Michael Henry, Lincoln Electric Cooperative
Bryan Case, Fall River Electric Cooperative

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for exclusion:

- Radial lines
- Local distribution networks, generators, generation plants, loads, transformers, reactive devices, and protection and control system found to not cause adverse reliability impacts on neighboring bulk system Elements and Facilities using a performance-based exclusion process.

b. Provide a generic one-line diagram depicting the Element or Facility in question (if available).

Assuming FERC continues to insist upon a 100kV "bright line" definition, we support a process to exclude systems operating at 100kV and above that do not cause adverse reliability impacts on the neighboring bulk transmission system. For facilities operating at 100kV or above, the exclusion process should allow exclusion of those elements that, using a performance-based assessment, are demonstrated to operate without causing adverse reliability impacts on neighboring bulk system.

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: The ultimate goal of the Reliability Standards process should be to achieve reliable operation of the bulk transmission system, as defined by Congress. The term "reliable operation" was a term specifically defined in FPA Section 215 to include standards assuring the operation of bulk transmission system elements "within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance. . . or unanticipated failure of system elements." 16 U.S.C. § 825o(a)(4). Congress specifically precluded the mandatory reliability system from enforcing standards for adequacy of service, which were left to state and local authorities. 16 U.S.C. § 825o(i)(2).

Recognizing that Congress intended the mandatory reliability regime to focus on thermal, voltage, and stability limits on the bulk system rather than more generally on levels of service to retail customers, the Standards Development Team should define the Bulk Electric System to include only those facilities whose failure or mis-operation meaningfully threatens to produce instability, uncontrolled separation, or cascading failures on the bulk system. As a legal matter, expanding the definition to include local distribution facilities and facilities that do not threaten thermal, voltage or stability impacts on the bulk system exceeds the permissible scope of NERC Reliability Standards and FERC authority under FPA Section 215. As a practical matter, mandating adherence to Reliability Standards for facilities, or equipment, that do not cause adverse reliability impacts on the neighboring bulk system is a significant diversion of funds and resources that will produce little or no benefits in terms of improved reliability of the bulk system.

d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

☒ Interconnection-wide

Comments relative to the proposed exclusion(s): The WECC Bulk Electric System Definition Task Force ("BESDTF") has carefully considered and provided an extensive record of technical support for excluding Radial Facilities and Local Distribution Networks from the BES. While we recognize that physical differences between the electric system in WECC and other reliability regions may justify different approaches in those regions, we commend the work of the BESDTF to the standard drafting team.

Jerome Murray, Oregon Public Utility Commission

Telephone: 503-378-6626

Email: Jerry.murray@state.or.us

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion: An element or facility that is not necessary to reliably operate an interconnected transmission system need not be included in the BES

   d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

   ☒ Continent-wide

   ☒ Interconnection-wide

   ☒ Region-wide

   Comments relative to the proposed exclusion(s): This should be assessed first using engineering-based inspection (or screening) methodologies for 100 kV to 200 kV sub-transmission elements to determine obvious exclusions from the BES. For questionable sub-transmission elements, engineering-based studies evaluating worst-case scenarios need to be performed to establish exclusion from the BES.

   The thresholds associated with screening methodologies and worst-case studies may vary between interconnections and regions. For example, voltage deviation may be more relevant in the Western Interconnection (which is primarily stability limited) than in the Eastern Interconnection (which is primarily thermally limited).

John D. Martinsen , Public Utility District No. 1 of Snohomish County

Telephone: 425-783-8080

Email: jdmartinsen@snopud.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion:

      - Radial lines
      - Local distribution networks, generators, generation plants, loads, transformers, reactive devices, and protection and control system found to not cause adverse reliability impacts on neighboring bulk system Elements and Facilities using a performance-based exclusion process.

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available). Assuming FERC continues to insist upon a 100-kV "bright line" definition, SNPD supports a process to exclude systems operating at 100 kV and above that do not cause adverse reliability impacts on the neighboring bulk transmission system. For facilities operating at 100 kV or above, the exclusion process should allow exclusion of those elements that, using a performance-based assessment, are demonstrated to operate without causing adverse reliability impacts on neighboring bulk system.

      Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

   Justification: The ultimate goal of the Reliability Standards process should be to achieve reliable operation of the bulk transmission system, as defined by Congress. The term "reliable operation" was a term specifically defined in FPA Section 215 to include standards assuring the operation of bulk transmission system elements "within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance. . . or unanticipated failure of system elements." 16 U.S.C. § 824o(a)(4). Congress specifically precluded the mandatory reliability system from enforcing standards for adequacy of service, which were left to state and local authorities. 16 U.S.C. § 824o(i)(2).

   Recognizing that Congress intended the mandatory reliability regime to focus on thermal, voltage and stability limits on the bulk system rather than more generally on levels of service to retail customers, the Standards Development Team should define the Bulk

Electric System to include only those facilities whose failure or mis-operation meaningfully threatens to produce instability, uncontrolled separation, or cascading failures on the bulk system. As a legal matter, expanding the definition to include local distribution facilities and facilities that do not threaten thermal, voltage or stability impacts on the bulk system exceeds the permissible scope of NERC Reliability Standards and FERC authority under FPA Section 215. As a practical matter, mandating adherence to Reliability Standards for facilities that do not cause adverse reliability impacts on the neighboring bulk system is a significant diversion of funds and resources that will produce little or no benefits in terms of improved reliability of the bulk system.

c. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

☒ Continent-wide

☒ Interconnection-wide

Comments relative to the proposed exclusion(s): The WECC Bulk Electric System Definition Task Force ("BESDTF") has carefully considered and provided an extensive record of technical support for excluding Radial Facilities and Local Distribution Networks from the BES. While we recognize that physical differences between the electric system in WECC and other reliability regions may justify different approaches in those regions, we commend the work of the BESDTF to the standard drafting team.

Steve Alexanderson P.E., Central Lincoln

Telephone: 541-574-2064

Email: salexanderson@cencoast.com

1. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **100kV and above** which should be considered for **exclusion** from the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for exclusion: All the SS_ 115 kV buses in the attached one-lines as well as the connecting lines should be excluded from consideration since they are radial serving load. Additional facilities may be put through the exclusion process, and excluded if shown not to be needed for "reliable operation" as defined in 16 U.S.C. § 824o(a)(4).

   b. Provide a generic one-line diagram depicting the Element or Facility in question (if available). Refer to **Attachment 1b.10 & 1b.11**

   c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

   Justification: These SS_ facilities in the diagram are operated radially and are used to distribute energy locally. The FPA specifically excludes "facilities used in the local distribution of electric energy" (16 U.S.C. § 824o(a)(1)) and prohibits FERC from enforcing standards for adequacy of service (16 U.S.C. § 824o(i)(2)). In addition, any faults or failures in these facilities will only affect the local area, and not cause instability, uncontrolled separation, or cascading outages (16 U.S.C. § 824o(a)(4)). These facilities should be excluded by inspection, and should not be required to go through an exemption process.

   d. Identify if this exclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this exclusion should apply, please select, "unknown."

      X Continent-wide

   Comments relative to the proposed exclusion(s): The two diagrams illustrate the overreaching approach that WECC is presently using. Documents on the RFC web site prove that the WECC approach is not at all universal.

   The SS2 bus is presently considered by WECC to be BES because it has two transmission sources, NON-RADIAL SUB 1 and NON-RADIAL SUB 3, even though the K9-5 at SS3 is normally open. WECC considers any possible second source regardless of the system is operated. Any faults at SS3 or in the supplying lines will result only in a local outage. We hope the SDT will consider actual operating conditions when it defines "radial" and "one transmission source."

The 115 kV bus at SS6 is considered by WECC to be BES because it has two transmission sources, one by way of NON-RADIAL SUB 4 and the other by way of NON-RADIAL SUB 5 (off the one-line to the right). We don't think that is what NERC meant by "transmission source." A fault on the SS6 bus would result in a local outage affecting only the four substations tapped off the NON-RADIAL SUB 4/SUB 5 line. We assume that if the risk of such an outage was unacceptable, the serving transmission company would have required protection at the tap points. We hope the SDT will properly clarify what is meant by a transmission source.

All the SS 115 kV buses shown also have multiple transmission sources by way of normally open tie switches on the 12.47 kV system. Again we hope the SDT will consider operating philosophies when defining "radial" and "one transmission source."

All the substation transformers in the diagrams are considered by WECC to be BES because one winding exceeds 100 kV. We understand the SDT properly intends to look at the lowest voltage winding rather than the highest.

Except for the fuses at SS8, all the SS transformer protection systems are considered by WECC to be BES subject to PRC-005. This is not because the transformers are considered to BES, but because relay operation results in tripping a circuit switcher that exceeds 100 kV. We expect the SDT will properly consider the zone of protection rather than the voltage of the interrupting device.

Please also consider the 115 kV lines joining the NON-RADIAL SUBs in the two diagrams. While most of them cannot be considered to be radial with one transmission source, they are not used to transport bulk power. Their purpose is the local distribution of power. Parallel 230 kV lines (not shown in the diagrams) are responsible for the bulk power transport. The WECC Bulk Electric System Definition Task Force has been working on a definition of "local distribution networks" that would properly classify the 115 kV lines as non-BES. We hope the SDT will look at the work the BESDTF has done.

Question 2: Summary Consideration: Prior to the issuance of Order 743a**,** the SDT reviewed all of the provided material and used this material and the examples supplied in its consideration of the revised definition of the Bulk Electric System (BES). The goal of the SDT is to provide a bright-line definition of BES which adheres to the guidelines and directives in Order 743. This bright-line definition contains certain inclusions and exclusions for specific equipment and configurations. The SDT believes that this definition now answers many of the questions raised by industry and encompasses most of the examples provided. However, no bright-line definition will be able to capture all of the concerns or situations. Accordingly, and consistent with Order 743, another aspect of this project is to establish an exception process with criteria based on reliability principles for the Interconnected BES that will be incorporated in NERC's Rules of Procedure (ROP) that will allow a process for the inclusion or exclusion of a particular BES Element from the definition. This ROP work effort will be done by a separate team but the DBESSDT will be in close coordination with that team.

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

- **a.** Identify the Element or Facility recommended for inclusion:
- **b.** Attach a generic one-line diagram depicting the Element or Facility (if available).
- **c.** Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).
- **d.** Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

Commenters:

Michael Moltane and John Zipp, ITC Holdings 3

Frank Gaffney, Florida Municipal Power Agency, Et all 4

Brandy A. Dunn, Western Area Power Administration 7

Alain Pageau, Hydro-Québec TransÉnergie 8

Guy Zito, Northeast Power Coordinating Council 9

Jim UhrinReliabilityFirst Corporation 11

Joe Petaski, Manitoba Hydro 12

John W.Delucca, Lee County Electric Cooperative 13

Paul Cummings, City of Redding 14

Patrick Farrell, Southern California Edison Company..... 15

Manny Robledo, City of Anaheim 17

Lorissa Jones, Transmission Reliability Program Manager..... 18

David Burke, Orange and Rockland Utilities..... 19

Alice Ireland, Xcel Energy..... 20

Amir Hammad, Constellation Power Source Generation, Inc., Et all..... 21

William J. Gallagher, Transmission Access Policy Study Group..... 22

Marc M. Butts, Southern Company 23

Ronald Sporseen, PNGC Power, Et all 24

Michael Moltane and John Zipp, ITC Holdings

Telephone: 248-946-3093

Email: mmoltane@itctransco.com

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

Comments relative to the proposed inclusion(s): Again it is unclear what is meant by Region wide when talking about an element inclusion. It is important that this be tied to the PRC023 "Critical Element" definition/test. Why would I apply for an element inclusion when there is no definition of what is required for the element to be included?

Frank Gaffney, Florida Municipal Power Agency, Et all

Florida Municipal Power Agency is filing the comments below on behalf of its' project participants:

City of New Smyrna Beach
KUA
Lakeland Electric
City of Clewiston
Beaches Energy Services
Ocala Electric Utility

Telephone: 407-355-7767
Email: frank.Gaffney@fmpa.com

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion:

FMPA' proposed criteria for inclusion are listed above in response to Question 1(a). As stated above, there should be no "generic" or "categorical" inclusions. Inclusions, like exemptions, should be considered on a case-by-case basis. The *criteria* by which proposed inclusions or requested exemptions are judged, however, should be uniform across the continent.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Continent-wide

Comments relative to the proposed inclusion(s): This question appears to assume that all inclusions in the BES will be categorical, rather than case-by-case. This is inappropriate. Inclusions, like exclusions, should involve case-specific consideration of the uniform, continent-wide criteria.

The inclusion process should be the mirror image of the exemption process: it is NERC, rather than the Registered Entity, who initiates the process, and the burden is on NERC to demonstrate that the Element to be included is "necessary for operating an interconnected electric transmission network." The processes should otherwise be identical: the initial determination should be made by NERC staff, with appeals to the Board of Trustees Compliance Committee, and to FERC if necessary. The proposed process is discussed in more detail in response to Question 1 above.

Michelle Mizumori, Western Electricity Coordinating Council

Telephone: 801-819-7624

Email: mmizumori@wecc.biz

3. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: Elements or Facilities that are shown through engineering studies to be necessary to reliably operate an interconnected bulk electric system.

b. Attach a generic one-line diagram depicting the Element or Facility (if available).

c. Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: An element or facility that is necessary to reliably operate an interconnected transmission system should be included in the BES. This can be measured using engineering studies that show the effect of worst-case disturbances on multiple indicators such as frequency, voltage, system flows, operating limits, generator tripping, cascading outages, and/or islanding. If the system cannot maintain acceptable steady-state and dynamic performance with a disturbance at the element, it is necessary to reliably operate the system.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Continent-wide

☒ Interconnection-wide

☒ Region-wide

Comments relative to the proposed inclusion(s): While operating voltage (i.e., the proposed 100 kV bright-line) may be a clear and repeatable proxy for identifying those elements that are necessary to reliably operate an interconnected transmission system, it is a broad approach that may not adequately address specific examples. Moreover, engineering studies can be used to more granularly and accurately identify such elements that are needed to reliably operate an interconnected transmission system.

The thresholds on the indicators listed above may vary between interconnections and regions. For example, voltage deviation may be more relevant in the Western

Interconnection (which is primarily stability limited) than in the Eastern Interconnection (which is primarily thermally limited).

Brandy A. Dunn, Western Area Power Administration

Telephone: 720-962-7431

Email: dunn@wapa.gov

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: Any Element above 100-kV that is shown (through system studies) to be necessary to reliably operate the interconnected transmission system.

b. Attach a generic one-line diagram depicting the Element or Facility (if available).

c. Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: An Element that is required to reliably operate the interconnected transmission system should be included in the BES. This can be assessed through engineering system studies that show the worst-case results based on indicators such as voltage, frequency, OTC limits, angular instability and/or cascading outages based on that Element being removed from service. If the system cannot maintain acceptable performance without that Element, it is necessary to reliably operate the interconnected transmission system.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Continent-wide

☒ Interconnection-wide

☒ Region-wide

Comments relative to the proposed inclusion(s): While a brightline test voltage (such as the proposed >100-kV) may be a clear and repeatable proxy for identifying Elements that are necessary to reliably operate the interconnected transmission system, this broad approach may not adequately address specific examples. Engineering system studies can accurately identify Elements which are not needed to reliably operate the interconnected transmission system.

Alain Pageau, Hydro-Québec TransÉnergie

Telephone: 514 879-4100 #5414

Email: pageau.alain@hydro.qc.ca

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: Common interconnection between the two jurisdictions.

b. Attach a generic one-line diagram depicting the Element or Facility (if available).

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: Common rules should applied to the common elements.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Continent-wide

Guy Zito, Northeast Power Coordinating Council

Telephone: 212-840-1070

Email: gzito@npcc.org

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: Transmission facilities as determined to be necessary for reliability to the bulk electric system. Common interconnections between two or more areas.

b. Attach a generic one-line diagram depicting the Element or Facility (if available).

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: The exemption process should allow for a registered entity to submit the results of an objective, impact based assessment evaluation in support of its application for exemption of facilities that would otherwise be classified as part of the BES. This assessment process, when consistently applied in a non-arbitrary manner, would yield results that demonstrate that the facilities for which the exemption is being sought do not impact the BES whenever they are removed from service.

Any regional or registered entity can present technical studies to NERC for consideration of the expansion of the Bulk Electric System. The primary consideration by NERC Staff for inclusion must be that the addition of these recommended facilities bring a measurable (not subjective) incremental reliability benefit to real-time grid operations. Common rules should apply to elements common to the interconnections between two or more areas.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Continent-wide

☒ Interconnection-wide

☒ Region-wide

☒ Less than Region-wide

Comments relative to the proposed inclusion(s): Registered Entities must retain the right to appeal any decisions with direct implications to their facilities. Broad applications of "included facilities" could result in the designation of facilities, the

inclusion of which is not warranted. Registered Entities need the right to seek exemption when broad new inclusions are applied.

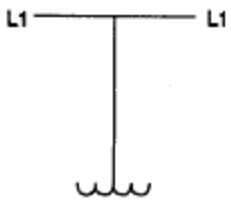
Jim Uhrin ReliabilityFirst Corporation

Telephone: 330.247.3058
Email: jim.uhrin@rfirst.org

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: Those facilities that trip and lockout a BES facility at anytime must be included.

b. Attach a generic one-line diagram depicting the Element or Facility (if available).



In the diagram above, the distribution transformer operated below 100 kV without a high-side interrupting device and connected to the BES that does or could trip and lockout a BES facility should be included since there is no way to isolate the transformer without tripping/locking out another BES facility. However, if radial equipment has sectionalizing (such as a high-side ground switch or circuit switcher) that prohibits its operation from or does not trip and lockout a BES facility for any reason and therefore could not affect operation of the BES, those facilities could also be excluded.

c. Provide a technical justification for the exclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: If the facility trips and lockouts a BES facility, then it should be included as a part of the BES.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Continent-wide

Joe Petaski, Manitoba Hydro

Telephone: 204-487-5332

Email: jpetaski@hydro.mb.ca

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

Comments relative to the proposed inclusion(s): No comment but there should be no regional differences in the BES definition or in the BES definition exemption process.

John W.Delucca, Lee County Electric Cooperative

Telephone: 239-656-2190

Email: john.delucca@lcec.net

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

- **a.** Identify the Element or Facility recommended for inclusion: No specific element proposed.
- **b.** Attach a generic one-line diagram depicting the Element or Facility (if available).
- **c.** Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

  Justification: The only reason a lower voltage should be considered for inclusion is if, under normal operating conditions, loss of these elements has a significant reliability impact upon the BES

Comments relative to the proposed inclusion(s): Only where and if a rare case of BES impact exists.

Paul Cummings, City of Redding

Telephone: 530-245-7016

Email: pcummings@ci.redding.ca.us

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: Those elements or facilities operated b elow 100kV that are shown through engineering studies to be necessary to reliably operate an interconnected transmission system. See Attachment 1below.

b. Attach a generic one-line diagram depicting the Element or Facility (if available).

Refer to Attachment 1b.5

c. Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: "The impact an Element has on the BES shall be determined by assessing the performance of key measures of BES reliability through power flow, post-transient, and transient stability analysis with (1) the system, and the Subject Element, operating at reasonably stressed conditions that replicate expected system conditions under which the loss of the Subject Element would have the greatest impact on the key measures of reliability, and (2) the Subject Element removed from service, but without allowing for system readjustment."

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Continent-wide

☒ Interconnection-wide

☒ Region-wide

Patrick Farrell, Southern California Edison Company

Telephone: 626-302-1321

Email: Patrick.Farrell@sce.com

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: Elements or Facilities that are shown through engineering studies to be necessary to reliably operate an interconnected bulk electric system may need to be included even if operated at voltages below 100kV. Additionally, there are transmission facilities at 100kV and above that are radial in nature and used for load serving purposes that are not parallel to interconnected transmission systems. As an example, in SCE's system the Valley 115kV system is radial in nature and the power flow is generally from 500kV to 115kV to serve load.

b. Attach a generic one-line diagram depicting the Element or Facility (if available).

c. Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: An element or facility that is necessary to reliably operate an interconnected transmission system should be included in the BES. This can be measured using engineering studies that show the effect of worst-case disturbances on multiple indicators such as frequency, voltage, system flows, operating limits, generator tripping, and cascading outages and/or islanding. If the system cannot maintain acceptable steady-state and dynamic performance without the subject element in service, that element is necessary to reliably operate the system.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

X Continent-wide

X Interconnection-wide

X Region-wide

Comments relative to the proposed inclusion(s): While operating voltage (i.e. the proposed 100kV bright-line) may be a clear and repeatable proxy for identifying those elements that are necessary to reliably operate an interconnected transmission system, it is a broad approach that may not adequately address specific examples. Engineering studies can be used to more granularly and accurately identify elements which are not needed to reliably operate an interconnected transmission system.

The thresholds on the indicators listed above may vary between interconnections and regions. For example, SCE's system has facilities rated at the 115kV level that are radial in nature for load serving purposes. Therefore, applying a 100kV bright-line may unnecessarily bring facilities that could be excluded through an engineering study.

Manny Robledo, City of Anaheim

Telephone: 714-765-5107

Email: mrobledo@anaheim.net

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

Comments relative to the proposed inclusion(s): Anaheim's sub-transmission system is operated at 69kV and is radial to the BES with one transmission source. There is no transmission through Anaheim, and there are no generators connected to Anaheim's distribution system that are required for the reliable operation of the BES.

Lorissa Jones, Transmission Reliability Program Manager

Telephone: 360-418-8978

Email: ljjones@bpa.gov

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: Elements or Facilities that are shown through engineering studies to be necessary to reliably operate an interconnected bulk electric system. Balancing Authorities need to have the authority to recommend inclusion on a facility by facility basis based on impact to the larger BES considerations for registration.

b. Attach a generic one-line diagram depicting the Element or Facility (if available).

c. Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: An element or facility that is necessary to reliably operate an interconnected transmission system should be included in the BES. This can be measured using engineering studies that show the effect of worst-case disturbances on multiple indicators such as frequency, voltage, system flows, operating limits, generator tripping, cascading outages and/or islanding. If the system cannot maintain acceptable steady-state and dynamic performance without the subject element in service, it is necessary to reliably operate the system.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Interconnection-wide

☒ Region-wide

Comments relative to the proposed inclusion(s): While operating voltage (i.e. the proposed 100 kV brightline) may be a clear and, repeatable proxy for identifying those elements that are necessary to reliably operate an interconnected transmission system, it is a broad approach that may not adequately address specific examples. Moreover engineering studies can be used to more granularly and accurately identify such elements which are needed to reliably operate an interconnected transmission system.

David Burke, Orange and Rockland Utilities

Telephone: 845-577-3076

Email: burkeda@oru.com

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: Transmission facilities as determined to be necessary for reliability to the bulk electric system.

b. Attach a generic one-line diagram depicting the Element or Facility (if available).

c. Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: Any regional or registered entity can present technical studies to NERC for consideration of the expansion of the Bulk Electric System. The primary consideration by NERC Staff for inclusion must be that the addition of these recommended facilities bring a measurable (not subjective) incremental reliability benefit to real-time grid operations.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

X☐ Continent-wide

X☐ Interconnection-wide

X☐ Region-wide

X☐ Less than Region-wide

Comments relative to the proposed inclusion(s): Registered Entities must retain the right to appeal any decisions with direct implications to their facilities. Broad applications of "included facilities" could result in the designation of facilities, the inclusion of which is not warranted. Registered Entities need the right to seek exemption when broad new inclusions are applied.

Alice Ireland, Xcel Energy

Telephone: 303-571-7868

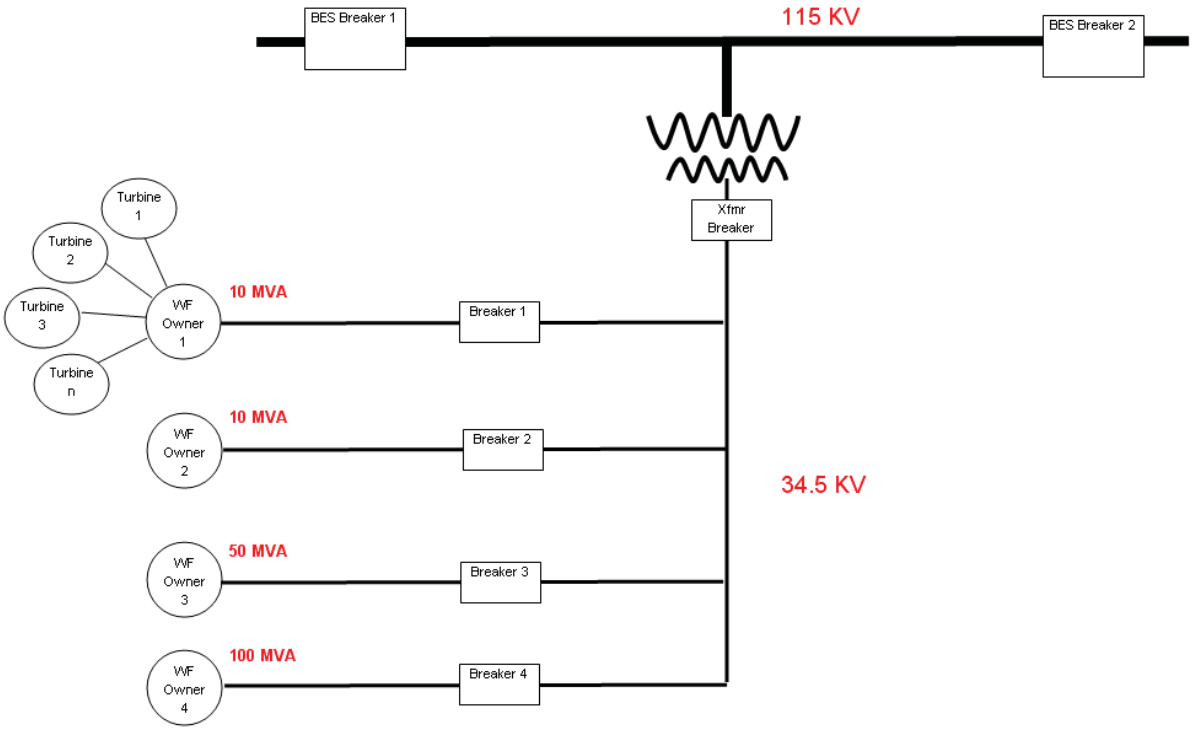
Email: alice.murdock@xcelenergy.com

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Unknown

Comments relative to the proposed inclusion(s): The scenario below should be considered and worked through as part of the development of the definition and exemptions. As stated in questions 2, 3, 8 of the BES definition comment questionnaire it is unclear as to how treatment of facilities would occur, especially if there are multiple/separate owners of each wind farm, even thought they aggregate to a common bus that connects to the transmission system. Treatment of the bus and breakers between each wind farm and the transformer also needs to be contemplated and addressed in the definition or exclusion process.



Amir Hammad, Constellation Power Source Generation, Inc., Et all

CPSG is filing the comments below on behalf of:

Constellation Energy Group, Inc.
Baltimore Gas & Electric Company
Constellation Energy Commodities Group, Inc.
Constellation Energy Control and Dispatch, LLC
Constellation NewEnergy, Inc. and its affiliates
Constellation Energy Nuclear Group, LLC,[1]

Telephone: 410-787-5226
Email: amir.hammad@constellation.com

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: Constellation believes that the drafting team should incorporate the inclusions found in the Compliance Registration criteria that have been excluded by the proposed BES definition. RFC has adopted this approach in their BES definition.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Continent-wide

Comments relative to the proposed inclusion(s): Constellation does not believe that there are any Transmission or Generation Elements or Facilities operated at voltages below 100kV that should be considered for inclusion in the Elements and Facilities classified as part of the BES other than those provided for in the Compliance Registration Criteria and echoed in the RFC BES Definition sited above.

[1] On November 6, 2009, EDF, Inc. ("EDF") and Constellation Energy Group, Inc. completed a transaction pursuant to which EDF acquired a 49.99 percent ownership interest in CENG. CENG was previously a wholly owned subsidiary of Constellation Energy Group, Inc.

William J. Gallagher, Transmission Access Policy Study Group

Telephone: (802) 839-0562

Email: bgallagher@vppsa.com

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: TAPS' proposed criteria for inclusion are listed above in response to Question 1(a). As stated above, there should be no "generic" or "categorical" inclusions. Inclusions, like exemptions, should be considered on a case-by-case basis. The *criteria* by which proposed inclusions or requested exemptions are judged, however, should be uniform across the continent.

Comments relative to the proposed inclusion(s): This question appears to assume that all inclusions in the BES will be categorical, rather than case-by-case. This is inappropriate. Inclusions, like exclusions, should involve case-specific consideration of the uniform, continent-wide criteria.

The inclusion process should be the mirror image of the exemption process: it is NERC, rather than the Registered Entity, who initiates the process, and the burden is on NERC to demonstrate that the Element to be included is "necessary for operating an interconnected electric transmission network." The processes should otherwise be identical: the initial determination should be made by NERC staff, with appeals to the Board of Trustees Compliance Committee, and to FERC if necessary. The proposed process is discussed in more detail in response to Question 1 above.

Marc M. Butts, Southern Company

Telephone: 205-257-4839

Email: mmbutts@southernco.com

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

Comments relative to the proposed inclusion(s): Subpart D should be deleted – any inclusion should be a specific request for a specific facility, not on a generic Continent-wide, Interconnection-wide or Region wide-basis.

Ronald Sporseen, PNGC Power, Et all

Email: RSporseen@pngcpower.com

Supporters of the following comments are as follows:

Bud Tracy, Blachly-Lane Electric Cooperative
Dave Hagen, Clearwater Power Cooperative
Dave Sabala, Douglas Electric Cooperative
Heber Carpenter, Raft River Rural Electric Cooperative
Dave Markham, Central Electric Cooperative
Jon Shelby, Northern Lights, Inc.
Ken Dizes, Salmon River Electric Cooperative
Ray Ellis, Okanogan County Electric Cooperative
Richard Reynolds, Lost River Electric Cooperative
Rick Crinklaw, Lane Electric Cooperative
Roger Meader, Coos-Curry Electric Cooperative
Roman Gillen, Consumer's Power Inc.
Steve Eldrige, Umatilla Electric Cooperative
Marc Farmer, West Oregon Electric Cooperative
Michael Henry, Lincoln Electric Cooperative
Bryan Case, Fall River Electric Cooperative

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages below 100kV which should be considered for inclusion in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: In rare cases, facilities operating below 100kV should be considered for inclusion in the BES, but only if the RRO provides clear evidence that such facilities threaten to cause instability, uncontrolled separation, or cascading outages on the bulk transmission system if those facilities are not included as part of the BES.

b. Attach a generic one-line diagram depicting the Element or Facility (if available).

c. Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: As discussed above, the ultimate goal of the standards drafting process must be to ensure the reliable operation of the bulk transmission system, so that the risks of instability, uncontrolled separation, and cascading outages on the bulk system are reduced. In rare cases, it is possible that facilities operating at voltages below 100kV may create risks of this kind to the bulk system. However, caution should be used when identifying parallel lower voltage systems that reduce transfers on higher voltage systems as reliability concerns. In many cases these concerns are commercial in nature and the burden to resolve these capacity issues should be placed on the TSP.

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

☒ Continent-wide

☒ Interconnection-wide

Comments relative to the proposed inclusion(s): The BESDTF has developed an approach in which certain facilities operating at voltages below 100kV would be included in the BES, but facilities not falling within these specific, defined categories would not be included in the BES unless the RRO could demonstrate that the facility creates a material impact threatening the reliable operation of the bulk interconnected system. We believe this is a sensible approach to this question.

John D. Martinsen, Public Utility District No. 1 of Snohomish County

Telephone: 425-783-8080

Email: jdmartinsen@snopud.com

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **below 100kV** which should be considered for **inclusion** in the Elements and Facilities classified as part of the BES:

   a. Identify the Element or Facility recommended for inclusion:

      In rare cases, facilities operating below 100 kV should be considered for inclusion in the BES, but only if the RRO provides clear evidence that such facilities threaten to cause instability, uncontrolled separation, or cascading outages on the bulk transmission system if those facilities are not included as part of the BES.

   b. Attach a generic one-line diagram depicting the Element or Facility (if available).

   c. Provide a technical justification for the inclusion (provide justification here or attach a supplemental document or URL link to publicly posted document if available).

Justification: As discussed above, the ultimate goal of the standards drafting process must be to ensure the reliable operation of the bulk transmission system, so that the risks of instability, uncontrolled separation, and cascading outages on the bulk system are reduced. In rare cases, it is possible that facilities operating at voltages below 100 kV may create risks of this kind to the bulk system. However, caution should be used when identifying parallel lower voltage systems that reduce transfers on higher voltage systems as reliability concerns. In many cases these concerns are commercial in nature and the burden to resolve these capacity issues should be placed on the TSP.

   d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

      ☒ Continent-wide

      ☒ Interconnection-wide

Comments relative to the proposed inclusion(s): The BESDTF has developed an approach in which certain facilities operating at voltages below 100-kV would be included in the BES, but facilities not falling within these specific, defined categories would not be included in the BES unless the RRO could demonstrate that the facility creates a material impact threatening the reliable operation of the bulk interconnected system. We believe this is a sensible approach to this question.

Steve Alexanderson P.E., Central Lincoln

Telephone: 541-574-2064

Email: salexanderson@cencoast.com

2. If you believe there are Transmission or Generation Elements or Facilities operated at voltages **below 100kV** which should be considered for **inclusion** in the Elements and Facilities classified as part of the BES:

a. Identify the Element or Facility recommended for inclusion: This burden would be on the Regional Entity rather than the Registered Entity. Facilities that are not radial serving only load may be put through an inclusion process (similar to, but with the opposite effect of the exclusion process) to determine if they are needed for "reliable operation" as defined in 16 U.S.C. § 824o(a)(4).

d. Identify if this inclusion should apply on a continent-wide basis, interconnection-wide basis, region-wide basis, or less than a region-wide basis. If you don't know how widely this inclusion should apply, please select, "unknown."

X Continent-wide

Question 3: Summary Consideration: Prior to the issuance of Order 743a**,** the SDT reviewed all of the provided material and used this material and the examples supplied in its consideration of the revised definition of the Bulk Electric System (BES). The goal of the SDT is to provide a bright-line definition of BES which adheres to the guidelines and directives in Order 743. This bright-line definition contains certain inclusions and exclusions for specific equipment and configurations. The SDT believes that this definition now answers many of the questions raised by industry and encompasses most of the examples provided. However, no bright-line definition will be able to capture all of the concerns or situations. Accordingly, and consistent with Order 743, another aspect of this project is to establish an exception process with criteria based on reliability principles for the Interconnected BES that will be incorporated in NERC's Rules of Procedure (ROP) that will allow a process for the inclusion or exclusion of a particular BES Element from the definition. This ROP work effort will be done by a separate team but the DBESSDT will be in close coordination with that team.

Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Commenters:

John A. Gray, The Dow Chemical Company 3

Michael Moltane/John Zipp, ITC Holdings 4

Laura Lee, Duke Energy 5

Michelle Mizumori, Western Electricity Coordinating Council 6

Brandy A. Dunn, Western Area Power Administration 7

Alain Pageau, Hydro-Québec TransÉnergie 8

Guy Zito, Northeast Power Coordinating Council 9

Jim UhrinReliabilityFirst Corporation 11

Joe Petaski, Manitoba Hydro 12

John W. Delucca, Lee County Electric Cooperative 13

Paul Cummings, City of Redding 14

Patrick Farrell, Southern California Edison Company 15

Dan Rochester, Independent Electricity System Operator 16

Lorissa Jones, Transmission Reliability Program Manager 18

David Burke, Orange and Rockland Utilities 19

Alice Ireland, Xcel Energy 21

Allen Mosher, American Public Power Association 22

Jim Case, Entergy SERC OC Standards Review Group..... 25

John P. Hughes, Electricity Consumers Resource Council (ELCON) 26

Thad Ness, American Electric Power 31

Amir Hammad, Constellation Power Source Generation, Inc. (CPSG), Et All..... 32

Marc M. Butts, Southern Company 35

Andrew Z. Pusztai, American Transmission Company..... 36

Al DiCaprio, PJM 37

Bud Tracy, Blachly-Lane Electric Cooperative..... 38

Jerome Murray, Oregon Public Utility Commission 41

John D. Martinsen , Public Utility District No. 1 of Snohomish County 42

Steve Alexanderson P.E., Central Lincoln..... 45

Brian J. Murphy, NextEra Energy, Inc. 46

Phil Tatro, NERC Staff..... 49

John A. Gray, The Dow Chemical Company

281-966-2390
JAGray3@dow.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

   Comments: Dow has reviewed and generally supports the comments prepared by The Electricity Consumers Resource Council (ELCON).

Michael Moltane/John Zipp, ITC Holdings

Telephone: 248-946-3093

Email: mmoltane@itctransco.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: I would be motivated to apply for element exclusions and the process looks good. I don't see a reason for us to apply for any inclusions

Laura Lee, Duke Energy

Telephone: 704-382-3625

Email: Laura.Lee@duke-energy.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: There are three parts to the work that need to be accomplished to fulfill the intent of the Commission's Order; 1) revision of the definition of Bulk Electric System, 2) development of exemption criteria and 3) development of a process for applying the exemption criteria. The first two parts of the work should be accomplished using the standards development process. This work is technical in nature and therefore should be developed by technical experts in the industry. The Rules of Procedure change process should be reserved for the mechanics of administering the exemption process.

The Regions should administer the exemption process with NERC serving an oversight role to ensure consistency among the Regions. This would fit logically with the Regions' administration of other processes such as the registration process.

Each registered entity that identifies Transmission or Generation Elements or Facilities that should be included or excluded from the Bulk Electric System should submit an application to the Region, including the information sought in parts a, b and c of questions 1 and 2 in this document (i.e., identification of the Element or Facility, diagram, and technical justification). The Region should then review the request through a stakeholder technical committee using the criteria approved through the standards development process. NERC should periodically review all applications of the exemption process to ensure consistency in the Regions' application of the criteria.

Michelle Mizumori, Western Electricity Coordinating Council

Telephone: 801-819-7624

Email: mmizumori@wecc.biz

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: In addition to defining functional characteristics that can be used for an exemption process, the use of engineering studies that demonstrate the effect of an element on system performance must also be allowed, but must include clearly-defined and technically-justified assumptions, metrics, and thresholds. To the extent that there are physical differences between regions or interconnections, variations between those regions and interconnections must be allowed. However; all assumptions, metrics, and thresholds must be thoroughly vetted and approved by NERC as part of the NERC Exemption Process. Furthermore, it would be helpful if NERC could clarify the process that it will use to develop the Exemption Process and Criteria, including how the team will be populated, how coordination with the Drafting Team will be assured, and how the vetting process would occur. It is important that the team developing the exemption criteria includes technical experts from the stakeholder community.

Brandy A. Dunn, Western Area Power Administration

Telephone: 720-962-7431

Email: dunn@wapa.gov

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: The use of engineering system studies that demonstrate the impact of an Element on system performance must be allowed to demonstrate inclusion/exclusion to the BES. To the extent there are physical differences between Regions, variations between those Regions must be allowed. Also – the Exception Definition Task Force needs to be a stakeholder-populated/ -driven process.

The exemption process should be part and parcel of the definition. Exemption language furthermore must be explicit and unambiguous. The WECC Bulk Electric Definition Task Force (BESDTF) has expended considerable effort over the last two years exploring important issues pertaining to exempting elements from the BES including;

a. Lines of demarcation between BES and non-BES elements
b. Definition of 'radial'
c. High voltage distribution networks.
d. Impact assessment methodologies.

Alain Pageau, Hydro-Québec TransÉnergie

Telephone: 514 879-4100 #5414

Email: pageau.alain@hydro.qc.ca

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: For the Canadian entities, the inclusion or exclusion of equipment and facilities in the BES must be also approved by the Canadian regulators. (as answer 2c). We believe that it is very difficult to propose first a definition for the BES and only after an Exemption process. Both aspects influence each other and both should be carried out together.

Guy Zito, Northeast Power Coordinating Council

Telephone: 212-840-1070

Email: gzito@npcc.org

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments:

[1] **Seven Factor Test** – NPCC participating members believe that the BES Exclusion process should place substantial weight upon Factor 3 from the FERC Seven Factor test. Factor 3 states, "Power flows into local distribution systems, and rarely, if ever flows out."[1] We also believe that Factor 7 has been broadly interpreted by FERC, State Commissions and the Courts to **include** facilities serving a distribution function and operated at 100 kV and above. [2,3,4,5,6,7]

[2] **NPCC A-10 Methodology for Determine BPS Elements** – NPCC participating member believe the A-10 Criteria methodology that NPCC uses to determine its BPS elements can be further utilized to identify critical system components that may be operated below the 100 kV threshold. The Criteria may also be used be used in lieu of the use of "higher" thresholds that appear or are contemplated in some of the ERO standards such as FAC-003 cites 200kV and above, the TPL-001 currently under development may specify a 200 kV threshold for some "more stringent" planning criteria. These higher thresholds may lend themselves to the use of an "impact based" methodology that could be used to determine where more stringent requirements may need to be applied.

[3] **New York State Public Service Commission (NYSPSC)** - In Opinion No. 97-12, Case 97-E-0251, the NYPSC provided utilities under its jurisdiction explicit guidance for

[1] We view the term "rarely" as used in Factor 3 to be bounded on the upside by a reverse power flow rate of no more than 10% of all hours and a peak reverse power flow (MW) amount of no more than 50% of peak inflows.
[2] STATE OF IOWA DEPARTMENT OF COMMERCE UTILITIES BOARD, DOCKET NO. SPU-98-12, IN RE: MIDAMERICAN ENERGY COMPANY, ORDER RECOMMENDING DELINEATION OF TRANSMISSION AND LOCAL DISTRIBUTION FACILITIES, Issued April 30, 1999. See http://www.state.ia.us/iub/docs/orders/1999/0430_spu9812.pdf
[3] *Pacific Gas and Electric Company, et al*., 77 FERC ¶ 61,077 at 61,325 (1996).
[4] *Puget Sound Energy, Inc*., 110 FERC ¶ 61,229 at 61,856 (2005).
[5] Case No. U-l3862, August 26, 2003 meeting of the Michigan Public Service Commission in Lansing, Michigan.
[6] "With regard to the deference it would provide to recommendations by state regulatory authorities concerning where to draw the jurisdictional line between FERC jurisdictional transmission facilities and state-jurisdictional local distribution facilities, FERC provided the following guidelines:… (e) If the utility's classifications and/or cost allocations are supported by the state regulatory authorities and are consistent with the principles established in Order No. 888, FERC **will defer to such classifications** and/or cost allocations." FERC comments filing by *Central Illinois Light Company*, Docket EL03-39-000, filed Dec. 20, 2002.
[7] *Mansfield Municipal Electric Department v. New England Power Co*., 97 FERC ¶ 61,134 (2001). "…the Municipals' facilities have all of these [Seven Factor Test] indicators except the last one. The voltage of the lines is 115 kV, the same voltage as the transmission grid. As discussed supra, the voltage alone is not dispositive of the issue as to whether a line is distribution or transmission. We must also look at the function."

determining the point-of-demarcation between transmission facilities under FERC jurisdiction and distribution

facilities under NYSPSC jurisdiction.[8] Appendix C to this Order established three (3) measures that utilities were instructed to use in determining the classification of transmission and distribution assets.

[4] FERC non-jurisdictional entities such as the Canadian Provinces.

The exemption process should clearly address the process and requirements for FERC non-jurisdictional entities (such as the Canadian entities) with the exception of the interconnections between them and those entities under FERC jurisdiction, and/or those entities having a direct impact on those interconnections. See **APPENDIX C**

[8] STATE OF NEW YORK PUBLIC SERVICE COMMISSION, OPINION NO. 97-12 in CASE 97-E-0251 - *Proceeding on Motion of the Commission to Distinguish Bulk Electric Transmission System from Local Distribution Facilities*.

Jim Uhrin ReliabilityFirst Corporation

Telephone: 330.247.3058

Email: jim.uhrin@rfirst.org

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: ReliabilityFirst would like to see this as a simple and easy-to-follow definition. The exclusion process needs to be clear without room for discussion or interpretation.

- There must be a common framework developed, along with a single NERC-wide BES definition.
- The definition should serve as a common approach for the identification of BES Elements and Facilities that are subject to compliance.
- The definition and approach for the determination must be repeatable.
- The method must clearly identify the BES elements for use by the industry.
- In order to obtain consistency, the definition, application and criteria must be used across Regional Entity boundaries.
- The revised BES definition should be consistent with the Statement of Compliance Registry Criteria so as not to create a conflict between the two, and could possibly simply reference the Criteria for issues such as size of generating units (e.g., 20 MVA units and 75 MVA plants) included in the BES.
- The criteria for exemption should be included within the BES definition, and the exemption process should contain only the procedure for submitting and determination of such. The exemption process should not contain a third set of criteria (in addition to the BES definition itself and the Statement of Compliance Registry Criteria) in which to make a determination of facilities to be monitored for compliance to standards.
- With the revised BES definition containing specific requirements for inclusion in the BES, will the separate Statement of Compliance Registry Criteria even be needed?

Joe Petaski, Manitoba Hydro

Telephone: 204-487-5332

Email: jpetaski@hydro.mb.ca

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments:

a. A NERC definition of 'radial' is required to prevent misapplication of the BES definition and exemption process.

b. There should be no regional differences in the BES definition or in the BES definition exemption process.

c. There should be equal representation from the regions to draft this standard

d. There should be consistent wording to describe the process - exception or exemption.

John W. Delucca, Lee County Electric Cooperative

Telephone: 239-656-2190

Email: john.delucca@lcec.net

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: The exception process under draft in the FRCC region should serve as a strong basis that could be applied Continent-wide. Also while the exclusion process should be administered within the Region there needs to be an appeals process in place that progresses quickly. In addition, a Region should not be allowed to allege violations of reliability standards related to a system while in the appeals process. If the appeal is not upheld the entity should then be allowed time to bring the system into compliance. Also for consideration Bright-line" methodology seems to be the "easy button" solution, but this "one-size fits all' places the burden on entities to obtain exclusions. From an entity's viewpoint, move the "bright-line threshold" to non-radial facilities operating at or greater than 230 kV, and adopt an inclusion process and criteria for including facilities that are necessary to operate an interconnected electric transmission network.

Paul Cummings, City of Redding

Telephone: 530-245-7016

Email: pcummings@ci.redding.ca.us

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: The WECC Bulk Electric System Definition Task Force has done extensive work on this topic. Please consider their current work when drafting the BES definition and exception process.

Patrick Farrell, Southern California Edison Company

Telephone: 626-302-1321

Email: Patrick.Farrell@sce.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: In addition to defining functional characteristics that can be used for an exemption process, the use of engineering studies that demonstrate the effect of an element on system performance should be allowed, with clearly defined and technically justified assumptions, metrics, and thresholds. To the extent that there are physical differences between regions or interconnections, variations between those regions and interconnections should be allowed. However, all the assumption, metrics, and thresholds will need to be thoroughly vetted and approved by NERC as part of the NERC Exemption Process.

Dan Rochester, Independent Electricity System Operator

Telephone: 905-855-6363

Email: dan.rochester@ieso.ca

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: We have difficulties understanding the intent of this Comment Form and the content in Q1 and Q2, above, which appear to be templates for information to be included in an exclusion/inclusion request rather than asking for comments on each of the listed items.

1. Is the intent of this Comment Form to obtain:
    a. Recommendations of the criteria to be considered in developing deviations from the default criteria for classifying Elements and Facilities as part of the BES?
    b. Assessment of the templates proposed in Q1 and Q2?
2. The concept paper that is posted alongside the SAR and proposed definition is not referenced in this Comment Form. Is it the drafting team's intent to solicit comments on the concept paper?
3. In the concept paper, three exemption criteria are presented. We do not have any issue with the first and third criteria but are concerned that Criterion #2 is not a criterion. It states that:

    "Elements and Facilities identified through application of the exemption process, consistent with the criteria, where the exemption process deems that the Element or Facility should be excluded from the BES (with concurrence from the ERO)."

    This criterion appears to reference yet another set of criteria not already included in the set or the concept paper. In fact, this "referenced" set needs to be clearly stipulated to ensure that applicants are fully aware of the conditions under which an Element or Facility operated at 100 kV or above can be deemed not necessary to support bulk power system reliability and, conversely, the conditions for an Element or Facility operated at below 100 kV to be included. The "templates" presented in Q1 and Q2 of this Comment Form also do not convey the needed conditions.

    We believe it is the clear conditions for exclusion (Elements/Facilities of 100 kV and above) and inclusion (below 100 kV) that need to be developed and fully vetted. We urge the drafting team to proceed to developing these criteria expeditiously so as to support the assessment and approval of the revised definition of BES.
4. We strongly advocate that the exemption process allows for a registered entity to submit the results of an objective, impact-based assessment process in support of its application for exemption of facilities that would otherwise be classified as part of the BES. This

assessment process, when consistently applied in a non-arbitrary manner, would yield results that demonstrate concretely, that the facilities for which the exemption is being sought, do not impact the BES.

5. Finally, given that the exemption process will be used to included and exclude transmission facilities we suggest either of the following as a more appropriate name: "BES Classification Exception Process" or "BES Classification Review Process".

Lorissa Jones, Transmission Reliability Program Manager

Telephone: 360-418-8978

Email: ljjones@bpa.gov

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: In addition to defining functional characteristics that can be used for an exemption process, the use of engineering studies that demonstrate the effect of an element on system performance must also be allowed, with clearly defined and technically justified assumptions, metrics and thresholds. Furthermore, to the extent that there are physical differences between regions or interconnections, variations between those regions and interconnections must be allowed. However all assumptions, metrics and thresholds must be thoroughly vetted and approved by NERC as part of the NERC Exemption Process.

David Burke, Orange and Rockland Utilities

Telephone: 845-577-3076

Email: burkeda@oru.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments:

[1] Seven Factor Test – NPCC participating members believe that the BES Exclusion process should place substantial weight upon Factor 3 from the FERC Seven Factor test. Factor 3 states, "Power flows into local distribution systems, and rarely, if ever flows out."[9] We also believe that Factor 7 has been broadly interpreted by FERC, State Commissions and the Courts to **include** facilities serving a distribution function and operated at 100 kV and above.[10,11,12,13,14,15]

[2] **NPCC A-10 Methodology for Determine BPS Elements** – NPCC participating member believe the A-10 Criteria methodology that NPCC uses to determine its BPS elements can be further utilized to identify critical system components that may be below the 100 kV threshold. The Criteria may also be used be used in lieu of the use of "higher" thresholds that appear or are contemplated in some of the ERO standards such as FAC-003 cites 200kV and above, the TPL-001 currently under development may specify a 200 kV threshold for some "more stringent" planning criteria. These higher thresholds may lend themselves to the use of an "impact based" methodology that could be used to determine where more stringent requirements may need to be applied.

[3] **New York State Public Service Commission (NYSPSC)** - In Opinion No. 97-12, Case 97-E-0251, the NYPSC provided utilities under its jurisdiction explicit guidance for determining the point-of-demarcation between transmission facilities under FERC

[9] We view the term "rarely" as used in Factor 3 to be bounded on the upside by a reverse power flow rate of no more than 10% of all hours and a peak reverse power flow (MW) amount of no more than 50% of peak inflows.
[10] STATE OF IOWA DEPARTMENT OF COMMERCE UTILITIES BOARD, DOCKET NO. SPU-98-12, IN RE: MIDAMERICAN ENERGY COMPANY, ORDER RECOMMENDING DELINEATION OF TRANSMISSION AND LOCAL DISTRIBUTION FACILITIES, Issued April 30, 1999. See http://www.state.ia.us/iub/docs/orders/1999/0430_spu9812.pdf
[11] *Pacific Gas and Electric Company, et al*., 77 FERC ¶ 61,077 at 61,325 (1996).
[12] *Puget Sound Energy, Inc*., 110 FERC ¶ 61,229 at 61,856 (2005).
[13] Case No. U-l3862, August 26, 2003 meeting of the Michigan Public Service Commission in Lansing, Michigan.
[14] "With regard to the deference it would provide to recommendations by state regulatory authorities concerning where to draw the jurisdictional line between FERC jurisdictional transmission facilities and state-jurisdictional local distribution facilities, FERC provided the following guidelines:… (e) If the utility's classifications and/or cost allocations are supported by the state regulatory authorities and are consistent with the principles established in Order No. 888, FERC **will defer to such classifications** and/or cost allocations." FERC comments filing by *Central Illinois Light Company*, Docket EL03-39-000, filed Dec. 20, 2002.
[15] *Mansfield Municipal Electric Department v. New England Power Co*., 97 FERC ¶ 61,134 (2001). "…the Municipals' facilities have all of these [Seven Factor Test] indicators except the last one. The voltage of the lines is 115 kV, the same voltage as the transmission grid. As discussed supra, the voltage alone is not dispositive of the issue as to whether a line is distribution or transmission. We must also look at the function."

jurisdiction and distribution facilities under NYSPSC jurisdiction.[16] Appendix C to this Order established three (3) measures that utilities were instructed to use in determining the classification of transmission and distribution assets. See **APPENDIX C**

NEW YORK INDICATORS (FINAL REVISED VERSION)

[NY-1] A transmission system delivers power from generation plants to local distribution systems. Where a generator directly supplies a local distribution system, the need for a transmission system to deliver its output to load depends on the size of the generator in relation to the minimum load of that system.

[NY-2] Transmission systems end at the high-voltage terminals or at the disconnect switch of a substation transformer; if no transformer is present, the transmission system ends at the bus tap of the local distribution feeder.

[16] STATE OF NEW YORK PUBLIC SERVICE COMMISSION, OPINION NO. 97-12 in CASE 97-E-0251 - *Proceeding on Motion of the Commission to Distinguish Bulk Electric Transmission System from Local Distribution Facilities*.

Alice Ireland, Xcel Energy
Telephone: 303-571-7868
Email: alice.murdock@xcelenergy.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: Xcel Energy agrees that the FERC Order 743 directs NERC to modify the Rules of Procedure to include the process for how an entity or region may initiate an exclusion or inclusion. However, we do not agree that FERC also directed that the actual criteria and technical specifics for inclusion or exclusion be developed as part of the Rules of Procedure. Furthermore, since the inclusion/exclusion criteria is a key component to the definition of BES, we feel the criteria should be treated as part of the definition development and developed in the same manner as the definition itself. (Preferably by the same drafting team.)

It is also not clear as to why the Reliability Assurer is included as an applicable entity in the SAR.

Allen Mosher, American Public Power Association

Telephone: 202-467-2944

Email: amosher@publicpower.org

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments:

The Concept Paper states at page 1 that in Order 743, FERC directed NERC to do the following:

A. Utilize the NERC Standard Development Process to revise the definition of Bulk Electric System (BES) contained in the NERC Glossary of Terms.

B. Develop a single Implementation Plan to address the application of the revised definition of the BES and the implementation of the exemption process.

C. Utilize the NERC Rules of Procedure to develop and implement an 'exemption process' used to identify Elements and Facilities which will be included in or excluded from the BES.

The Concept Paper continues to state that:

> This project will address items 'A' and 'B' and will coordinate efforts between the Standard Drafting Team (SDT) and the group working to develop the exemption process for inclusion in the NERC Rules of Procedure to ensure that the revised BES definition and exemption process result in an accurate, repeatable, and transparent method for the identification of BES and non-BES Elements and Facilities.

APPA agrees that the standards process must be used to develop the revised BES definition and that NERC has been directed to use its Rules of Procedure process to develop an ROP-based procedure to implement an exemption/exclusion/inclusion process. However, the FERC directives do not speak to how and by whom the technical methodology, study criteria and data requirements for requesting and receiving approval for an exemption should be developed.

To the maximum extent possible, subject to time constraints imposed by FERC, this inherently technical methodology needs to be developed through the NERC standards development process, in conjunction with development of the revised definition of BES. Separate development will significantly hamper development of industry consensus in support of the revised BES definition and the yet to be developed ROP modifications for the exemption process.

The most critical question is how do we arrive at a commonly agreed upon, widely accessible, transparent, and replicable continent-wide methodology to determine whether

each specific facility is or is not "necessary to operate an interconnected electric transmission network" to quote from paragraph 16 of Order 743. While each region may have a separate model reflecting its topology and system performance characteristics, a continent-wide approach is required to address FERC concerns about inconsistency across regions that are not the result of physical differences.

The statutory definition of the term bulk-power system defines the outer extent of facilities that can be included (at least within the United States) within the NERC definition of BES. FPA section 215(a)(1) states that the bulk-power system includes "(A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability." Further, the term BPS "does not include facilities used in the local distribution of electric energy." [emphasis added].

Similarly, "reliable operation" is defined at 215(a)(4) to mean "operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure of system elements."

These definitions appear to point to two basic questions for the classification of each facility or element as BES or non-BES:

1. Is the facility or element necessary for reliable operation because it contributes significant capability to the interconnected transmission network?
2. Will the misoperation or unanticipated failure of the facility or element adversely affect the reliable operation of the interconnected transmission network?

APPA suggests that the BES SDT or separate study teams should be directed to establish the outline for this study methodology. APPA further suggests that BES sub-teams be established to address the Proposed BES Criteria in the Concept Paper. Separate sub-teams should be established to address detailed system configuration and study methodology issues affecting:

1. Radials serving load (with and without distribution voltage generation not subject to registration)
2. Other transmission elements that entities seek to include in or exclude from the BES.
3. Generating plant equipment that entities seek to include in or exclude from the BES.
4. Technical issues raised by the FERC Seven Factor Test for Local Distribution Facilities.

Separate sub-teams are appropriate because the study issues are likely to be quite distinct. For example, radials serving only load do not provide alternative pathways for reliable BES

operations, as might some sub-100 kV facilities. Mixing the two teams together might slow progress on identification of various commonly used radial to load center configurations that with proper protection schemes do not have the potential to adversely affect the BES. A focused effort on permissible exclusions of radials serving load is essential to prevent distribution providers from adopting less reliable system configurations to serve their loads because they are concerned that the preferred configuration will make them subject to registration as TOs and/or TOPs.

Note that the proposed sub-teams do not necessarily have to be populated by members of the SDT. The new standards process allows SDTs to gather informal input from a variety of sources. However, development and posting for industry comment of the minimum acceptable characteristics of the study methodology to be used in the Exceptions Process should be the responsibility of the BES SDT.

The Comment Form on the Exclusion Process poses reasonable questions and it is my hope that registered entities and regional entities identify numerous candidate facilities and elements for inclusion or exclusion from the BES, accompanied by one-line diagrams that lay out each of the permutations for such facilities that are candidates for exclusion/inclusion. These facilities range from simple radial transmission lines and distribution step-down transformers to 100 kV class distribution networks that operate radially from the BES. I also hope that entities submit extensive technical documentation to explain why such facilities should be excluded from or included in the BES.

Jim Case, Entergy SERC OC Standards Review Group

SERC OC Standards Review Group participants in developing the above comments:

Jim Case, Entergy
Gerald Beckerle, Ameren
Andy Burch, EEI
Randy Castello, Miss Power
Dan Roethemeyer, Dynegy
Melinda Montgomery, Entergy
Sam Holeman, Duke
Joel Wise, TVA
Alvis Lanton, SIPC
Hamid Zakery, Dynegy
John Neagle, AECI
Mike Hirst, Cogentrix
Tim Hattaway, PowerSouth
Robert Thomasson, BREC
Shardra Scott, Gulf Power
Patrick Woods, EKPC
Alisha Ankar, Prairie Power
Bill Hutchison, SIPC
J.T. Wood, Southern

Telephone: 601-985-2345
Email: jcase@entergy.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: Each inclusion and exclusion should be based solely on its technical justification.

"The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."

John P. Hughes, Electricity Consumers Resource Council (ELCON)

Telephone: 202-682-1390

Email: jhughes@elcon.org

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: ELCON members have always supported fair and effective reliability efforts at NERC. However, the expansion of the standards compliance responsibility implied by the NERC Concept Document goes too far. As written, this proposal could have the effect of devaluing a large number of industrial owned electrical power assets by forcing industrials to meet new and unnecessary compliance obligations. Many will be forced to choose to either accept a significant new cost or fire sale their assets to local providers increasing the purchaser's market power in the process. ELCON feels the addition of new compliance obligations should not be done in such a wholesale manner but instead done on an exception and as needed basis that factors in both a realistic appraisal of the underlying risk and the economic burden imposed on the registered entity relative to the expected benefits.

Specific recommendations and concerns are:

1. An Overarching "Principle" for the Identification of BES Elements and Facilities Must be the Guidance Provided by FERC That Significant Expansion of the Compliance Registry is Not Contemplated.

   In FERC's March 18, 2010 Notice of Proposed Rulemaking (NOPR) on the Revision to Electric Reliability Organization Definition of Bulk Electric System, the Commission stated regarding the revision to the BES definition:

   > This proposal would eliminate the discretion provided in the current definition for a Regional Entity to define "bulk electric system" within a region. Importantly, however, we emphasize that we are not proposing to eliminate all regional variations and we do not anticipate that the proposed change would affect most entities. ¶ 16. … the Commission does not believe that the proposal would have an immediate effect on entities in any Regional Entity other than NPCC. ¶ 27.

   Similarly, in Order No. 743, the Commission stated:

   > We expect that our decision to direct NERC to develop a uniform modified definition of "bulk-electric system" will eliminate regional discretion and ambiguity. The change will not significantly increase the scope of the present definition, which applies to transmission, generation and interconnection facilities. The proposed exemption process will provide sufficient means for entities that do not believe particular facilities are necessary for operating the interconnected transmission system to apply for an exemption. ¶ 144.

One area where the proposed BES definition and exception process will significantly expand the Compliance Registry is the criteria applicable to behind-the-meter generation (primarily cogeneration facilities). We urge that the BES definition should not change the currently applicable 20 MVA / 75 MVA generation size threshold applicable to generation facilities or the manner in which that threshold is currently applied, with behind- the- meter cogeneration facilities evaluated based on the net capacity actually provided to the grid.

2. A Second Overarching "Principle" for the Identification of BES Elements and Facillities Is the Need to Clarify Which Facilities Perform a True Transmission Function and Excluding Facilities That Perform a Local Distribution Function, As Required by Law.

Congress stated in Federal Power Act section 215:

SEC. 215. ELECTRIC RELIABILITY.
''(a) DEFINITIONS.—For purposes of this section:
''(1) The term 'bulk-power system' means—
''(A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and
''(B) electric energy from generation facilities needed to maintain transmission system reliability.

The term does not include facilities used in the local distribution of electric energy.

There has been little attempt by NERC to clarify what in fact are "facilities used in the local distribution of electric energy" even though any plain English application of the term makes such a determination self-evident. The proposed BES definition should expressly exclude facilities used in the local distribution of electric energy, and the identification of such facilities is independent of the identification of BES transmission. Facilities used for local distribution are NOT the residual of any determination of what are BES transmission facilities.

3. A Third Overarching "Principle" for the Identification of BES Elements and Facilities Must be Recognition of the Risk Imposed by the Element or Facility, and the Economic Burden of the Owner/Operator of the Element of Facility.

The efforts of the BES Standards Drafting Team follow the release of two important policy documents.

First, on January 18, 2011, the White House issued an Executive Order ("Improving Regulation and Regulatory Review") by President Obama regarding improvements to federal regulations and the review of existing regulations to ensure, among other things, that a regulation be proposed or adopted "only upon reasoned determination that its benefits justify its costs," and that regulations be tailored "to impose the least burden on society."

Second, the NERC Planning Committee issued on January 10, 2011, "Risk-Based Reliability Compliance – White Paper Concept Discussion," which attempts to advance "processes and procedures to prioritize [NERC's] efforts and 'tiering' elements of its programs to maximize their value and optimize the benefit/cost of effort from stakeholders." This white paper complements the President's Executive Order.

ELCON believes that BES exclusion criteria and process should recognize and exclude elements and facilities in which the risk to bulk electric system reliability is at most theoretical or speculative, and where the compliance burden clearly outweighs the benefits. Such a determination should recognize the historical record of the element or facility in terms of the owner or operator's coordination with the BA or control area, and transmission operators. This principle should be applied to the development of exclusion/inclusion criteria for private lines that connect loads and behind-the-meter generation to true BES Elements and Facilities.

4. An Additional Principle for the Identification of BES Elements and Facilities Should Be the Explicit Recognition on How the Element or Facility is Actually Operated or Used, Not Its Physical or Nominal Rating That May be Irrelevant to Reliability Considerations.

In Order No. 743, FERC clarified that it did not intend to require NERC to utilize the term "rated at" rather than the term "operated at" for the voltage threshold in the revised BES definition. A principle for the identification of BES Elements and Facilities should be such recognition and not exclusively on the rated value of an Element or Facility. This principle should be used to retain the exclusion in the Statement of Compliance Registry Criteria (Revision 5.0) for "net capacity provided to the bulk power system" in the context of the 20 MVA generating unit and 75 MVA generating plant thresholds. The "net capacity" applies to capacity "put" of a behind-the-meter generator whose predominant function is to serve load at the same site.

5. An Additional Principle for the Identification of BES Elements and Facilities Should be the Exclusion of PSEs That Do Not Own or Operate Physical Assets and Whose Power Transactions Are Exclusively Financial in Nature.

Many PSEs that operate in FERC jurisdictional organized wholesale markets (i.e., ISOs and RTOs) do not own, operate or lease physical assets and are currently bombarded with data requests that assume that they own or control such assets. An example of a superfluous data request is to prove that adequate reactive power has been procured to support the load. This is a question that should not have been asked and displays a profound ignorance of the operation of ISO/RTO markets. One potential solution to this problem is to create two subsets of PSEs: one that owns and operates physical assets that are used to serve their loads, and a second that does not.

Some Regional Entities have also begun to ask questions that require PSEs to reveal the details of specific commercial transactions. This raises a broader question on what NERC and regional compliance staffs and auditors "need to know" and whether such questions are an abuse of their enforcement authority.

6. Any Attempt to Make Demand Side Management (DSM) Measures an Element or Facility of BES Will Be Shortsighted and Counterproductive.

Proposals that unilaterally and arbitrarily remove exclusions for generation and transmission, including the application of new compliance obligations to DSM programs, go far beyond what FERC intended in its guidance for revisions. Any new requirement concerning voluntary DSM adds cost to a process that so far has only acted to support reliability with performance equal to and sometimes superior to traditional providers. How is it that a potential resource that can contribute to maintaining reliability is now so quickly identified as a risk? We warn against the overzealous pursuit of control over every asset and resource on the electric system. This mindset will only breed cynicism and end the willingness of potentially dispatchable loads to cooperate with the real operators and owners of the BES.

A recently issued FERC study highlights the potential value to reliability of DSM (in the form of dispatchable demand response) (See Joseph H. Eto et al., Use of Frequency Response Metrics to Assess the Planning and Operating Requirements for Reliable Integration of Variable Renewable Generation, LBNL-4142E, December 2010). To reliably integrate greater amounts of wind energy resources to the bulk electric system, the study recommended the:

Expanded use of demand response that is technically capable of providing frequency control (potentially including smart grid applications), starting with broader industry appreciation of the role of demand response in augmenting primary and secondary frequency control reserves.

7. Revising the Definition of BES Does Not Justify Shifting the Plenary Burden for BPS Reliability from Utilities to Utility Customers. A BES Principle Should Recognize That the Obligation to Serve Applies in One Direction.

The only reason the bulk power system exists is to deliver electric power to residential households, commercial businesses, government facilities and industrial facilities of all sizes. The value of a reliable BPS is dependent on the needs of end use customers. Nothing in the legislative history of section 215 of the Federal Power Act suggests that Congress wittingly intended to change that relationship.

The burden of complying with NERC Reliability Standards is a cost of doing business for utility providers of generation, transmission and distribution services. Generation and interconnection facilities of industrial customers are almost never intended for or used to "operate the interconnected transmission network." Those facilities are integral to a manufacturing process, including purchasing power from the grid. They were built in expectation that the BPS was prudently planned and operated by utilities. The rare exceptions are administered under applicable tariffs or contracts, and are already Registered Entities.

Part of NERC's effort should include defining the line between a BES asset that is used to deliver power and an End User asset that's sole purpose is to serve the End User's load. The NERC Functional Model includes a vague definition of End-use Customer. The problem is determining the scope of an end-use device. If an industrial company owns a 138 kV to 13.8 kV transformer that feeds its plant, is that an end-use device or a transmission asset that is used to transmit power to the low voltage distribution network within the manufacturing facility? Any work to revise the definition of the BES should also include a clarification of its boundaries. We believe that NERC should not expand the scope of the BES to include assets within end-use customer's private use networks.

8. An Additional BES Principle Should be that BES Elements and Facilities be Limited to Only Functions Currently Specified in the NERC Functional Model (Version 5).

NERC's development of the revised BES definition and exclusion/inclusion criteria and processes should be limited to functions specified in the NERC Functional Model (Version 5).

9. NERC is Encouraged to Propose a "Different Solution" That is as Effective as, or Superior to, the Commission's Proposed Approach. The Proposed Principles for the Exclusion of Elements and Facilities from the BES Should Include a Process for Categorical Exclusion Based on Common Physical Characteristics.

The Commission stated in Order No. 743 regarding its proposed revision of the BES definition (and presumably the exclusion/inclusion criteria and processes):

… NERC may propose a different solution that is as effective as, or superior to, the Commission's proposed approach in addressing the Commission's technical and other concerns so as to ensure that all necessary facilities are included within the scope of the definition. ¶ 16.

In addition, specific to the exclusion of Elements and Facilities from the BES, the Final Rule did not adopt the exclusion process proposed in the NOPR (i.e., facility-by-facility review). In the Final Order, FERC directed NERC to develop an exclusion process "with practical application that is less burdensome than the NOPR proposal."

FERC has also allowed NERC to consider concerns (mainly industrials') regarding "exclusion categories" in developing the exclusion process and criteria. ¶ 120.

ELCON interprets the Commission's statements to mean that the agency is open to developing a more efficient compliance process, including processes that minimize unnecessary regulatory burdens on potential Registered Entities and the administrative costs of NERC and RE compliance operations. In the spirit of "streamlining" NERC and the REs' review of smaller entities, ELCON recommends the addition of a principle on the exclusion of Elements and Facilities from the BES that encourages a process for categorical exclusion of entities based on common physical characteristics.

Thad Ness, American Electric Power

Telephone: 614-716-2053

Email: tkness@aep.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: We appreciate the opportunity to provide advance comments on the BES definition exemption process. The comments provided above are initial thoughts, and are by no means an exhaustive itemized list of exemptions. AEP looks forward to contributing additional input through the standards development process when the SDT provides drafts or revisions.

Amir Hammad, Constellation Power Source Generation, Inc. (CPSG), Et All

CPSG is filing the comments below on behalf of:
Constellation Energy Group, Inc.
Baltimore Gas & Electric Company
Constellation Energy Commodities Group, Inc.
Constellation Energy Control and Dispatch, LLC
Constellation NewEnergy, Inc. and its affiliates
Constellation Energy Nuclear Group, LLC,[17]

Telephone: 410-787-5226
Email: amir.hammad@constellation.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: While the Regional Bulk Electric System Coordination Group has done an admirable job at drafting an initially proposed list of inclusion and exclusion criteria, Constellation strongly suggests that the continued work on criteria be orchestrated through the FERC-approved standard development process and not as part of a Rules of Procedure revision. We view development of the technical criteria for both the BES definition and exemption process as a single exercise.

The compliance implications and technical nature of such criteria make it imperative that industry input be considered in a transparent stakeholder process. It is appropriate for NERC to develop aspects such as the administrative management, the role and interaction of the regions, an appeal process, etc. However, due to the technical aspects of BES operation, the drafting team members are best suited to devise criteria for inclusion or exclusion of facilities to the BES.

To clarify the distinction between the exception process and the exception criteria, the purpose statement in the concept document should add a fourth bullet to read:

- **A.** Utilize the NERC Standard Development Process to revise the definition of Bulk Electric System (BES) contained in the NERC Glossary of Terms.
- **B.** Utilize the NERC Standard Development Process to develop exception criteria to be utilized in the exception process.Develop a single Implementation Plan to address the application of the revised definition of the BES and the implementation of the exemption process.

[17] On November 6, 2009, EDF, Inc. ("EDF") and Constellation Energy Group, Inc. completed a transaction pursuant to which EDF acquired a 49.99 percent ownership interest in CENG. CENG was previously a wholly owned subsidiary of Constellation Energy Group, Inc.

C. Utilize the NERC Rules of Procedure to develop and implement an 'exemption process' used to identify Elements and Facilities which will be included in or excluded from the BES.

The revised definition should expressly incorporate exclusions for facilities below 100 kV. Entities should not have to seek an exemption for facilities below 100 kV or for radial lines. They should be clearly excluded in the BES definition itself. We encourage the drafting team to embrace a design concept that seeks to maximize the "brightness" of bright line criteria. The BES exemption process should contemplate very few exemptions. The TFE process is an example of a process not to be repeated here.

In addition, Constellation is not convinced that creation of a definition and an exception process is the best course to respond to the FERC directives. We are concerned that the current approach of a simple, all inclusive definition coupled with an exception criteria and process will not draw on the fundamentals underpinning the existing definition and create a cumbersome and unnecessary exception process.

As an alternative, we propose that the standard drafting team utilize the Compliance Registry Criteria – Section III (Rules of Procedure Appendix 5B) along with definition threshold language to develop a more comprehensive definition. Further, we propose that the BES drafting team incorporate the criteria directly into the revised BES definition, replacing the term "bulk power system" in each criterion with "greater than 100 kV." It will make for a longer definition, but by aligning the facilities requiring registration as those defined as BES, the definition will more clearly determine the line between BES and non-BES. It is preferable that non-BES facilities be excluded by the definition language rather than to define BES broadly and require non-BES facilities go through an exception process. Ideally, this approach can eliminate the need for an onerous exemption process as well as eliminate the need for Section III of the Registry Criteria in the Rules of Procedure.

For special case facilities deemed non-BES by the revised definition that may warrant consideration for inclusion, an "opt-in" evaluation could be conducted.

The rules of procedure process may be used to develop the "opt-in" process that would replace the proposed exception concept; however, the drafting team, perhaps in collaboration with regional entities, should develop any opt-in criteria needed for the process. Again, it is appropriate for NERC to develop aspects such as the administrative management, the role and interaction of the regions, an appeal process, etc. However, due to the technical aspects of BES operation, the drafting team members are best suited to devise criteria for non-BES facilities to warrant inclusion in the BES.

We find that this approach to revising the BES definition would satisfy the FERC directives in Order 743 by encompassing all facilities necessary for operating an interconnected electric transmission network into a national level, bright-line definition. This approach will improve the clarity and consistency of the BES definition for application by Industry and NERC as well as avoiding creation of a potentially cumbersome exception process.

Shaun Anders, City Water Light and Power

Telephone: 217-321-1323

Email: shaun.anders@cwlp.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: CWLP has chosen to comment on the inclusion/exclusion process as a whole. The current lack of detailed, firm administrative guidelines as well as an unambiguous process for resolving disputes between parties involved in the process of adjudicating inclusions/exclusions is problematic. It is CWLP's belief that developing the proposed administrative framework for the process is needed first. Focusing on the data to be submitted as shown in (1) and (2) above does not address the scope, nature, and criteria applicable to the review of requests for inclusions/exclusions. Regardless, CWLP feels strongly that the sole basis for approval or rejection of a request should be technical justification.

Speaking to the process in general, any inclusion or exclusion should be a specific request for a specific facility; continent-wide, interconnect-wide, and region-wide applicability for inclusions/exclusions departs from the intent of FERC Order 743 to establish a definition without regional variances.

Marc M. Butts, Southern Company

Telephone: 205-257-4839

Email: mmbutts@southernco.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: The evaluation method should be clear, understandable, and technically based. Sometimes the "process" is called an Exemption Process and other times it is called "Exception Process",

Andrew Z. Pusztai, American Transmission Company
Telephone: 262-506-6913
Email: apusztai@atcllc.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments:

a. ATC feels strongly that the exemption criteria need to be developed by the SDT. NERC Staff should focus on the process (identification, notification, appeal and rights) but the SDT is in the better position to develop the technical basis of the exemption criteria.

b. The NERC process for exclusion or inclusion must clearly address who is responsible for submitting an Element or Facility Exception Process. Is it limited to the asset owner of the Element or Facilities, or is it open to neighboring entities that may want to initiate a request for exemption or inclusion to the BES?

c. Also, ATC believes the process should allow for multi-year distinctions for exceptions. In other words, if a Registered Entity gets an Element or Facility excluded, then that exclusion or inclusion should be allowed for 3 or more years. Annual certifications and approval are too restrictive.

d. ATC also supports the comments as submitted by EEI REAC on the Draft Concept Paper on the Definition of BES Project 2010-17

Al DiCaprio, PJM

Telephone: 610-666-8854

Email: dicrapm@pjm.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: We have difficulties understanding the intent of this Comment Form and the content in Q1 and Q2, above, which appear to be templates for information to be included in an exclusion/inclusion request rather than asking for comments on each of the listed items.

1. Is the intent of this Comment Form to obtain:
   a. Recommendations of the criteria to be considered in developing deviations from the default criteria for classifying Elements and Facilities as part of the BES?
   b. Assessment of the templates proposed in Q1 and Q2?
2. The concept paper that is posted alongside the SAR and proposed definition is not referenced in this Comment Form. Is it the drafting team's intent to solicit comments on the concept paper?
3. In the concept paper, three exemption criteria are presented. We do not have any issue with the first and third criteria but are concerned that Criterion #2 is not a criterion. It states that:

"Elements and Facilities identified through application of the exemption process, consistent with the criteria, where the exemption process deems that the Element or Facility should be excluded from the BES (with concurrence from the ERO)."

This criterion appears to reference yet another set of criteria not already included in the set or the concept paper. In fact, this "referenced" set needs to be clearly stipulated to ensure that applicants are fully aware of the conditions under which an Element or Facility operated at 100 kV or above can be deemed not necessary to support bulk power system reliability and, conversely, the conditions for an Element or Facility operated at below 100 kV to be included. The "templates" presented in Q1 and Q2 of this Comment Form also do not convey the needed conditions.

We believe it is the clear conditions for exclusion (Elements/Facilities of 100 kV and above) and inclusion (below 100 kV) that need to be developed and fully vetted. We urge the drafting team to proceed to developing these criteria expeditiously so as to support the assessment and approval of the revised definition of BES.

Bud Tracy, Blachly-Lane Electric Cooperative

Telephone: 541.688.8711

Email: tracyb@blachlylane.coop

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments:

1. We have a number of concerns related to the initial SAR proposal:

a) The primary concern expressed by FERC in Order No. 743 was the discretion the current definition accords to the RROs to develop their own definition of the BES without approval by NERC or FERC. See Order No. 743, 133 FERC ¶ 61,150 at P 16 (2010) (FERC believes the "best way to address these concerns is to eliminate the Regional Entities' discretion to define 'bulk electric system' without ERO or Commission review"); at 30 (same). Hence, we believe FERC's concern can be addressed by simply removing the phrase "As defined by the Regional Reliability Organization" from the existing definition. The result would be that the RROs could then develop regionally-appropriate rules based on the uniform definition, which NERC and FERC could then approve, giving deference to the technical findings of the RROs and NERC, as the FPA requires. FPA Section 215(d), 16 U.S.C. § 825o(d). We urge the standards drafting team to consider the virtues of such a minimalist approach and then focus on alternative approaches that will achieve FERC's aim more effectively and/or at lower cost, and on the exemption process, which will, unless FERC abandons its insistence on a 100-kV bright-line threshold, be the most important aspect of the standards development process.

b) The definition proposed in the SAR would incorporate "All Transmission and Generation Elements and Facilities" that are "necessary to support bulk power system reliability." We applaud the effort to properly restrict the definition of BES using the NERC-defined terms "Transmission," "Generation," "Elements" and "Facilities." By using these terms, the drafting team recognizes that Congress excluded from the statutory "Bulk-Power System" definition "facilities used in the local distribution of electric energy," FPA Section 215(a)(1), 16 U.S.C. § 825o(a)(1), and has thereby excluded such facilities from the reach of the mandatory reliability system. Similarly, by focusing the definition on "Transmission" and "Generation," the standards drafting team recognizes that Congress limited the reach of reliability standards to: (1) "facilities and control systems necessary for operating an interconnected electric energy transmission network," and, (2) "electric energy from generation facilities needed to maintain transmission system reliability." Id.

When viewed in the context of the proposed BES definition, however, we are concerned that incorporating the terms as defined in the NERC Glossary may create unnecessary confusion and ambiguity. For example, the NERC Glossary defines "Facility" as "[a] set of electrical equipment that operates as a single Bulk Electric System Element." But attempting to define BES by using a term that itself incorporates "Bulk Electric System" is circular and is likely to create confusion in applying the revised definition. Similarly, "Generation" is not specifically defined in the NERC Glossary of Terms, creating potential confusion.

Finally, the NERC Glossary defines "Transmission" in part as "the movement or transfer of electric energy between points of supply and points at which it is transformed for delivery to customers." This creates the potential for an over-inclusive definition since "Transmission" could, by this definition, be understood to encompass only the last transformation of voltage to end-user level voltage in a system, whereas distribution systems generally include several downward transformations of voltage between the point of bulk delivery and the end-use consumer. One could argue that each of the segments between delivery of bulk power to the local distribution utility and that utility's step-down transformers is, by the terms of the definition, merely moving power "between points of supply" and only the last segment includes the "point at which [power] is transformed for delivery to customers." This, of course, would improperly classify a large portion of most distribution system as "Transmission."

For these reasons, it may be necessary to define "Generation" and to more precisely define "Facility" and "Transmission" as part of the standards drafting process.

We note, on the other hand, that "reliable operation" was a term specifically defined by Congress in FPA Section 215 to include the operation of BES elements "within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance. . . or unanticipated failure of system elements." 16 U.S.C. § 825o(a)(4). Congress specifically precluded the mandatory reliability system from enforcing standards for adequacy of service, which were left to state and local authorities. 16 U.S.C. § 825o(i)(2). Accordingly, we applaud the standards drafting team for including in the BES only facilities "necessary to support bulk power system reliability," because the use of the italicized term at least implicitly excludes from the definition facilities that affect only the levels of service that were explicitly excluded from the mandatory reliability regime by Congress and do not affect "reliable operation" of the BES as Congress defined it.

c) The proposed SAR definition unnecessarily restricts the exclusion in the existing definition for radial facilities. The existing definition provides that radial facilities are "generally not included" in the BES. The proposed new definition would significantly restrict this exclusion, excluding radial systems from the BES only if they are excluded through the "BES definition exemption process." We believe there is no reason to make radial systems and other elements of the electric system

that, because of their limited interaction with the bulk system, have no meaningful impact on bulk system reliability go through a potentially onerous exemption process. Rather, such systems should be presumptively excluded from the definition, as they are now. Further, for the reasons set forth in detail by the WECC BESDTF, local distribution networks in the West should be subject to a similar categorical exclusion, subject to inclusion in the BES only upon a demonstration that the network creates substantial reliability risks for the bulk system. This approach is consistent with FERC's direction that "radial facilities, as well as facilities used in the local distribution of electric energy as provided in Section 215, will continue to be excluded." Order No. 743 at P 120.

Jerome Murray, Oregon Public Utility Commission
Telephone: 503-378-6626
Email: Jerry.murray@state.or.us

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments:

1. The work that has been completed by the WECC Bulk Electric System Definition Task Force is based on sound engineering principles and appears to be a comprehensive solution to defining the BES and providing a means for exceptions to the 100 kV "bright line" criteria. The NERC BES Drafting Team is urged accept the proposal in whole or include contained principles to guide NERC's process for exception.
2. There is serious concern in the Western Interconnection that if a strict 100 kV bright line is mandated that billions of dollars will be needed to be upgrade 100kV to 200 kV distribution elements to comply with NERC reliability/security standards. There is a significant potential for unintended consequences. A serious one is that there could be substantially less monetary resources available for new transmission investment for high impact BES elements and for relieving congestion. Another is FERC would arguably be negating the 7 factor test for distribution facilities, extending FERC jurisdiction over distribution facilities, bringing costs for such facilities into the FERC tariffs, and reducing PUC state review of such investments. These could result in substantial cost increases and/or reliability issues for electric consumers.

John D. Martinsen , Public Utility District No. 1 of Snohomish County

Telephone: 425-783-8080

Email: jdmartinsen@snopud.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments:

1. We have a number of concerns related to the initial SAR proposal:

a) The primary concern expressed by FERC in Order No. 743 was the discretion the current definition accords to the RROs to develop their own definition of the BES without approval by NERC or FERC. *See* Order No. 743, 133 FERC ¶ 61,150 at P 16 (2010) (FERC believes the "best way to address these concerns is to eliminate the Regional Entities' discretion to define 'bulk electric system' *without ERO or Commission review*"); at 30 (same). Hence, we believe FERC's concern can be addressed by simply removing the phrase "As defined by the Regional Reliability Organization" from the existing definition. The result would be that the RROs could then develop regionally-appropriate rules based on the uniform definition, which NERC and FERC could then approve, giving deference to the technical findings of the RROs and NERC, as the FPA requires. FPA Section 215(d), 16 U.S.C. § 824o(d). We urge the standards drafting team to consider the virtues of such a minimalist approach and then focus on alternative approaches that will achieve FERC's aim more effectively and/or at lower cost, and on the exemption process, which will, unless FERC abandons its insistence on a 100-kV bright-line threshold, be the most important aspect of the standards development process.

b) The definition proposed in the SAR would incorporate "All *Transmission* and *Generation Elements* and *Facilities*" that are "necessary to support bulk power system *reliability*." We applaud the effort to properly restrict the definition of BES using the NERC-defined terms "Transmission," "Generation," "Elements" and "Facilities." By using these terms, the drafting team recognizes that Congress excluded from the statutory "Bulk-Power System" definition "facilities used in the local distribution of electric energy," FPA Section 215(a)(1), 16 U.S.C. § 824o(a)(1), and has thereby excluded such facilities from the reach of the mandatory reliability system. Similarly, by focusing the definition on "Transmission" and "Generation," the standards drafting team recognizes that Congress limited the reach of reliability standards to: (1) "facilities and control systems necessary for operating an interconnected electric energy transmission network," and, (2) "electric energy from generation facilities needed to maintain transmission system reliability." *Id.*

When viewed in the context of the proposed BES definition, however, we are concerned that incorporating the terms as defined in the NERC Glossary may create unnecessary confusion and ambiguity. For example, the NERC Glossary defines "Facility" as "[a] set of electrical equipment that operates as a single Bulk Electric System Element." But attempting to define BES by using a term that itself incorporates "Bulk Electric System" is circular and is likely to create confusion in applying the revised definition. Similarly, "Generation" is not specifically defined in the NERC Glossary of Terms, creating potential confusion.

Finally, the NERC Glossary defines "Transmission" in part as "the movement or transfer of electric energy between points of supply and points at which it is transformed for delivery to customers." This creates the potential for an over-inclusive definition since "Transmission" could, by this definition, be understood to encompass only the last transformation of voltage to end-user level voltage in a system, whereas distribution systems generally include several downward transformations of voltage between the point of bulk delivery and the end-use consumer. One could argue that each of the segments between delivery of bulk power to the local distribution utility and that utility's step-down transformers is, by the terms of the definition, merely moving power "between points of supply" and only the last segment includes the "point at which [power] is transformed for delivery to customers." This, of course, would improperly classify a large portion of most distribution system as "Transmission."

For these reasons, it may be necessary to define "Generation" and to more precisely define "Facility" and "Transmission" as part of the standards drafting process.

We note, on the other hand, that "reliable operation" was a term specifically defined by Congress in FPA Section 215 to include the operation of BES elements "within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance. . . or unanticipated failure of system elements." 16 U.S.C. § 824o(a)(4). Congress specifically precluded the mandatory reliability system from enforcing standards for adequacy of service, which were left to state and local authorities. 16 U.S.C. § 824o(i)(2). Accordingly, we applaud the standards drafting team for including in the BES only facilities "necessary to support bulk power system *reliability*," because the use of the italicized term at least implicitly excludes from the definition facilities that affect only the levels of service that were explicitly excluded from the mandatory reliability regime by Congress and do not affect "reliable operation" of the BES as Congress defined it.

c) The proposed SAR definition unnecessarily restricts the exclusion in the existing definition for radial facilities. The existing definition provides that radial facilities are "generally not included" in the BES. The proposed new definition would significantly restrict this exclusion, excluding radial systems from the BES

only if they are excluded through the "BES definition exemption process." We believe there is no reason to make radial systems and other elements of the electric system that, because of their limited interaction with the bulk system, have no meaningful impact on bulk system reliability, go through a potentially onerous exemption process. Rather, such systems should be presumptively excluded from the definition, as they are now. Further, for the reasons set forth in detail by the WECC BESDTF, local distribution networks in the West should be subject to a similar categorical exclusion, subject to inclusion in the BES only upon a demonstration that the network creates substantial reliability risks for the bulk system. This approach is consistent with FERC's direction that "radial facilities, as well as facilities used in the local distribution of electric energy as provided in Section 215, will continue to be excluded." Order No. 743 at P 120.

Steve Alexanderson P.E., Central Lincoln

Telephone: 541-574-2064

Email: salexanderson@cencoast.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: Our understanding of the FERC Order was that the threshold would be 100 kV "**except** for defined radial facilities" and that they also ordered NERC to adopt an "**exemption process**". The question confuses the two distinct parts by speaking of an "**exception process"** never ordered by FERC. We urge the SDT to clearly define "radial" in such a way that no external "process" is needed, and that radial facilities can easily be determined by each registered entity by inspection. And if they have facilities that don't meet the radial definition, they may still be put through a formal exemption process and be exempted if they are found not to contribute to reliable operation of the BPS.

The WECC Bulk Electric System Definition Task Force has done extensive work on this topic. Please consider their current work when drafting the BES definition and exemption process.

Brian J. Murphy, NextEra Energy, Inc.

Telephone: (305) 442-5132

Email: Brian.J.Murphy@fpl.com

3. Please provide any other information that you feel would be helpful to the group working to develop a BES Definition Exception Process.

Comments: Based on the information posted by the North American Electric Reliability Corporation (NERC) on its plans to address Order No. 743 of the Federal Energy Regulatory Commission (FERC), NextEra Energy, Inc.1 (NextEra) believes that NERC (and associated drafting teams) should slightly modify its direction to more closely align with FERC's proposed framework. In Order No. 743, at paragraph 30, FERC stated that:

The Commission believes the best way to address these concerns is to eliminate the regional discretion in the ERO's current definition, maintain the bright-line threshold that includes all facilities operated at or above 100 kV except defined radial facilities, and establish an exemption process and criteria for excluding facilities the ERO determines are not necessary for operating the interconnected transmission network. It is important to note that Commission is not proposing to change the threshold value already contained in the definition, but rather seeks to eliminate the ambiguity created by the current characterization of that threshold as a general guideline.

1 NextEra registered entities, which include NextEra Energy Resources, Inc. and Florida Power & Light Company, operate in the eight NERC regions. **Official Comment form for BES Definition Exception Process** FERC also provided NERC with the opportunity to propose an alternative approach. NextEra believes, however, that FERC's proposed framework is appropriately designed to enhance the definition of the Bulk Electric System (BES) in the NERC glossary, and to separately develop a process to apply for and receive, as appropriate, an exemption from the BES definition. Although it appears that NERC and the drafting teams may also be inclined to proceed as suggested by FERC, there are indications in the questionnaire and BES concept paper that there may be some thought to deviating from FERC's proposal.

A review of the information posted by NERC seems to indicate NERC's intention to have a drafting team develop a revised BES definition via the standards development process (*i.e.,* Appendix 3A of the NERC Rules of Procedure). It also seems that NERC is interested in assigning a "working group" to separately develop an exemption process that would be implemented as a new process in the NERC Rules of Procedure. NextEra agrees with this approach.

NextEra's concerns stem from some of the words in the proposed BES definition, the BES concept paper and the questions asked, which seem to suggest an unnecessarily overlapping definition and exemption process, and a movement toward an exemption process based on categories rather than criteria. Thus, to address these concerns NextEra proposes the

following enhancements to more clearly separate the BES definition and exemption process, and align each more closely with Order No. 743.

As for the BES definition, NextEra encourages the drafting team to solely focus its efforts on the definition. The currently posed revised BES definition reads as follows:

Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher necessary to support bulk power system reliability. Elements and Facilities operated at voltages of 100kV or higher, including Radial Transmission systems, may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process.

NextEra maintains that this is not the correct starting point, nor consistent with Order No. 743 or the other material posted by NERC, that suggests a more definitive separation of the BES definition from the exemption process. Thus, NextEra proposes that the definition be revised to read as follows:

Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher, unless a Transmission or Generation Element or Facility has been exempted pursuant to the exemption process set forth in the NERC Rules of Procedure. **Official Comment form for BES Definition Exception Process** This proposed BES definition more clearly and cleanly separates the BES definition from the exemption process. It also does not add unnecessary qualifiers or verbiage that may result in confusion.

NextEra is also concerned that the working group assigned to the exemption process may initially be more focused on developing categories, instead of an exemption process and associated criteria. Given the unique circumstances of the interconnected BES, including system topology, NextEra does not believe that it would be a productive exercise for the exemption working group to focus on types, groups or categories of equipment; instead, its efforts should focus on developing specific objective criteria to judge the reasonableness of a request or application for an exemption. This approach also seems more in line with FERC's statement in Order No. 743 at paragraph 115:

NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid. The ERO also should determine any related changes to its Rules of Procedures that may be required to implement the exemption process, and file the proposed exemption process and rule changes with the Commission. The challenges of developing an exemption process also include ensuring than any applicant is afforded due process and balanced decision-making, as required by section 215 of the Federal Power Act. Thus, the exemption process must address legal, regulatory and technical issues.

Accordingly, NextEra requests that NERC assemble a working group (perhaps via the Standards Committee) to develop the exemption process that is comprised of stakeholders

with legal, regulatory and technical experience. Without this balance of disciplines, NextEra is concerned that a technical-heavy working group will attempt to develop a "fix," instead of a process whereby applicants may request an exemption, and have that exemption judged by specific criteria and pursuant to a process that affords due process and balanced decision-making.

It is not clear whether an exemption working group has already been assembled. If it has, NextEra requests that NERC consider restructuring of the group consistent with NextEra's proposal.

In summary, NextEra requests that the BES definition drafting team adopt NextEra's proposed definition of BES. NextEra also requests that NERC assemble a cross-functional working group to develop an exemption process based on specific criteria (rather than categories), and a process that affords applicants due process and balanced decision-making.

Phil Tatro, NERC Staff

NERC Staff Comments on Bulk Electric System (BES) Concept Document

NERC staff appreciates the opportunity to provide comments on the concept document drafted by the Regional Bulk Electric System Definition Coordination Group (Coordination Group). We believe the concept document provides a good starting point from which discussion of the BES definition (included/excluded Facilities) and exemption process should begin.

In defining the boundaries of the BES, we believe there are some key principles that must be in place:

- The BES must be contiguous. For example, BES generation's connections and paths to Transmission need to be part of the BES.
- The BES definition must be continent-wide, with a uniform process for considering regional inclusions or exclusions.
- The BES definition cannot override any criteria already explicitly established in a standard. In other words, if a standard applies to specifically identified Elements or Facilities, then the BES definition or a regional exclusion cannot be used to modify the Elements or Facilities to which the standard is applicable (e.g., FAC-003-1, PRC-023-1).

We started with the Facilities identified in the *Statement of Compliance Registry Criteria (Revision 5.0)*[18] since these Facilities have been vetted by the industry. We used this starting point to develop a framework that we believe can be helpful as the industry continues to work on defining the BES. Our framework has the BES defined in three parts:

1. BES Generation
2. BES Transmission (excluding Facilities used for local distribution, such as certain radial transmission Facilities and certain transformers)
3. BES Protection and Controls

These three BES components are described in Sections 1, 2, and 3. This framework could serve as a continent-wide "base definition" to which additional inclusion and exclusion of Elements or Facilities could be applied at the regional level as described in Section 4. As Section 5 discusses, these comments do not address registration or functional model impacts resulting from the BES definition.

The details of what we think are appropriate for inclusion or exclusion in each component of the base definition is contained in each of three sections below. The rationale is described in italicized font[19], as well any changes from current NERC practice. For convenience, the definitions from the *Glossary of Terms Used in NERC Reliability Standards* used herein are in the table below.

[18] http://www.nerc.com/files/Statement_Compliance_Registry_Criteria-V5-0.pdf

[19] If an Element or Facility is included in the *Statement of Compliance Registry Criteria (Revision 5.0)*, we have not provided a rationale.

Term	*Glossary* Definition
Blackstart Resource	A generating unit(s) and its associated set of equipment which has the ability to be started without support from the System or is designed to remain energized without connection to the remainder of the System, with the ability to energize a bus, meeting the Transmission Operator's restoration plan needs for real and reactive power capability, frequency and voltage control, and that has been included in the Transmission Operator's restoration plan.
Cranking Path	A portion of the electric system that can be isolated and then energized to deliver electric power from a generation source to enable the startup of one or more other generating units.
Demand-Side Management	The term for all activities or programs undertaken by [a] Load-Serving Entity or its customers to influence the amount or timing of electricity they use.
Element	Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components
Facility	A set of electrical equipment that operates as a single Bulk Electric System Element (e.g., a line, a generator, a shunt compensator, transformer, etc.)
System	A combination of generation, transmission, and distribution components.
Transmission	An interconnected group of lines and associated equipment for the movement or transfer of electric energy between points of supply and points at which it is transformed for delivery to customers or is delivered to other electric systems.
Transmission Line	A system of structures, wires, insulators and associated hardware that carry electric energy from one point to another in an electric power system. Lines are operated at relatively high voltages varying from 69 kV up to 765 kV, and are capable of transmitting large quantities of electricity over long distances.
Protection System	Protective relays, associated communication systems, voltage and current sensing devices, station batteries and DC control circuitry.
Right-of-Way	A corridor of land on which electric lines may be located. The Transmission Owner may own the land in fee, own an easement, or have certain franchise, prescription, or license rights to construct and maintain lines.

Prior to any revised BES definition becoming effective, its impact on existing standards needs to be examined. In other words, if an existing standard was written based on the existing definition (which included the phrase "as defined by the Regional Reliability Organization"), then moving to a continent-wide bright-line definition may significantly alter the intent or implementation of the standard.

1. BES GENERATION

BES Generation should include:

a. Individual generating units greater than 20 MVA (gross nameplate rating). *All units greater than 20 MVA should be included, regardless of the interconnection voltage, because the impact on reliability of the BES associated with tripping similarly-sized units that are interconnected at different voltages is nearly identical. This is a change from current practice. We also believe that "generating unit" should be defined as "A device, whether spinning or static and whether connected synchronously, asynchronously, or electronically coupled, that produces electrical energy from another source of energy, either directly from the other energy source (such as a combustion turbine from natural gas or light distillate oil, a wind turbine from wind, or a solar*

array from the sun) or through a storage medium (such as pumped storage hydro, a flywheel, compressed air, or battery)."

b. Generating plants with aggregate generation capacity greater than 75 MVA (gross nameplate rating). *All plants greater than 75 MVA should be included, regardless of the interconnection voltage, because the impact on reliability of the BES associated with tripping similarly-sized plants that are interconnected at different voltages is nearly identical. We also believe that "generating plant" should be defined as "one or more generating units that are under the common local operational control of a Generator Operator."*

c. Blackstart Resources. *Blackstart Resources are essential for the restoration of de-energized portions of a System.*

d. Any resource (supply-side or Demand-Side Management) relied on to provide Contingency Reserves to its Balancing Authority. *Contingency Reserves are required by BAL-002-0 – Disturbance Control Performance. Resources that may provide such reserves are essential to ensure control of the BES.*

e. Any resource relied on in the determination of a System Operating Limit (SOL) or an Interconnection Reliability Operating Limit (IROL). *FAC-011-2 - System Operating Limits Methodology for the Operation Horizon requires that Reliability Coordinators have a documented SOL Methodology, including a description of how to identify the subset of SOLs that qualify as IROLs. Resources included in the calculation of an SOL or an IROL should therefore be considered part of the BES since they are used to determine key BES limits that ensure reliable operation.*

f. Any resource that is monitored by Reliability Coordinators (RCs). *IRO-003-2 – Reliability Coordination – Wide-Area View requires RCs to monitor "all Bulk Electric System facilities, which may include sub-transmission information, within its Reliability Coordinator Area and adjacent Reliability Coordinator Areas, as necessary to ensure that, at any time, regardless of prior planned or unplanned events, the Reliability Coordinator is able to determine any potential System Operating Limit and Interconnection Reliability Operating Limit violations within its Reliability Coordinator Area." Any resources monitored by an RC are being monitored to ensure the reliable operation of the BES.*

g. Any resource fully or partially relied on to fulfill a capacity obligation. *Although most capacity resources are likely captured by the other categories above, this additional category ensures that all resources that have capacity obligations are part of the BES.*

h. Elements or Facilities required for the control or operation of resources above, regardless of voltage, and including, but not limited to, various generator transformers (e.g., step-up, auxiliary, start-up), generator controls (including exciters and power system stabilizers), prime mover controls, and generating unit control rooms. *A generating unit cannot operate reliably without properly functioning controls or a power supply to its auxiliary loads.*

We note that the current *Statement of Compliance Registry Criteria (Revision 5.0)* has language (p. 9) that excludes customer-owned/operated generation from registration if it is behind the customer's meter, used to serve the customer's load, has appropriate back-up services to cover service to the load when the customer's generation is outaged, and the "net capacity provided to the bulk power system does not exceed the criteria above" (i.e., 20 MVA for an individual generating unit and 75 MVA for a generating plant.) This language does address generation adequacy for service to the customer's load; however, it does not address the immediate-term impact on reliability (e.g., the stability of the system immediately following the loss of generation). As this exemption is

currently written, a 300 MW behind-the meter generator serving 285 MW customer load could be excluded from the BES. Therefore, we believe that behind-the-meter generation exclusions should not be part of the base BES definition. However, we are not opposed to a reliability-based exemption process that, on a case-by-case basis, would consider exemptions of specific behind-the-meter generation that would otherwise be part of the BES.

2. BES TRANSMISSION

BES Transmission is made up of both alternating current (ac) transmission Facilities and direct current (dc) transmission Facilities. Although the *Statement of Compliance Registry Criteria (Revision 5.0)* does not distinguish between ac and dc, we believe that this distinction is intended, and our framework uses it for clarity.

2.1 AC Transmission Facilities

Ac transmission Facilities should include:

a. Transmission, Transmission Lines (including their associated Right-of-Way), and substation Facilities nominally operated at 100 kV or higher as measured phase-to-phase for a three-phase ac circuit, with the exception that radial facilities meeting the criteria described in section 2.1.1 ("Excluded Radial Transmission Facilities) are not included. Radial transmission facilities that do not meet the criteria described in section 2.1.1 (e.g., BES interconnection Facilities) are included. *We believe that the attributes of excluded radial Facilities make them Facilities that are used in the local distribution of energy. Their exclusion conforms to the Section 215 definition of Bulk-Power System which states that it "does not include facilities used in the local distribution of electric energy."*

b. Transformers, including autotransformers, variable frequency transformers, and phase-shifting transformers, with a high-side voltage 100 kV or higher, provided that transformers used in the local distribution of electric energy are excluded. *The exclusion of transformers used for the local distribution of energy conforms to the Section 215 definition of Bulk-Power System which states that it "does not include facilities used in the local distribution of electric energy."*

c. Transmission, Transmission Lines (including their associated Right-of-Way), substation Facilities, and transformers, not covered by a. or b. above, that form the principal transmission path[20] between BES Generation and BES ac transmission Facilities, including the Cranking Path for Blackstart Resources. *Per the "contiguous" principle described above, the principal transmission path of BES Generation that is not connected to transmission Facilities that are 100 kV or higher is part of the BES.*

d. Transmission, Transmission Lines, and substation Facilities included in the determination of an Interconnection Reliability Operating Limit or a System Operating Limit. *See 1.e above.*

e. Transmission, Transmission Lines, and substation Facilities monitored by Reliability Coordinators. *See 1.f above.*

f. Elements or Facilities used in control or operation of BES ac transmission Facilities listed above, regardless of voltage and including, but not limited to, circuit breakers, in-line switches, fuses, shunt and series compensation (capacitors and reactors), power electronic control devices (e.g., static var compensators (SVCs), static synchronous compensators (STATCOMs)), wave traps, and current and potential transformers. *Ac transmission Facilities cannot operate reliably without properly functioning controls.*

[20] The term "principal transmission path" would need to be defined.

2.1.1 Excluded Radial Transmission Facilities

We believe that it is important to set some guidelines for the exclusion of radial transmission facilities from the BES. As such, any ac transmission Facility composed of Transmission Line(s), substation Facilities, and transformers that is connected to BES ac Transmission Facilities at only one point by automatic interruption devices (e.g., circuit breaker or fuse), and that meets the following criteria, should be considered an "excluded radial transmission Facility."

a. Is not capable of being switched so as to be simultaneously connected to BES ac transmission Facilities at a second point. *This criterion prevents the excluded Facility from carrying loop flow.*

b. Has no connected BES Generation. *If the transmission Facility has any BES generation connected to it, the transmission Facility would be included in the BES per 2.1.c. above.*

c. Connected aggregate non-BES generation, unreduced for any load, does not exceed 75 MVA. *The addition of "aggregate non-BES generation, unreduced for load, exceeding 75 MVA" captures generation that may not be captured by 1.b. above if it is distributed and not at a single generating plant. Electrically, tripping distributed generation on a radial facility has virtually an identical impact to the BES as tripping the same amount of generation aggregated at a single generating plant.*

d. Will not cause the interruption of power flow on BES ac transmission Facilities due to a fault with Normal Clearing on any of the subject transmission Facilities described above. *If tripping a radial Facility impacts BES ac transmission Facilities, there is a direct link between BES reliability and the reliability of the radial Facility, and hence the radial Facility cannot be excluded.*

The automatic interruption device(s) and (i) Protection Systems and (ii) communications and control systems associated with the excluded radial transmission Facility should be included as part of the BES, and its owner and operator should be on the NERC Compliance Registry.

The current registry criteria states "Radial transmission facilities serving only load with one transmission source are generally not included in this definition [of BES]." The language we have provided above more clearly defines what radial means, but does not specify that an excluded radial Transmission Facility only serves load because if a radial Facility met all the criteria above and only served load, it would be excluded. Our proposal does permit some non-BES generation (up to 75 MVA) to be considered as part of an excluded radial facility. We believe this is a reasonable upper limit and would allow some self-generation by end-use customers who are connected to the grid to be excluded from the BES. The registration criteria also includes radial Facilities that are 200 kV or greater that are explicitly covered by the vegetation management standard. We believe the 200 kV or greater inclusion in FAC-003-1 – Transmission Vegetation Management Program is not necessary for the reliable operation of the BES since "radial" has been narrowly defined above. For example, our radial criteria would not exclude as "radial" a hard tap[21] serving load that is part of a three-terminal line, while the present radial exclusion language could include it because the load on the hard tap could be considered as having "one transmission source."

2.2 DC Transmission Facilities

Dc transmission Facilities should include:

a. Transmission, Transmission Lines, and substation Facilities operated at 100 kV dc or higher as measured pole-to-ground for a single dc circuit (i.e., a single pole).

[21] A "hard tap" has no automatic interruption devices at the tap.

b. Equipment that connects ac Transmission Lines and substation Facilities to dc Transmission Lines and substation Facilities, which are operated at 100 kV (ac or dc) and above (e.g., ac/dc converter terminals).

c. Equipment, regardless of its ac or dc voltage level, that connects normally asynchronous ac Transmission, Transmission Lines, or substation Facilities operated at 100 kV or higher (e.g., ac/dc back-to-back converters).

d. Transmission, Transmission Lines (including their associated Right-of-Way), and substation Facilities not covered above, that interconnect BES Generation to BES ac transmission Facilities, including the Cranking Path for Blackstart Resources. *See 2.1.c above.*

e. Transmission, Transmission Lines, and substation Facilities included in the determination of an Interconnection Reliability Operating Limit or a System Operating Limit. *See 2.1.d above.*

f. Transmission, Transmission Lines, and substation Facilities monitored by Reliability Coordinators. *See 2.1.e above.*

g. Elements or Facilities used in the control or operation of the BES dc transmission Facilities listed above, regardless of voltage. *See 2.1.f. above.*

3. BES PROTECTION AND CONTROLS

We believe that BES Protection and Controls should not only include all Protection Systems and control and communication systems that are included in Elements or Facilities for the control and operation of BES Transmission or BES Generation, but also any Protection Systems, controls and communication systems which are used to reliably operate the BES, regardless of voltage. BES Protection and Controls would include, but are not limited to, energy management systems, supervisory control and data acquisition systems, Protection Systems, Special Protection Systems (a.k.a., Remedial Action Schemes), underfrequency load shedding programs, undervoltage load shedding programs, Demand-Side Management programs using control and/or communication systems, and Protection Systems and control and communication systems and facilities operated by or relied on by Balancing Authorities, Transmission Operators, Reliability Coordinators, or Generation Operators. *Protection and control of the BES is paramount for the reliable operation of the BES. Each of the systems, programs, or facilities delineated above is used to ensure reliability. To be sure that no protection and control systems used for reliability were inadvertently excluded, we added language that this third part of the BES definition "should not only include all Protection Systems and control and communication systems that are included in Elements or Facilities for the control and operation of BES Transmission or BES Generation, but also any Protection Systems, controls and communication systems which are used to reliably operate the BES." Any attempts to itemize such systems into an exhaustive list would inevitably leave a key one out.*

4. ADDITIONAL REGIONAL INCLUSIONS AND EXCLUSIONS

Facilities not discussed above could be included or excluded by Regional Entities, depending on whether they are used for the reliable operation of the BES. Such inclusions and exclusions would be based on a process included in a future revision to NERC's *Rules of Procedure*. Such revision would be subject to both NERC and FERC approval.

a. Regional exclusions should not exclude Elements or Facilities covered by a standard. Such exclusions would degrade the level of reliability provided by the standard.

b. FERC Order 672[22] addressed criteria for regional differences in Paragraph 291:

> As a general matter, we will accept the following two types of regional differences, provided they are otherwise just, reasonable, not unduly discriminatory or preferential, and in the public interest, as required under the statute: (1) a regional difference that is more stringent than the continent-wide Reliability Standard, including a regional difference that addresses matters that the continent-wide Reliability Standard does not; and (2) a regional Reliability Standard that is necessitated by a physical difference in the Bulk-Power System.

We agree that these criteria should be the starting point for additional regional inclusions or exclusions.

c. Facilities that are used for the reliable operation of the BES in a particular region and which are not captured in the base definition should be included as part of the BES by that region.

d. Facilities should only be considered for exclusion by a region if they are not used for the reliable operation of the BES, provided that such facilities are incapable of being tapped onto or directly connected to the BES.

e. If excluded Elements or Facilities are to be connected to the BES, they should have automatic interruption devices (e.g., circuit breakers or fuses) connecting them to the BES at their point of connection. Furthermore, this device and (i) Protection Systems and (ii) communications and control systems associated with the excluded Element or Facility should be included as part of the BES, and its owner and operator should be on the NERC Compliance Registry.

5. REGISTRATION AND FUNCTIONAL MODEL IMPACTS

This proposed BES framework would bring conforming changes to NERC's compliance registry criteria; however, this document has not attempted to define those changes. For example, a Load-Serving Entity served by a hard radial tap that it owns (as part of a three-terminal line) would be registered as a Transmission Owner since the hard tap is not excluded from the BES. Likewise, an owner of a 50 MW generating unit interconnected at 69 kV would be registered as a Generation Owner. Once the BES definition is settled, changes in the compliance registry criteria would logically follow.

Functional model changes may also be necessitated by a new BES definition. For example, in the BES Generation section, we have included Demand-Side Management resources, and no functional model entity is currently responsible for such resources within the functional model. Again, functional model changes would need to logically follow a new BES definition.

---

[22] http://www.nerc.com/files/final_rule_reliability_Order_672.pdf

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standard Authorization Request Form

Title of Proposed Standard: NERC Glossary of Terms: Revision of the Bulk Electric System definition.
Request Date: December 6, 2010
SC Posting Authorization Date: December 8, 2010
Revised: March 18, 2011
Date SC Accepted SAR as Final:

SAR Requester Information	**SAR Type** (*Check a box for each one that applies.*)	
Name: Regional Bulk Electric System Definition Coordination Group	☐	New Standard
Primary Contact: Peter Heidrich (Manager of Reliability Standards, FRCC) Regional Participation: FRCC, NPCC, RFC, WECC	☒	Revision to existing Standard
Telephone: (813) 207-7994 Fax: (813) 289-5646	☐	Withdrawal of existing Standard
E-mail: pheidrich@frcc.com	☐	Urgent Action

Purpose (Describe what the standard action will achieve in support of bulk power system reliability.)

Revise the definition of Bulk Electric System (BES), including specific inclusions and exclusions, to address the Federal Energy Regulatory Commission's (FERC) concerns as identified in FERC Order 693 issued on March 16, 2007 and directives in FERC Order 743 issued on November 18, 2010. The definition encompasses all Elements necessary for the reliable operation and planning of the interconnected transmission network. Identify what evidence will be needed to support a request for an exception to the new definition of BES.

Industry Need (Provide a justification for the development or revision of the standard, including an assessment of the reliability and market interface impacts of implementing or not implementing the standard action.)

This project supports the ERO's obligation to respond to the Commission's directives and recommendations relative to the definition of Bulk Electric System identified in FERC Order 743.

Brief Description (Provide a paragraph that describes the scope of this standard action.)

Revise the definition of Bulk Electric System (BES) contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. Develop specific inclusions and exclusions to the core definition. Identify what evidence will be needed to support a request for an exception to the new definition of BES.

Detailed Description (Provide a description of the proposed project with sufficient details for the standard drafting team to execute the SAR.)

Revise the definition of Bulk Electric System (BES) to identify specific inclusions and exclusions to the core definition, to address the Federal Energy Regulatory Commission's (FERC) concerns as identified in FERC Order 693 issued on March 16, 2007 and directives in FERC Order 743 issued on November 18, 2010. The definition encompasses all Elements necessary for the reliable operation and planning of the interconnected transmission network.

Existing NERC Glossary of Terms Definition of Bulk Electric System:

As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition.

The authors are proposing a revised definition of the term BES to provide for improved clarity, to reduce ambiguity, and to establish a universal "bright-line" for distinguishing between BES and non-BES Elements.

This proposed definition provides consistency across the nation's reliability regions by establishing a definition that clearly describes what constitutes BES and non-BES Elements. The BES definition references an exception process (which may include regional differences as defined by FERC Order 672) that can be used to:

- Identify radial Transmission that is excluded from the BES,
- Identify Elements operated at voltages of 100kV or higher that may be excluded from the BES; and
- Identify Elements operated at voltages less than 100kV that may be included in the BES.

The proposed continent-wide definition of Bulk Electric System that the Project 2010-17 SDT will start with is:

Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher necessary to support bulk power system reliability. Elements and Facilities operated at voltages of 100kV or higher, including Radial Transmission systems, may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process.

The development, approval, and application of the BES definition exception process (including periodic review) will be governed by revisions to the NERC Rules of Procedure accomplished by another team in close coordination with the revision of the BES definition.

The Standard Drafting Team will work closely with the Rules of Procedure team developing the BES

definition exception process to develop a single coordinated implementation plan. The BES Definition team will solicit stakeholder input in identifying the evidence an entity will need when submitting a request for an exception to the definition of BES. While the determination of what evidence will be needed to support a request for a BES Definition Exception will be developed using NERC's standard development process, no decision has been made on "where" the final product will reside – in the definition of BES or as an attachment (e.g., a procedure identifying what evidence to produce when applying for a BES exception) to the new BES Exception Process in the Rules of Procedure.

Reliability Functions

The Standard will Apply to the Following Functions *(Check box for each one that applies.)*		
☒	Reliability Assurer	Monitors and evaluates the activities related to planning and operations, and coordinates activities of Responsible Entities to secure the reliability of the bulk power system within a Reliability Assurer Area and adjacent areas.
☒	Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
☒	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports Interconnection frequency in real time.
☒	Interchange Authority	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
☒	Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
☒	Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within its portion of the Planning Coordinator's Area.
☒	Transmission Owner	Owns and maintains transmission facilities.
☒	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
☒	Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within the Transmission Planner Area.
☒	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
☒	Distribution Provider	Delivers electrical energy to the End-use customer.
☒	Generator Owner	Owns and maintains generation facilities.
☒	Generator Operator	Operates generation unit(s) to provide real and reactive power.
☐	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
☒	Load-Serving Entity	Secures energy and transmission service (and reliability-related services) to serve the End-use Customer.

Reliability and Market Interface Principles

Applicable Reliability Principles *(Check box for all that apply.)*	
☒	1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
☒	2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
☒	3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.
☒	4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented.
☒	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems.
☒	6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.
☒	7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis.
☒	8. Bulk power systems shall be protected from malicious physical or cyber attacks.

Does the proposed Standard comply with all of the following Market Interface Principles? *(Select 'yes' or 'no' from the drop-down box.)*
1. A reliability standard shall not give any market participant an unfair competitive advantage. Yes
2. A reliability standard shall neither mandate nor prohibit any specific market structure. Yes
3. A reliability standard shall not preclude market solutions to achieving compliance with that standard. Yes
4. A reliability standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes

Related Standards

Standard No.	Explanation

Related SARs

SAR ID	Explanation

Regional Variances

Region	Explanation
FRCC	
MRO	
NPCC	
SERC	
TRE	
RFC	
SPP	
WECC	

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standard Authorization Request Form

Title of Proposed Standard: NERC Glossary of Terms: Revision of the Bulk Electric System definition.
Request Date: December 6, 2010
SC ~~Approval~~ Posting Authorization Date: December 8, 2010
Revised: March 18, 2011
Date SC Accepted SAR as Final:

SAR Requester Information	**SAR Type** (*Check a box for each one that applies.*)	
Name: Regional Bulk Electric System Definition Coordination Group	☐	New Standard
Primary Contact: Peter Heidrich (Manager of Reliability Standards, FRCC) Regional Participation: FRCC, NPCC, RFC, WECC	☒	Revision to existing Standard
Telephone: (813) 207-7994 Fax: (813) 289-5646	☐	Withdrawal of existing Standard
E-mail: pheidrich@frcc.com	☐	Urgent Action

Purpose (Describe what the standard action will achieve in support of bulk power system reliability.)

Revise the definition of Bulk Electric System (BES), including specific inclusions and exclusions, to address the Federal Energy Regulatory Commission's (FERC) concerns as identified in FERC Order 693 issued on March 16, 2007 and directives in FERC Order 743 issued on November 18, 2010. ~~(Order 743) so that t~~The definition encompasses all Elements ~~and Facilities~~ necessary for the reliable operation and planning of the interconnected ~~bulk power s~~ transmission~~ystem~~ network. Identify what evidence will be needed to support a request for an exception to the new definition of BES.

Industry Need (Provide a justification for the development or revision of the standard, including an assessment of the reliability and market interface impacts of implementing or not implementing the standard action.)

This project supports the ERO's obligation to respond to the Commission's directives and recommendations relative to the definition of Bulk Electric System identified in FERC Order ~~No.~~ 743.

Brief Description (Provide a paragraph that describes the scope of this standard action.)

Revise the definition of Bulk Electric System (BES) contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements ~~and Facilities~~. Develop specific inclusions and exclusions to the core definition. Identify what evidence will be needed to support a request for an exception to the new definition of BES.

Formatted: Font:

Detailed Description (Provide a description of the proposed project with sufficient details for the standard drafting team to execute the SAR.)

Revise the definition of Bulk Electric System (BES) ~~and~~ to ~~develop~~identify specific inclusions and exclusions to the core definition, to address the Federal Energy Regulatory Commission's (FERC) concerns as identified in FERC Order 693 issued on March 16, 2007 and directives in FERC Order 743 issued on November 18, 2010. ~~(Order 743) so that t~~The definition encompasses all Elements ~~and Facilities~~ necessary for the reliable operation and planning of the interconnected ~~Bulk Power System~~transmission network.

Existing NERC Glossary of Terms Definition of Bulk Electric System:

As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition.

The authors are proposing a revised definition of the term BES to provide for improved clarity, to reduce ambiguity, and to establish a universal "bright-line" for distinguishing between BES and non-BES Elements ~~and Facilities~~.

This proposed definition provides consistency across the nation's reliability regions by establishing a definition that clearly describes what constitutes BES and non-BES Elements ~~and Facilities~~. The BES definition references an ~~exemption~~ exception process (which may include regional differences as defined by FERC Order 672 ~~or jurisdictional exemptions as appropriate for those entities not subject to Section 215 of the Federal Power Act~~) that can be used to:

- Identify ~~the R~~radial Transmission ~~systems~~ that ~~are~~is excluded from the BES,
- Identify Elements ~~and Facilities~~ operated at voltages of 100kV or higher that may be excluded from the BES; and
- Identify Elements ~~and Facilities~~ operated at voltages less than 100kV that may be included in the BES.

The proposed continent-wide definition of Bulk Electric System that the Project 2010-17 SDT will start with is:

Bulk Electric System: All Transmission and Generation Elements and Facilities operated at voltages of 100 kV or higher necessary to support bulk power system reliability. Elements and Facilities operated at voltages of 100kV or higher, including Radial Transmission systems, may be excluded and Elements and Facilities operated at voltages less than 100kV may be included if approved through the BES definition exemption process.

The development, approval, and application of the BES definition ~~exemption~~ exception process (including periodic review ~~of exempted facilities~~) will be governed by revisions to the NERC Rules of Procedure~~,~~ accomplished by another team in close coordination with the revision of the BES definition.

~~However, as envisioned, t~~The ~~s~~Standard ~~d~~Drafting ~~t~~Team will work closely with the Rules of Procedure team developing the BES definition ~~exemption~~ exception process to develop a single coordinated implementation plan. ~~It is also envisioned, that the Rules of Procedure~~The BES Definition team ~~working to develop the BES definition exemption~~ exception ~~process~~ will solicit stakeholder input ~~from drafting teams, stakeholders, and Regional Reliability Organizations~~ Entities in identifying the evidence an entity will need when submitting a request for an exception to the definition of BES. ~~physical and operational characteristics for consideration in developing the BES definition exemption~~ exception ~~process.~~ While the determination of what evidence will be needed to support a request for a BES Definition Exception will be developed using NERC's standard development process, no decision has been made on "where" the final product will reside – in the definition of BES or as an attachment (e.g., a procedure identifying what evidence to produce when applying for a BES exception) to the new BES Exception Process in the Rules of Procedure.

Formatted: Font: (Default) Calibri

Formatted: Font: (Default) Calibri

Formatted: Font: (Default) Calibri

Formatted: Font: (Default) Calibri

Formatted: Font: (Default) Calibri

Formatted: Font: (Default) Calibri

Reliability Functions

The Standard will Apply to the Following Functions *(Check box for each one that applies.)*		
☒	Reliability Assurer	Monitors and evaluates the activities related to planning and operations, and coordinates activities of Responsible Entities to secure the reliability of the bulk power system within a Reliability Assurer Area and adjacent areas.
☒	Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
☒	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports Interconnection frequency in real time.
☒	Interchange Authority	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
☒	Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
☒	Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within its portion of the Planning Coordinator's Area.
☒	Transmission Owner	Owns and maintains transmission facilities.
☒	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
☒	Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within the Transmission Planner Area.
☒	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
☒	Distribution Provider	Delivers electrical energy to the End-use customer.
☒	Generator Owner	Owns and maintains generation facilities.
☒	Generator Operator	Operates generation unit(s) to provide real and reactive power.
☐	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
☒	Load-Serving Entity	Secures energy and transmission service (and reliability-related services) to serve the End-use Customer.

Reliability and Market Interface Principles

Applicable Reliability Principles *(Check box for all that apply.)*	
☒	1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
☒	2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
☒	3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.
☒	4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented.
☒	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems.
☒	6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.
☒	7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis.
☒	8. Bulk power systems shall be protected from malicious physical or cyber attacks.
Does the proposed Standard comply with all of the following Market Interface Principles? *(Select 'yes' or 'no' from the drop-down box.)*	
1. A reliability standard shall not give any market participant an unfair competitive advantage. Yes	
2. A reliability standard shall neither mandate nor prohibit any specific market structure. Yes	
3. A reliability standard shall not preclude market solutions to achieving compliance with that standard. Yes	
4. A reliability standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes	

Related Standards

Standard No.	Explanation

Related SARs

SAR ID	Explanation

Regional Variances

Region	Explanation
FRCC	
MRO	
NPCC	
SERC	
TRE	
RFC	
SPP	
WECC	

Proposed Continent-wide Definition of Bulk Electric System:

Bulk Electric System (BES): All Transmission Elements operated at 100 kV or higher, Real Power resources as described below, and Reactive Power resources connected at 100 kV or higher unless such designation is modified by the list shown below.

Inclusions:

- I1 - Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings of 100 kV or higher unless excluded under Exclusions E1 and E3.
- I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above.
- I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.
- I4 - Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage.
- I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.

Exclusions:

- E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and:
  a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or,
  b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or,
  c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.
- E2 - A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.
- E3 - Local distribution networks (LDNs): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN's are connected to the Bulk Electric System (BES) at

more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:

a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;
b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;
c) Power flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN;
d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and
e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Proposed Continent-wide Definition of Bulk Electric System:

Bulk Electric System~~:~~ (BES): All Transmission ~~and Generation~~ Elements ~~and Facilities~~ operated at ~~voltages~~100 kV or higher, Real Power resources as described below, and Reactive Power resources connected at 100 kV or higher unless such designation is modified by the list shown below.

Inclusions:

- I1 - Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings of 100 kV or higher ~~necessary~~unless excluded under Exclusions E1 and E3.
- I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above.
- I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.
- I4 - Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage.
- I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to ~~support~~a system Element at a voltage of 100 kV or above.

Exclusions:

- E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and:
  a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or,
  b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or,
  c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.
- E2 - A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a

binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.

- E3 - Local distribution networks (LDNs): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power ~~system reliability. Elements and Facilities operated at voltages of 100kV or higher, including Radial Transmission systems, may~~ across the interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:
  a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be ~~excluded and~~connected through automatic fault-interrupting devices;
  b) Limits on connected generation: Neither the LDN, nor its underlying Elements ~~and Facilities operated at voltages less than 100kV may be~~(in aggregate), includes more than 75 MVA generation;
  c) Power flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN;
  d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and
  ~~a)~~e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included ~~if approved through the BES definition exemption process.~~in an Interconnection Reliability Operating Limit (IROL).

Implementation Plan for Project 2010-17: Definition of BES

Prerequisite Approvals

There are no other Reliability Standards or Standard Authorization Requests (SARs), in progress or approved, that must be implemented before this project can be implemented. However, this definition relies heavily on the fact that an approved exception process exists in the NERC Rules of Procedure.

Revision to Sections of Approved Standards and Definitions

There is one new definition associated with this project.

Bulk Electric System (BES): All Transmission Elements operated at 100 kV or higher, Real Power resources as described below, and Reactive Power resources connected at 100 kV or higher unless such designation is modified by the list shown below.

Inclusions:

- I1 - Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, with two windings of 100 kV or higher unless excluded under Exclusions E1 and E3.
- I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above.
- I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.
- I4 - Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage.
- I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.

Exclusions:

- E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and:
    a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or,
    b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or,
    c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.
- E2 - A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.
- E3 - Local Distribution Networks (LDN): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the Interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to

improve the level of service to retail customer Load. The LDN is characterized by all of the following:

a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;

b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;

c) Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN;

d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and

e) Not part of a Flowgate or Transfer Path: The LDN does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

Effective Dates

The effective date is the date entities are expected to meet the performance identified.

This definition shall become effective on the first day of the first calendar quarter, 24 months after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, all requirements go into effect on the first day of the first calendar quarter, 24 months after Board of Trustees adoption.

The SDT realizes that Order 743 suggested a maximum of 18 months for implementation of a revised definition of the BES. The 24 month period cited here is based on the various rehearing requests filed by entities expected to be affected by the revised definition. Thus, the SDT believes that this is a more realistic timeframe in which to effect any changes.

The SDT believes that the timeframe shown is needed to:

- Effectively produce reasonable transition plans – As shown in Order 743, part of the overall process of revising the definition of BES is for the ERO and Regional Entities to develop transition plans on a region by region basis to accommodate any changes needed in those regions due to the revised definition. The transition plans will include any actions necessary for entities to achieve compliance on any issues brought about by the revised definition.
- Submit any necessary registration changes – While Order 743 states that a revised definition should provide clarity and not necessarily require major changes to registration; it is possible that the revised definition may cause some registration changes. Entities will need time to submit their changes and for those changes to work their way through the process.
- File for exceptions – The revised definition does not exist in a vacuum. There is a corresponding process for entities to request exceptions for specific equipment or configurations. This process will be defined in the NERC Rules of Procedure and will involve individual entities or the Regional Entities having to make a technical case to justify the exception. This process will take

some time to complete and it would be expected that there will be an initial backlog of cases to process.

- Provide training – Entities will need to train their operators and personnel on changes to their operations brought about by the revised definition.

The existing definition of BES shall be retired upon the effective date of the new definition of BES.

Comment Form for 1st Draft of Definition of BES (Project 2010-17)

Please **DO NOT** use this form to submit comments on the 1st draft of the Definition of the Bulk Electric System (Project 2010-17). This comment form must be completed by **May 27, 2011.**

If you have questions please contact Ed Dobrowolski at ed.dobrowolski@nerc.net or by telephone at 609-947-3673.

Background Information
Definition of the BES (Project 2010-17)

The SDT responded to the comments received for the posting of the SAR for this project by clarifying the core definition and expanding the definition to contain specific inclusions and exclusions to meet the concerns of the industry. The SDT has also used a variety of other inputs including work that was done by regional entities such as WECC, NPCC, RFC, and FRCC in coming up with the present definition. Another input was FERC Order No. 743 (and Order No. 743a) which provided several specific directives on clarifying the existing definition. The revised definition does not address functional entity registration or the applicability of standard requirements. Those are separate issues.

The core definition represents a true bright-line; but, it is clear that by itself, it does not cover all of the known situations and configurations that are needed for a complete definition. Therefore, the SDT developed several specific inclusions and exclusions that are proposed for addition to the core definition. At the present time, the SDT has drafted 5 specific inclusions and 3 specific exclusions.

Inclusions represent those items that are included as part of the Bulk Electric System (BES) where they would not have been included as part of the simple core definition. The reasons that the SDT has added these items are as follows:

- **Inclusion I1** – Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, with two windings of 100 kV or higher unless excluded under Exclusions E1 and E3.
    - Since transformers have windings operating at different voltages, clarification was required to explicitly identify which transformers to include in the BES. The SDT believes that the present draft provides this needed clarification.
- **Inclusion I2** – Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above.
    - This item mirrors the NERC Compliance Registry Criteria for individual generating units. One of the basic tenets that the SDT is following is to avoid changes to registration due to the revised definition if such changes are not technically required for the definition to be complete.
    - In the comments received from the posting of the SAR for this project, the SDT found no technical rationale for changing from the present greater than 20 MVA threshold. To provide clarity on these conditions, the SDT has spelled out that the BES includes the generator terminal leads through the generator step-up transformer (GSU).
- **Inclusion I3** – Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the

generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.

  - This item mirrors the NERC Compliance Registry Criteria for multiple generating units at a single site. One of the basic tenets that the SDT is following is to avoid changes to registration due to the revised definition if such changes are not technically required for the definition to be complete.
  - In the comments received from the posting of the SAR for this project, the SDT has found no technical rationale for changing from the present greater than 75 MVA threshold. To provide clarity on these conditions, the SDT has spelled out that the BES includes the generator terminal leads through the generator step-up transformer (GSU).

- **Inclusion I4** – Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage.
  - Blackstart units and their respective cranking paths are considered vital to the overall operation of the BES.
  - Consequently, the SDT has included Blackstart Resources and their respective Cranking Paths in the BES regardless of voltage level.
- **Inclusion I5** – Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.
  - This item was added to accommodate the effects of variable generation on the BES. The intent of this configuration is to include variable generation (e.g., wind and solar resources) with an aggregate rating greater than 75 MVA at one location and was considered different enough from what was proposed in Inclusion I3 to warrant its own inclusion statement for clarity.

In addition to inclusions, to complete the picture, specific exclusions also need to be considered. The SDT has currently drafted 3 specific exclusions:

- **Exclusion E1** – Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and:

  a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or,

  b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or,

  c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.

  - This item was added to address the basic issue of radial systems. A radial exclusion is part of the existing definition and was supported moving forward in all of the regional work as well as Order No. 743 (and Order No. 743a). The SDT has clarified this exclusion by specifying that protection for the BES is a required element of the system to be excluded. The SDT believes that faults on radial lines without protection devices could negatively impact the BES.

- **Exclusion E2** – A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.
    - This item was added to address the situation of behind-the-meter generation. The wording is basically extracted from the NERC Compliance Registry Criteria.
- **Exclusion E3** – Local Distribution Networks (LDN): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the Interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:

    a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;

    b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;

    c) Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN;

    d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and

    e) Not part of a Flowgate or Transfer Path: The LDN does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
        - Local distribution networks were added to the exclusion list after considerable discussions among the SDT and various registered entities that have configurations meeting these conditions. The SDT believes that any network that simply supports distribution and is providing adequate protection should be excluded from the BES.

In parallel with the definition project, another team has been set up to develop a change to the NERC Rules of Procedure (ROP) to allow entities to technically justify excluding Elements from the BES that might otherwise be included according to the proposed definition. This same process would be used by Registered Entities to justify including Elements in the BES that might otherwise be excluded according to the proposed definition. Finally, this process would also be used for those situations where the core definition does not clearly identify whether an Element is part of the BES or not. This ROP team will develop the process for seeking an exemption from the definition but the DBES SDT will develop the criteria necessary for inclusion with a request for an exemption through the standards development process.

You do not have to answer all questions. Enter All Comments in Simple Text Format.

Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

The SDT has asked one specific question for each specific aspect of the definition.

1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes:

   No:

   Comments:

2. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes:

   No:

   Comments:

3. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes:

   No:

   Comments:

4. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes:

   No:

Comments:

5. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes:

   No:

   Comments:

6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes:

   No:

   Comments:

7. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes:

   No:

   Comments:

8. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes:

   No:

   Comments:

9. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes:

No:

Comments:

10. The SDT is discussing an exclusion from the Bulk Electric System (BES) for small utilities based on statements in Order No. 743 that FERC does not believe its suggested approach to the BES definition and exemption process will have a significant economic impact on a substantial number of small entities and that small entities will not adversely impact the reliability of the Bulk Electric System. The SDT has been made aware that organizations that are not presently required to be registered by the NERC Statement of Compliance Registry Criteria would meet the requirements to be registered as Transmission Owners given the current proposed BES definition. These small utilities could use the Rules of Procedure (ROP) exception process but this may be an issue that could be handled more appropriately through the BES definition. This would alleviate the paperwork burden for these small utilities and also avoid a possibly unnecessary and significant impact on the administration of the ROP exception process during the transition period to the revised BES definition. The proposed exclusion language is:

    Exclusion E4: Transmission Elements, from a single Transmission source connected at a voltage of 100 kV or greater, owned by a small utility whose connection to the BES is solely through this single Transmission source, and without interconnected generation as recognized in the BES Designation Inclusion Items I2, I3, I4, or I5. A small utility is recognized as an entity that performs a Distribution Provider or Load Serving Entity function but is not required to register as a Distribution Provider or Load Serving Entity by the ERO.

    Do you agree with this approach and the proposed language? If not, please be specific in your response with a technical reason for your disagreement and, if appropriate, suggested language for such an exclusion if you agree in general but feel that alternative language would be more appropriate.

    Yes:

    No:

    Comments:

11. In Order No. 743, the Commission addressed the need to differentiate between Transmission and distribution in the revised definition of the Bulk Electric System (BES). Specifically, the Commission stated that local distribution facilities are to be excluded from the BES. The SDT believes that it has excluded local distribution facilities through the revised bright-line core definition and specific inclusions and exclusions. Do you agree with this position? If not, please provide specific comments and suggestions on what else needs to be addressed or added.

    Yes:

    No:

    Comments:

12. Are you aware of any conflicts between the proposed definition and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? If so, please identify them here and provide suggested language changes that may clarify the issue.

Yes:

No:

Comments:

13. Are there any other concerns with this definition that haven't been covered in previous questions and comments?

Yes:

No:

Comments:

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standards Announcement

Bulk Electric System Definition Revision Status

Background

On November 18, 2010 FERC issued Order 743 and directed NERC to revise the definition of Bulk Electric System (BES) so that the definition encompasses all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. Additional specificity will reduce ambiguity and establish consistency across all Regions in distinguishing between BES and non-BES Elements and Facilities.

In addition, NERC was directed to develop a process for identifying any Elements or Facilities that should be excluded from the BES. NERC is working to address these directives with two activities – the definition of Bulk Electric System (BES) is being revised through the standard development process and a BES Definition Exception Process is being developed as a proposed modification to the NERC Rules of Procedure.

Teams

Two teams have been formed to develop the products needed to respond to Order 743. The first team is a drafting team working under the direction of the Standards Committee. This team is called the BES Definition Team (BES DT) and its work is publicly posted on the following web page with a link to toggle between the work of this team and the work of the BES Rules of Procedure Team:
http://www.nerc.com/filez/standards/Project2010-17_BES.html

The second team is working under the direction of NERC staff and is called the BES Rule of Procedure Team (BES ROP). Its work is publicly posted on the following web page with a link to toggle between the work of this team and the work of the BES Definition Team:
http://www.nerc.com/filez/standards/Rules_of_Procedure-RF.html

Deliverables

The Standards Committee and the Standards staff have received many comments concerning the division of work between these two teams. The leadership of the BES Definition SDT and Rules of Procedure team met with the leadership of the Standards Program and the Standards Committee and determined that the BES Definition SDT will assume responsibility for working with stakeholders to identify what evidence is needed to support a request for an exception to the BES definition. The BES Definition team will solicit stakeholder input to identify the evidence an entity will need to provide when submitting a request for an exception to the definition of BES.

Product	BES Definition Team	BES Rule of Procedure Team
Revised BES Definition	X	
Identification of evidence needed to support a request for an exception to the BES definition	X	
Addition to Rule of Procedure		X
Implementation Plan	X	X

While the determination of what evidence will be needed to support a request for a BES Definition Exception will be developed using NERC's standard development process, a decision on where the final product will reside - in the definition of BES, or as an attachment (e.g., a procedure identifying what evidence to produce when applying for a BES exception) to the Rules of Procedure will be made jointly by the leadership of the Standards Program and the Standards Committee at a later stage. Given the time constraints of this project, having all the technical content associated with this project developed by a single team seemed the most efficient decision.

Status

The BES Definition Team has posted its consideration of the comments submitted in response to questions about the SAR, initial draft definition, and list of criteria for either inclusion or exclusion from the definition of BES. The team has also posted its next draft of the definition of BES and will be posting a comment form in mid-April to collect stakeholder feedback on the revised definition.

The BES ROP Team has been meeting and expects to post a draft of its proposed ROP in late April for stakeholder feedback.

Members of the two teams are sharing information and ideas and working cooperatively to ensure cohesion in the final products.

For more information or assistance, please contact Monica Benson,
Standards Process Administrator, at monica.benson@nerc.net or at 404-446-2560.

North American Electric Reliability Corporation
116-390 Village Blvd.
Princeton, NJ 08540
609.452.8060 | www.nerc.com

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standards Announcement

Project 2010-17 BES Definition
Comment Period Open April 28-May 27, 2011

Now available at: http://www.nerc.com/filez/standards/Project2010-17_BES.html

Formal 30-day Comment Period Open through 8 p.m. on May 27, 2011
A proposed revision to the definition of "Bulk Electric System," and an associated implementation plan have been posted for a formal comment period until **8 p.m. Eastern on May 27, 2011.**

The BES Definition Drafting Team is also working to identify what evidence is needed to support a request for an exception to the BES definition. The BES Definition team expects to post its initial Technical Justification Principles proposal describing the evidence needed to support a request for an exception to the BES definition in early May and will seek stakeholder comments on its proposal.

A separate team is working to identify the necessary changes to NERC's Rules of Procedure to incorporate the process for requesting exceptions. The proposed changes to the Rules of Procedure will also be posted in early May. Once all three documents have been posted (draft revised BES Definition, proposed Technical Justification Principles, and proposed Rules of Procedure changes) and prior to the end of the comment periods, a webinar will be scheduled.

Instructions
Please use this electronic form to submit comments. If you experience any difficulties in using the electronic form, please contact Monica Benson at monica.benson@nerc.net. An off-line, unofficial copy of the comment form is posted on the project page: http://www.nerc.com/filez/standards/Project2010-17_BES.html

Next Steps
The drafting team will consider all comments and determine whether to make additional changes to the definition and its implementation plan. The team will post its response to comments and, if changes are made to the definition and implementation plan, submit the revised documents for quality review prior to the next posting.

Project Background
On November 18, 2010 FERC issued Order 743 and directed NERC to revise the definition of Bulk Electric System so that the definition encompasses all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. Additional specificity will reduce ambiguity and establish consistency across all Regions in distinguishing between BES and non-BES Elements and Facilities.

In addition, NERC was directed to develop a process for identifying any Elements or Facilities that should be excluded from the BES. NERC is working to address these directives with two activities – the definition of Bulk Electric System (BES) is being revised through the standard development process and a BES Definition

Exception Process is being developed as a proposed modification to the Rules of Procedure. The work of the BES Definition Exception Process has been publicly posted at:
http://www.nerc.com/filez/standards/Rules_of_Procedure-RF.html

Standards Process

The Standard Processes Manual contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

For more information or assistance, please contact Monica Benson, Standards Process Administrator, at monica.benson@nerc.net or at 404-446-2560.

North American Electric Reliability Corporation
116-390 Village Blvd.
Princeton, NJ 08540
609.452.8060 | www.nerc.com

Individual or group. (154 Responses)
Name (108 Responses)
Organization (108 Responses)
Group Name (46 Responses)
Lead Contact (46 Responses)
Question 1 (131 Responses)
Question 1 Comments (154 Responses)
Question 2 (129 Responses)
Question 2 Comments (154 Responses)
Question 3 (133 Responses)
Question 3 Comments (154 Responses)
Question 4 (125 Responses)
Question 4 Comments (154 Responses)
Question 5 (107 Responses)
Question 5 Comments (154 Responses)
Question 6 (120 Responses)
Question 6 Comments (154 Responses)
Question 7 (138 Responses)
Question 7 Comments (154 Responses)
Question 8 (108 Responses)
Question 8 Comments (154 Responses)
Question 9 (131 Responses)
Question 9 Comments (154 Responses)
Question 10 (120 Responses)
Question 10 Comments (154 Responses)
Question 11 (130 Responses)
Question 11 Comments (154 Responses)
Question 12 (106 Responses)
Question 12 Comments (154 Responses)
Question 13 (0 Responses)
Question 13 Comments (154 Responses)

Individual
Kevin Conway
Intellibind
No
I agree in principle with the changes; however the definition and direct effect on certain small entities has not been improved. Primarily there are many entities that will be included that are marginal at best. Such entities will include intermittent generation such as wind, which may, or may not fit into the designation of aggregation of up to 75 MVA. It is becoming a practice to size a farm, or phase of a farm, to under 75MVA to get around the rules. A site is not defined and could be defined very narrowly. I do not agree with the 20MVA threshold for single generators when the generators net output cannot reach the 20MVA output. Trash burning facilities have heavy station service loads and by nameplate are included when in reality they operate below the arbitrary cut off. FERC has asked for technically justified standards, and the proposed BES definition still applies an arbitrary threshold not supported by technical argument. This issue is further aggravated by location of these resources. Many of these resources are remotely located specifically so that they have no, or minimize impact on the BES. Many times they are on long lines that are over 100KV simply because of efficiency in electrical transmission.
Yes
No
In the discussion the Drafting team stated they found no technical rational to change the 20 MVA rule, however there is no technical rational to support 20 MVA either. There are arguably cases where it will be appropriate to include these generators; however there are may instances where these

generators should not be included. This should be driven by the interconnected transmission operators, not by an arbitrary threshold. In the WECC there are multiple examples of small/medium hydro, waste-to-energy, and other non-dispatchable generation that not only are located where they cannot add to the reliability of the BES, are not manned, and are bound by contractual relationships by a BA. These facilities have a tendency to have multiple forced outages, are affected by weather events, and are not considered reliable by the interconnected transmission operator for BES reliability purposes. Many of these facilities generate power as a secondary business, not primary. Wood burning, trash burning is waste disposal, irrigation projects are primarily focused on water delivery. Failure of power generation is not addressed as a primary importance during a failure, and none of these facilities were constructed to benefit the BES. In many cases the contract to construct these facilities was predicated on proving they do not impact the interconnected transmission operator or the BES.
No
Though as previously stated I do not think that the 20 MVA threshold has technical merit, I do not believe that the 75MVA limit has technical merit either. Further the impact should be measured at the buss bar not at the nameplate. The aggregate rating should be the same as the individual unit rating on a single plant, unless the plant can prove that there is not a common failure mode to lose more than 20MVA.
Yes
There continues to be confusion in the industry of blackstart by Generator Owners and Operators (especially small to medium generation), and the drafting team should clearly define what is meant by blackstart. Many small generators have the capability to blackstart their resource, but are not part of the Transmission Operator's blackstart plan on restoring the BES. In most cases they are asked to blackstart if possible and wait until lines are energized and close in as directed by Transmission Operator. This is significantly different than owning a blackstart resource designated to provide power during a blackout.
No
Though the intent is understood through the discussion, the language presented is not clear enough. The drafting team should be cautioned on how Standards are read through many different entities and audiences. The team should also understand if the issue is not clearly defined, there will continue to be ambiguity through the registration and compliance processes. As previously stated on an earlier question, I do not think that the 20 MVA threshold has technical merit, I do not believe that the 75MVA limit has technical merit either. Further the impact should be measured at the buss bar not at the nameplate. The aggregate rating should be the same as the individual unit rating on a single plant, unless the plant can prove that there is not a common failure mode to lose more than 20MVA.
No
Small radial systems that have two interconnection points at the same location or very close to the same location, but are not used for Transmission flow through should also be excluded. There are numerous examples of two interconnection points that are paralleled by much higher voltage systems and do not flow power through the system, but are redundant to increase distribution reliability. This should be left to the Transmission Operator/Transmission Owner to determine if there is flow through and impact to the BES before designating these as BES assets based on interconnection points. Radial should be defined as power flowing one direction only, not based on how it is interconnected to 100KV or higher lines.
No
This is very confusing. Understanding the Drafting Team's goal, it would better to adjust the I2 and I3 criteria to address NET generation and behind the meter generation. E2 appears to try and address the net generation versus nameplate issue, but not fully. Station service power is behind the meter and it is a commitment of the resource. Many small generators have multiple processes outside of power generation they must provide for, and these should be considered in the exceptions.
Yes
This does address some of my concerns on small radial transmission systems. I think that there will be confusion when small entities try and apply both E3 and E1 to their particular situations. The ambiguity will cause more questions than it is trying to answer.
No

This does not address the full concerns of these small entities. In on case I am familiar with the entity has a switchyard over 100KV and it was convenient for the interconnected utility to utilize the location of the switchyard to add a line for the Transmission Operators purpose, however now that there are two lines into the switchyard it has affected the small utility and they will not have exemption as described in Question 10. The financial burden is very high for these entities when not exempted. In this particular case noted above, the entity is planning to eventually decommission its system, but is caught in having to bear the cost of operating a transmission system even though it is only one substation that is immediatly stepped down to 13.8Kv and feeding a small distributed load. The proposed exemption will still not allow this entity to be exempt. The ROP process does not serve these small utilities well as an alternative and the Drafting Team should resolve these issues in the definition of the BES if possible.
No
Due to the voltage bright line of 100kV there is still a question of what makes up sub-transmission. Many rural companies with large geographic areas use the 115kV system internally as sub transmission, but because of the bright line it is considered part of the transmission system. This is not its purpose, or how it is operated. There are no commercial paths, and no transmission flow through. On the other hand there are significant generation resources (significantly over 20MVA) that are interconnected directly through the sub transmission system to the BES, and by definition, since they are not interconnected at 100kV, they are exempted from BES status. Some of these facilities do have direct impact on the BES.
No
Generation that is BES significant that is not connected at 100kV or above.
Individual
Si Truc PHAN
Hydro-Quebec TransEnergie
No
The bright line revised definition could expand significantly what is considered to be BES in the case of HQT, with no discernible impact on the reliable operation of the interconnected system, because of the nature of the Québec interconnection. Furthermore, it should be stated that there appears to be a conflict between the proposed definition and the regulatory framework applicable in Québec or at least there are some important differences between both. The non-FERC juridiction was acknowledged by FERC Order 743 in paragraph 95. As an example, the Québec regulatory framework considers that there are several levels of application for standards, not only one. A single BES definition cannot apply to all standards. The definition must include more latitude for non-FERC jurisdictions, as long as the reliability objective is achieved.
No
Since transformers are already part of "all transmission Elements operated at 100 kV and above" in the definition, and since inclusions I2 to I5 are commonly related to only generation, I1 should be removed and replace instead by the following Exclusion: Ex "Transformers not used as Generator Step-Up (GSU) transformers that have primary or secondary winding at less than 100 kV."
No
We believe that it is not necessary to include small generator of 20 MVA into the BES, neither the transmission path that connect them. However, a provision should be made so that some reliability standards related to generator shall apply (voltage regulation, etc.).
No
We believe that automatic inclusion of 75 MVA generation and the path to connect them to the BES should not be automatically included in the BES. However, a provision should be made so that some reliability standards related to generator shall apply (voltage regulation, etc.).
No
When we have to use Blackstart Resources, there is no more system. Therefore, reliability is not a system planning issue, the need is no more for reliability since we lost the System or part of it. It becomes a need for restoration of the system as fast as possible. The restoration plan is necessary, but the Blackstart Resources and do not contribute to the reliability of the System, which just failed,

but to limit the time of loss of service. There is no obligation to apply the same Reliability Standards on the paths and it should not be automatically included in the BES.
No
We believe that automatic inclusion of dispersed generation greater than 75 MVA and the path to connect them to the BES should not be automatically included in the BES. However, a provision should be made so that some reliability standards related to generator shall apply (voltage regulation, etc.).
No
It is too much restrictive to refuse exclusion of radial system when they have generator greater than 20 MVA, or multiple generating units of aggregate capacity greater than 75 MVA, especially when a system is able to function reliably with the loss of generation much higher than this amount. The fact that no Reliability Standards apply to generators excluded from BES is problematic. Generators should be allowed to be excluded but reliability standards should apply to them in specific. Also, the connection through only a single Transmission source is again too restrictive. Other Transmission source could be used for load continuity of service and the restriction should be limited to radial transmission paths where the power flow is greater than the first contingency lost.
No
Part b) is again very restrictive. It is not necessary to refuse exclusion when generation is above 75 MVA. However, a provision should be made so that reliability standards related to generator shall apply.
No
The case of small Utility is covered through other exclusions. However, the Facilities owned by small utility should have protection requirement applied.
No
See comments on E3 (Q.9)
Yes
There appears to be a conflict between the proposed definition and the regulatory framework applicable in Québec or at least there are some important differences between both. NERC's proposed definition of Bulk Electric System (“BES”) is made in response to FERC's Order 743. FERC is looking to remove regional discretion, and in some cases to make sure BES includes the most important national load centers. As for HQT's System, the BES definition shall meet the expectations of Quebec's regulator, the Régie de l'Énergie du Québec, (Quebec Energy Board) which has the responsibility to ensure that electric power transmission in Québec is carried out according to the reliability standards it adopts. In a recent order (D-2011-068), the Régie de l'Énergie du Québec has recognized several level of application for the Reliability Standards in Québec. It stated specifically that most reliability standards in Québec shall be applied to the Main Transmission System (MTS). One other level of application recognised by this decision is the NPCC Bulk Power System (BPS) to which the standards related to the protection system (PRC-004-1 and PRC-005-1) and those related to the design of the transmission system (TPL 001-0 to TPL-004-0) will be applicable. The Main Transmission System definition is somewhat different than the Bulk Electric System definition. The Main Transmission System includes elements that impact the reliability of the grid, supply-demand balance and interchanges. It can be described as follows : The transmission system comprised of equipments and lines generally carrying large quantities of energy and of generating facilities of 50 MVA or more controlling reliability parameters: • Generation/load balancing • Frequency control • Level of operating reserves • Voltage control of the system and tie lines • Power flows within operating limits • Coordination and monitoring of interchange transactions • Monitoring of special protection systems • System restoration Therefore, it will be necessary to accommodate NERC's proposed definition of BES or the exception process with the Québec situation where Entities are under a different jurisdiction. These differences include more than one level of application for the reliability standards, the Main Transmission System definition being the main one to which most reliability standards apply.
Individual
Martin Bauer

US Bureau of Reclamation
Yes
Yes
Yes
Yes
Yes
Yes
Yes
No
The term "retail load" is ambiguous and unnecessary. The term should be changed to "load". The change is justified by the conditions (i) and (ii) placed on the generators.
Yes
No
The small entities can seek exclusion using the BES Exception Process developed under this project.
Yes
No
Individual
Jerome Murray
Oregon Public Utility Commission Staff
No
The inclusion of individual generation units with a nameplate capacity between 20 MVA and 75 MVA is over-inclusive and unnecessary. Generation in this range generally has no impact to the reliability of the bulk transmission system. The 20 MVA threshold was pulled from the existing NERC Statement of Compliance Registry. This Registry value was adopted without the benefit of having been scrutinized through a NERC Standards Development Process, so the technical record justifying the 20 MVA threshold is unavailable. The BES Drafting Team will need to have technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different framework. Absent any technical justification, Inclusion I2 should be eliminated. This would leave the 75 MVA threshold in Inclusion I3 and Inclusion I5 as the minimum BES thresholds for generation. The proposed BES Definition does not address the BES "demarcation points" and whether the BES must be "contiguous." NERC Staff has submitted written comments to this project stating that the BES "must be contiguous." Instituting a contiguous BES with Inclusion I2 would result in a over-inclusive BES definition. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of distribution elements that have nothing to do with improving or protecting the reliability of bulk transmission system. There is no compelling reason to adopt a "contiguous" BES down into local distribution systems. Section 215 of the FPA of 2005 gives FERC jurisdictional authority over "users" as well as "owners" and "operators" of the bulk power system. Consequently, FERC has the jurisdictional authority to require generation entities in the

Compliance Registry to comply with applicable NERC requirements. Hence, even where an entity does not own or operate BES assets, it could still be required, for example, to provide necessary information to the applicable Reliability Coordinator or Planning Coordinator and to participate in programs to prevent instability, uncontrolled separation or cascading outages to the bulk transmission system. This approach would fully achieve the goals of bulk transmission system reliability without imposing the full BES regulatory compliance burden on local distribution elements.

Yes

Exclusion I as currently proposed adequately defines radial systems; however, Inclusion I2 language should be removed per the rationale stated in the response to Question 3 above. To retain the Inclusion I2 language herein would sweep in an abundance of distribution elements that have no impact on the reliable operation of the interconnected bulk transmission system.

Yes

Exclusion E3 is absolutely necessary for excluding local distribution elements from the interconnected bulk transmission system as required by Section 215 of the FPA of 2005. This exclusion mirrors the Seven Factor Test (established in FERC Order 888), which sets sound overarching principles for differentiating local distribution elements from bulk transmission elements. Also, the conversion of radial systems to local distribution networks is generally implemented by a distribution provider to improve the level of service to local retail customers, not to accommodate bulk transfer of wholesale power. Retaining Exclusion E3 is absolutely crucial for maintaining the 100 kV brightline in the core BES definition. Without the distribution network E3 exclusion, the voltage threshold in the core BES definition would need to be changed to the 200 kV level. Otherwise, NERC and Regional Entities will have to deal with endless exception applications and evaluations associated with the removal of local distribution elements that have no impact on the reliable operation of the interconnected bulk transmission system.

No

Without BES "demarcation" and "contiguous" principles being addressed in the proposed BES definition, this question is difficult to answer. NERC Staff has submitted written comments to this project stating that the BES "must be contiguous." Instituting a contiguous BES with Inclusion I2, for example, would result in a substantially over-inclusive BES definition. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of distribution elements that nothing to do with improving or protecting the reliability of bulk transmission system. There is no compelling reason to adopt a "contiguous" BES down into local distribution systems. Section 215 of the FPA of 2005 gives FERC jurisdictional authority over "users" as well as "owners" and "operators" of the bulk power system. Consequently, FERC has the jurisdictional authority to require generation and other entities in the Compliance Registry to comply with applicable NERC requirements. Hence, even where an entity does not own or operate BES assets, it could still be required, for example, to provide necessary information to the applicable Reliability Coordinator or Planning Coordinator and to participate in programs to prevent instability, uncontrolled separation, or cascading outages to the bulk transmission system. This approach would fully achieve the goals of bulk transmission system reliability without imposing the full BES regulatory compliance burden on local distribution elements.

Individual

Eric Lee Christensen

Public Utility District No. 1 of Snohomish County, Washington

Yes

As a general matter, Snohomish County PUD supports the approach the Standards Development Team ("SDT") has taken to defining the Bulk Electric System ("BES"). In the comments we submit

today, we identify several refinements we believe would improve the definition. We also discuss the legal framework the SDT must operate under as we understand it. But we support the SDT's conceptual approach and, if refined as we suggest, we will support the SDT's proposal so long as an acceptable process for defining exceptions accompanies the definition. As to the core definition addressed in Question 1, Snohomish believes the changes made in the revised definition are helpful and represent significant progress toward an acceptable definition. Nonetheless, we are concerned that the core definition is overly-broad and sweeps facilities into the BES that are required by the statute to be excluded, even considering the list of inclusions and exclusions. We therefore suggest two different approaches below that may achieve the SDT's aims more effectively than the proposed core definition. At a minimum, as we explain below, additional clarifications to the core definition are necessary and an acceptable exemption process is required to ensure that facilities that by statute must be excluded are excluded from the BES as defined by the SDT. At the outset, we urge the SDT to bear in mind the specific restrictions on the definition of "bulk-power system" contained in Section 215 of the Federal Power Act ("FPA") (Following FERC's guidance on the question, we treat the statutory term "bulk-power system" as equivalent to the term ordinarily used in the industry, "Bulk Electric System"). In Section 215(a)(1), Congress defined "bulk-power system" to mean "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" and "electric energy from generation facilities needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1). Congress unequivocally excluded from this definition "facilities used in the local distribution of electric energy." Id. The "bulk-power system" definition thus imposes a clear limit on the reach of the mandatory reliability regime. Congress reinforced that limit in Section 215(i), where it emphasized that the FPA authorizes the imposition of reliability standards "for only the bulk-power system." 16 U.S.C. § 824o(i)(1) (emph. added). Further, the SDT must bear in mind "the cardinal rule that a statute is to be read as a whole since the meaning of statutory language, plain or not, depends on context." City of Mesa v. FERC, 993 F.2d 888, 893 (D.C. Cir. 1993) (citation omitted). In considering how Congress used the term "bulk-power system" in the statute, as well as the limits on the reliability regime imposed in the surrounding statutory language, it is clear that Congress intended the "bulk-power system" to be defined narrowly so that it would incorporate only high-voltage, interstate facilities used to transmit power over long distances, whose failure threatens drastic reliability events such as cascading outages. These limitations are plain from, for example, the statutory definition of "reliability standard," which provides that reliability standards are to encompass only requirements to "provide for reliable operation of the bulk-power system." 16 U.S.C. § 824o(a)(3) (emph. added). Congress further refined the scope of reliability authority by specifically defining "reliable operation" to mean "operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance. . . or unanticipated failure of system elements." 16 U.S.C. § 824o(a)(4). Congress's intent to focus the national reliability regime on broad-scale threats to the interconnected, interstate high-voltage system like cascading outages is made clear, as well, by Congress's specific direction that the mandatory reliability system is prohibited from enforcing standards for adequacy of service, which were left to state and local authorities. 16 U.S.C. § 824o(i)(2). When read in the context of the statute as a whole, the definition developed by the SDT should therefore focus on that portion of the interconnected bulk transmission grid for which thermal, voltage, and stability limits must be observed in order to prevent instability, separation events, and cascading outages. Further, in order to honor the specific limits placed on the definition by Congress, the SDT's definition must exclude facilities used in the local distribution of electric power and it must exclude facilities whose operation or mis-operation affects only the level of service and does not threaten cascading outages or other widespread events on the bulk interconnected system. Snohomish is concerned that the SDT's proposed definition is overly-broad, and that it will sweep in many Elements that have little or no material impact on the reliable operation of the interconnected bulk transmission grid. For example, the definition would sweep in all generators with 20 MVA capacity even though generators this small rarely create impacts on the interconnected bulk transmission system that would threaten to violate the thermal, voltage or stability limits of the bulk transmission system and therefore do not threaten instability, separation, or cascading outages on the interconnected transmission system. Accordingly, for the BES definition to conform to the requirements of the statute, the SDT must adopt an effective mechanism to exempt facilities like these that are improperly swept in by the SDT's brightline approach to inclusions and exclusions. For this reason, the Exception process to accompany the SDT's definition is of critical concern. It constitutes the last line of defense against a SDT definition that

sweeps in facilities excluded by the statutory definition. Snohomish believes the SDT can achieve the goals of FERC's Orders No. 743 and 743-A while honoring these statutory limits by taking one of two alternative approaches to the core definition. First, perhaps the simplest way the SDT could achieve the goals of FERC Order No. 743 while avoiding overbreadth that violates statutory limits is to simply adopt the statutory definition of "bulk-power system" as the core definition. This approach is commonly used by regulatory agencies in defining key jurisdictional terms to ensure that the agency does not cross statutory boundaries when carrying out the duties assigned to it by Congress. Under this approach, the core definition would simply echo the statutory definition, substituting "Bulk Electric System" for its statutory equivalent, "bulk-power system": The term 'Bulk Electric System' means: (A) Facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and, (B) Electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy. See 16 U.S.C. § 824o(a)(1). The inclusions and exclusions developed by the SDT, with the refinements we discuss below, would then be added to provide guidance in the application of this definition to specific classes of electric system facilities and Elements. A second alternative approach is to make the smallest possible adjustment to the current BES definition that suffices to address the central concern expressed by FERC in Orders No. 743 and 743-A. Those orders emphasized that FERC's concerns are with the initial phrase in the current NERC BES definition, which provides that the "Bulk Electric System" is: As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. In Order No. 743, FERC made clear that it views the initial phrase ("As defined by the Regional Reliability Organization") as creating unreviewable discretion for Regional Entities to define the BES in their region, and that this unreviewable discretion, rather than lack of uniformity per se, is the problem Order No. 743 is designed to remedy. See, e.g., Order No. 743, 133 FERC ¶ 61,150 at P 16 (2010) (FERC believes the "best way to address these concerns is to eliminate the Regional Entities' discretion to define 'bulk electric system' without ERO or Commission review"; id. at 30 (same). In Order No. 743-A, FERC clarified that the primary aim of its rulemaking was to eliminate this unreviewed regional discretion, and it was not, as FERC had originally proposed, to create a uniform national definition that does not allow for any regional variation. Order No. 743-A, 134 FERC ¶ 61,210 at P 11 ("We clarify that the specific issue the Commission directed the ERO to rectify is the discretion the Regional Entities have under the current bulk electric system definition to define the parameters of the bulk electric system in their regions without any oversight from the Commission or NERC."); id. at P 39 ("The Commission's suggested solution simply would eliminate regional discretion that is not subject to review by [NERC] or the Commission"). Accordingly, the SDT could achieve the primary aim of Order No. 743 by simply rewriting the current definition to read: Unless a different definition has been developed by the Regional Reliability Organization and approved by NERC and FERC, the Bulk Electric System is defined as the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. If the SDT uses this suggested language as its core definition, it will have addressed FERC's primary concern with a minimum of disruption to the current NERC system of definitions. The definition could then be further elaborated with the list of specific inclusions and exclusions of Elements and systems (modified as discussed below), to provide more specific guidance to the industry. In this connection, we note that a 200 kV threshold would be more appropriate for WECC than a 100-kV threshold. This is because generation in the West is generally located far from load, and power is generally transmitted from these generation sources to distant load centers on extremely high-voltage lines, usually operating in the range of 230-kV to 500-kV. Further, because loads are often dispersed across relatively broad geographic areas, especially in the rural West, 115-kV lines are frequently used in local distribution systems. See WECC Bulk Electric System Definition Task Force, Initial Proposal and Discussion, at pp. 11-16 (posted May 15, 2009) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx) (technical discussion showing that most transmission in the Western Interconnection operates at voltages greater than 200 kV). Accordingly, a 200-kV threshold with an "inclusion" mechanism to sweep in the relatively limited number of 115-kV lines in the West that perform a transmission function would be better suited to the typical topology of systems in the West than a 100-kV threshold with exceptions for facilities that operate as local distribution. That being said, we recognize that 200-kV may not be an appropriate threshold for other parts of the country and we are willing to support the SDT's approach as long as discretion is preserved for the WECC to develop a definition better suited to the conditions in the

Western Interconnection. If the STD elects not to adopt one of the above suggestions, the core definition proposed on April 28 requires clarification. Specifically, as drafted, the proposed definition is ambiguous in that it is not clear whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition. To eliminate this ambiguity, we suggest that the proposed definition be reordered to read as follows: Bulk Electric System (BES): (A) Unless included or excluded in subpart B, the Bulk Electric System consists of: (1) all Transmission Elements operated at 100 kV or higher; (2) Real Power resources identified in subpart B; and, (3) Reactive Power resources connected at 100 kV or higher. (B) [the list of inclusions and exclusions, modified as discussed in our responses to questions 2 through 9]. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that would be inserted as Subpart B modifies each provision of Subpart A. Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart B of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Snohomish supports the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the Federal Power Act ("FPA"), 16 U.S.C. § 824o. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."

Yes

In concept, we support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort. Also, the reference to "two windings of 100 kV or higher" may create some confusion because many three-phase transformer banks have 6 or 9 windings, depending on whether the transformer has a tertiary. We suggest clarifying this provision by changing the clause referencing two windings to read: "the two highest voltage transformer windings of 100 kV per phase that are connected to the Bulk Electric System."

No

Snohomish is concerned that the inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain

transmission system reliability." 16 U.S.C. § 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted improperly expands the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System – Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." But this conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. In fact, we believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result. We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Developoment Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the

classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. The other alternative is to draft standards that apply to a specific type of equipment – again UFLS relays is a good example – rather than to BES facilities categorically. Either approach will fully achieve the goals of bulk system reliability without imposing an undue regulatory compliance burden on local distribution systems. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application of particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.
No
Snohomish is concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition.
Yes
Including "all" blackstart and blackstart cranking paths in the BES may ultimately provide an incentive to the electric industry to reduce the number of resources with blackstart capability. We therefore suggest that essential blackstart resources identified by the Regional Entity should be included in the Bulk Electric System, but non-essential blackstart resources need not be.
No
Snohomish agrees that it is important to address wind generation facilities and similar generation facilities in which a large number of generating units, each with a relatively small capacity, are clustered and fed into the grid at a single interconnection point. That being said, Snohomish is concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.
Yes
FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained. We believe the exclusion as drafted adequately defines radials.
Yes
As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold (through reference to Inclusion I2) lacks an adequate technical justification in this context. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit ("standby, back-up, and maintenance power…") should be eliminated.
Yes
Snohomish strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all

facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. But providing an exclusion for radials without providing an equivalent exclusion for LDNs will have the opposite effect, to the ultimate detriment of electric consumers. Snohomish also supports, with the reservations discussed below, the LDN exclusion as drafted by the SDT. At least conceptually, we believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system. Although Snohomish supports the LDN exclusion, we believe the exclusion should be refined in the following respects: • The SDT's draft states that: "LDN's are connected to the Bulk Electric System (BES) at more than one location SOLELY to improve the level of service to retail customer Load." (emphasis added) We are concerned that the use of the term "solely" implies the need for an examination of the motives of a local distribution utility in connecting to the BES at more than one location. This result is problematic because it defeats the purpose of the exclusion, which is to allow LDNs to be excluded from the BES without an in-depth and expensive inquiry into the exact nature of the LDN. In addition, the local utility may have a number of motives for connecting to the BES at more than one location, but the local utility's motives have nothing to do with how the LDN interacts with the interconnected bulk system, which should be the key determinant in including or excluding any Element from the BES. With these concerns in mind, we therefore recommend that the SDT revise the sentence quoted above as follows: "LDNs are connected to the Bulk Electric System (BES) at more than one location to improve the level of service to retail customer load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances. • We believe the characteristics specified by the LDN in subsections (b) and (c) of the exclusion are redundant. Subsection b specifies that the LDN would not interconnect more than 75 MVA of generation in aggregate. Subpart c specifies that power flows only into the LDN. We believe the SDT can eliminate subpart b of the definition and simply rely on subpart c because if power only flows into the LDN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system, only with the LDN. Further, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LDN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the subpart c criteria, would be wholly absorbed within the LDN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. In addition, the 75 MVA criterion would make an LDN interconnecting more than 75 MVA part of the BES. For the reasons set forth by the Project 2010-07 SDT, we are concerned the result will be the local utility being improperly classified as a Transmission Owner and Transmission Operator, which would subject the local utility to a number of reliability standards that would significantly increase its compliance burden without substantially improving bulk system reliability. In fact, in the LDN situation, there is even less reason to impose these burdens on the local utility than in the situation addressed by the Project 2010-07 team, where generators are interconnected to the BES by dedicated interconnection facilities. Because the LDN is interconnected at multiple points, the generators interconnected to the LDN could continue to operate even if one or two interconnection points are out of service. On the other hand, in the situation addressed by the Project 2010-07 team, if the dedicated interconnection facility is out of service, the generation is unavailable because there is no alternative route to deliver it to load. Finally, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception.

Yes

Snohomish County PUD supports the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that can ill afford the substantial costs that accompany imposition of mandatory compliance with reliability standards. Further, we agree that the small utilities covered by the exemption will have no measurable impact on the operation of the

interconnected BES. Our views are borne out by experience in the Pacific Northwest where many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.

No

While Snohomish County PUD agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1, Snohomish believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. To give a further example, assume that a local distribution utility operates a distribution network that currently would be excluded from the SDT's definition, but that a cogeneration facility with a capacity of 30 MVA and average production of 15 MW is constructed in one of the industrial areas served by local distribution facility and the output is purchased by one of the industrial customers. Because of inclusion I2, the local utility would now be classified as owning BES facilities, even though the output of the generator rarely exceeds 20 MW in practice and the output is, as a matter of physics, absorbed by the surrounding industrials loads rather than being transmitting onto the interconnected grid. Further, the fundamental nature of the local distribution facilities has not changed. They are still used to deliver electric power to the utility's end-use customers, not to deliver power on the wholesale market across the interconnected bulk grid. Hence, the result of the SDT's definition is to include "facilities used on the local distribution of electric energy" in contravention of FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). The practical result of the improper classification would be that the local utility would be required to register as a Transmission Owner and Transmission Operator, and would incur substantial costs to comply with requirements that are designed to ensure the reliable operation of transmission lines that are part of the interconnected grid, not local distribution facilities. For the reasons explained in the papers published by the Project 2010-07 Task Force, the result is substantially increased compliance costs that produce little or no improvement in the reliability of the interconnected bulk system. Accordingly, if viewed in isolation, the SDT's core definitions and list of inclusions/exclusions do not comply with the statute or produce optimum benefits for bulk system reliability. Whether the SDT's approach complies with the statute can only be determined by examining the Exception process now under development, in conjunction with the SDT's definition. If the Exception process results in the exclusion of facilities that are improperly swept into the BES by the bright-line thresholds included in the SDT's definition, and the Exception can be attained at a reasonable cost to the involved entities, then the SDT will have achieved a result that complies with the statute. But this conclusion can be reached only upon review of the entire package, not just the core definition and list of inclusions/exclusions. In this regard, as discussed in our answer to Question 3, Snohomish notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that "users" of the BES can be subject to reliability regulation. 16 U.S.C. § 824o(b). Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BES Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.

Yes

As noted in our responses to Question 1 and Question 11, we believe the SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used in the local distribution of electric energy. Unless the SDT adopts some approach other than a core definition with inclusions and exclusions based on brightline thresholds, the SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities.

Snohomish County PUD has these additional concerns: • We are concerned that the proposed 24-

month delay in the effective date of the new definition will delay the potentially beneficial effects of the SDT's efforts, especially for utilities that have been inappropriately registered for BES-related functions, which is a common situation in WECC. We therefore urge the new BES definition to become effective immediately upon approval by FERC or other applicable regulatory agencies. Entities that have been improperly registered for BES functions can then immediately file for deregistration and obtain the benefits of the new definition as soon as possible. For entities that have not previously been registered for BES-related functions but that would be required to register under the new definition, we do not object to the 24-month transition period proposed by the SDT to allow the newly-registered entity to attain compliance with newly-applicable reliability standards, many of which require new training for employees, new maintenance procedures, and complex new operational protocols. However, the transition period for newly-registered entities should be structured in a way that does not prevent entities seeking deregistration from benefitting from the new definition at the earliest possible date. • The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." Snohomish is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BES Task Force approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. • For the reasons we have explained in our answer to Question 11, we believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process. Further, we believe that the failure to vet all material elements of the BES definition through the Standards Development Process would constitute a violation of NERC's bylaws and the requirements of the Standards Development Process.
Group
Public Service Enterprise Group LLC
Mikhail Falkovich
No
There is still room for misinterpretation of the BES boundaries. The BES definition has ramifications affecting many standards. NERC should provide examples of what specifically is in and what is out of BES boundaries. Example one line diagrams showing "Generation Resources" included or excluded and types of radial feeds exempted should be shown. Identify what element is in BES / what is out. Suggest showing typical interconnection facilities. Addressing typical interconnection facility configurations will assist in developing a clear and concise definition that provides a precise line of demarcation between elements of the BES.
Yes
No
See comment 1 above.

Yes
No
Black start resources and the cranking path should not be included in the BES definition unless connected at 100kV and above. There are many other existing standards that impact black start units. Routine testing and redundancy is part of them. Adding in black start units < 100kV and the associated cranking path to the BES definition may discourage entities from providing black start capability due to cost associated with cumulative testing and record keeping criteria. This may result in withdrawing the offer to provide that service and/or potentially drive up the cost of that service significantly without any related increase in BES reliability.
Yes
No
Again, in similar comments to item 1 above, where is the BES line of demarcation between BES elements (the interrupting device itself) connecting the non-BES radial system? The term "Generation resource" is not defined and open for interpretation.
Yes
Group
National Rural Electric Cooperative Association (NRECA)
Barry Lawson and Patti Metro
Yes
NRECA believes the definition should explicitly state that facilities used in local distribution are excluded from the BES.
Yes
Yes
Yes
No
This is the only part of the BES definition and inclusions/exclusions that specifically states "regardless of voltage." NRECA does not believe it is appropriate for the BES definition to include such a statement. This issue needs to be addressed in standard applicability language, not in the definition of BES.
Yes
Yes
NRECA requests that the drafting team state explicitly whether the automatic interruption device is included or excluded from the BES. Examples of automatic interruption devices should be included in a reference or FAQ document, and drawings/diagrams on typical configurations would be beneficial. Consistent language is needed in the Inclusions/Exclusions. E1 states "automatic interruption device" and E3(a) states "automatic fault interrupting devices." NRECA recommends adding the word "fault" as in E3(a) and also stating "device(s)" in E1 and E3(a) and wherever else the phrase may be used in the BES definition and inclusions/exclusions. Additional clarification is needed in explaining E1(c) to ensure industry understands the scenario.

Yes
Yes
Yes
NRECA agrees with this approach, but also believes this could be addressed in the Statement of Compliance Registry Criteria document.
No
NRECA believes the definition should explicitly state that facilities used in local distribution are excluded from the BES.
Individual
Nicholas Winsemius
Grand Haven Board of Light and Power
No
The Grand Haven Board of Light and Power (GHBLP) does not agree that the core definition for the BES use a "bright line" definition of 100kV and above. Currently, we have a 138kV/69kV transformer that connects to the BES and serves a radial, load serving system. This transformer is presently protected by a "ground switch" relay scheme. We have a project in process that is replacing this "ground switch" relay scheme with a circuit switcher. The circuit switcher, unlike the ground switch, would not affect the BES if it were to operate. By this "bright line" definition this single asset would be defined as a part of the BES. The cost that our organization would incur from being forced to register as a Transmission Owner and Transmission Operator (TO/TOP) would be extreme, and would significantly impact our budget and our customer's rates. We should not have to depend on an "exclusion" process to remove this asset from being defines as a part of the BES, and this should be addressed in the core definition.
Yes
Yes
Yes
Yes
Yes
No
Exclusion E1 addresses a radial, load serving system, but it does not address whether the automatic interrupting device should be defined as a part of the BES or not. In our case, the ONE automatic interrupting device that we own would force us to register as a TO/TOP, and as a result incur significant costs. This does not comply with FERC Order No. 743 (and No. 743a) and should be addressed in this exclusion if not in the core definition.
Yes
Yes
No
We agree with addition of Exclusion E4, except that it should apply to small load serving distribution utilities even if they are required to register as a Distribution Provider and Load Serving Entity. In our last fiscal year, July 2009 through June 2010, the Grand Haven Board of Light and Power served

262,847 MWh and peaked at 54 MW. Even though we are required to register as DP/LSE, we are still a small utility. Please revise the definition of a small entity for the purpose of this exception to use more reasonable criteria.
No
The exclusions do not properly address the exclusion of single automatic interrupting device that serves a radial, load serving system and, through its operation, does not affect the BES.
Yes
This current definition does not comply with FERC Order No. 743 (and 743a) by not addressing the exclusion of a single automatic interrupting device that serves a radial, load serving system.
I can not over emphasize how unreasonable it would be for our utility to have to register as a TO/TOP because of one asset (138kV circuit switcher) that serves a radial, load serving system. It is equally unreasonable for us to have to use a long and arduous exception process to qualify for deregistration. Please take this into consideration as you prepare the final definition.
Individual
Josh Dellinger
Glacier Electric Cooperative
No
I still feel that a bright-line of 200 kV would be more appropriate, with language stating that certian significant elements operated below 200 kV would be included. However, I believe the exlusion process is definitely a step in the right direction.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
No
I agree with the approach, but not the language. I believe the small utility clause should be taken out and this Exlusion should be applicable to any transmission elements whose connection to the BES is soley through a single transmission source and without interconnected generation, regardless of the size of the utility.
Yes
I do believe that the language in its plain sense does exclude local distribution systems, but I do see the possibility of differeing interpretations of the language across the regions again. Perhaps adding some example system diagrams showing what would and would not be included in the BES would help alleviate any possible ambiguity and increase consistency across the regions.
No
No
Individual
Russ Schneider

FHEC
Yes
Generally agree, but think E1 should be changed slightly to: From: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: To: E1 - Any radial system which is described as connected from a Transmission source originating with a single automatic interruption device and:
Yes
Believe that the NERC Statement of Compliance Registry Criteria should be revised to reflect only thsese inclusions and exclusions. An entity with no assets that meet this definition should be allowed to de-register.
Yes
Yes
Yes
Yes
No
Suggest the word single be moved later in the sentence, see below- From: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: To: E1 - Any radial system which is described as connected from a Transmission source originating with a single automatic interruption device and:
Yes
Yes
We support the current wording of E3.
Yes
this begs the question of the Statement of Compliance Registry Criteria being updated also.
No
Not until the Statement of Compliance Registry Criteria is conformed to this proposed definition.
No
Individual
Kim Moulton
Vermont Transco
Yes
It appears that the SDT has made progress in addressing comments made to date. Concerned that facilities below 100 kV will fall into the current definition of BES. If changes in the wording better identified key areas the new definition would be easier to interpret, apply, and it would better align with the concerns of the members
Yes
This inclusion’s wording allows an entity to easily identify which of its transformers will be included as BES and also adheres directly to the FERC identified 100kV or higher equipment. Question: if a transformer does not have two windings of 100 kV or higher but does have protection devices that could open the BES system, e.g. due to a low-voltage failed breaker scenario, would the protective devices be part of the BES even though the transformer itself is not?
Yes
How will generating owners currently registered as a GO/GOP and have units tied to the BES system through a radial transmission line, that they own, and connects them to the grid be affected by the

new definition? Will they need to become TO and TOP registered also? Should a GO/GOP have to adhere to all TO/TOP standards and requirements or only a sub-set of requirements?
No
What is the definition of "common bus"? Would this only apply to generating facilities with a direct GSU tie to the 100 kV, and up, system? Or would it apply to those units tied to the low side of a transformer at a voltage below 100 kV that has a step up high side voltage greater than 100 KV? Example: units are tied through to a single 46 kV substation (GSU high side connected to this substation) with a tie from this substation to the BES through a step up transformer.
No
: The phrase "regardless of voltage" is a concern. The goal of the FERC order is to provide a more reliable "bulk power system". Many blackstart resources are at voltages well below the 100 kV voltage and are not material to the restoration of the bulk electric system during a blackout. The wording of this inclusion would require many units that are used only for local area support to now be listed as a BES facility. The wording of this inclusion should be something to the order of "Blackstart Resources and the designated blackstart cranking paths identified in the transmission operators restoration plan that are necessary to restore the BES system", this should not include cranking paths on distribution feeds that are used primarily for local area support. The purpose of this inclusion should be to make certain all units necessary to energize the BES grid after a blackout are maintained and operated appropriately
No Comment
No
Does "a single transmission source" mean a single "substation" at 100 kV or above? The wording of this exclusion appears to allow distribution (<100 kV) level generating units to be excluded from the definition of BES. If so then this generation exclusion is appropriate to the FERC order. However, the definition of "automatic interruption device" should be defined fully. Specifically what types of equipment are considered an AID? If a transformer has a high side voltage of 115 kV and a low side voltage of 34.5 kV it would not be part of the BES definition, however depending on how one interprets the exclusion for a radial feed, if the transformers automatic interruption device were on the low side of this transformer, it appears that this transformer would then need to be "included" as BES. In addition, would the protection schemes associated with the breaker failure on the low side of a transformer (voltage <100 kV) designed to send a signal to the high side (which is greater than 100KV) for a breaker failure scenario fall into the "included" facilities even though the transformer would not be "included"?
No Comment
No Comment
The exclusion wording is difficult to understand and apply. Are their voltage levels where this would not apply (ex. 230 kV) or load levels that would be seen as too high? Cannot agree or disagree due to the wording
No
The inclusion of all black start units "regardless of voltage", the unclear definition of "automatic interruption device" and "common bus" could lead to local distribution company facilities being included in the definition of BES.
No
No Comment
No additional comments
Group
Northeast Power Coordinating Council
Guy Zito
No
The core definition should be revised to read: Bulk Electric System (BES): All Transmission Elements operated at 100 KV or higher, unless such designation is modified by the list shown below. The resulting modified BES shall comprise all Elements deemed necessary for operating an interconnected electric energy transmission network, but shall exclude any Elements used in the local distribution of electric energy. The inclusion and exclusion requirements are restrictive. For example, radial

characteristics should not be limited by the amount of installed generation or single transmission source and/or require an interrupting device. Instead, one or more transmission sources could feed the radial load to provide redundancy as long as there is adequate protection and isolation for improved customer-supply continuity and reliability. This would be considered radial as long as the loss of any transmission source would not affect, and is not necessary for the operation of the interconnected transmission network. This retains the incentive to build transmission. The revised definition will have a direct impact on entities across North America and may conflict with regulatory requirements, Codes, and Licenses. FERC in its Order 743 and 743A has directed NERC to address these concerns. Include provisions in both the NERC exception criteria and exception process for federal, state and provincial jurisdictions. These provisions should provide clear guidance so that, if and when there are deviations from the exception criteria, they are properly identified with technical and regulatory justifications ensuring there is no adverse impact on the interconnected transmission network. This burden of proof should be left to the entity seeking exception because it may be difficult to define the exception criteria. Further, if such an explicit criteria could be defined, it could become another bright-line BES.

Yes

No

I2 should pertain to individual generating units, but the entire path should not be labeled as BES. Oftentimes there are cases when neither the path nor a 20 MVA unit itself will have any impact on the reliability of the interconnected transmission network, nor is it necessary for its operation. The path to generating facilities does not need to be BES contiguous. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require a contiguous path unless the unit is identified essential for the operation of transmission network.

No

I3 should pertain to multiple generating units located at a single site, but the entire contiguous path should not be labeled as BES. Oftentimes there are cases when neither the path of a 75 MVA plant or aggregated generation will have any impact on the reliability of the interconnected transmission network nor be necessary for its operation. As stated earlier, under various green energy, smart grid and dispersed renewable energy plans advocated by both Canadian and US policy makers, the gross nameplate rating of 75 MVA may undermine and deter the future potential of integrating Distributed Generations (DG's) that will be implemented to ensure the reliable operation of the interconnected transmission network BES, and, at the same time, providing the most effective and economical solutions for rate payers. Local generation can cost-effectively enhance the reliability of load pocket by avoiding transmission, but such restrictions would deter the adoption of good planning decisions. Path to generating facilities need not be BES contiguous. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require contiguous BES paths.

No

Blackstart resources and transmission facilities on the cranking path should not be classified as BES regardless of size and voltage level. From a regulatory perspective, such an inclusion would be in conflict with the current regulatory requirements in many jurisdictions. More importantly, designating these facilities as BES Elements or Facilities beyond the 100 kV bright line, the 20 MVA/unit or 75 MVA/plant criteria, without a regard to their impact on the BES (under conditions other than system restoration) will impose unnecessary requirements for these facilities, which do not contribute to reliability under interconnected operation conditions. For a restoration condition, this inclusion is extraneous. There is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. The BES definition should cover those facilities that are needed for operation under both normal and emergency conditions, which includes situations related to blackstart and system restoration. The directives should not specifically ask for inclusion of blackstart resources and facilities on the cranking path in the BES definition. The requirements in EOP-005-2 suffice to address the SDT's interpretation

and concern regarding recognition of the reliability impacts and requirements for blackstart resources and facilities used for system restoration. Generating units of any size and transmission facilities of any voltage level may be used for black start and restoration. Conceivably, a generator of 10 MW and transmission or distribution facilities of 44 kV or 69 kV may be a part of the cranking path. A BES inclusion will then subject these generators and facilities, which are essentially "local" facilities but called upon to begin restoring its bulk interconnected counterparts, to comply with the reliability standards intended for maintaining BES reliability. Included in the BES definition will thus discourage smaller generators from providing black start capability, and the transmission facilities from being a part of the cranking path. This may also discourage Transmission Owners and Operators from identifying multiple black start resources and cranking paths to provide restoration flexibility. Such an inclusion will ultimately undermine reliability. If indeed any of these facilities are deemed necessary to support bulk power system reliability at times other than system restoration, they would/should have been identified through the basic BES definition and inclusion list or can be addressed through the exception procedure. I4 should be removed based upon: • The availability and performance expectations of blackstart resources and facilities on the cranking path are already specifically addressed in an existing standard; and • Unless they meet the BES definition and the other inclusion criteria, they do not have any perceived reliability impact on everyday operation of the BES. • I4 may include very small generators and distribution facilities as it is written. Is it necessary from a reliability point of view to include "cranking paths" below 100kV?
No
The entire contiguous path does not have to be BES. The path or aggregate generation will rarely have any impact on the reliability on the interconnected transmission network, nor is it necessary for its operation. These are generally referred to as connection facilities.
No
The concept is consistent with the statements in the FERC Order. However, it is imperative to understand that the limitations of E1 will have a direct impact on many entities (big and small) along with distribution companies across North America. The exclusion requirements are restrictive and these restrictions mayhave an adverse affect on future transmission investment, for example the addition of a second line removing the radial status exclusion. Consideration should be given to allowing entities to build additional transmission and not automatically compromise the exclusion status of any given facilities. For example, a redundant double circuit designed to supply the load with adequate protection and isolation beyond the radial tap could be significantly better for load supply-continuity and reliability. If more than one transmission source feed radial load to ensure customer supply continuity and reliability, then this should be either part of the bright-line definition E1 exclusion as long as there is adequate protection and, the loss of any single transmission source does not affect the interconnected transmission network. The SDT should: • Carefully craft the exception criteria and procedure that is flexible and technically sound to adequately allow entities to present their case to the ERO for exclusion • Exception criteria should be at a high-level with items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) mentioned in exclusions or inclusions based on technical assessment, evidence and justification for its unique characteristics, configuration, and utilization • Acknowledge and provide provisions in both NERC exception criteria and exception process for federal, state and provincial jurisdictions.
Yes
No
Regarding E3.a.--If the supply to a LDN is tapped off a Bulk Electric System facility, and the step down transformer is protected on its high side by a fault magnitude supervised automatic interrupting device (such as a circuit switcher), how does that affect the exclusion? The circuit switcher will only interrupt faults up to a certain magnitude. Above that threshold, depending on the system configuration, fault clearing might have to be done at the Bulk Electric System facility. Regarding E3.d.--The LDN cannot be used to transfer real or reactive power under all operating conditions. Suggest combining E3.c and E3.d to read as follows: Power is intended to flow only into the LDN. The generation within the LDN shall not exceed the electric real or reactive power demand within the LDN. The LDN only delivers real or reactive power to load, and is not to be used to transfer real or reactive power between different locations in the BES. Under no system condition is BES reliability to be

dependent on LDN flow.
No
Small utility or distribution provider is a relative term. A distribution provider may have an impact on the transmission network based on its design, configuration, connection point, and protection. Such an exception should apply regardless of the size of an entity. The concept discussed here is to define a radial system and not a small utility, as mentioned in the FERC Order. We do not believe that the SDT had sufficient discussions while crafting the proposed exclusion in regards to small utilities. The language used in the proposed clause is only appropriate to establish a bright-line definition for a radial system. Many small utilities (and individual load customers or generation connections) have more than a single transmission source with a solid tap and, at the same time, be adequately protected and effectively isolated without any adverse impact on the transmission network. Such a practice and design is widely used across North America. Hence, we do not agree that this exclusion is an attempt to address the issue of small utilities. The definition and inclusions will force many small entities, load customers and generation unit owners to act and register as Transmission Owners. This may be in conflict with state or provincial regulatory act, Codes and Licenses. Consistent with the FERC Order, the ERO and the SDT should be aware of these conflicts and should not ignore them. The ERO and the SDT address this by providing explicit but simple provisions in the exception procedure by considering sound technical exception criteria that is flexible based on demonstration of evidence to justify the element's necessity for operation. Regulatory Acts and Rules will always overrule NERC requirements and the only evidence that should be required of small utilities/entities is: • Regulatory evidence • Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of their connection.
No
The current definition drafted by the SDT has not differentiated between Transmission and Distribution, nor excluded distribution facilities from the BES, nor addressed the issue of local distribution facilities above 100kV. It is important for the ERO and the SDT to understand and be consistent with the FERC Order for these important but complex issues. Many parts of the continent could be in conflict with state or provincial regulatory act, Codes, and Licenses. The ERO and SDT and RoP teams be aware of these conflicts and not disregard them, as they will pose many implementation complexities and confusion within the industry. Regulatory Acts and Rules will always supersede NERC requirements and hence it is important that ERO should neither be caught in regulatory conflict nor put entities in these situations. As responded to in Question 10, the ERO and SDT can address this by providing explicit but simple provisions in the exception criteria (to be used by exception procedure) by putting forward required technical assessments , which are based on a demonstration of evidence to justify the element's necessity for operation. For example, suggest that for local distribution, the evidence that should be required is: • Regulatory evidence • Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of their connection Some of the other key attributes of such an exception criteria should be: • Elements are not to be part of interconnection between two balancing authority or contribute to IROLs • Entire system cannot be classified as contiguous • Entity to justify whether or not the elements are necessary for the operation of the interconnected transmission network • Distinguish if the element in question supplies load centers, major cities, serves the national interest and/or possibly impact national commerce or national security, or is identified by the relevant regulatory authority Accordingly, the exception criteria should ONLY list a menu of items and a prescribed report template that should be assessed and presented by an entity as their evidence and justification for exception to a RE, the ERO and any relevant regulatory authority. This evidence and justification would be used by the ERO as part of its decision making process.
Yes
The proposed definition will have a direct impact on entities not under FERC jurisdiction, and may be in conflict with regulatory requirements with which those entities must comply.
Currently, the posted exception criterion is only a concept with many gaps and TBD, as posted details are later to follow. The exception criteria should be a menu of technical items (load flows, stability analysis etc) and non technical items (type of loads such as distribution companies versus major city center, national security, etc). Entities should be required to assess and provide their own justification under each category with a conclusion that takes into account all of the relevant items for element(s) under exception, in a consistent template and table of contents. Suggest the SDT to avoid specification of any parameters as they would differ under different design concepts, system

configurations, system characteristics and regulatory requirements. The comments herein reflect thoughts on the document posted. An "all encompassing" comment is that the definition is too lengthy. The importance of the BES definition is recognized throughout the industry for its importance, and as such it should be simple, clear, and straightforward. The first draft definition posted was more along this line. I2, I3, and I5, being very similar, can they be combined into an encompassing generator inclusion criteria?
Individual
Richard McLeon
South Texas Electric Cooperative, Inc.
Yes
There is general confusion as to whether or not the "BES" is synonymous with the "BPS". If this is so, then it should be expressly stated as such. If not, clarification should be provided to industry.
Yes
Yes
Yes
Yes
Yes
No
I agree with everything up to "…but is not required to register…by the ERO". There are many small utilities that fit into the scope and spirit of the exclusion BUT were required to register as DP and/or LSE by their ERO. This has generally been on the interpretation of "better safe". Please remove the language which gives this discretion to the ERO and insert language allowing already registered small utilities with have their registrations revoked or surrendered.
Yes
I agree, but believe that those distribution companies that were forced to register as LSEs under FERC interpretation should be excluded as well.
No
Group
Tri-State Generation and Transmission Association, Inc.
Bill Middaugh
No
The Northeast Power Coordinating Council stated that "Step-down transformers with the low-side terminals serving non-BES facilities, which are serving a distribution function, should not be part of the definition of BES." The drafting team stated that it agrees with the comment, but the implementation uses the term local distribution network, which is different than a step-down transformer. Transformers are addressed in the answer to the NPCC comment 2, but uses the ambiguous "single Transmission source" phrase as a requirement to determine BES status. Other specific comments are below.
No
We recommend changing I1 to the following: "Only transformers, including phase angle regulators, with two or more windings of 100 kV or higher that are connected through automatic fault-

interrupting devices, unless excluded under Exclusions E1 and E3." "Only" is required to prevent a regional interpretation that includes distribution transformers since they are never specifically excluded. The phrase regarding GSUs is removed since they are covered in I2 and I3.
Yes
Yes
Yes
Yes
No
A "single Transmission source" is unclear and may be interpreted differently by different Regional Entities. A circuit switcher-protected transformer serving only distribution load may be tapped to a single transmission line but the transmission line has two or more sources. Is the system then connected to a single Transmission source, thus making it radial and being excluded? Or will the Regional Entity declare that, since the transmission line has two sources that the radial system also has two sources? We suggest changing the opening sentence of Exclusion E1 to "Any radial system that is connected to a Transmission source through an automatic interrupting device or devices and:"
No
This Exclusion should also include "wholesale" meters for the instance where an electric distribution cooperative has some small generation connected to its distribution system that meets the same criteria.
No
We believe that element c. needs to be changed to : "Power flows only into the Local Distribution Network, even under all contingency conditions that are considered under any TPL standard requirement dealing with transmission system performance: The generation within the LDN shall not exceed the electric Demand within the LDN;"
No
We disagree with adding E4. This issue should be resolved by enhancing the NERC Statement of Compliance Registry Criteria, not by integrating registration exemptions in NERC definitions.
No
See the comments to Question 7.
No
We believe that this definition is not consistent with the response from the SPCS in Project 2009-17, "Interpretation of PRC-004-1 and PRC-005-1 for Y-W Electric and Tri-State" and could change its intent. Existing tapped distribution transformers are clearly not BES Elements at this time. Under the proposed definition that clarity is lost. There are instances where "automatic interruption device" or "automatic interrupting device" is used. Each should be changed to include "fault" after "automatic."
Individual
Angela Gaines
Portland General Electric Company
The bright-line definition of 100kV should specify that this is a three-phase line-to-line voltage.
Yes
The reference to "two windings" will cause confusion. Presumably the Standard Drafting Team means two three-phase windings, which would mean that both the high sides and the low sides of a typical transformer bank would have to be operating at 100kV and above in order to be part of the BES. In other words, a 230kV/57kV transformer would not be included, despite the fact that all three windings that make up the high side are individually rated at over 100kV. The inclusion needs to make clear that it's talking about two or more sets of windings, each set consisting of three phases.
No

The 20 MVA gross nameplate rating threshold for an individual unit is too low and will result in the inclusion in the BES of generating units that have no potential to impact the reliability of the BES. The 20 MVA threshold was taken from the registration criteria, and no technical justification has been provided for its use. PGE recommends that this inclusion be removed entirely.
The 75 MVA aggregate capacity rating threshold could result in the inclusion in the BES of generating units that have no potential to impact the reliability of the BES. The 75 MVA threshold was taken from the registration criteria, and no technical justification has been provided for its use. In addition, the meaning of the phrase "located at a single site" is unclear and subject to multiple interpretations. The phrase "connected through a common bus" accomplishes the same goal, and therefore the phrase "located at a single site" should be removed.
Yes
It is not clear what the SDT is attempting to capture with this inclusion that is not already captured in I3. In addition, the term "collector system" needs to be defined.
Yes
Yes
While PGE appreciates the SDT's efforts to exclude distribution systems, as required by the statute, PGE believes that this Exclusion needs further clarification to be workable. PGE has specific concerns with the following aspects of the Exclusion: (b) The phrase "nor its underlying Elements (in aggregate)" is ambiguous. It does not make it clear how a utility could differentiate between the multiple Local Distribution Networks within its service territory. (c) The phrase "Power flows only into the Local Distribution Network" does not make clear that under certain abnormal circumstances power may flow out of a Local Distribution Network. Wording such as "the predominant direction of flow is into the Local Distribution Network during normal (non-outage) conditions" could account for such abnormal circumstances. (d) The phrase "Not used to transfer bulk power" should similarly be modified to indicate that it is meant to describe normal rather than abnormal conditions. In addition, this aspect of the Exclusion should account for the fact that two utilities may have multiple interchange points at the distribution level, but the fact that energy is transferred at these points does not inherently make them transmission paths. A phrase such as "none of the LDN facilities are identified as belonging to or having direct rating impact on a regionally-recognized constrained transmission path used to deliver energy to points outside of the LDN" could address this concern.
As stated above, PGE believes that the Exclusion for Local Distribution Network needs to be more explicit.
Individual
Richard McLeon
South Texas Electric Cooperative, Inc.
Yes
There is general confusion as to whether or not the "BES" is synonymous with the "BPS". If this is so, then it should be expressly stated as such. If not, clarification should be provided to industry.
Yes
Yes
Yes
Yes

Yes
Yes
Yes
Yes
Yes
There are many small utilities that fit into the scope and spirit of the exclusion BUT are currently registered as a DP and/or LSE. Will this exclusion remove them from registration OR should language be inserted that automatically revokes the NERC registrations of "already registered" small utilities. I recommend that any such revocation be handled by NERC and NOT by the various EROs for the sake of consistency.
Yes
I agree, but believe that those local distribution companies operating below the bright-line that were forced to register as LSEs under FERC Order on Compliance Filing (October 16, 2008) should be excluded as well. For example, BAL-005-0.1b, CIP-001-1a, EOP-002-3 and others do not apply to DPs but affect small local utilities as LSEs. If, according to FERC Order 743 a small local distribution utility would be rightly excluded from DP standards, then, by the same logic and as a distribution-level LSE, they should be excluded from LSE standards as well. If an operating system voltage below 100kV is too low to affect the BES/BPS, then it stands to reason that their connected load is too small as well. If not – then another bright-line should be established in the spirit of FERC Order 743 to differentiate between power flow across the BES/BPS and power flow to end-use consumers.
No
no.
Individual
Michael Albosta
Sweeny Cogeneration LP
The specific identification of global inclusions and exclusions is a very good way to approach this complex issue. We believe there are further items to be added to the list related to generator interconnections, a task that was passed to this project from Project 2010-07. Just as is the case with complex distribution systems, there are a variety of generator-transmission interconnection architectures which are driving the Regions to inappropriately register Generator Owner/Operators as Transmission Owners.
Yes
Transmission system transformers are not part of our existing or anticipated base of facilities.
No
The threshold for individual generation units is consistent with the NERC functional registry criterion. We believe that it is important to maintain this uniformity. However, we believe there are further items to be added to the list related to generator interconnections, a task that was passed to this project from Project 2010-07. Just as is the case with complex distribution systems, there are a variety of generator-transmission interconnection architectures which are driving the Regions to inappropriately register Generator Owner/Operators as Transmission Owners.
No
The threshold for multiple generation units aggregated at a single location is consistent with the NERC functional registry criterion. We believes that it is important to maintain this uniformity. However, we believe there are further items to be added to the list related to generator interconnections, a task that was passed to this project from Project 2010-07. Just as is the case with complex distribution systems, there are a variety of generator-transmission interconnection architectures which are driving the Regions to inappropriately register Generator Owner/Operators as Transmission Owners.
We do not operate any Blackstarts

Yes
The threshold for widely distributed and aggregated generation units (wind farms) is consistent with the NERC functional registry criterion.
Yes
We agree that all radial connections serving a single load, small generator, or combination should be excluded
No
Generators which serve local retail load (cogeneration) should be excluded if the net capacity available to the BES does not exceed 20 MW Single Unit/75 MW Multiple Units thresholds. We believe there are further items to be added to the list related to generator interconnections, a task that was passed to this project from Project 2010-07. Just as is the case with complex distribution systems, there are a variety of generator-transmission interconnection architectures which are driving the Regions to inappropriately register Generator Owner/Operators as Transmission Owners.
Yes
Yes
No
Group
American Municipal Power and Members
Kevin Koloini
Yes
AMP and its members appreciate the opportunity to comment on the draft BES definition. We generally support the direction taken by the SDT, with some minor changes. We agree with some other entities' comments and suggest a few clarifying edits to the core definition. First, the definition should refer to "non-generator Reactive Power resources," to make clear that although all generators provide some reactive power, those that do not meet the criteria of I2-I5 are not included in the BES. There is ambiguity concerning whether a transformer stepping down from >100 kV to <100 kV is included or not, though we believe that the SDT intends to exclude such transformers. It is clear that transformers with two windings >100 kV are included and GSUs for registered generators are included, but it is somewhat unclear in the current draft whether a 138 kV to 69 kV transformer is included or excluded. We suggests making it clear that the intent of the SDT is to include (a) GSUs associated with BES generators and (b) transformers with 2 or more windingwindings >100 kV, and that other transformers are excluded. We also believe the drafting team intended to exclude all elements that are not included either under the BES definition and designations or through the exception process. For the sake of clarity, we suggest that a sentence to that effect be added to the core definition. Finally, we note that the definition does not currently refer to the existence of the exception process. We suggest that such a reference be added either to the core definition or to the lists of Inclusions and Exclusions. The following is the core definition incorporating the changes: All Transmission Elements (except transformers) operated at 100 kV or higher, transformers as described below, Real Power resources as described below, and non-generator Reactive Power resources connected at 100 kV or higher unless such designation is modified by the list shown below. The NERC Rules of Procedure provide an Exception Process through which Elements not included in the BES under this definition and designations may be included in the BES, and Elements included in the BES under this definition and designations may be excluded from the BES. Elements not included in the BES either by application of this definition and designations, or through the BES exception process, are not BES Elements.
Yes
We support I2, but propose clarifying edits. To minimize possible confusion as to the category of transformers being addressed in I1, and the sufficiency of a single applicable Exclusion, we suggest the following rewording: "Transformers, including phase angle regulators, and not including generator

step-up (GSU) transformers, with two windings of 100 kV or higher unless excluded under Exclusion E1 or E3.”
Yes
We support I2 but propose clarifying edits. We understand that the intent is to define the BES component of qualifying generators as that equipment from the generator terminals through the GSU. To convey clearly this point, as well as that only generators that are both over 20 MVA and connected through a GSU with a high side voltage of at least 100 kV are included in the BES, I2 should be reworded as follows: “Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals, connected through a GSU that has a high-side voltage of 100 kV or above. A BES generator includes the equipment from the generator terminals through the GSU.”
Yes
I3 contains language similar to I2, and should be similarly reworded, as follows: “Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating), connected through a common bus operated at a voltage of 100 kV or above. A BES generating plant includes the equipment from the generator terminals through the respective GSUs.”
No
We recommend that the SDT exclude Blackstart Units under 20MW and Blackstart Units that are connected via their GSU to Non-BES Facilities (under 100kV). We believe this would be a minimal impact on the existing Restoration Plans while increasing the reliability and viability of these Restoration Plans since the industry would be forced to use only BES facilities as defined by NERC BES definition. This would force all Blackstart Units to be compliance with all Reliability Standards if this change is implemented.
No
There is concern over inadvertently including small distribution that has behind-the-meter generation on a 69 kV loop. We somewhat agree with the concept of Inclusion I5 but suggest a language change to clarify what we understand to be the drafting team’s intent, that the inclusion is intended to apply to dispersed wind and solar generating plants, and not, for example, to a radially-connected city with an aggregate of 75 MW of small generators behind-the-meter. This distinction is appropriate because such a city cannot have the same impact on the grid as a 75 MW wind farm; loss of the radial connecting the city to the grid would result in loss of its load as well as its generation, so that the supply-demand mismatch would be far less significant. We suggest that I5 be revised.
No
The words “described as” should be deleted from the exclusion to avoid confusion. What matters is how the system is actually connected, not how someone describes it. In addition, “a single Transmission source” could be defined, and should be generic enough to encompass the various bus configurations. It is not the case, for example, that each individual breaker position in a ring bus is a separate Transmission source; in that case, a bus at one voltage level at one substation should be considered “a single transmission source.” Some examples of configurations that should be considered a single transmission source for this purpose are at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf, Examples 1-6. The phrase “automatic interrupting device” should be replaced with the phrase “switching device”.” Many radials are connected to ring buses or breaker-and-a-half schemes where the breakers (automatic interrupting devices) are within the bus arrangement where the appropriate division between BES and non-BES is at the disconnect switch as the radial “takes off” from the bus arrangement.
Yes
We understand that E2 is intended to apply only to retail customers’ generation. The exclusion should therefore be revised to make that limitation clear. Specifically, the first sentence should read: “A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the retail customer’s side of the retail meter.” In addition, the first condition of exclusion, (i), "the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3," as written is vague and could be subjectively applied. I2 limits capacity supplied to the BES to 20MVA while I3 limits that capacity to 75MVA. A better way to state the exclusion would be as follows: (i), "the net capacity provided to the BES does not exceed the retail customer's total nameplate generation, or 75MVA, whichever is greater,".

Yes
The exclusion refers to groups of Elements that "distribute power to Load rather than transfer bulk power across the interconnected system." The use of the term "bulk power" is vague and could be read incorrectly as a reference to the "bulk-power system," which is defined in the Federal Power Act but is not a NERC defined term. If the LDN is connected to the BES at more than one location, there will by definition be some loop flow. We recommend below that Exclusion 3(d) be revised to quantify the amount of loop flow that is permissible in an excluded LDN. In the context of the first sentence of Exclusion E3, less specificity is needed, and the sentence should only be revised for the sake of accuracy to state: "Groups of Elements operated above 100 kV that are primarily intended to distribute power to load rather than to transfer power across the interconnected System." The exclusion's reference to connection "at more than one location" is vague. The sentence should be revised to read "connected to the Bulk Electric System (BES) from more than one Transmission source solely to improve the level of service to retail customer Load," and "Transmission source" should have the same meaning that it does in E1. E3(a) should require that there be switching devices between the LDN and the BES, not specifically automatic fault-interrupting devices. The term "separable by" in "Separable by automatic fault interrupting devices" is unclear and should be reworded. E3(b) To avoid pulling an LDN into the BES based on very small customer-owned generation (such as rooftop photovoltaics and hospital backup diesel generators) that the utility does not consider or rely on, or necessarily even know about, the item should be reworded: "Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA of generation used to meet the resource adequacy requirements of electric utilities." E3(d) states "Not used to transfer bulk power." As noted above, "bulk power" is a vague term. There will necessarily be some loop flow on a system that is connected to the BES at more than one location. The amount of permissible loop flow for this purpose needs to be determined and stated in this item.
Yes
For the sake of clarity, the final sentence should be revised to read as follows: "For purposes of this exclusion, a "small utility" is an entity that benefits from the utility of the BES, but does not meet the registry criteria to perform functions in the BES."
No
No
In Ohio, 50 MW is the threshold for siting. Although 20 MW has recently been the criteria for the BES, if there is no technical justification (a study of some kind) then we highly recommend raising the threshold for generators to 50 MVA for a single unit. In our experience, registered generators, even those that have had severe violations, have been routinely classified as not having an impact on the BES in the enforcement process. Due to this truth, we can not understand the justification for keeping such a low threshold. We suggest raising the threshold to 50 MVA for single units, unless a technical study justifies inclusion.
Individual
Michael Jones
National Grid
No
The core definition should be revised to read: Bulk Electric System (BES): All Transmission Elements operated at 100 KV or higher, unless such designation is modified by the list shown below. The resulting modified BES shall comprise all Elements deemed necessary for operating an interconnected electric energy transmission network, but shall exclude any Elements used in the local distribution of electric energy.
Yes
We would like some clarification regarding three-winding transformers, for example a 345/115/23 kV transformer. Was the intention to include the 23kV in the new definition of BES? If so, it seems likely that other 23 kV components on the buswork could be pulled into the definition of BES if it is in the zone of protection of the transformer.
Yes

Yes
No
We do not feel that blackstart resources and cranking paths should be classified as BES. In several instances, cranking paths direct the operator to pick up distribution load before moving on to the next step for stability purposes. These are non-jurisdictional distribution facilities and should not be considered BES, since they are not necessary to support the reliability of the bulk power system during normal conditions. The BES definition should cover those facilities that are within FERC's jurisdiction and that are needed for operation under both normal and emergency conditions, which may include some facilities related to black-start and system restoration, but not all. The directives should not broadly include blackstart resources and facilities on the cranking path in the BES definition. This is over inclusive. The requirements in NERC standard EOP-005-2 address the SDT's interpretation and concern regarding recognition of the reliability impacts and requirements for blackstart resources and facilities used for system restoration. For example, there could also be small generators (less than 20 MVA/unit or 75 MVA/plant) or transmission and distribution facilities of 69 kV or less, which are considered "local", that are used for system restoration in the cranking path. A BES inclusion will then subject these generators and facilities, which are "local", non-jurisdictional facilities that may be called upon to begin restoring its bulk interconnected counterparts, to comply with the reliability standards intended for maintaining BES reliability. Including these facilities in the BES definition will thus discourage smaller generators from providing blackstart capability, and the transmission facilities from being a part of the cranking path. This may also discourage Transmission Owners and Operators from identifying multiple blackstart resources and cranking paths to provide restoration flexibility. This will ultimately undermine reliability. Also, including these types of facilities in the BES definitions could lead to jurisdictional challenges that could cause uncertainty and delay the implementation of the new BES definition and divert important industry and regulatory resources. Because of these reasons, I4 should be removed from the inclusions list.
Yes
No
We feel that there might be some confusion between I1 and E1 because while I1 only includes transformers with 2 windings greater than 100kV, E1 specifically says a tap must have an automatic interruption device to be excluded. So, we are concerned that radial tapped lines with a transformer whose low-side voltage is less than 100kV, but do not have an automatic interruption device are not excluded. We would like to see some additional clarity in this exclusion to address this situation Does automatic interruption device only include breakers/circuit switchers? Would a device such as a motorized loadbreak be considered an automatic interruption device? If motorized loadbreaks are also considered as an automatic interruption device, then there would be less confusion between E1 and I1. We also request that this issue be addressed by adding clarity to the exclusion. Another concern is that this exclusion requirement is restrictive and may have an adverse affect on future transmission investment for redundant radial supply to improve local load service, for example the addition of a second line removing the radial status exclusion. Consideration should be given to allowing entities to build additional transmission without automatically compromising the exclusion status of any given facilities.
Yes
No
E3.c and E3.d – These two points can be combined into one: Power is intended to flow only into the LDN. The generation within the LDN shall not exceed the electric real or reactive power demand within the LDN. The LDN only delivers real or reactive power to load, and is not to be used to transfer real or reactive power between different locations in the BES. Under no system condition is BES reliability to be dependent on LDN flow. E3.e - We would like more clarification on flowgates and what they are. We are interpreting flowgate as the lines that make up defined operational interface, as defined by the Operations group not the Planning group. Is this the correct interpretation of flowgate?
No

This exclusion is not necessary. Many small utilities (and individual load customers or generation connections) have more than a single transmission source with a solid tap and, at the same time, be adequately protected and effectively isolated without any adverse impact on the transmission network. Such a practice and design is widely used across North America. Hence, we do not agree that this exclusion is an attempt to address the issue of small utilities. The definition and inclusions will force many small entities, load customers and generation unit owners to act and register as Transmission Owners. This may be in conflict with state or provincial regulatory act, Codes and Licenses, and may lead to jurisdictional challenges that could cause uncertainty and delay in implementing the new BES definition. Consistent with the FERC Order, the ERO and the SDT should be aware of these conflicts and should not ignore them The ERO and the SDT address this by providing explicit but simple provisions in the exception procedure by considering sound technical exception criteria that is flexible based on demonstration of evidence to justify the element's necessity for operation. The only evidence that should be required of small utilities/entities is: • Regulatory evidence. • Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of their connection.

No

We don't believe the bright-line core definition and specific inclusions and exclusions prevent distribution from being considered as BES. Actually, it seems like a lot of distribution will be considered BES according to the inclusions and exclusions. (E1 may be interpreted to include step downs if they don't have automatic interruption devices and possibly the tied through distribution system to the other step-down transformer that doesn't have an automatic interruption device from the same Transmission source) If the definition is not revised to exclude more distribution, we are concerned about how the distribution elements that will be considered BES under the new definition will be classified. The BES definition should not be used to differentiate between transmission and distribution. It is important for the ERO and the SDT to understand and be consistent with the FERC Order for these important but complex issues. There could be conflicts with state or provincial jurisdictions. The ERO and SDT and RoP teams should be aware of these conflicts and not disregard them, as they will pose many implementation complexities and confusion within the industry, and may lead to jurisdictional challenges that could cause uncertainty and delay in implementation of the new BES definition. It is important for the ERO to not put entities in situations where there is some confusion or conflict. Removing I4, the inclusion regarding blackstart resources and cranking paths, will prevent distribution from being considered as BES. Also, clarification that step downs which have one winding which is less than 100 kV but are tapped off of the BES system without an automatic interruption device are not BES could also prevent distribution from being considered as BES.

Yes

There could be some conflicts with the ISO-NE Pool Transmission Facility (PTF) definition. If something is considered non-PTF, but is considered BES with this new definition, it could lead to confusion about which criteria should be applied to these entities and potentially which tariff (non-PTF or PTF) is truly the correct tariff. We believe adding more clarity as previously mentioned in the other questions to the definition and excluding I4 and clarifying E1 will minimize these issues.

We are concerned that the proposed definition of BES and specified inclusions reaches farther into the electric system than the Bulk Power System (BPS) definition. The statutory framework of the Federal Power and section 215 specifically must govern the definition of BES. It is clear in FERC's Order No. 743 that BES should not extend further than BPS, therefore the statutory definition of BPS must be the guide for the SDT's efforts, particularly with regard to the treatment of local distribution facilities. The BPS definition includes (1) facilities and control systems necessary for operating an interconnected electric energy transmission network; and (2) electric energy from generation facilities needed to maintain transmission system reliability. It does not include facilities used in the local distribution of electric energy. The definition of BES must comply with the statutory definition. First, the facilities and control systems to be included within the BPS/BES must be necessary for operating an interconnected electric transmission network. Therefore, one question to consider for each of the proposed inclusions and exclusions is "are they necessary?" A particular facility or element should not included in the BES definition just because it would be desirable to have the facility considered BES or covered by a particular standard. Imposing a requirement that all contiguous elements be included is too broad and may sweep in facilities to the BES definition that are statutorily excluded because they are not necessary. Second, both the transmission and the generation facilities included within the BPS/BES must be tied to maintaining the reliable operation of the BPS. Section 215 defines the term

"reliable operation" as "operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure". The statute does not require that there be no loss of load. The statute is aimed at avoiding uncontrolled separation or cascading failures. Therefore, the definition of BES should only include elements that are necessary to prevent these occurrences.
Group
Edison Electric Institute
Barbara Hindin
No
EEI believes that the entire designated cranking path should not be included in the BES definition if it would include facilities that are less than 100 kV on the path. Including such facilities may inappropriately include some facilities that are local distribution facilities, which are under state jurisdiction. These facilities might be swept into the definition of BES without an inquiry as to whether or not the facilities are "facilities used in local distribution of electric energy," which is an explicit exclusion under the Federal Power Act definition of "Bulk-Power System." This issue is more fully discussed in EEI's response to Question 13.
Yes
EEI suggests that the following language more clearly expresses the intent of the SDT: Dispersed power producing resources with aggregate capacity greater than 75 MVA gross aggregate nameplate rating) utilizing a collector system from the point where the aggregate rating exceeds 75 MVA through a common point of interconnection to a system Element at a voltage o 100 kV or above.
No
EEI suggests the following change to E1: Any radial system which is described as connected from a single Transmission source [Delete "originating with an automatic interruption device"] and:
See comments to Question 13.
See comments to Question 13.
Comments: EEI appreciates the efforts of the SDT and offers these comments to help guide its efforts. EEI believes that the statutory framework of the Federal Power Act and Section 215 specifically must govern the definition of BES. While FERC has declined to further define the term "Bulk-Power System" ("BPS") and suggested in Order No. 743 that the BPS "reaches farther than those facilities that are included" in the BES, it is clear that the BES cannot extend further than the BPS, and therefore the statutory definition of BPS must be the guide for the SDT's efforts, particularly with regard to the treatment of local distribution facilities. The BPS definition in Section 215 includes: (1) facilities and control systems necessary for operating an interconnected electric energy transmission network; and (2) electric energy from generation facilities needed to maintain transmission system reliability. But the term BPS does not include facilities used in the local distribution of electric energy. The definition of BES must comply with the statutory definition. EEI points to several issues to which it believes the SDT should pay particular attention. First, the facilities and control systems to be included within the BPS/BES must be necessary for operating an interconnected electric transmission network. Therefore, each of the proposed inclusions and exclusions must be measured against this requirement – are they necessary? It is insufficient to include a particular facility or element within the BES definition merely because it would be desirable to have such a facility covered under the BES or a particular standard. In addition, EEI believes that imposing a requirement that all contiguous elements be included is too broad and may sweep in facilities to the BES definition that are statutorily excluded because they are not necessary. For example, while blackstart resources may be "necessary," including all facilities that are contiguous

between a particular blackstart resource and the transmission system is likely to include elements that are not "necessary" to the operation of the interstate transmission network and therefore not within the statutory definition. As a general rule, EEI believes it is appropriate to include contiguous elements or facilities above 100kV necessary for operating the interconnected transmission network, but not any below 100 kV unless the element is necessary to operate the interconnected transmission network. There is no reason to require a "contiguous" BES down to the local distribution facility level. Section 215 gives NERC and FERC jurisdiction over "users, owners and operators" of the BPS. Therefore, FERC has authority to require an entity that is not a BES facility to comply with applicable NERC requirements where necessary for BPS reliability. This approach would achieve the goals of BPS reliability without extending the full reach of BES applicability to facilities that may be local distribution facilities that are excluded from Section 215. Second, both the transmission and the generation facilities included within the BPS/BES must be tied to maintaining the reliable operation of the BPS. Section 215 defines the term "reliable operation" as "operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure. The statute does not require that there be no loss of load. The statute is aimed at avoiding uncontrolled separation or cascading failures. Therefore, consistent with the statute, the definition of BES should only include elements that are necessary to prevent these occurrences. Third, the statute contains a specific exclusion for facilities used in the local distribution of electric energy ("local distribution facilities"). FERC has agreed in Orders No. 743 and 743-A that local distribution facilities are not subject to Section 215. FERC, as the agency implementing Section 215, has the authority to interpret what that means. In Order 743-A, FERC left it to NERC, and therefore to the SDT, to determine in the first instance which facilities are local distribution and therefore excluded and whether or not to use tests such as the Seven Factor Test from Order No. 888. Order No. 888 set out seven indicators, a combination of functional and technical tests, to assist companies and state commissions with separating local distribution facilities from FERC jurisdictional transmission facilities on a case by case basis. The seven factors are: (1) Local distribution facilities are normally in close proximity to retail customers; (2) Local distribution facilities are primarily radial in character; (3) Power flows into local distribution systems; it rarely, if ever, flows out; (4) When power enters into a local distribution system, it is not reconsigned or transported on to some other market; (5) Power entering a local distribution system is consumer in a comparatively restricted geographical area; (6) Meters are based at the transmission/local distribution interface to measure flows into the local distribution facilities; and (7) Local distribution systems will be of reduced voltage. EEI acknowledges that the Seven Factor test does not draw a bright line between facilities used in local distribution and transmission facilities and may not be a perfect fit for applying to specific pieces of equipment as the SDT has tried to do. However, many state commissions have made determination of what are local distribution facilities and FERC has concurred with these determinations. Therefore, EEI proposes that if NERC or FERC seek to include facilities (or class of facilities) in the BES that have been previously determined by a state commission to be local distribution through application of the Seven Factor Test, that there is a rebuttable presumption that these are facilities used in local distribution for purposes of the BES definition. In order to overcome this presumption, NERC/FERC must make a showing demonstrating that these facilities "necessary" for the reliable operation of the BPS. EEI will address this and a procedure for seeking exclusion of facilities that previously have been determined to be local distribution in its comments to be submitted on the exceptions process. In applying the statutory exclusion for local distribution facilities, the SDT should ensure that the inclusions do not include local distribution facilities and that the exclusions are sufficient to exclude local distribution facilities. Similarly, it is not sufficient to include an element that would otherwise be a local distribution facility merely to support a facility clearly within the BES. For example, the SDT should consider the how the proposed criteria would classify types of equipment such as distribution voltage equipment – some, such as cap banks in a generation switchyard do support the transmission system versus a regulator on a distribution feeder – the former may be part of the BES and the latter unlikely or not at all.

Individual

Bud Tracy

Blachly Lane Electric Cooperative

No

First, thank you for the opportunity to comment on the draft Proposed Continent-wide Definition of

the Bulk Electric System (BES). We appreciate the work that the Standards Development Team (SDT) has put into a new definition so far and believe the draft is a step in the right direction. We also understand the relatively short timeframe that NERC is working under in order to create a new BES definition to submit to FERC for approval before the imposed deadline. That said, we believe that the draft definition needs significant revision before NERC files it with FERC for approval. In response to question #1, we recommend that NERC revise the draft BES definition so that the first paragraph reads as follows: "Bulk Electric System (BES): Includes anything that meets each of the following three (3) criteria: (1) (a) Is a facility or control system necessary for operating an interconnected electric energy transmission network (or any portion thereof), or (b) Is electric energy from generation facilities needed to maintain transmission system reliability; AND (2) Is not a facility used in the local distribution of electric energy as determined by the Seven Factor Test set out in FERC Order 888; AND (3) (a) Unless included or excluded in subpart (b), is i. A Transmission Element operated at 100kV or higher; or ii. A Real Power Resource identified in subpart (b); or iii. A Reactive Power resource connected at 100kV or higher; (b) [the list of inclusions of exclusions in the draft, as modified by our comments below]" Criteria (1) and (2) of these revisions would capture the limitations on what may be included in the BES due to the jurisdictional limits that Congress placed on FERC, NERC, and the Regional Entities in developing and enforcing mandatory reliability standards. Specifically, Section 215(i) of the Federal Power Act provides that the Electric Reliability Organization (ERO) "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." Section 215(b)(1) of the FPA, 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. With this language, Congress expressly limited FERC, NERC, and the Regional Entities' jurisdiction with regard to local distribution facilities as well as those facilities not necessary for operating a transmission network. Given that these facilities are statutorily excluded from the definition of the BPS, reliability standards may not be developed or enforced for facilities used in local distribution, and therefore the definition of the BES may not include such facilities. In Order No. 672, FERC adopted the statutory definition of the BPS. See Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006). In Order No. 743-A, issued earlier this year, the Commission acknowledged that "Congress has specifically exempted 'facilities used in the local distribution of electric energy'" from the BPS definition. See Order 743-A, 134 FERC ¶ 61,210 at P. 25 (2011). FERC also held that to the extent any facility is a facility used in the local distribution of electric energy, it is exempted from the requirements of Section 215. Id. at P.54. In Order No. 743-A, FERC delegated to NERC the task of proposing for FERC approval criteria and a process to identify the facilities used in local distribution that will be excluded from NERC and FERC regulation. Id. at P 76. The critical first step in this process is for NERC to propose criteria for approval by FERC to determine which facilities are not BPS facilities and therefore not BES facilities. Accordingly, it is critical that NERC create a definition of the BES that first excludes facilities used in local distribution. In Order No. 743-A, the Commission confirmed this, stating: "once a facility is classified as local distribution, the facility will be excluded from the [BES] unless changes to the system warrant a review of the determination." Order No. 743-A, at P 71 (emphasis added). We believe that the Seven Factor is the appropriate means to determine whether a facility is used in the local distribution of electricity and therefore should be referenced in the definition of the BES. This is the test that applies elsewhere to determine whether facilities qualify as local distribution, and therefore there is strong and clear precedent for using it in the BES definition. See 334 F.3d 48. In fact, the statutory language in Section 201 of the FPA that led to the Seven Factor Test for other purposes is identical to the statutory language in Section 215 of the FPA at issue here. Well established rules of statutory construction call for interpreting identical language to produce similar meanings, therefore applying the Seven Factor Test under both sections of the statute is appropriate. And, without the Seven Factor Test as a means of determining what qualifies as local distribution facilities, there could be significant uncertainty and confusion as to whether certain facilities are part of the BES. Further, the Commission stated in Order 743-A that, "the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes, while also allowing NERC flexibility in applying the test or developing an alternative approach as it deems necessary." Id. at P 69. The Seven Factor Test includes the following factors: 1) Local distribution facilities are normally in close proximity to retail customers; 2) local distribution facilities are primarily radial in character; 3) power flows into local

distribution systems, it rarely, if ever, flows out; 4) when power enters a local distribution system, it is not re-consigned or transported on to some other market; 5) power entering a local distribution system is consumed in a comparatively restricted geographical area; 6) meters are based at the transmission/local distribution interface to measure flows into the local distribution system; and 7) local distribution systems will be of reduced voltage. Order No. 888 at 31,771. FERC precedent indicates that a utility does not have to meet every factor of the seven-factor test in order for their facilities to qualify as local distribution. California Pacific Edison Co., Order Granting in Part and Denying in Part Petition for Declaratory Order, 133 FERC ¶ 61,018, 61,075 (Oct. 7, 2010). NERC must also limit the BES to facilities or control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) or electric energy from generation facilities needed to maintain transmission system reliability, as directed by the FPA. Similar to the local distribution exclusion, facilities not falling into either of these categories are not part of the BPS and therefore must be expressly excluded from the BES. In order to establish a process that is consistent with the FPA and NERC's delegated authority from FERC, the proper sequence of steps must be applied in the correct order to determine which facilities are subject to NERC and FERC jurisdiction in the first instance, and only then, from among the jurisdictional facilities, to determine which facilities and control systems must comply with the electric reliability standards. Our revisions to the BES definition would create such a process within the definition of the BES. It would ensure that entities would begin any analysis of whether a particular item qualifies as BES by asking, first, whether that facility is "necessary for operating an interconnected electric energy transmission network (or any portion thereof)" or is "electric energy from generation facilities needed to maintain transmission system reliability," and second, whether that facility is "used in the local distribution of electric energy." Only after addressing these questions might further analysis be appropriate. We understand, but disagree with, the argument that, because the FPA clearly excludes local distribution facilities and facilities necessary for operating an interconnected electric transmission network from FERC, NERC, and Regional Entity jurisdiction, it is not necessary to expressly exclude these facilities again in the definition of the BES. This approach might be legally accurate, but could lead to significant confusion for entities attempting to implement the new BES definition. There are numerous examples of Regional Entities, particularly WECC, attempting to include such facilities in the BES under the current BES definition, and regulated entities are not certain as to which facilities they should consider part of the BES. Clarifying FERC, NERC, and Regional Entity in the BES definition, even if such clarification is already provided in the FPA, would avoid such problems under the new definition. Criterion (3) of these revisions is necessary to resolve the ambiguity in the proposed definition as to whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that would be inserted as Subpart (b) modifies each provision of Subpart (a). Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart (b) of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Further, we support the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the FPA. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."

Yes
We support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. We note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort.
No
The inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System – Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result. We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the

Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application fo particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.

Yes

FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained.

As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold lacks an adequate technical justification. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit should be eliminated.

Yes

We strongly support the categorical exclusion of Local Distribution Networks from the BES. For reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are likely the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. We also support, with the reservations discussed below, the LDN exclusion as drafted by the SDT. We believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system. However, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

Yes

We strongly support the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that cannot afford the substantial costs that accompany imposition of mandatory reliability standards. We agree that the small utilities covered by the proposed exemption would have no measurable impact on the operation of the interconnected BES. Our views are borne out by experience in the Pacific Northwest where many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.

No

We agree that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing some local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed in our answer to Question 1, the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES.

As discussed in our answers to Question 1 and Question 11, the SDT proposal does not reflect the jurisdictional limitations of the FPA.

Individual

Paul Titus

Northern Wasco County PUD

No

As a general matter, Northern Wasco County PUD supports the approach the Standards Development Team ("SDT") has taken to defining the Bulk Electric System ("BES"). The changes made in the revised core definition are helpful and represent significant progress toward an acceptable definition. With an effective and efficient exclusion process, the draft will better define the BES as a whole. We urge the SDT to bear in mind the restrictions contained in Section 215 of the Federal Power Act ("FPA") The "bulk-power system" (As per FERC, we treat the statutory term "bulk-power system" as equivalent to the term ordinarily used in the industry, "Bulk Electric System") definition imposes a clear limit on the reach of the mandatory reliability regime. The BES is made up of only those "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" and "electric energy from generation facilities needed to maintain

transmission system reliability." Congress reinforced that limit in Section 215(i), where it emphasized that the FPA authorizes the imposition of reliability standards "for only the bulk-power system." Northern Wasco County PUD is concerned that the SDT's proposed definition is overly-broad, and that it will sweep in many Elements that have little or no material impact on the reliable operation of the interconnected bulk transmission grid. For example, the definition uses the arbitrary 20 MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators. Accordingly, for the BES definition to conform to the requirements of the statute, the SDT must adopt an effective mechanism to exempt facilities like these that are improperly swept in by the SDT's brightline approach to inclusions and exclusions. For this reason, the Exception process to accompany the SDT's definition is of critical concern. If the SDT incorporates this statutory language as its core definition, it will have addressed FERC's primary concern with a minimum of disruption to the current NERC system of definitions. The definition could then be further elaborated to show specific points of demarcation for each inclusion and exclusion similar to that Proposal 6 from the WECC Bulk Electric System Definition Task Force ("BESDTF") team to further delineate BES and non-BES facilities.

No

In concept, we support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams noting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort. Also, the reference to "two windings of 100 kV or higher" may create some confusion because many three-phase transformer banks have 6 or 9 windings, depending on whether the transformer has a tertiary. We suggest clarifying this provision by changing the clause reference two windings to read: "the two highest voltage transformer windings of 100 kV per phase that are connected to the Bulk Electric System." We again urge the SDT to consider further delineation of points of demarcation similar to WECC BESDTF Proposal 6.

No

Northern Wasco County PUD is concerned that I2 inclusion criteria that includes the arbitrary 20 MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted improperly expands the BES definition to include generators that the statute requires to be excluded. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Unfortunately, the SDT appears to have concluded that any interconnection facility operating above 100-kV should be classified as BES. The result will be to require Generation Owners to register as Transmission Owners/Operators, as well, producing substantial additional compliance costs for those Generation Owners but resulting in little or no improvement in the reliability of the BES. We recommend that the SDT, like the Project 2010-07 SDT (commonly referred to as the GO/TO Team), give careful consideration to the practical results of its recommendations rather than relying on abstract conclusions about whether a "contiguous" or "non-contiguous" BES is more desirable. We are concerned that the SDT's pursuit of a "contiguous" BES will result in a substantially over-inclusive BES definition. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. NERC's Standards Drafting Team for Project 2010-07, has already considered this question and, based on an in-depth review of potentially applicable reliability standards, has concluded that generation interconnection facilities, even if operated above 100-kV, need to comply only with a limited set of reliability standards in order to achieve the reliability goals. Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission

Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability.
No
Northern Wasco County PUD is concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition.
Yes
Including "all" blackstart and blackstart cranking paths in the BES may ultimately provide an incentive to the electric industry to reduce the number of resources with blackstart capability. We therefore suggest that essential blackstart resources identified by the Regional Entity should be included in the Bulk Electric System, but non-essential blackstart resources need not be.
No
Northern Wasco County PUD agrees that it is important to address wind generation facilities and similar generation facilities in which a large number of generating units, each with a relatively small capacity, are clustered and fed into the grid at a single interconnection point. That being said, Northern Wasco County PUD is concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.
Yes
FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained. We believe the exclusion as drafted adequately defines radials.
No
As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold (through reference to Inclusion I2) lacks an adequate technical justification in this context. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit ("standby, back-up, and maintenance power…") should be eliminated.
Yes
Northern Wasco County PUD strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. Northern Wasco County PUD supports the LDN exclusion, but we believe the exclusion should be refined in the following respects: • The SDT's draft states that: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load." (emphasis added) We recommend that the SDT revise the sentence quoted above as follows: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances.
Yes

Northern Wasco County PUD supports the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that can ill afford the substantial costs that accompany imposition of mandatory compliance with reliability standards. Further, we agree that the small utilities covered by the exemption will have no measurable impact on the operation of the interconnected BES. In the Pacific Northwest, many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.

No

While Northern Wasco County PUD agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1, Northern Wasco County PUD believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. As discussed in our answer to Question 3, Northern Wasco County PUD notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that "users" of the BES can be subject to reliability regulation. Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BESDTF Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.

Yes

The Exceptions process is a necessary part of making this proposal complaint with the Federal Power Act. As noted in our responses to Question 1 and Question 11, we believe the basic SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used in the local distribution of electric energy. The SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities.

Northern Wasco County PUD has these additional concerns: • The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." Northern Wasco County PUD is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BESDTF approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. • For the reasons we have explained in our answer to Question 11, we believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process.

Individual

Bill Dearing

PUD No. 2 of Grant County, Washington
Yes
Grant supports the approach the Standards Development Team ("SDT") has taken to defining the Bulk Electric System ("BES"). The changes made in the revised core definition are helpful and represent significant progress toward an acceptable definition. With an effective and efficient exclusion process, the draft will better define the BES as a whole. The definition could then be further elaborated to show specific points of demarcation for each inclusion and exclusion similar to that Proposal 6 from the WECC Bulk Electric System Definition Task Force ("BESDTF") team to further delineate BES and non-BES facilities.
Yes
Grant supports the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. In I1 the transformer inclusion specifies "two windings greater than 100 kV or". This appears to leave auto transformers out of the definition entirely. If the intent is to include these transformers, then more clarity might be available if it was revised to "at least two sets of bushings rated higher than 100 kV unless…" Inclusion I-1 is helpful because it implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note again that the WECC BESDTF has devoted considerable effort to this question and has developed one-line diagrams noting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort.
No
In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Unfortunately, the SDT appears to have concluded that any interconnection facility operating above 100-kV should be classified as BES. The result will be to require Generation Owners to register as Transmission Owners/Operators, as well, producing substantial additional compliance costs for those Generation Owners but resulting in little or no improvement in the reliability of the BES. We recommend that the SDT, like the Project 2010-07 SDT (commonly referred to as the GO/TO Team), give careful consideration to the practical results of its recommendations rather than relying on abstract conclusions about whether a "contiguous" or "non-contiguous" BES is more desirable. We are concerned that the SDT's pursuit of a "contiguous" BES will result in a substantially over-inclusive BES definition. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. A "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." The improper classification of local distribution lines as BES "Transmission" facilities results in huge regulatory compliance burdens with little or no improvement in bulk system reliability.
Yes
Grant supports this proposed inclusion.
Yes
Grant supports this proposed inclusion with the caveat that the BES should be allowed to be non-contiguous, especially in this case, if the unit is low voltage.
Yes
Grant agrees that it is important to address wind generation facilities and similar generation facilities in which a large number of generating units, each with a relatively small capacity, are clustered and fed into the grid at a single interconnection point.
Yes
E1 specifically states "Any radial system which is described as connected from a single transmission source originating with an automatic disconnection device and…". The example of concern is a radial tap to a single distribution power transformer that is connected to a ring bus or breaker and a half bus. In this case the transformer would have 2 automatic disconnection devices from what is

essentially a single source. Typically ring bus and breaker and a half bus are used to improve reliability, limiting the exclusion to a single disconnecting device appears to bring a hypothetical radial tap fed from a ring bus or breaker and a half bus into the BES definition. Although the LDN exclusion might apply there is the potential for many situations where it might not. A possible remedy is to revise the exclusion as follows: "Any radial system which is described as connected from a single transmission source that originates with automatic disconnection device(s) and…" In addition, a definition for "a single transmission source" should be provided to clarify the intent. Suggestion: "A single transmission source would be any transmission source located within a single facility, yard or fenced area and electrically continuous at a single voltage level".
Yes
Unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit ("standby, back-up, and maintenance power…") should be eliminated.
Yes
Grant supports the categorical exclusion of Local Distribution Networks from the BES. We believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. Grant supports the LDN exclusion, but we believe the exclusion should be refined in the following respects: • The SDT's draft states that: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load." (emphasis added) We recommend that the SDT revise the sentence quoted above as follows: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances. Two more suggestions: Bullet d, starts with "bulk power" and ends with generic "energy" transferred through and out of the LDN. This is inconsistent and will likely lead to confusion. In addition, "paper only" contract path transfers that result in no physical flow across the LDN should be specifically excluded.
Grant supports the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that can ill afford the substantial costs that accompany imposition of mandatory compliance with reliability standards. Further, we agree that the small utilities covered by the exemption will have no measurable impact on the operation of the interconnected BES. In the Pacific Northwest, many small entities were required to register by virtue of owning a very small portion of the region's 115-kV transmission. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.
Yes
Grant supports the concepts as presented in the draft. Exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. The statutes provide that "users" of the BES can be subject to reliability regulation. Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BESDTF Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.
Yes
The Exceptions process is a necessary part of making this proposal complaint with the Federal Power Act. The SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from

regulation as BES facilities.
Grant has these additional concerns: • We are concerned that the proposed 24-month delay in the effective date of the new definition will delay the potentially beneficial effects of the SDT's efforts, especially for utilities that have been inappropriately required to meet BES reliability standards, which is a common situation in WECC. We therefore urge the new BES definition become effective immediately upon approval by FERC or other applicable regulatory agencies. Entities that have been improperly required to meet standards can then immediately redirect resources to where they are truly needed. For entities that have not previously been registered for BES-related functions but that would be required to register under the new definition, we agree that 24 months is an appropriate transition period to allow the newly-registered entity to attain compliance with newly-applicable reliability standards, many of which require new training for employees, new maintenance procedures, and complex new operational protocols. However, the transition period for newly-registered entities should be structured in a way that does not prevent entities seeking deregistration from benefitting from the new definition at the earliest possible date. • The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." Grant is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BESDTF approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force.
Group
Small Entity Working Group (SEWG)
Scott Berry
Yes
The Small Entity Working Group (SEWG) appreciates the opportunity to comment on the draft BES definition. The group generally supports the direction taken by the SDT, with some minor changes. The BES definition should refer to "non-generator Reactive Power resources," to clarify that although all generators provide some reactive power, the generators that do not meet the criteria of I2 through I5 are not included in the BES. The BES definition should include a reference to the existence of the exception process.
No comment.
Yes
Yes, with a minor clarification. Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side connection voltage of 100 kV or above. This should help state that only generators that are both over 20 MVA and connected through a GSU with a high side voltage of at least 100kV are included in the BES.
No comment.
No
The SEWG proposes a minor change to Inclusion I4. The SEWG recommends that the SDT exclude Blackstart Units under 20MW and Blackstart Units that are connected via their GSU to Non-BES Facilities (under 100kV). We believe this would be a minimal impact on the existing Restoration Plans while increasing the reliability and viability of these Restoration Plans since the industry would be forced to use only BES facilities as defined by NERC BES definition. In addition, a clarification is needed under the first bullet under I4 in the posted word comment form for this BES draft (posted in the first column under Implementation Plan for Definition). It should be changed to read "Blackstart units that have been included in the Transmission Operator's restoration plan and their respective cranking paths..." We do not believe it was the intent of the SDT to include all blackstart units in the BES definition regardless if they are not part of a Transmission Operator's restoration plan.
No Comment
Yes

Yes, with some minor changes. Delete the words "described as" in the sentence: Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and. How the radial system is actually connected is important not the description. The SEWG believes that "a single Transmission source" should be defined in such a way to ensure all the various bus configurations are captured. The SEWG recommends modifying the language in E1 to allow for the use of a "switching device" rather than an "automatic reclosing device" for two specifics situations as follows: 1) When a radial transmission line is feed from a ring bus, but only serve load and/or non-registered generation: 2) When a radial transmission line is feed from a breaker and half bus and it only serves load and/or non-registered generation. In both cases, faults on the radial transmission line will not interrupt network transmission flows and therefore has minimal impact on the BES. For direct connection of radial transmission lines to a networked transmission line, the SEWG agrees that an automatic interrupting device is required to protect the BES.
No Comments
Yes
Yes, with some clarifying edits. The first sentence of Exclusion 3 should be revised for accuracy as follows: ""Local Distribution Networks (LDN): Groups of Elements operated above 100 kV that are primarily intended to distribute power to Load rather than to transfer bulk power across the Interconnected System." The second sentence should be revised for clarity as follows: "LDN's are connected to the Bulk Electric System (BES) from more than one Transmission source solely to improve the level of service to retail customer Load." Exclusion E3 a) should be revised as we note in our comments in Question#7 to allow for the use of switching devices in specific situations
Yes
Yes, with some clarifying edits. The final sentence should be revised as follows: "For purposes of this exclusion, a 'small utility' is an entity that performs a distribution provider or load serving entity function but is not required to register as a Distribution Provider or Load Serving Entity by the ERO."
No comments
No comments
No comments
Group
Idaho Falls Power
Richard Malloy
No
We believe that inclusions or exclusions tied to brightline registration criteria (such as the 20MVA single generation source or 75 MVA facility) does not fulfill the effort the NERC BES definition project was tasked to undertake. The current draft's language will draw in many small municipal and other like entities with small generation assets, which have no material impact upon the BES. Further, should these generation assets not be excluded, this draft implies that all assets downstream to the point of interconnection are BES as well regardless of point of connection. We believe it was the original intent of this definition project to remove such immaterial assets and the undue burden placed upon such entities and subsequently their rate payers, who have no impact to the BES.
Yes
It seems reasonable to conclude that such transformers would belong in a classification that comprises the BES.
No
We feel the bright line criteria 20 MVA for generation is equally as arbitrary as the 100KV threshold for transmission, which was the impetus for the NERC BES definition effort. There should be more defining criteria to establish what generation resources should be included in the BES. Possible criteria to consider would be generation serving load other than local load connected to an LDN or generation that is dispatchable. Surely, just as not all 100 kV is is material to the BES, niether is all 20MVA or greater generation. If this draft's language is allowed to stand at the brightline of 20MVA, without additional defining criteria, will have the likely result of an inordinate number of entities having to resolve the issue of material impact through the Rules of Procedure exemption process. We urge NERC to take this opportunity now to more clearly define material generation assets beyond a simple brightline criteria. In addition to our concern of this draft following bright line registry criteria for

generation assets, it is our concern that there is no distinction made as to where the generation is connected. Our belief is that generation on an LDN wherein the net flow of power is into the LDN should be exempt as the liklihood of that generation being material to the larger BES is exceedingly small.
No
Again, following our statement in question 3, we feel an arbitrary brightline threshold requires additional defining criteria for inclusion. Adopting the registry's brightline criteria is to us skirting the purpose of the BES definition effort, and lends no more clarity to what is in fact the BES.
Yes
It is reasonable to conclude that Blackstart generation resources are material to the BES.
No
This inclusion seems redundant to the registry criteria for GO/GOP of a facility generation of 75MVA or greater. We do not see how this definition adds or removes any assets already defined by the registry criteria.
No
This exclusion speaks to radial systems with generation resouces not identified in I2, I3, I4, or, I5, thus seemingly only to apply to generation resouces smaller than 20MVA. We wonder why this exclusion then exists as these resources are already excluded by not being large enough to fall under the registry criteria, and thus need not comply with the reliability standards.
No
We do not agree with E2(i). If the generation assets listed in the inclusions of I2 and I3 are not permitted to be excluded in E2, then what is the point of E2? The generation assets would already be in or out based upon the registry's MVA nameplate capacity. We would support E2 if provision (i) were struck. If generation assets are behind the meter on a local distribution network (fitting the criteria E3 for exemption) then too the generation should be exempted regardless of MVA rating. Moreover, we do not agree that there is a brightline MVA threshold of materiality to the BES. We would hope that the drafting team could demonstrate how the 20MVA brightline is a valid threshold for generation while the 100kV for transmission is not. We are concerned that relatively small generation on a local distribution network wherein generation is always serving local retail load behind the meter will be labelled a BES asset. As such, then is the LDN to the point of interconnection a BES asset as well, and therefore subject to the suite of TO/TOP standards? We feel such an outcome is unreasonable. It seems to us, as is stated under section 215 of the FPA, that the term BES "does not include facilities used in the local distribution of electric energy." To a logical conclusion, the generation attached to local distribution was considered and is intended to be one of the "facilities" and should therefore be exempted form inclusion in the BES. However, should the drafting team deem that all generation above 20MVA are a BES assets, we would hope that the exclusion for Local Distribution Networks could still stand and that the generation on the LDN would be divorced and defined separately. Our opinion is the BES is not one large contiguous system, but is rather comprised of assets across the region, which due to their size or location are vital to a sound BES but are not necessarily connected to each other. This principle would allow the generation to be regulated yet remove the burden of transmission standards from small entities.
No
We support this exclusion, however generation assets on a Local Distribution Network should be excluded regardless of MVA rating if all other defining critera in E3 are met. Additionally, it is unclear as written whether a single generation asset greater than 20MVA would be excluded as E3(b) states 75 MVA, but is inconsist with E2(i). Some clarification of intent is needed to resolve the ambiguities between these two exclusions.
No
Just as 100kv is an arbitrary number, so is 20MVA. We appreciate the NERC efforts made to define transmission material to the BES, and likewise feel the same efforts should be applied to small generation resources. There exists a large number of utilities with small generation serving local load on an LDN that will be possibly drawn into TO/TOP standard's compliance by the language in this draft. We hope the drafting team will define BES generation beyond a brightline criteria, as 20MVA lends no more clarity as to what is a BES asset than does 100kV. We believe it should be demonstrated as to why 20MVA is deemed a generation threshold of materiality to the BES. The

opportunity now exists to address thresholds, not just the 100kV.

No

In the exclusions, we feel there has not been given enough clarification of generation assets on a LDN, specifically, is a single generation resource >20MVA but <75 MVA excluded? This does not seem clear because of the seeming inconsistencies of E2(i) and E3(b). Further, we believe generation on an LDN serving local load wherein the net flow is into the LDN should be excluded.

Yes

It is unclear how the reliability standards will be applied to registered entities should some assets be deemed not to be a part of the BES. As an example; will a an LSE with >25MW of load connected at 161kv be responsible for relay maintenance under PRC-005-1 if the 161 kv is exempted as a local distribution network? Clarification of this issue may be beyond the scope of the BES definition effort, however guidance in this area should accompany this effort.

Individual

Dave Markham

Central Electric Cooperative

No

First, thank you for the opportunity to comment on the draft Proposed Continent-wide Definition of the Bulk Electric System (BES). We appreciate the work that the Standards Development Team (SDT) has put into a new definition so far and believe the draft is a step in the right direction. We also understand the relatively short timeframe that NERC is working under in order to create a new BES definition to submit to FERC for approval before the imposed deadline. That said, we believe that the draft definition needs significant revision before NERC files it with FERC for approval. In response to question #1, we recommend that NERC revise the draft BES definition so that the first paragraph reads as follows: "Bulk Electric System (BES): Includes anything that meets each of the following three (3) criteria: (1) (a) Is a facility or control system necessary for operating an interconnected electric energy transmission network (or any portion thereof), or (b) Is electric energy from generation facilities needed to maintain transmission system reliability; AND (2) Is not a facility used in the local distribution of electric energy as determined by the Seven Factor Test set out in FERC Order 888; AND (3) (a) Unless included or excluded in subpart (b), is i. A Transmission Element operated at 100kV or higher; or ii. A Real Power Resource identified in subpart (b); or iii. A Reactive Power resource connected at 100kV or higher; (b) [the list of inclusions of exclusions in the draft, as modified by our comments below]" Criteria (1) and (2) of these revisions would capture the limitations on what may be included in the BES due to the jurisdictional limits that Congress placed on FERC, NERC, and the Regional Entities in developing and enforcing mandatory reliability standards. Specifically, Section 215(i) of the Federal Power Act provides that the Electric Reliability Organization (ERO) "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." Section 215(b)(1) of the FPA, 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. With this language, Congress expressly limited FERC, NERC, and the Regional Entities' jurisdiction with regard to local distribution facilities as well as those facilities not necessary for operating a transmission network. Given that these facilities are statutorily excluded from the definition of the BPS, reliability standards may not be developed or enforced for facilities used in local distribution, and therefore the definition of the BES may not include such facilities. In Order No. 672, FERC adopted the statutory definition of the BPS. See Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006). In Order No. 743-A, issued earlier this year, the Commission acknowledged that "Congress has specifically exempted 'facilities used in the local distribution of electric energy'" from the BPS definition. See Order 743-A, 134 FERC ¶ 61,210 at P. 25 (2011). FERC also held that to the extent any facility is a facility used in the local distribution of electric energy, it is exempted from the requirements of Section 215. Id. at P.54. In Order No. 743-A, FERC delegated to NERC the task of proposing for FERC approval criteria and a process to identify the facilities used in local distribution that will be excluded from NERC and FERC regulation. Id. at P 76. The critical first step in this process is for NERC to propose criteria for approval by FERC to determine which facilities are not BPS facilities

and therefore not BES facilities. Accordingly, it is critical that NERC create a definition of the BES that first excludes facilities used in local distribution. In Order No. 743-A, the Commission confirmed this, stating: "once a facility is classified as local distribution, the facility will be excluded from the [BES] unless changes to the system warrant a review of the determination." Order No. 743-A, at P 71 (emphasis added). We believe that the Seven Factor is the appropriate means to determine whether a facility is used in the local distribution of electricity and therefore should be referenced in the definition of the BES. This is the test that applies elsewhere to determine whether facilities qualify as local distribution, and therefore there is strong and clear precedent for using it in the BES definition. See 334 F.3d 48. In fact, the statutory language in Section 201 of the FPA that led to the Seven Factor Test for other purposes is identical to the statutory language in Section 215 of the FPA at issue here. Well established rules of statutory construction call for interpreting identical language to produce similar meanings, therefore applying the Seven Factor Test under both sections of the statute is appropriate. And, without the Seven Factor Test as a means of determining what qualifies as local distribution facilities, there could be significant uncertainty and confusion as to whether certain facilities are part of the BES. Further, the Commission stated in Order 743-A that, "the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes, while also allowing NERC flexibility in applying the test or developing an alternative approach as it deems necessary." Id. at P 69. The Seven Factor Test includes the following factors: 1) Local distribution facilities are normally in close proximity to retail customers; 2) local distribution facilities are primarily radial in character; 3) power flows into local distribution systems, it rarely, if ever, flows out; 4) when power enters a local distribution system, it is not re-consigned or transported on to some other market; 5) power entering a local distribution system is consumed in a comparatively restricted geographical area; 6) meters are based at the transmission/local distribution interface to measure flows into the local distribution system; and 7) local distribution systems will be of reduced voltage. Order No. 888 at 31,771. FERC precedent indicates that a utility does not have to meet every factor of the seven-factor test in order for their facilities to qualify as local distribution. California Pacific Edison Co., Order Granting in Part and Denying in Part Petition for Declaratory Order, 133 FERC ¶ 61,018, 61,075 (Oct. 7, 2010). NERC must also limit the BES to facilities or control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) or electric energy from generation facilities needed to maintain transmission system reliability, as directed by the FPA. Similar to the local distribution exclusion, facilities not falling into either of these categories are not part of the BPS and therefore must be expressly excluded from the BES. In order to establish a process that is consistent with the FPA and NERC's delegated authority from FERC, the proper sequence of steps must be applied in the correct order to determine which facilities are subject to NERC and FERC jurisdiction in the first instance, and only then, from among the jurisdictional facilities, to determine which facilities and control systems must comply with the electric reliability standards. Our revisions to the BES definition would create such a process within the definition of the BES. It would ensure that entities would begin any analysis of whether a particular item qualifies as BES by asking, first, whether that facility is "necessary for operating an interconnected electric energy transmission network (or any portion thereof)" or is "electric energy from generation facilities needed to maintain transmission system reliability," and second, whether that facility is "used in the local distribution of electric energy." Only after addressing these questions might further analysis be appropriate. We understand, but disagree with, the argument that, because the FPA clearly excludes local distribution facilities and facilities necessary for operating an interconnected electric transmission network from FERC, NERC, and Regional Entity jurisdiction, it is not necessary to expressly exclude these facilities again in the definition of the BES. This approach might be legally accurate, but could lead to significant confusion for entities attempting to implement the new BES definition. There are numerous examples of Regional Entities, particularly WECC, attempting to include such facilities in the BES under the current BES definition, and regulated entities are not certain as to which facilities they should consider part of the BES. Clarifying FERC, NERC, and Regional Entity in the BES definition, even if such clarification is already provided in the FPA, would avoid such problems under the new definition. Criterion (3) of these revisions is necessary to resolve the ambiguity in the proposed definition as to whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that would be inserted as Subpart (b) modifies each provision of Subpart (a). Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is

nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart (b) of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Further, we support the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the FPA. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."

Yes

We support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. We note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort.

No

The inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System – Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). Further, the Statement of Compliance

Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result. We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application fo particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is

considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.

Yes

FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained.

As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold lacks an adequate technical justification. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit should be eliminated.

Yes

We strongly support the categorical exclusion of Local Distribution Networks from the BES. For reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are likely the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. We also support, with the reservations discussed below, the LDN exclusion as drafted by the SDT. We believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system. However, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

Yes

We strongly support the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that cannot afford the substantial costs that accompany imposition of mandatory reliability standards. We agree that the small utilities covered by the proposed exemption would have no measurable impact on the operation of the interconnected BES. Our views are borne out by experience in the Pacific Northwest where many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.

No

We agree that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing some local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed in our answer to Question 1, the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that

should not be classified as BES.

As discussed in our answers to Question 1 and Question 11, the SDT proposal does not reflect the jurisdictional limitations of the FPA.

Individual

Dave Hagen

Clearwater Power Company

No

First, thank you for the opportunity to comment on the draft Proposed Continent-wide Definition of the Bulk Electric System (BES). We appreciate the work that the Standards Development Team (SDT) has put into a new definition so far and believe the draft is a step in the right direction. We also understand the relatively short timeframe that NERC is working under in order to create a new BES definition to submit to FERC for approval before the imposed deadline. That said, we believe that the draft definition needs significant revision before NERC files it with FERC for approval. In response to question #1, we recommend that NERC revise the draft BES definition so that the first paragraph reads as follows: "Bulk Electric System (BES): Includes anything that meets each of the following three (3) criteria: (1) (a) Is a facility or control system necessary for operating an interconnected electric energy transmission network (or any portion thereof), or (b) Is electric energy from generation facilities needed to maintain transmission system reliability; AND (2) Is not a facility used in the local distribution of electric energy as determined by the Seven Factor Test set out in FERC Order 888; AND (3) (a) Unless included or excluded in subpart (b), is i. A Transmission Element operated at 100kV or higher; or ii. A Real Power Resource identified in subpart (b); or iii. A Reactive Power resource connected at 100kV or higher; (b) [the list of inclusions of exclusions in the draft, as modified by our comments below]" Criteria (1) and (2) of these revisions would capture the limitations on what may be included in the BES due to the jurisdictional limits that Congress placed on FERC, NERC, and the Regional Entities in developing and enforcing mandatory reliability standards. Specifically, Section 215(i) of the Federal Power Act provides that the Electric Reliability Organization (ERO) "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." Section 215(b)(1) of the FPA, 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. With this language, Congress expressly limited FERC, NERC, and the Regional Entities' jurisdiction with regard to local distribution facilities as well as those facilities not necessary for operating a transmission network. Given that these facilities are statutorily excluded from the definition of the BPS, reliability standards may not be developed or enforced for facilities used in local distribution, and therefore the definition of the BES may not include such facilities. In Order No. 672, FERC adopted the statutory definition of the BPS. See Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006). In Order No. 743-A, issued earlier this year, the Commission acknowledged that "Congress has specifically exempted 'facilities used in the local distribution of electric energy'" from the BPS definition. See Order 743-A, 134 FERC ¶ 61,210 at P. 25 (2011). FERC also held that to the extent any facility is a facility used in the local distribution of electric energy, it is exempted from the requirements of Section 215. Id. at P.54. In Order No. 743-A, FERC delegated to NERC the task of proposing for FERC approval criteria and a process to identify the facilities used in local distribution that will be excluded from NERC and FERC regulation. Id. at P 76. The critical first step in this process is for NERC to propose criteria for approval by FERC to determine which facilities are not BPS facilities and therefore not BES facilities. Accordingly, it is critical that NERC create a definition of the BES that first excludes facilities used in local distribution. In Order No. 743-A, the Commission confirmed this, stating: "once a facility is classified as local distribution, the facility will be excluded from the [BES] unless changes to the system warrant a review of the determination." Order No. 743-A, at P 71 (emphasis added). We believe that the Seven Factor is the appropriate means to determine whether a facility is used in the local distribution of electricity and therefore should be referenced in the definition of the BES. This is the test that applies elsewhere to determine whether facilities qualify as local distribution, and therefore there is strong and clear precedent for using it in the BES definition. See 334 F.3d 48. In fact, the statutory language in Section 201 of the FPA that led to the Seven Factor Test for other purposes is identical to the statutory language in Section 215 of the FPA at issue

here. Well established rules of statutory construction call for interpreting identical language to produce similar meanings, therefore applying the Seven Factor Test under both sections of the statute is appropriate. And, without the Seven Factor Test as a means of determining what qualifies as local distribution facilities, there could be significant uncertainty and confusion as to whether certain facilities are part of the BES. Further, the Commission stated in Order 743-A that, "the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes, while also allowing NERC flexibility in applying the test or developing an alternative approach as it deems necessary." Id. at P 69. The Seven Factor Test includes the following factors: 1) Local distribution facilities are normally in close proximity to retail customers; 2) local distribution facilities are primarily radial in character; 3) power flows into local distribution systems, it rarely, if ever, flows out; 4) when power enters a local distribution system, it is not re-consigned or transported on to some other market; 5) power entering a local distribution system is consumed in a comparatively restricted geographical area; 6) meters are based at the transmission/local distribution interface to measure flows into the local distribution system; and 7) local distribution systems will be of reduced voltage. Order No. 888 at 31,771. FERC precedent indicates that a utility does not have to meet every factor of the seven-factor test in order for their facilities to qualify as local distribution. California Pacific Edison Co., Order Granting in Part and Denying in Part Petition for Declaratory Order, 133 FERC ¶ 61,018, 61,075 (Oct. 7, 2010). NERC must also limit the BES to facilities or control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) or electric energy from generation facilities needed to maintain transmission system reliability, as directed by the FPA. Similar to the local distribution exclusion, facilities not falling into either of these categories are not part of the BPS and therefore must be expressly excluded from the BES. In order to establish a process that is consistent with the FPA and NERC's delegated authority from FERC, the proper sequence of steps must be applied in the correct order to determine which facilities are subject to NERC and FERC jurisdiction in the first instance, and only then, from among the jurisdictional facilities, to determine which facilities and control systems must comply with the electric reliability standards. Our revisions to the BES definition would create such a process within the definition of the BES. It would ensure that entities would begin any analysis of whether a particular item qualifies as BES by asking, first, whether that facility is "necessary for operating an interconnected electric energy transmission network (or any portion thereof)" or is "electric energy from generation facilities needed to maintain transmission system reliability," and second, whether that facility is "used in the local distribution of electric energy." Only after addressing these questions might further analysis be appropriate. We understand, but disagree with, the argument that, because the FPA clearly excludes local distribution facilities and facilities necessary for operating an interconnected electric transmission network from FERC, NERC, and Regional Entity jurisdiction, it is not necessary to expressly exclude these facilities again in the definition of the BES. This approach might be legally accurate, but could lead to significant confusion for entities attempting to implement the new BES definition. There are numerous examples of Regional Entities, particularly WECC, attempting to include such facilities in the BES under the current BES definition, and regulated entities are not certain as to which facilities they should consider part of the BES. Clarifying FERC, NERC, and Regional Entity in the BES definition, even if such clarification is already provided in the FPA, would avoid such problems under the new definition. Criterion (3) of these revisions is necessary to resolve the ambiguity in the proposed definition as to whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that would be inserted as Subpart (b) modifies each provision of Subpart (a). Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart (b) of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Further, we support the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude

facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the FPA. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."

Yes

We support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. We note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort.

No

The inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System – Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result. We base these conclusions on the findings of NERC's

Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application fo particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. The 100 MVA threshold

seems more in alignment with technical standards such as Power System Stabilizer requirements.
No
We are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.
Yes
FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained.
As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold lacks an adequate technical justification. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit should be eliminated.
Yes
We strongly support the categorical exclusion of Local Distribution Networks from the BES. For reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are likely the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. We also support, with the reservations discussed below, the LDN exclusion as drafted by the SDT. We believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system. However, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.
Yes
We strongly support the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that cannot afford the substantial costs that accompany imposition of mandatory reliability standards. We agree that the small utilities covered by the proposed exemption would have no measurable impact on the operation of the interconnected BES. Our views are borne out by experience in the Pacific Northwest where many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.
No
We agree that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing some local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed in our answer to Question 1, the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES.
As discussed in our answers to Question 1 and Question 11, the SDT proposal does not reflect the jurisdictional limitations of the FPA.
Individual
Roman Gillen
Consumers Power Inc.
No
First, thank you for the opportunity to comment on the draft Proposed Continent-wide Definition of

the Bulk Electric System (BES). We appreciate the work that the Standards Development Team (SDT) has put into a new definition so far and believe the draft is a step in the right direction. We also understand the relatively short timeframe that NERC is working under in order to create a new BES definition to submit to FERC for approval before the imposed deadline. That said, we believe that the draft definition needs significant revision before NERC files it with FERC for approval. In response to question #1, we recommend that NERC revise the draft BES definition so that the first paragraph reads as follows: "Bulk Electric System (BES): Includes anything that meets each of the following three (3) criteria: (1) (a) Is a facility or control system necessary for operating an interconnected electric energy transmission network (or any portion thereof), or (b) Is electric energy from generation facilities needed to maintain transmission system reliability; AND (2) Is not a facility used in the local distribution of electric energy as determined by the Seven Factor Test set out in FERC Order 888; AND (3) (a) Unless included or excluded in subpart (b), is i. A Transmission Element operated at 100kV or higher; or ii. A Real Power Resource identified in subpart (b); or iii. A Reactive Power resource connected at 100kV or higher; (b) [the list of inclusions of exclusions in the draft, as modified by our comments below]" Criteria (1) and (2) of these revisions would capture the limitations on what may be included in the BES due to the jurisdictional limits that Congress placed on FERC, NERC, and the Regional Entities in developing and enforcing mandatory reliability standards. Specifically, Section 215(i) of the Federal Power Act provides that the Electric Reliability Organization (ERO) "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." Section 215(b)(1) of the FPA, 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. With this language, Congress expressly limited FERC, NERC, and the Regional Entities' jurisdiction with regard to local distribution facilities as well as those facilities not necessary for operating a transmission network. Given that these facilities are statutorily excluded from the definition of the BPS, reliability standards may not be developed or enforced for facilities used in local distribution, and therefore the definition of the BES may not include such facilities. In Order No. 672, FERC adopted the statutory definition of the BPS. See Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006). In Order No. 743-A, issued earlier this year, the Commission acknowledged that "Congress has specifically exempted 'facilities used in the local distribution of electric energy'" from the BPS definition. See Order 743-A, 134 FERC ¶ 61,210 at P. 25 (2011). FERC also held that to the extent any facility is a facility used in the local distribution of electric energy, it is exempted from the requirements of Section 215. Id. at P.54. In Order No. 743-A, FERC delegated to NERC the task of proposing for FERC approval criteria and a process to identify the facilities used in local distribution that will be excluded from NERC and FERC regulation. Id. at P 76. The critical first step in this process is for NERC to propose criteria for approval by FERC to determine which facilities are not BPS facilities and therefore not BES facilities. Accordingly, it is critical that NERC create a definition of the BES that first excludes facilities used in local distribution. In Order No. 743-A, the Commission confirmed this, stating: "once a facility is classified as local distribution, the facility will be excluded from the [BES] unless changes to the system warrant a review of the determination." Order No. 743-A, at P 71 (emphasis added). We believe that the Seven Factor is the appropriate means to determine whether a facility is used in the local distribution of electricity and therefore should be referenced in the definition of the BES. This is the test that applies elsewhere to determine whether facilities qualify as local distribution, and therefore there is strong and clear precedent for using it in the BES definition. See 334 F.3d 48. In fact, the statutory language in Section 201 of the FPA that led to the Seven Factor Test for other purposes is identical to the statutory language in Section 215 of the FPA at issue here. Well established rules of statutory construction call for interpreting identical language to produce similar meanings, therefore applying the Seven Factor Test under both sections of the statute is appropriate. And, without the Seven Factor Test as a means of determining what qualifies as local distribution facilities, there could be significant uncertainty and confusion as to whether certain facilities are part of the BES. Further, the Commission stated in Order 743-A that, "the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes, while also allowing NERC flexibility in applying the test or developing an alternative approach as it deems necessary." Id. at P 69. The Seven Factor Test includes the following factors: 1) Local distribution facilities are normally in close proximity to retail customers; 2) local distribution facilities are primarily radial in character; 3) power flows into local

distribution systems, it rarely, if ever, flows out; 4) when power enters a local distribution system, it is not re-consigned or transported on to some other market; 5) power entering a local distribution system is consumed in a comparatively restricted geographical area; 6) meters are based at the transmission/local distribution interface to measure flows into the local distribution system; and 7) local distribution systems will be of reduced voltage. Order No. 888 at 31,771. FERC precedent indicates that a utility does not have to meet every factor of the seven-factor test in order for their facilities to qualify as local distribution. California Pacific Edison Co., Order Granting in Part and Denying in Part Petition for Declaratory Order, 133 FERC ¶ 61,018, 61,075 (Oct. 7, 2010). NERC must also limit the BES to facilities or control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) or electric energy from generation facilities needed to maintain transmission system reliability, as directed by the FPA. Similar to the local distribution exclusion, facilities not falling into either of these categories are not part of the BPS and therefore must be expressly excluded from the BES. In order to establish a process that is consistent with the FPA and NERC's delegated authority from FERC, the proper sequence of steps must be applied in the correct order to determine which facilities are subject to NERC and FERC jurisdiction in the first instance, and only then, from among the jurisdictional facilities, to determine which facilities and control systems must comply with the electric reliability standards. Our revisions to the BES definition would create such a process within the definition of the BES. It would ensure that entities would begin any analysis of whether a particular item qualifies as BES by asking, first, whether that facility is "necessary for operating an interconnected electric energy transmission network (or any portion thereof)" or is "electric energy from generation facilities needed to maintain transmission system reliability," and second, whether that facility is "used in the local distribution of electric energy." Only after addressing these questions might further analysis be appropriate. We understand, but disagree with, the argument that, because the FPA clearly excludes local distribution facilities and facilities necessary for operating an interconnected electric transmission network from FERC, NERC, and Regional Entity jurisdiction, it is not necessary to expressly exclude these facilities again in the definition of the BES. This approach might be legally accurate, but could lead to significant confusion for entities attempting to implement the new BES definition. There are numerous examples of Regional Entities, particularly WECC, attempting to include such facilities in the BES under the current BES definition, and regulated entities are not certain as to which facilities they should consider part of the BES. Clarifying FERC, NERC, and Regional Entity in the BES definition, even if such clarification is already provided in the FPA, would avoid such problems under the new definition. Criterion (3) of these revisions is necessary to resolve the ambiguity in the proposed definition as to whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that would be inserted as Subpart (b) modifies each provision of Subpart (a). Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart (b) of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Further, we support the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the FPA. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."

Yes
We support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. We note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort.
No
The inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System – Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result. We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the

Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application fo particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.

Yes

FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained.

As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold lacks an adequate technical justification. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit should be eliminated.

Yes

We strongly support the categorical exclusion of Local Distribution Networks from the BES. For reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are likely the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. We also support, with the reservations discussed below, the LDN exclusion as drafted by the SDT. We believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system. However, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

Yes

We strongly support the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that cannot afford the substantial costs that accompany imposition of mandatory reliability standards. We agree that the small utilities covered by the proposed exemption would have no measurable impact on the operation of the interconnected BES. Our views are borne out by experience in the Pacific Northwest where many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.

No

We agree that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing some local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed in our answer to Question 1, the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES.

As discussed in our answers to Question 1 and Question 11, the SDT proposal does not reflect the jurisdictional limitations of the FPA.

Individual

Roger Meader

Coos-Curry Electric Cooperative

No

First, thank you for the opportunity to comment on the draft Proposed Continent-wide Definition of the Bulk Electric System (BES). We appreciate the work that the Standards Development Team (SDT) has put into a new definition so far and believe the draft is a step in the right direction. We also understand the relatively short timeframe that NERC is working under in order to create a new BES definition to submit to FERC for approval before the imposed deadline. That said, we believe that the draft definition needs significant revision before NERC files it with FERC for approval. In response to question #1, we recommend that NERC revise the draft BES definition so that the first paragraph reads as follows: "Bulk Electric System (BES): Includes anything that meets each of the following three (3) criteria: (1) (a) Is a facility or control system necessary for operating an interconnected electric energy transmission network (or any portion thereof), or (b) Is electric energy from

generation facilities needed to maintain transmission system reliability; AND (2) Is not a facility used in the local distribution of electric energy as determined by the Seven Factor Test set out in FERC Order 888; AND (3) (a) Unless included or excluded in subpart (b), is i. A Transmission Element operated at 100kV or higher; or ii. A Real Power Resource identified in subpart (b); or iii. A Reactive Power resource connected at 100kV or higher; (b) [the list of inclusions of exclusions in the draft, as modified by our comments below]" Criteria (1) and (2) of these revisions would capture the limitations on what may be included in the BES due to the jurisdictional limits that Congress placed on FERC, NERC, and the Regional Entities in developing and enforcing mandatory reliability standards. Specifically, Section 215(i) of the Federal Power Act provides that the Electric Reliability Organization (ERO) "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." Section 215(b)(1) of the FPA, 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. With this language, Congress expressly limited FERC, NERC, and the Regional Entities' jurisdiction with regard to local distribution facilities as well as those facilities not necessary for operating a transmission network. Given that these facilities are statutorily excluded from the definition of the BPS, reliability standards may not be developed or enforced for facilities used in local distribution, and therefore the definition of the BES may not include such facilities. In Order No. 672, FERC adopted the statutory definition of the BPS. See Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006). In Order No. 743-A, issued earlier this year, the Commission acknowledged that "Congress has specifically exempted 'facilities used in the local distribution of electric energy'" from the BPS definition. See Order 743-A, 134 FERC ¶ 61,210 at P. 25 (2011). FERC also held that to the extent any facility is a facility used in the local distribution of electric energy, it is exempted from the requirements of Section 215. Id. at P.54. In Order No. 743-A, FERC delegated to NERC the task of proposing for FERC approval criteria and a process to identify the facilities used in local distribution that will be excluded from NERC and FERC regulation. Id. at P 76. The critical first step in this process is for NERC to propose criteria for approval by FERC to determine which facilities are not BPS facilities and therefore not BES facilities. Accordingly, it is critical that NERC create a definition of the BES that first excludes facilities used in local distribution. In Order No. 743-A, the Commission confirmed this, stating: "once a facility is classified as local distribution, the facility will be excluded from the [BES] unless changes to the system warrant a review of the determination." Order No. 743-A, at P 71 (emphasis added). We believe that the Seven Factor is the appropriate means to determine whether a facility is used in the local distribution of electricity and therefore should be referenced in the definition of the BES. This is the test that applies elsewhere to determine whether facilities qualify as local distribution, and therefore there is strong and clear precedent for using it in the BES definition. See 334 F.3d 48. In fact, the statutory language in Section 201 of the FPA that led to the Seven Factor Test for other purposes is identical to the statutory language in Section 215 of the FPA at issue here. Well established rules of statutory construction call for interpreting identical language to produce similar meanings, therefore applying the Seven Factor Test under both sections of the statute is appropriate. And, without the Seven Factor Test as a means of determining what qualifies as local distribution facilities, there could be significant uncertainty and confusion as to whether certain facilities are part of the BES. Further, the Commission stated in Order 743-A that, "the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes, while also allowing NERC flexibility in applying the test or developing an alternative approach as it deems necessary." Id. at P 69. The Seven Factor Test includes the following factors: 1) Local distribution facilities are normally in close proximity to retail customers; 2) local distribution facilities are primarily radial in character; 3) power flows into local distribution systems, it rarely, if ever, flows out; 4) when power enters a local distribution system, it is not re-consigned or transported on to some other market; 5) power entering a local distribution system is consumed in a comparatively restricted geographical area; 6) meters are based at the transmission/local distribution interface to measure flows into the local distribution system; and 7) local distribution systems will be of reduced voltage. Order No. 888 at 31,771. FERC precedent indicates that a utility does not have to meet every factor of the seven-factor test in order for their facilities to qualify as local distribution. California Pacific Edison Co., Order Granting in Part and Denying in Part Petition for Declaratory Order, 133 FERC ¶ 61,018, 61,075 (Oct. 7, 2010). NERC must also limit the BES to facilities or control systems necessary for operating an interconnected electric

energy transmission network (or any portion thereof) or electric energy from generation facilities needed to maintain transmission system reliability, as directed by the FPA. Similar to the local distribution exclusion, facilities not falling into either of these categories are not part of the BPS and therefore must be expressly excluded from the BES. In order to establish a process that is consistent with the FPA and NERC's delegated authority from FERC, the proper sequence of steps must be applied in the correct order to determine which facilities are subject to NERC and FERC jurisdiction in the first instance, and only then, from among the jurisdictional facilities, to determine which facilities and control systems must comply with the electric reliability standards. Our revisions to the BES definition would create such a process within the definition of the BES. It would ensure that entities would begin any analysis of whether a particular item qualifies as BES by asking, first, whether that facility is "necessary for operating an interconnected electric energy transmission network (or any portion thereof)" or is "electric energy from generation facilities needed to maintain transmission system reliability," and second, whether that facility is "used in the local distribution of electric energy." Only after addressing these questions might further analysis be appropriate. We understand, but disagree with, the argument that, because the FPA clearly excludes local distribution facilities and facilities necessary for operating an interconnected electric transmission network from FERC, NERC, and Regional Entity jurisdiction, it is not necessary to expressly exclude these facilities again in the definition of the BES. This approach might be legally accurate, but could lead to significant confusion for entities attempting to implement the new BES definition. There are numerous examples of Regional Entities, particularly WECC, attempting to include such facilities in the BES under the current BES definition, and regulated entities are not certain as to which facilities they should consider part of the BES. Clarifying FERC, NERC, and Regional Entity in the BES definition, even if such clarification is already provided in the FPA, would avoid such problems under the new definition. Criterion (3) of these revisions is necessary to resolve the ambiguity in the proposed definition as to whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that would be inserted as Subpart (b) modifies each provision of Subpart (a). Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart (b) of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Further, we support the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the FPA. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."

Yes

We support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. We note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at:

http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort.

No

Specific language change: Change 20 MVA to 100 MVA The inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System – Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result. We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment

that actually produces electricity – the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application for particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.
No
Specific language change: Change 75 MVA to 100 MVA We are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.
No
We are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.
Yes
FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained.
As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold lacks an adequate technical justification. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit should be eliminated.
Yes
We strongly support the categorical exclusion of Local Distribution Networks from the BES. For reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to

ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are likely the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. We also support, with the reservations discussed below, the LDN exclusion as drafted by the SDT. We believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system. However, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

Yes

We strongly support the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that cannot afford the substantial costs that accompany imposition of mandatory reliability standards. We agree that the small utilities covered by the proposed exemption would have no measurable impact on the operation of the interconnected BES. Our views are borne out by experience in the Pacific Northwest where many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.

No

We agree that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing some local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed in our answer to Question 1, the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES.

As discussed in our answers to Question 1 and Question 11, the SDT proposal does not reflect the jurisdictional limitations of the FPA.

Individual

Dave Sabala

Douglas Electric Cooperative

No

First, thank you for the opportunity to comment on the draft Proposed Continent-wide Definition of the Bulk Electric System (BES). We appreciate the work that the Standards Development Team (SDT) has put into a new definition so far and believe the draft is a step in the right direction. We also understand the relatively short timeframe that NERC is working under in order to create a new BES definition to submit to FERC for approval before the imposed deadline. That said, we believe that the draft definition needs significant revision before NERC files it with FERC for approval. In response to question #1, we recommend that NERC revise the draft BES definition so that the first paragraph reads as follows: "Bulk Electric System (BES): Includes anything that meets each of the following three (3) criteria: (1) (a) Is a facility or control system necessary for operating an interconnected electric energy transmission network (or any portion thereof), or (b) Is electric energy from generation facilities needed to maintain transmission system reliability; AND (2) Is not a facility used in the local distribution of electric energy as determined by the Seven Factor Test set out in FERC Order 888; AND (3) (a) Unless included or excluded in subpart (b), is i. A Transmission Element operated at 100kV or higher; or ii. A Real Power Resource identified in subpart (b); or iii. A Reactive Power resource connected at 100kV or higher; (b) [the list of inclusions of exclusions in the draft, as modified by our comments below]" Criteria (1) and (2) of these revisions would capture the limitations on what may be included in the BES due to the jurisdictional limits that Congress placed on FERC, NERC, and the Regional Entities in developing and enforcing mandatory reliability standards. Specifically, Section 215(i) of the Federal Power Act provides that the Electric Reliability Organization

(ERO) "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." Section 215(b)(1) of the FPA, 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. With this language, Congress expressly limited FERC, NERC, and the Regional Entities' jurisdiction with regard to local distribution facilities as well as those facilities not necessary for operating a transmission network. Given that these facilities are statutorily excluded from the definition of the BPS, reliability standards may not be developed or enforced for facilities used in local distribution, and therefore the definition of the BES may not include such facilities. In Order No. 672, FERC adopted the statutory definition of the BPS. See Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006). In Order No. 743-A, issued earlier this year, the Commission acknowledged that "Congress has specifically exempted 'facilities used in the local distribution of electric energy'" from the BPS definition. See Order 743-A, 134 FERC ¶ 61,210 at P. 25 (2011). FERC also held that to the extent any facility is a facility used in the local distribution of electric energy, it is exempted from the requirements of Section 215. Id. at P.54. In Order No. 743-A, FERC delegated to NERC the task of proposing for FERC approval criteria and a process to identify the facilities used in local distribution that will be excluded from NERC and FERC regulation. Id. at P 76. The critical first step in this process is for NERC to propose criteria for approval by FERC to determine which facilities are not BPS facilities and therefore not BES facilities. Accordingly, it is critical that NERC create a definition of the BES that first excludes facilities used in local distribution. In Order No. 743-A, the Commission confirmed this, stating: "once a facility is classified as local distribution, the facility will be excluded from the [BES] unless changes to the system warrant a review of the determination." Order No. 743-A, at P 71 (emphasis added). We believe that the Seven Factor is the appropriate means to determine whether a facility is used in the local distribution of electricity and therefore should be referenced in the definition of the BES. This is the test that applies elsewhere to determine whether facilities qualify as local distribution, and therefore there is strong and clear precedent for using it in the BES definition. See 334 F.3d 48. In fact, the statutory language in Section 201 of the FPA that led to the Seven Factor Test for other purposes is identical to the statutory language in Section 215 of the FPA at issue here. Well established rules of statutory construction call for interpreting identical language to produce similar meanings, therefore applying the Seven Factor Test under both sections of the statute is appropriate. And, without the Seven Factor Test as a means of determining what qualifies as local distribution facilities, there could be significant uncertainty and confusion as to whether certain facilities are part of the BES. Further, the Commission stated in Order 743-A that, "the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes, while also allowing NERC flexibility in applying the test or developing an alternative approach as it deems necessary." Id. at P 69. The Seven Factor Test includes the following factors: 1) Local distribution facilities are normally in close proximity to retail customers; 2) local distribution facilities are primarily radial in character; 3) power flows into local distribution systems, it rarely, if ever, flows out; 4) when power enters a local distribution system, it is not re-consigned or transported on to some other market; 5) power entering a local distribution system is consumed in a comparatively restricted geographical area; 6) meters are based at the transmission/local distribution interface to measure flows into the local distribution system; and 7) local distribution systems will be of reduced voltage. Order No. 888 at 31,771. FERC precedent indicates that a utility does not have to meet every factor of the seven-factor test in order for their facilities to qualify as local distribution. California Pacific Edison Co., Order Granting in Part and Denying in Part Petition for Declaratory Order, 133 FERC ¶ 61,018, 61,075 (Oct. 7, 2010). NERC must also limit the BES to facilities or control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) or electric energy from generation facilities needed to maintain transmission system reliability, as directed by the FPA. Similar to the local distribution exclusion, facilities not falling into either of these categories are not part of the BPS and therefore must be expressly excluded from the BES. In order to establish a process that is consistent with the FPA and NERC's delegated authority from FERC, the proper sequence of steps must be applied in the correct order to determine which facilities are subject to NERC and FERC jurisdiction in the first instance, and only then, from among the jurisdictional facilities, to determine which facilities and control systems must comply with the electric reliability standards. Our revisions to the BES definition would create such a process within the definition of the BES. It would ensure that entities

would begin any analysis of whether a particular item qualifies as BES by asking, first, whether that facility is "necessary for operating an interconnected electric energy transmission network (or any portion thereof)" or is "electric energy from generation facilities needed to maintain transmission system reliability," and second, whether that facility is "used in the local distribution of electric energy." Only after addressing these questions might further analysis be appropriate. We understand, but disagree with, the argument that, because the FPA clearly excludes local distribution facilities and facilities necessary for operating an interconnected electric transmission network from FERC, NERC, and Regional Entity jurisdiction, it is not necessary to expressly exclude these facilities again in the definition of the BES. This approach might be legally accurate, but could lead to significant confusion for entities attempting to implement the new BES definition. There are numerous examples of Regional Entities, particularly WECC, attempting to include such facilities in the BES under the current BES definition, and regulated entities are not certain as to which facilities they should consider part of the BES. Clarifying FERC, NERC, and Regional Entity in the BES definition, even if such clarification is already provided in the FPA, would avoid such problems under the new definition. Criterion (3) of these revisions is necessary to resolve the ambiguity in the proposed definition as to whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that would be inserted as Subpart (b) modifies each provision of Subpart (a). Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart (b) of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Further, we support the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the FPA. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."

Yes

We support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. We note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort.

No

Specific language change: Change 20 MVA to 100 MVA The inclusion of individual generation units

with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System – Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result. We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk

system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application for particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.

Yes

FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained.

As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold lacks an adequate technical justification. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit should be eliminated.

Yes

We strongly support the categorical exclusion of Local Distribution Networks from the BES. For reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are likely the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. We also support, with the reservations discussed below, the LDN exclusion as drafted by the SDT. We believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system.

However, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

Yes

We strongly support the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that cannot afford the substantial costs that accompany imposition of mandatory reliability standards. We agree that the small utilities covered by the proposed exemption would have no measurable impact on the operation of the interconnected BES. Our views are borne out by experience in the Pacific Northwest where many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.

No

We agree that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing some local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed in our answer to Question 1, the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES.

As discussed in our answers to Question 1 and Question 11, the SDT proposal does not reflect the jurisdictional limitations of the FPA.

Individual

Bryan Case

Fall River Electric Cooperative

No

First, thank you for the opportunity to comment on the draft Proposed Continent-wide Definition of the Bulk Electric System (BES). We appreciate the work that the Standards Development Team (SDT) has put into a new definition so far and believe the draft is a step in the right direction. We also understand the relatively short timeframe that NERC is working under in order to create a new BES definition to submit to FERC for approval before the imposed deadline. That said, we believe that the draft definition needs significant revision before NERC files it with FERC for approval. In response to question #1, we recommend that NERC revise the draft BES definition so that the first paragraph reads as follows: "Bulk Electric System (BES): Includes anything that meets each of the following three (3) criteria: (1) (a) Is a facility or control system necessary for operating an interconnected electric energy transmission network (or any portion thereof), or (b) Is electric energy from generation facilities needed to maintain transmission system reliability; AND (2) Is not a facility used in the local distribution of electric energy as determined by the Seven Factor Test set out in FERC Order 888; AND (3) (a) Unless included or excluded in subpart (b), is i. A Transmission Element operated at 100kV or higher; or ii. A Real Power Resource identified in subpart (b); or iii. A Reactive Power resource connected at 100kV or higher; (b) [the list of inclusions of exclusions in the draft, as modified by our comments below]" Criteria (1) and (2) of these revisions would capture the limitations on what may be included in the BES due to the jurisdictional limits that Congress placed on FERC, NERC, and the Regional Entities in developing and enforcing mandatory reliability standards. Specifically, Section 215(i) of the Federal Power Act provides that the Electric Reliability Organization (ERO) "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." Section 215(b)(1) of the FPA, 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. With this language, Congress expressly limited FERC, NERC, and the Regional Entities' jurisdiction with regard to local distribution facilities as well as those facilities not necessary for operating a transmission network. Given that these facilities are statutorily excluded from the

definition of the BPS, reliability standards may not be developed or enforced for facilities used in local distribution, and therefore the definition of the BES may not include such facilities. In Order No. 672, FERC adopted the statutory definition of the BPS. See Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006). In Order No. 743-A, issued earlier this year, the Commission acknowledged that "Congress has specifically exempted 'facilities used in the local distribution of electric energy'" from the BPS definition. See Order 743-A, 134 FERC ¶ 61,210 at P. 25 (2011). FERC also held that to the extent any facility is a facility used in the local distribution of electric energy, it is exempted from the requirements of Section 215. Id. at P.54. In Order No. 743-A, FERC delegated to NERC the task of proposing for FERC approval criteria and a process to identify the facilities used in local distribution that will be excluded from NERC and FERC regulation. Id. at P 76. The critical first step in this process is for NERC to propose criteria for approval by FERC to determine which facilities are not BPS facilities and therefore not BES facilities. Accordingly, it is critical that NERC create a definition of the BES that first excludes facilities used in local distribution. In Order No. 743-A, the Commission confirmed this, stating: "once a facility is classified as local distribution, the facility will be excluded from the [BES] unless changes to the system warrant a review of the determination." Order No. 743-A, at P 71 (emphasis added). We believe that the Seven Factor is the appropriate means to determine whether a facility is used in the local distribution of electricity and therefore should be referenced in the definition of the BES. This is the test that applies elsewhere to determine whether facilities qualify as local distribution, and therefore there is strong and clear precedent for using it in the BES definition. See 334 F.3d 48. In fact, the statutory language in Section 201 of the FPA that led to the Seven Factor Test for other purposes is identical to the statutory language in Section 215 of the FPA at issue here. Well established rules of statutory construction call for interpreting identical language to produce similar meanings, therefore applying the Seven Factor Test under both sections of the statute is appropriate. And, without the Seven Factor Test as a means of determining what qualifies as local distribution facilities, there could be significant uncertainty and confusion as to whether certain facilities are part of the BES. Further, the Commission stated in Order 743-A that, "the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes, while also allowing NERC flexibility in applying the test or developing an alternative approach as it deems necessary." Id. at P 69. The Seven Factor Test includes the following factors: 1) Local distribution facilities are normally in close proximity to retail customers; 2) local distribution facilities are primarily radial in character; 3) power flows into local distribution systems, it rarely, if ever, flows out; 4) when power enters a local distribution system, it is not re-consigned or transported on to some other market; 5) power entering a local distribution system is consumed in a comparatively restricted geographical area; 6) meters are based at the transmission/local distribution interface to measure flows into the local distribution system; and 7) local distribution systems will be of reduced voltage. Order No. 888 at 31,771. FERC precedent indicates that a utility does not have to meet every factor of the seven-factor test in order for their facilities to qualify as local distribution. California Pacific Edison Co., Order Granting in Part and Denying in Part Petition for Declaratory Order, 133 FERC ¶ 61,018, 61,075 (Oct. 7, 2010). NERC must also limit the BES to facilities or control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) or electric energy from generation facilities needed to maintain transmission system reliability, as directed by the FPA. Similar to the local distribution exclusion, facilities not falling into either of these categories are not part of the BPS and therefore must be expressly excluded from the BES. In order to establish a process that is consistent with the FPA and NERC's delegated authority from FERC, the proper sequence of steps must be applied in the correct order to determine which facilities are subject to NERC and FERC jurisdiction in the first instance, and only then, from among the jurisdictional facilities, to determine which facilities and control systems must comply with the electric reliability standards. Our revisions to the BES definition would create such a process within the definition of the BES. It would ensure that entities would begin any analysis of whether a particular item qualifies as BES by asking, first, whether that facility is "necessary for operating an interconnected electric energy transmission network (or any portion thereof)" or is "electric energy from generation facilities needed to maintain transmission system reliability," and second, whether that facility is "used in the local distribution of electric energy." Only after addressing these questions might further analysis be appropriate. We understand, but disagree with, the argument that, because the FPA clearly excludes local distribution facilities and facilities necessary for operating an interconnected electric transmission network from FERC, NERC, and Regional Entity jurisdiction, it is not necessary to expressly exclude these facilities again in the definition of the BES. This approach might be legally accurate, but could lead to significant confusion

for entities attempting to implement the new BES definition. There are numerous examples of Regional Entities, particularly WECC, attempting to include such facilities in the BES under the current BES definition, and regulated entities are not certain as to which facilities they should consider part of the BES. Clarifying FERC, NERC, and Regional Entity in the BES definition, even if such clarification is already provided in the FPA, would avoid such problems under the new definition. Criterion (3) of these revisions is necessary to resolve the ambiguity in the proposed definition as to whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that would be inserted as Subpart (b) modifies each provision of Subpart (a). Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart (b) of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Further, we support the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the FPA. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."

Yes

We support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. We note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort.

No

Specific language change: Change 20 MVA to 100 MVA The inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact,

material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System – Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result. We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only

plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application for particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.

Yes

FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained.

As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold lacks an adequate technical justification. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit should be eliminated.

Yes

We strongly support the categorical exclusion of Local Distribution Networks from the BES. For reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are likely the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. We also support, with the reservations discussed below, the LDN exclusion as drafted by the SDT. We believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system. However, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

Yes

We strongly support the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that cannot afford the substantial costs that accompany imposition of mandatory reliability standards. We agree that the small utilities covered by the

proposed exemption would have no measurable impact on the operation of the interconnected BES. Our views are borne out by experience in the Pacific Northwest where many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.
No
We agree that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing some local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed in our answer to Question 1, the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES.
As discussed in our answers to Question 1 and Question 11, the SDT proposal does not reflect the jurisdictional limitations of the FPA.
Individual
Rick Crinklaw
Lane Electric Cooperative
No
First, thank you for the opportunity to comment on the draft Proposed Continent-wide Definition of the Bulk Electric System (BES). We appreciate the work that the Standards Development Team (SDT) has put into a new definition so far and believe the draft is a step in the right direction. We also understand the relatively short timeframe that NERC is working under in order to create a new BES definition to submit to FERC for approval before the imposed deadline. That said, we believe that the draft definition needs significant revision before NERC files it with FERC for approval. In response to question #1, we recommend that NERC revise the draft BES definition so that the first paragraph reads as follows: "Bulk Electric System (BES): Includes anything that meets each of the following three (3) criteria: (1) (a) Is a facility or control system necessary for operating an interconnected electric energy transmission network (or any portion thereof), or (b) Is electric energy from generation facilities needed to maintain transmission system reliability; AND (2) Is not a facility used in the local distribution of electric energy as determined by the Seven Factor Test set out in FERC Order 888; AND (3) (a) Unless included or excluded in subpart (b), is i. A Transmission Element operated at 100kV or higher; or ii. A Real Power Resource identified in subpart (b); or iii. A Reactive Power resource connected at 100kV or higher; (b) [the list of inclusions of exclusions in the draft, as modified by our comments below]" Criteria (1) and (2) of these revisions would capture the limitations on what may be included in the BES due to the jurisdictional limits that Congress placed on FERC, NERC, and the Regional Entities in developing and enforcing mandatory reliability standards. Specifically, Section 215(i) of the Federal Power Act provides that the Electric Reliability Organization (ERO) "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." Section 215(b)(1) of the FPA, 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. With this language, Congress expressly limited FERC, NERC, and the Regional Entities' jurisdiction with regard to local distribution facilities as well as those facilities not necessary for operating a transmission network. Given that these facilities are statutorily excluded from the definition of the BPS, reliability standards may not be developed or enforced for facilities used in local distribution, and therefore the definition of the BES may not include such facilities. In Order No. 672, FERC adopted the statutory definition of the BPS. See Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006). In Order No. 743-A, issued earlier this year, the Commission acknowledged that "Congress has specifically exempted 'facilities used in the local distribution of electric energy'" from the BPS definition. See Order 743-A, 134 FERC ¶ 61,210 at P. 25 (2011). FERC also held that to the extent any facility is a facility used in the local distribution of electric energy, it is exempted from the requirements of Section 215. Id. at P.54. In Order No. 743-A, FERC delegated to NERC the task of proposing for FERC approval criteria and a process to identify the facilities used in local distribution

that will be excluded from NERC and FERC regulation. Id. at P 76. The critical first step in this process is for NERC to propose criteria for approval by FERC to determine which facilities are not BPS facilities and therefore not BES facilities. Accordingly, it is critical that NERC create a definition of the BES that first excludes facilities used in local distribution. In Order No. 743-A, the Commission confirmed this, stating: "once a facility is classified as local distribution, the facility will be excluded from the [BES] unless changes to the system warrant a review of the determination." Order No. 743-A, at P 71 (emphasis added). We believe that the Seven Factor is the appropriate means to determine whether a facility is used in the local distribution of electricity and therefore should be referenced in the definition of the BES. This is the test that applies elsewhere to determine whether facilities qualify as local distribution, and therefore there is strong and clear precedent for using it in the BES definition. See 334 F.3d 48. In fact, the statutory language in Section 201 of the FPA that led to the Seven Factor Test for other purposes is identical to the statutory language in Section 215 of the FPA at issue here. Well established rules of statutory construction call for interpreting identical language to produce similar meanings, therefore applying the Seven Factor Test under both sections of the statute is appropriate. And, without the Seven Factor Test as a means of determining what qualifies as local distribution facilities, there could be significant uncertainty and confusion as to whether certain facilities are part of the BES. Further, the Commission stated in Order 743-A that, "the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes, while also allowing NERC flexibility in applying the test or developing an alternative approach as it deems necessary." Id. at P 69. The Seven Factor Test includes the following factors: 1) Local distribution facilities are normally in close proximity to retail customers; 2) local distribution facilities are primarily radial in character; 3) power flows into local distribution systems, it rarely, if ever, flows out; 4) when power enters a local distribution system, it is not re-consigned or transported on to some other market; 5) power entering a local distribution system is consumed in a comparatively restricted geographical area; 6) meters are based at the transmission/local distribution interface to measure flows into the local distribution system; and 7) local distribution systems will be of reduced voltage. Order No. 888 at 31,771. FERC precedent indicates that a utility does not have to meet every factor of the seven-factor test in order for their facilities to qualify as local distribution. California Pacific Edison Co., Order Granting in Part and Denying in Part Petition for Declaratory Order, 133 FERC ¶ 61,018, 61,075 (Oct. 7, 2010). NERC must also limit the BES to facilities or control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) or electric energy from generation facilities needed to maintain transmission system reliability, as directed by the FPA. Similar to the local distribution exclusion, facilities not falling into either of these categories are not part of the BPS and therefore must be expressly excluded from the BES. In order to establish a process that is consistent with the FPA and NERC's delegated authority from FERC, the proper sequence of steps must be applied in the correct order to determine which facilities are subject to NERC and FERC jurisdiction in the first instance, and only then, from among the jurisdictional facilities, to determine which facilities and control systems must comply with the electric reliability standards. Our revisions to the BES definition would create such a process within the definition of the BES. It would ensure that entities would begin any analysis of whether a particular item qualifies as BES by asking, first, whether that facility is "necessary for operating an interconnected electric energy transmission network (or any portion thereof)" or is "electric energy from generation facilities needed to maintain transmission system reliability," and second, whether that facility is "used in the local distribution of electric energy." Only after addressing these questions might further analysis be appropriate. We understand, but disagree with, the argument that, because the FPA clearly excludes local distribution facilities and facilities necessary for operating an interconnected electric transmission network from FERC, NERC, and Regional Entity jurisdiction, it is not necessary to expressly exclude these facilities again in the definition of the BES. This approach might be legally accurate, but could lead to significant confusion for entities attempting to implement the new BES definition. There are numerous examples of Regional Entities, particularly WECC, attempting to include such facilities in the BES under the current BES definition, and regulated entities are not certain as to which facilities they should consider part of the BES. Clarifying FERC, NERC, and Regional Entity in the BES definition, even if such clarification is already provided in the FPA, would avoid such problems under the new definition. Criterion (3) of these revisions is necessary to resolve the ambiguity in the proposed definition as to whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that

would be inserted as Subpart (b) modifies each provision of Subpart (a). Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart (b) of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Further, we support the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the FPA. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."

Yes

We support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. We note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort.

No

Specific language change: Change 20 MVA to 100 MVA The inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System – Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are

"needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result. We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and

practical results of how its definition will affect the application for particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.

Yes

FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained.

As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold lacks an adequate technical justification. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit should be eliminated.

Yes

We strongly support the categorical exclusion of Local Distribution Networks from the BES. For reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are likely the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. We also support, with the reservations discussed below, the LDN exclusion as drafted by the SDT. We believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system. However, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

Yes

We strongly support the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that cannot afford the substantial costs that accompany imposition of mandatory reliability standards. We agree that the small utilities covered by the proposed exemption would have no measurable impact on the operation of the interconnected BES. Our views are borne out by experience in the Pacific Northwest where many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.

No

We agree that the approach adopted by the SDT -- a core definition coupled with specific inclusions

and exclusions – will be effective in removing some local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed in our answer to Question 1, the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES.

As discussed in our answers to Question 1 and Question 11, the SDT proposal does not reflect the jurisdictional limitations of the FPA.

Individual

Ray Ellis

Lincoln Electric Cooperative

No

First, thank you for the opportunity to comment on the draft Proposed Continent-wide Definition of the Bulk Electric System (BES). We appreciate the work that the Standards Development Team (SDT) has put into a new definition so far and believe the draft is a step in the right direction. We also understand the relatively short timeframe that NERC is working under in order to create a new BES definition to submit to FERC for approval before the imposed deadline. That said, we believe that the draft definition needs significant revision before NERC files it with FERC for approval. In response to question #1, we recommend that NERC revise the draft BES definition so that the first paragraph reads as follows: "Bulk Electric System (BES): Includes anything that meets each of the following three (3) criteria: (1) (a) Is a facility or control system necessary for operating an interconnected electric energy transmission network (or any portion thereof), or (b) Is electric energy from generation facilities needed to maintain transmission system reliability; AND (2) Is not a facility used in the local distribution of electric energy as determined by the Seven Factor Test set out in FERC Order 888; AND (3) (a) Unless included or excluded in subpart (b), is i. A Transmission Element operated at 100kV or higher; or ii. A Real Power Resource identified in subpart (b); or iii. A Reactive Power resource connected at 100kV or higher; (b) [the list of inclusions of exclusions in the draft, as modified by our comments below]" Criteria (1) and (2) of these revisions would capture the limitations on what may be included in the BES due to the jurisdictional limits that Congress placed on FERC, NERC, and the Regional Entities in developing and enforcing mandatory reliability standards. Specifically, Section 215(i) of the Federal Power Act provides that the Electric Reliability Organization (ERO) "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." Section 215(b)(1) of the FPA, 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. With this language, Congress expressly limited FERC, NERC, and the Regional Entities' jurisdiction with regard to local distribution facilities as well as those facilities not necessary for operating a transmission network. Given that these facilities are statutorily excluded from the definition of the BPS, reliability standards may not be developed or enforced for facilities used in local distribution, and therefore the definition of the BES may not include such facilities. In Order No. 672, FERC adopted the statutory definition of the BPS. See Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006). In Order No. 743-A, issued earlier this year, the Commission acknowledged that "Congress has specifically exempted 'facilities used in the local distribution of electric energy'" from the BPS definition. See Order 743-A, 134 FERC ¶ 61,210 at P. 25 (2011). FERC also held that to the extent any facility is a facility used in the local distribution of electric energy, it is exempted from the requirements of Section 215. Id. at P.54. In Order No. 743-A, FERC delegated to NERC the task of proposing for FERC approval criteria and a process to identify the facilities used in local distribution that will be excluded from NERC and FERC regulation. Id. at P 76. The critical first step in this process is for NERC to propose criteria for approval by FERC to determine which facilities are not BPS facilities and therefore not BES facilities. Accordingly, it is critical that NERC create a definition of the BES that first excludes facilities used in local distribution. In Order No. 743-A, the Commission confirmed this, stating: "once a facility is classified as local distribution, the facility will be excluded from the [BES] unless changes to the system warrant a review of the determination." Order No. 743-A, at P 71 (emphasis added). We believe that the Seven Factor is the appropriate means to determine whether a facility is used in the local distribution of electricity and therefore should be referenced in the definition of the BES. This is the test that applies elsewhere to determine whether facilities qualify as

local distribution, and therefore there is strong and clear precedent for using it in the BES definition. See 334 F.3d 48. In fact, the statutory language in Section 201 of the FPA that led to the Seven Factor Test for other purposes is identical to the statutory language in Section 215 of the FPA at issue here. Well established rules of statutory construction call for interpreting identical language to produce similar meanings, therefore applying the Seven Factor Test under both sections of the statute is appropriate. And, without the Seven Factor Test as a means of determining what qualifies as local distribution facilities, there could be significant uncertainty and confusion as to whether certain facilities are part of the BES. Further, the Commission stated in Order 743-A that, "the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes, while also allowing NERC flexibility in applying the test or developing an alternative approach as it deems necessary." Id. at P 69. The Seven Factor Test includes the following factors: 1) Local distribution facilities are normally in close proximity to retail customers; 2) local distribution facilities are primarily radial in character; 3) power flows into local distribution systems, it rarely, if ever, flows out; 4) when power enters a local distribution system, it is not re-consigned or transported on to some other market; 5) power entering a local distribution system is consumed in a comparatively restricted geographical area; 6) meters are based at the transmission/local distribution interface to measure flows into the local distribution system; and 7) local distribution systems will be of reduced voltage. Order No. 888 at 31,771. FERC precedent indicates that a utility does not have to meet every factor of the seven-factor test in order for their facilities to qualify as local distribution. California Pacific Edison Co., Order Granting in Part and Denying in Part Petition for Declaratory Order, 133 FERC ¶ 61,018, 61,075 (Oct. 7, 2010). NERC must also limit the BES to facilities or control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) or electric energy from generation facilities needed to maintain transmission system reliability, as directed by the FPA. Similar to the local distribution exclusion, facilities not falling into either of these categories are not part of the BPS and therefore must be expressly excluded from the BES. In order to establish a process that is consistent with the FPA and NERC's delegated authority from FERC, the proper sequence of steps must be applied in the correct order to determine which facilities are subject to NERC and FERC jurisdiction in the first instance, and only then, from among the jurisdictional facilities, to determine which facilities and control systems must comply with the electric reliability standards. Our revisions to the BES definition would create such a process within the definition of the BES. It would ensure that entities would begin any analysis of whether a particular item qualifies as BES by asking, first, whether that facility is "necessary for operating an interconnected electric energy transmission network (or any portion thereof)" or is "electric energy from generation facilities needed to maintain transmission system reliability," and second, whether that facility is "used in the local distribution of electric energy." Only after addressing these questions might further analysis be appropriate. We understand, but disagree with, the argument that, because the FPA clearly excludes local distribution facilities and facilities necessary for operating an interconnected electric transmission network from FERC, NERC, and Regional Entity jurisdiction, it is not necessary to expressly exclude these facilities again in the definition of the BES. This approach might be legally accurate, but could lead to significant confusion for entities attempting to implement the new BES definition. There are numerous examples of Regional Entities, particularly WECC, attempting to include such facilities in the BES under the current BES definition, and regulated entities are not certain as to which facilities they should consider part of the BES. Clarifying FERC, NERC, and Regional Entity in the BES definition, even if such clarification is already provided in the FPA, would avoid such problems under the new definition. Criterion (3) of these revisions is necessary to resolve the ambiguity in the proposed definition as to whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that would be inserted as Subpart (b) modifies each provision of Subpart (a). Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart (b) of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Further, we support the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already

defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the FPA. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."

Yes

We support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. We note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort.

No

Specific language change: Change 20 MVA to 100 MVA The inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System – Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be

supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result. We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application for particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn

from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.
No
We are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.
Yes
FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained.
As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold lacks an adequate technical justification. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit should be eliminated.
Yes
We strongly support the categorical exclusion of Local Distribution Networks from the BES. For reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are likely the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. We also support, with the reservations discussed below, the LDN exclusion as drafted by the SDT. We believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system. However, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.
Yes
We strongly support the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that cannot afford the substantial costs that accompany imposition of mandatory reliability standards. We agree that the small utilities covered by the proposed exemption would have no measurable impact on the operation of the interconnected BES. Our views are borne out by experience in the Pacific Northwest where many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.
No
We agree that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing some local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed in our answer to Question 1, the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES.
As discussed in our answers to Question 1 and Question 11, the SDT proposal does not reflect the jurisdictional limitations of the FPA.
Individual
Richard Reynolds

Lost River Electric Cooperative
No
First, thank you for the opportunity to comment on the draft Proposed Continent-wide Definition of the Bulk Electric System (BES). We appreciate the work that the Standards Development Team (SDT) has put into a new definition so far and believe the draft is a step in the right direction. We also understand the relatively short timeframe that NERC is working under in order to create a new BES definition to submit to FERC for approval before the imposed deadline. That said, we believe that the draft definition needs significant revision before NERC files it with FERC for approval. In response to question #1, we recommend that NERC revise the draft BES definition so that the first paragraph reads as follows: "Bulk Electric System (BES): Includes anything that meets each of the following three (3) criteria: (1) (a) Is a facility or control system necessary for operating an interconnected electric energy transmission network (or any portion thereof), or (b) Is electric energy from generation facilities needed to maintain transmission system reliability; AND (2) Is not a facility used in the local distribution of electric energy as determined by the Seven Factor Test set out in FERC Order 888; AND (3) (a) Unless included or excluded in subpart (b), is i. A Transmission Element operated at 100kV or higher; or ii. A Real Power Resource identified in subpart (b); or iii. A Reactive Power resource connected at 100kV or higher; (b) [the list of inclusions of exclusions in the draft, as modified by our comments below]" Criteria (1) and (2) of these revisions would capture the limitations on what may be included in the BES due to the jurisdictional limits that Congress placed on FERC, NERC, and the Regional Entities in developing and enforcing mandatory reliability standards. Specifically, Section 215(i) of the Federal Power Act provides that the Electric Reliability Organization (ERO) "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." Section 215(b)(1) of the FPA, 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. With this language, Congress expressly limited FERC, NERC, and the Regional Entities' jurisdiction with regard to local distribution facilities as well as those facilities not necessary for operating a transmission network. Given that these facilities are statutorily excluded from the definition of the BPS, reliability standards may not be developed or enforced for facilities used in local distribution, and therefore the definition of the BES may not include such facilities. In Order No. 672, FERC adopted the statutory definition of the BPS. See Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006). In Order No. 743-A, issued earlier this year, the Commission acknowledged that "Congress has specifically exempted 'facilities used in the local distribution of electric energy'" from the BPS definition. See Order 743-A, 134 FERC ¶ 61,210 at P. 25 (2011). FERC also held that to the extent any facility is a facility used in the local distribution of electric energy, it is exempted from the requirements of Section 215. Id. at P.54. In Order No. 743-A, FERC delegated to NERC the task of proposing for FERC approval criteria and a process to identify the facilities used in local distribution that will be excluded from NERC and FERC regulation. Id. at P 76. The critical first step in this process is for NERC to propose criteria for approval by FERC to determine which facilities are not BPS facilities and therefore not BES facilities. Accordingly, it is critical that NERC create a definition of the BES that first excludes facilities used in local distribution. In Order No. 743-A, the Commission confirmed this, stating: "once a facility is classified as local distribution, the facility will be excluded from the [BES] unless changes to the system warrant a review of the determination." Order No. 743-A, at P 71 (emphasis added). We believe that the Seven Factor is the appropriate means to determine whether a facility is used in the local distribution of electricity and therefore should be referenced in the definition of the BES. This is the test that applies elsewhere to determine whether facilities qualify as local distribution, and therefore there is strong and clear precedent for using it in the BES definition. See 334 F.3d 48. In fact, the statutory language in Section 201 of the FPA that led to the Seven Factor Test for other purposes is identical to the statutory language in Section 215 of the FPA at issue here. Well established rules of statutory construction call for interpreting identical language to produce similar meanings, therefore applying the Seven Factor Test under both sections of the statute is appropriate. And, without the Seven Factor Test as a means of determining what qualifies as local distribution facilities, there could be significant uncertainty and confusion as to whether certain facilities are part of the BES. Further, the Commission stated in Order 743-A that, "the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes, while also allowing NERC flexibility in applying the test or

developing an alternative approach as it deems necessary." Id. at P 69. The Seven Factor Test includes the following factors: 1) Local distribution facilities are normally in close proximity to retail customers; 2) local distribution facilities are primarily radial in character; 3) power flows into local distribution systems, it rarely, if ever, flows out; 4) when power enters a local distribution system, it is not re-consigned or transported on to some other market; 5) power entering a local distribution system is consumed in a comparatively restricted geographical area; 6) meters are based at the transmission/local distribution interface to measure flows into the local distribution system; and 7) local distribution systems will be of reduced voltage. Order No. 888 at 31,771. FERC precedent indicates that a utility does not have to meet every factor of the seven-factor test in order for their facilities to qualify as local distribution. California Pacific Edison Co., Order Granting in Part and Denying in Part Petition for Declaratory Order, 133 FERC ¶ 61,018, 61,075 (Oct. 7, 2010). NERC must also limit the BES to facilities or control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) or electric energy from generation facilities needed to maintain transmission system reliability, as directed by the FPA. Similar to the local distribution exclusion, facilities not falling into either of these categories are not part of the BPS and therefore must be expressly excluded from the BES. In order to establish a process that is consistent with the FPA and NERC's delegated authority from FERC, the proper sequence of steps must be applied in the correct order to determine which facilities are subject to NERC and FERC jurisdiction in the first instance, and only then, from among the jurisdictional facilities, to determine which facilities and control systems must comply with the electric reliability standards. Our revisions to the BES definition would create such a process within the definition of the BES. It would ensure that entities would begin any analysis of whether a particular item qualifies as BES by asking, first, whether that facility is "necessary for operating an interconnected electric energy transmission network (or any portion thereof)" or is "electric energy from generation facilities needed to maintain transmission system reliability," and second, whether that facility is "used in the local distribution of electric energy." Only after addressing these questions might further analysis be appropriate. We understand, but disagree with, the argument that, because the FPA clearly excludes local distribution facilities and facilities necessary for operating an interconnected electric transmission network from FERC, NERC, and Regional Entity jurisdiction, it is not necessary to expressly exclude these facilities again in the definition of the BES. This approach might be legally accurate, but could lead to significant confusion for entities attempting to implement the new BES definition. There are numerous examples of Regional Entities, particularly WECC, attempting to include such facilities in the BES under the current BES definition, and regulated entities are not certain as to which facilities they should consider part of the BES. Clarifying FERC, NERC, and Regional Entity in the BES definition, even if such clarification is already provided in the FPA, would avoid such problems under the new definition. Criterion (3) of these revisions is necessary to resolve the ambiguity in the proposed definition as to whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that would be inserted as Subpart (b) modifies each provision of Subpart (a). Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart (b) of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Further, we support the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the FPA. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase

"Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."

Yes

We support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. We note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort.

No

Specific language change: Change 20 MVA to 100 MVA The inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System – Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result. We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily

related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application for particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.

No

Specific language change: Change 75 MVA to 100 MVA We are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our

comments on Question 4.
Yes
FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained.
As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold lacks an adequate technical justification. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit should be eliminated.
Yes
We strongly support the categorical exclusion of Local Distribution Networks from the BES. For reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are likely the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. We also support, with the reservations discussed below, the LDN exclusion as drafted by the SDT. We believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system. However, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.
Yes
We strongly support the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that cannot afford the substantial costs that accompany imposition of mandatory reliability standards. We agree that the small utilities covered by the proposed exemption would have no measurable impact on the operation of the interconnected BES. Our views are borne out by experience in the Pacific Northwest where many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.
No
We agree that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing some local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed in our answer to Question 1, the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES.
As discussed in our answers to Question 1 and Question 11, the SDT proposal does not reflect the jurisdictional limitations of the FPA.
Individual
Annie Terracciano
Northern Lights Inc.
No
First, thank you for the opportunity to comment on the draft Proposed Continent-wide Definition of the Bulk Electric System (BES). We appreciate the work that the Standards Development Team (SDT) has put into a new definition so far and believe the draft is a step in the right direction. We also understand the relatively short timeframe that NERC is working under in order to create a new BES definition to submit to FERC for approval before the imposed deadline. That said, we believe that the draft definition needs significant revision before NERC files it with FERC for approval. In response to

question #1, we recommend that NERC revise the draft BES definition so that the first paragraph reads as follows: "Bulk Electric System (BES): Includes anything that meets each of the following three (3) criteria: (1) (a) Is a facility or control system necessary for operating an interconnected electric energy transmission network (or any portion thereof), or (b) Is electric energy from generation facilities needed to maintain transmission system reliability; AND (2) Is not a facility used in the local distribution of electric energy as determined by the Seven Factor Test set out in FERC Order 888; AND (3) (a) Unless included or excluded in subpart (b), is i. A Transmission Element operated at 100kV or higher; or ii. A Real Power Resource identified in subpart (b); or iii. A Reactive Power resource connected at 100kV or higher; (b) [the list of inclusions of exclusions in the draft, as modified by our comments below]" Criteria (1) and (2) of these revisions would capture the limitations on what may be included in the BES due to the jurisdictional limits that Congress placed on FERC, NERC, and the Regional Entities in developing and enforcing mandatory reliability standards. Specifically, Section 215(i) of the Federal Power Act provides that the Electric Reliability Organization (ERO) "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." Section 215(b)(1) of the FPA, 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. With this language, Congress expressly limited FERC, NERC, and the Regional Entities' jurisdiction with regard to local distribution facilities as well as those facilities not necessary for operating a transmission network. Given that these facilities are statutorily excluded from the definition of the BPS, reliability standards may not be developed or enforced for facilities used in local distribution, and therefore the definition of the BES may not include such facilities. In Order No. 672, FERC adopted the statutory definition of the BPS. See Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006). In Order No. 743-A, issued earlier this year, the Commission acknowledged that "Congress has specifically exempted 'facilities used in the local distribution of electric energy'" from the BPS definition. See Order 743-A, 134 FERC ¶ 61,210 at P. 25 (2011). FERC also held that to the extent any facility is a facility used in the local distribution of electric energy, it is exempted from the requirements of Section 215. Id. at P.54. In Order No. 743-A, FERC delegated to NERC the task of proposing for FERC approval criteria and a process to identify the facilities used in local distribution that will be excluded from NERC and FERC regulation. Id. at P 76. The critical first step in this process is for NERC to propose criteria for approval by FERC to determine which facilities are not BPS facilities and therefore not BES facilities. Accordingly, it is critical that NERC create a definition of the BES that first excludes facilities used in local distribution. In Order No. 743-A, the Commission confirmed this, stating: "once a facility is classified as local distribution, the facility will be excluded from the [BES] unless changes to the system warrant a review of the determination." Order No. 743-A, at P 71 (emphasis added). We believe that the Seven Factor is the appropriate means to determine whether a facility is used in the local distribution of electricity and therefore should be referenced in the definition of the BES. This is the test that applies elsewhere to determine whether facilities qualify as local distribution, and therefore there is strong and clear precedent for using it in the BES definition. See 334 F.3d 48. In fact, the statutory language in Section 201 of the FPA that led to the Seven Factor Test for other purposes is identical to the statutory language in Section 215 of the FPA at issue here. Well established rules of statutory construction call for interpreting identical language to produce similar meanings, therefore applying the Seven Factor Test under both sections of the statute is appropriate. And, without the Seven Factor Test as a means of determining what qualifies as local distribution facilities, there could be significant uncertainty and confusion as to whether certain facilities are part of the BES. Further, the Commission stated in Order 743-A that, "the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes, while also allowing NERC flexibility in applying the test or developing an alternative approach as it deems necessary." Id. at P 69. The Seven Factor Test includes the following factors: 1) Local distribution facilities are normally in close proximity to retail customers; 2) local distribution facilities are primarily radial in character; 3) power flows into local distribution systems, it rarely, if ever, flows out; 4) when power enters a local distribution system, it is not re-consigned or transported on to some other market; 5) power entering a local distribution system is consumed in a comparatively restricted geographical area; 6) meters are based at the transmission/local distribution interface to measure flows into the local distribution system; and 7) local distribution systems will be of reduced voltage. Order No. 888 at 31,771. FERC precedent

indicates that a utility does not have to meet every factor of the seven-factor test in order for their facilities to qualify as local distribution. California Pacific Edison Co., Order Granting in Part and Denying in Part Petition for Declaratory Order, 133 FERC ¶ 61,018, 61,075 (Oct. 7, 2010). NERC must also limit the BES to facilities or control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) or electric energy from generation facilities needed to maintain transmission system reliability, as directed by the FPA. Similar to the local distribution exclusion, facilities not falling into either of these categories are not part of the BPS and therefore must be expressly excluded from the BES. In order to establish a process that is consistent with the FPA and NERC's delegated authority from FERC, the proper sequence of steps must be applied in the correct order to determine which facilities are subject to NERC and FERC jurisdiction in the first instance, and only then, from among the jurisdictional facilities, to determine which facilities and control systems must comply with the electric reliability standards. Our revisions to the BES definition would create such a process within the definition of the BES. It would ensure that entities would begin any analysis of whether a particular item qualifies as BES by asking, first, whether that facility is "necessary for operating an interconnected electric energy transmission network (or any portion thereof)" or is "electric energy from generation facilities needed to maintain transmission system reliability," and second, whether that facility is "used in the local distribution of electric energy." Only after addressing these questions might further analysis be appropriate. We understand, but disagree with, the argument that, because the FPA clearly excludes local distribution facilities and facilities necessary for operating an interconnected electric transmission network from FERC, NERC, and Regional Entity jurisdiction, it is not necessary to expressly exclude these facilities again in the definition of the BES. This approach might be legally accurate, but could lead to significant confusion for entities attempting to implement the new BES definition. There are numerous examples of Regional Entities, particularly WECC, attempting to include such facilities in the BES under the current BES definition, and regulated entities are not certain as to which facilities they should consider part of the BES. Clarifying FERC, NERC, and Regional Entity in the BES definition, even if such clarification is already provided in the FPA, would avoid such problems under the new definition. Criterion (3) of these revisions is necessary to resolve the ambiguity in the proposed definition as to whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that would be inserted as Subpart (b) modifies each provision of Subpart (a). Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart (b) of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Further, we support the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the FPA. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."

Yes

We support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin.

We note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort.

No

Specific language change: Change 20 MVA to 100 MVA The inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System – Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result. We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for

Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application for particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.

Yes

FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained.

As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold lacks an adequate technical justification. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit should be eliminated.

Yes

We strongly support the categorical exclusion of Local Distribution Networks from the BES. For reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are likely the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. We also support, with the reservations discussed below, the LDN exclusion as drafted by the SDT. We believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system. However, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

Yes

We strongly support the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that cannot afford the substantial costs that accompany imposition of mandatory reliability standards. We agree that the small utilities covered by the proposed exemption would have no measurable impact on the operation of the interconnected BES. Our views are borne out by experience in the Pacific Northwest where many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.

No

We agree that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing some local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed in our answer to Question 1, the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES.

As discussed in our answers to Question 1 and Question 11, the SDT proposal does not reflect the jurisdictional limitations of the FPA.

Individual

Doug Adams

Okanogan Electric Cooperative

No

First, thank you for the opportunity to comment on the draft Proposed Continent-wide Definition of the Bulk Electric System (BES). We appreciate the work that the Standards Development Team (SDT) has put into a new definition so far and believe the draft is a step in the right direction. We also understand the relatively short timeframe that NERC is working under in order to create a new BES definition to submit to FERC for approval before the imposed deadline. That said, we believe that the draft definition needs significant revision before NERC files it with FERC for approval. In response to question #1, we recommend that NERC revise the draft BES definition so that the first paragraph reads as follows: "Bulk Electric System (BES): Includes anything that meets each of the following three (3) criteria: (1) (a) Is a facility or control system necessary for operating an interconnected electric energy transmission network (or any portion thereof), or (b) Is electric energy from generation facilities needed to maintain transmission system reliability; AND (2) Is not a facility used in the local distribution of electric energy as determined by the Seven Factor Test set out in FERC Order 888; AND (3) (a) Unless included or excluded in subpart (b), is i. A Transmission Element operated at 100kV or higher; or ii. A Real Power Resource identified in subpart (b); or iii. A Reactive Power resource connected at 100kV or higher; (b) [the list of inclusions of exclusions in the draft, as modified by our comments below]" Criteria (1) and (2) of these revisions would capture the

limitations on what may be included in the BES due to the jurisdictional limits that Congress placed on FERC, NERC, and the Regional Entities in developing and enforcing mandatory reliability standards. Specifically, Section 215(i) of the Federal Power Act provides that the Electric Reliability Organization (ERO) "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." Section 215(b)(1) of the FPA, 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. With this language, Congress expressly limited FERC, NERC, and the Regional Entities' jurisdiction with regard to local distribution facilities as well as those facilities not necessary for operating a transmission network. Given that these facilities are statutorily excluded from the definition of the BPS, reliability standards may not be developed or enforced for facilities used in local distribution, and therefore the definition of the BES may not include such facilities. In Order No. 672, FERC adopted the statutory definition of the BPS. See Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006). In Order No. 743-A, issued earlier this year, the Commission acknowledged that "Congress has specifically exempted 'facilities used in the local distribution of electric energy'" from the BPS definition. See Order 743-A, 134 FERC ¶ 61,210 at P. 25 (2011). FERC also held that to the extent any facility is a facility used in the local distribution of electric energy, it is exempted from the requirements of Section 215. Id. at P.54. In Order No. 743-A, FERC delegated to NERC the task of proposing for FERC approval criteria and a process to identify the facilities used in local distribution that will be excluded from NERC and FERC regulation. Id. at P 76. The critical first step in this process is for NERC to propose criteria for approval by FERC to determine which facilities are not BPS facilities and therefore not BES facilities. Accordingly, it is critical that NERC create a definition of the BES that first excludes facilities used in local distribution. In Order No. 743-A, the Commission confirmed this, stating: "once a facility is classified as local distribution, the facility will be excluded from the [BES] unless changes to the system warrant a review of the determination." Order No. 743-A, at P 71 (emphasis added). We believe that the Seven Factor is the appropriate means to determine whether a facility is used in the local distribution of electricity and therefore should be referenced in the definition of the BES. This is the test that applies elsewhere to determine whether facilities qualify as local distribution, and therefore there is strong and clear precedent for using it in the BES definition. See 334 F.3d 48. In fact, the statutory language in Section 201 of the FPA that led to the Seven Factor Test for other purposes is identical to the statutory language in Section 215 of the FPA at issue here. Well established rules of statutory construction call for interpreting identical language to produce similar meanings, therefore applying the Seven Factor Test under both sections of the statute is appropriate. And, without the Seven Factor Test as a means of determining what qualifies as local distribution facilities, there could be significant uncertainty and confusion as to whether certain facilities are part of the BES. Further, the Commission stated in Order 743-A that, "the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes, while also allowing NERC flexibility in applying the test or developing an alternative approach as it deems necessary." Id. at P 69. The Seven Factor Test includes the following factors: 1) Local distribution facilities are normally in close proximity to retail customers; 2) local distribution facilities are primarily radial in character; 3) power flows into local distribution systems, it rarely, if ever, flows out; 4) when power enters a local distribution system, it is not re-consigned or transported on to some other market; 5) power entering a local distribution system is consumed in a comparatively restricted geographical area; 6) meters are based at the transmission/local distribution interface to measure flows into the local distribution system; and 7) local distribution systems will be of reduced voltage. Order No. 888 at 31,771. FERC precedent indicates that a utility does not have to meet every factor of the seven-factor test in order for their facilities to qualify as local distribution. California Pacific Edison Co., Order Granting in Part and Denying in Part Petition for Declaratory Order, 133 FERC ¶ 61,018, 61,075 (Oct. 7, 2010). NERC must also limit the BES to facilities or control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) or electric energy from generation facilities needed to maintain transmission system reliability, as directed by the FPA. Similar to the local distribution exclusion, facilities not falling into either of these categories are not part of the BPS and therefore must be expressly excluded from the BES. In order to establish a process that is consistent with the FPA and NERC's delegated authority from FERC, the proper sequence of steps must be applied in the correct order to determine which facilities are subject to NERC and FERC jurisdiction in

the first instance, and only then, from among the jurisdictional facilities, to determine which facilities and control systems must comply with the electric reliability standards. Our revisions to the BES definition would create such a process within the definition of the BES. It would ensure that entities would begin any analysis of whether a particular item qualifies as BES by asking, first, whether that facility is "necessary for operating an interconnected electric energy transmission network (or any portion thereof)" or is "electric energy from generation facilities needed to maintain transmission system reliability," and second, whether that facility is "used in the local distribution of electric energy." Only after addressing these questions might further analysis be appropriate. We understand, but disagree with, the argument that, because the FPA clearly excludes local distribution facilities and facilities necessary for operating an interconnected electric transmission network from FERC, NERC, and Regional Entity jurisdiction, it is not necessary to expressly exclude these facilities again in the definition of the BES. This approach might be legally accurate, but could lead to significant confusion for entities attempting to implement the new BES definition. There are numerous examples of Regional Entities, particularly WECC, attempting to include such facilities in the BES under the current BES definition, and regulated entities are not certain as to which facilities they should consider part of the BES. Clarifying FERC, NERC, and Regional Entity in the BES definition, even if such clarification is already provided in the FPA, would avoid such problems under the new definition. Criterion (3) of these revisions is necessary to resolve the ambiguity in the proposed definition as to whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that would be inserted as Subpart (b) modifies each provision of Subpart (a). Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart (b) of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Further, we support the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the FPA. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."

Yes

We support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. We note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort.

No
Specific language change: Change 20 MVA to 100 MVA The inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System – Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result. We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the

operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application for particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.

Yes

FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained.

As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold lacks an adequate technical justification. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit should be eliminated.

Yes

We strongly support the categorical exclusion of Local Distribution Networks from the BES. For reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are likely the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. We also support, with the reservations discussed below, the LDN exclusion as drafted by the SDT. We believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be

classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system. However, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

Yes

We strongly support the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that cannot afford the substantial costs that accompany imposition of mandatory reliability standards. We agree that the small utilities covered by the proposed exemption would have no measurable impact on the operation of the interconnected BES. Our views are borne out by experience in the Pacific Northwest where many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.

No

We agree that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing some local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed in our answer to Question 1, the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES.

As discussed in our answers to Question 1 and Question 11, the SDT proposal does not reflect the jurisdictional limitations of the FPA.

Individual

Rick Paschall

PNGC Power

No

First, thank you for the opportunity to comment on the draft Proposed Continent-wide Definition of the Bulk Electric System (BES). We appreciate the work that the Standards Development Team (SDT) has put into a new definition so far and believe the draft is a step in the right direction. We also understand the relatively short timeframe that NERC is working under in order to create a new BES definition to submit to FERC for approval before the imposed deadline. That said, we believe that the draft definition needs significant revision before NERC files it with FERC for approval. In response to question #1, we recommend that NERC revise the draft BES definition so that the first paragraph reads as follows: "Bulk Electric System (BES): Includes anything that meets each of the following three (3) criteria: (1) (a) Is a facility or control system necessary for operating an interconnected electric energy transmission network (or any portion thereof), or (b) Is electric energy from generation facilities needed to maintain transmission system reliability; AND (2) Is not a facility used in the local distribution of electric energy as determined by the Seven Factor Test set out in FERC Order 888; AND (3) (a) Unless included or excluded in subpart (b), is i. A Transmission Element operated at 100kV or higher; or ii. A Real Power Resource identified in subpart (b); or iii. A Reactive Power resource connected at 100kV or higher; (b) [the list of inclusions of exclusions in the draft, as modified by our comments below]" Criteria (1) and (2) of these revisions would capture the limitations on what may be included in the BES due to the jurisdictional limits that Congress placed on FERC, NERC, and the Regional Entities in developing and enforcing mandatory reliability standards. Specifically, Section 215(i) of the Federal Power Act provides that the Electric Reliability Organization (ERO) "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." Section 215(b)(1) of the FPA, 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. With this language, Congress expressly limited FERC, NERC, and the Regional

Entities' jurisdiction with regard to local distribution facilities as well as those facilities not necessary for operating a transmission network. Given that these facilities are statutorily excluded from the definition of the BPS, reliability standards may not be developed or enforced for facilities used in local distribution, and therefore the definition of the BES may not include such facilities. In Order No. 672, FERC adopted the statutory definition of the BPS. See Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006). In Order No. 743-A, issued earlier this year, the Commission acknowledged that "Congress has specifically exempted 'facilities used in the local distribution of electric energy'" from the BPS definition. See Order 743-A, 134 FERC ¶ 61,210 at P. 25 (2011). FERC also held that to the extent any facility is a facility used in the local distribution of electric energy, it is exempted from the requirements of Section 215. Id. at P.54. In Order No. 743-A, FERC delegated to NERC the task of proposing for FERC approval criteria and a process to identify the facilities used in local distribution that will be excluded from NERC and FERC regulation. Id. at P 76. The critical first step in this process is for NERC to propose criteria for approval by FERC to determine which facilities are not BPS facilities and therefore not BES facilities. Accordingly, it is critical that NERC create a definition of the BES that first excludes facilities used in local distribution. In Order No. 743-A, the Commission confirmed this, stating: "once a facility is classified as local distribution, the facility will be excluded from the [BES] unless changes to the system warrant a review of the determination." Order No. 743-A, at P 71 (emphasis added). We believe that the Seven Factor is the appropriate means to determine whether a facility is used in the local distribution of electricity and therefore should be referenced in the definition of the BES. This is the test that applies elsewhere to determine whether facilities qualify as local distribution, and therefore there is strong and clear precedent for using it in the BES definition. See 334 F.3d 48. In fact, the statutory language in Section 201 of the FPA that led to the Seven Factor Test for other purposes is identical to the statutory language in Section 215 of the FPA at issue here. Well established rules of statutory construction call for interpreting identical language to produce similar meanings, therefore applying the Seven Factor Test under both sections of the statute is appropriate. And, without the Seven Factor Test as a means of determining what qualifies as local distribution facilities, there could be significant uncertainty and confusion as to whether certain facilities are part of the BES. Further, the Commission stated in Order 743-A that, "the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes, while also allowing NERC flexibility in applying the test or developing an alternative approach as it deems necessary." Id. at P 69. The Seven Factor Test includes the following factors: 1) Local distribution facilities are normally in close proximity to retail customers; 2) local distribution facilities are primarily radial in character; 3) power flows into local distribution systems, it rarely, if ever, flows out; 4) when power enters a local distribution system, it is not re-consigned or transported on to some other market; 5) power entering a local distribution system is consumed in a comparatively restricted geographical area; 6) meters are based at the transmission/local distribution interface to measure flows into the local distribution system; and 7) local distribution systems will be of reduced voltage. Order No. 888 at 31,771. FERC precedent indicates that a utility does not have to meet every factor of the seven-factor test in order for their facilities to qualify as local distribution. California Pacific Edison Co., Order Granting in Part and Denying in Part Petition for Declaratory Order, 133 FERC ¶ 61,018, 61,075 (Oct. 7, 2010). NERC must also limit the BES to facilities or control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) or electric energy from generation facilities needed to maintain transmission system reliability, as directed by the FPA. Similar to the local distribution exclusion, facilities not falling into either of these categories are not part of the BPS and therefore must be expressly excluded from the BES. In order to establish a process that is consistent with the FPA and NERC's delegated authority from FERC, the proper sequence of steps must be applied in the correct order to determine which facilities are subject to NERC and FERC jurisdiction in the first instance, and only then, from among the jurisdictional facilities, to determine which facilities and control systems must comply with the electric reliability standards. Our revisions to the BES definition would create such a process within the definition of the BES. It would ensure that entities would begin any analysis of whether a particular item qualifies as BES by asking, first, whether that facility is "necessary for operating an interconnected electric energy transmission network (or any portion thereof)" or is "electric energy from generation facilities needed to maintain transmission system reliability," and second, whether that facility is "used in the local distribution of electric energy." Only after addressing these questions might further analysis be appropriate. We understand, but disagree with, the argument that, because the FPA clearly excludes local distribution facilities and facilities necessary for operating an interconnected electric transmission network from FERC, NERC,

and Regional Entity jurisdiction, it is not necessary to expressly exclude these facilities again in the definition of the BES. This approach might be legally accurate, but could lead to significant confusion for entities attempting to implement the new BES definition. There are numerous examples of Regional Entities, particularly WECC, attempting to include such facilities in the BES under the current BES definition, and regulated entities are not certain as to which facilities they should consider part of the BES. Clarifying FERC, NERC, and Regional Entity in the BES definition, even if such clarification is already provided in the FPA, would avoid such problems under the new definition. Criterion (3) of these revisions is necessary to resolve the ambiguity in the proposed definition as to whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that would be inserted as Subpart (b) modifies each provision of Subpart (a). Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart (b) of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Further, we support the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the FPA. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."
Yes
We support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. We note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort.
No
Specific language change: Change 20 MVA to 100 MVA The inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry.

Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System – Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result. We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS

relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application for particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.
No
Specific language change: Change 75 MVA to 100 MVA We are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.
No
We are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.
Yes
FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained.
As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold lacks an adequate technical justification. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit should be eliminated.
Yes
We strongly support the categorical exclusion of Local Distribution Networks from the BES. For reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are likely the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. We also support, with the reservations discussed below, the LDN exclusion as drafted by the SDT. We believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system. However, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.
Yes

We strongly support the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that cannot afford the substantial costs that accompany imposition of mandatory reliability standards. We agree that the small utilities covered by the proposed exemption would have no measurable impact on the operation of the interconnected BES. Our views are borne out by experience in the Pacific Northwest where many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.

No

We agree that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing some local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed in our answer to Question 1, the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES.

As discussed in our answers to Question 1 and Question 11, the SDT proposal does not reflect the jurisdictional limitations of the FPA.

Individual

Heber Carpenter

Raft River Rural Electric Cooperative

No

First, thank you for the opportunity to comment on the draft Proposed Continent-wide Definition of the Bulk Electric System (BES). We appreciate the work that the Standards Development Team (SDT) has put into a new definition so far and believe the draft is a step in the right direction. We also understand the relatively short timeframe that NERC is working under in order to create a new BES definition to submit to FERC for approval before the imposed deadline. That said, we believe that the draft definition needs significant revision before NERC files it with FERC for approval. In response to question #1, we recommend that NERC revise the draft BES definition so that the first paragraph reads as follows: "Bulk Electric System (BES): Includes anything that meets each of the following three (3) criteria: (1) (a) Is a facility or control system necessary for operating an interconnected electric energy transmission network (or any portion thereof), or (b) Is electric energy from generation facilities needed to maintain transmission system reliability; AND (2) Is not a facility used in the local distribution of electric energy as determined by the Seven Factor Test set out in FERC Order 888; AND (3) (a) Unless included or excluded in subpart (b), is i. A Transmission Element operated at 100kV or higher; or ii. A Real Power Resource identified in subpart (b); or iii. A Reactive Power resource connected at 100kV or higher; (b) [the list of inclusions of exclusions in the draft, as modified by our comments below]" Criteria (1) and (2) of these revisions would capture the limitations on what may be included in the BES due to the jurisdictional limits that Congress placed on FERC, NERC, and the Regional Entities in developing and enforcing mandatory reliability standards. Specifically, Section 215(i) of the Federal Power Act provides that the Electric Reliability Organization (ERO) "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." Section 215(b)(1) of the FPA, 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. With this language, Congress expressly limited FERC, NERC, and the Regional Entities' jurisdiction with regard to local distribution facilities as well as those facilities not necessary for operating a transmission network. Given that these facilities are statutorily excluded from the definition of the BPS, reliability standards may not be developed or enforced for facilities used in local distribution, and therefore the definition of the BES may not include such facilities. In Order No. 672, FERC adopted the statutory definition of the BPS. See Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006). In Order No. 743-A, issued earlier this year, the Commission acknowledged that "Congress has specifically exempted 'facilities used in the local distribution of electric energy'" from the BPS definition. See Order 743-A, 134 FERC ¶ 61,210 at P. 25 (2011). FERC also held that to the extent

any facility is a facility used in the local distribution of electric energy, it is exempted from the requirements of Section 215. Id. at P.54. In Order No. 743-A, FERC delegated to NERC the task of proposing for FERC approval criteria and a process to identify the facilities used in local distribution that will be excluded from NERC and FERC regulation. Id. at P 76. The critical first step in this process is for NERC to propose criteria for approval by FERC to determine which facilities are not BPS facilities and therefore not BES facilities. Accordingly, it is critical that NERC create a definition of the BES that first excludes facilities used in local distribution. In Order No. 743-A, the Commission confirmed this, stating: "once a facility is classified as local distribution, the facility will be excluded from the [BES] unless changes to the system warrant a review of the determination." Order No. 743-A, at P 71 (emphasis added). We believe that the Seven Factor is the appropriate means to determine whether a facility is used in the local distribution of electricity and therefore should be referenced in the definition of the BES. This is the test that applies elsewhere to determine whether facilities qualify as local distribution, and therefore there is strong and clear precedent for using it in the BES definition. See 334 F.3d 48. In fact, the statutory language in Section 201 of the FPA that led to the Seven Factor Test for other purposes is identical to the statutory language in Section 215 of the FPA at issue here. Well established rules of statutory construction call for interpreting identical language to produce similar meanings, therefore applying the Seven Factor Test under both sections of the statute is appropriate. And, without the Seven Factor Test as a means of determining what qualifies as local distribution facilities, there could be significant uncertainty and confusion as to whether certain facilities are part of the BES. Further, the Commission stated in Order 743-A that, "the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes, while also allowing NERC flexibility in applying the test or developing an alternative approach as it deems necessary." Id. at P 69. The Seven Factor Test includes the following factors: 1) Local distribution facilities are normally in close proximity to retail customers; 2) local distribution facilities are primarily radial in character; 3) power flows into local distribution systems, it rarely, if ever, flows out; 4) when power enters a local distribution system, it is not re-consigned or transported on to some other market; 5) power entering a local distribution system is consumed in a comparatively restricted geographical area; 6) meters are based at the transmission/local distribution interface to measure flows into the local distribution system; and 7) local distribution systems will be of reduced voltage. Order No. 888 at 31,771. FERC precedent indicates that a utility does not have to meet every factor of the seven-factor test in order for their facilities to qualify as local distribution. California Pacific Edison Co., Order Granting in Part and Denying in Part Petition for Declaratory Order, 133 FERC ¶ 61,018, 61,075 (Oct. 7, 2010). NERC must also limit the BES to facilities or control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) or electric energy from generation facilities needed to maintain transmission system reliability, as directed by the FPA. Similar to the local distribution exclusion, facilities not falling into either of these categories are not part of the BPS and therefore must be expressly excluded from the BES. In order to establish a process that is consistent with the FPA and NERC's delegated authority from FERC, the proper sequence of steps must be applied in the correct order to determine which facilities are subject to NERC and FERC jurisdiction in the first instance, and only then, from among the jurisdictional facilities, to determine which facilities and control systems must comply with the electric reliability standards. Our revisions to the BES definition would create such a process within the definition of the BES. It would ensure that entities would begin any analysis of whether a particular item qualifies as BES by asking, first, whether that facility is "necessary for operating an interconnected electric energy transmission network (or any portion thereof)" or is "electric energy from generation facilities needed to maintain transmission system reliability," and second, whether that facility is "used in the local distribution of electric energy." Only after addressing these questions might further analysis be appropriate. We understand, but disagree with, the argument that, because the FPA clearly excludes local distribution facilities and facilities necessary for operating an interconnected electric transmission network from FERC, NERC, and Regional Entity jurisdiction, it is not necessary to expressly exclude these facilities again in the definition of the BES. This approach might be legally accurate, but could lead to significant confusion for entities attempting to implement the new BES definition. There are numerous examples of Regional Entities, particularly WECC, attempting to include such facilities in the BES under the current BES definition, and regulated entities are not certain as to which facilities they should consider part of the BES. Clarifying FERC, NERC, and Regional Entity in the BES definition, even if such clarification is already provided in the FPA, would avoid such problems under the new definition. Criterion (3) of these revisions is necessary to resolve the ambiguity in the proposed definition as to whether the

clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that would be inserted as Subpart (b) modifies each provision of Subpart (a). Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart (b) of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Further, we support the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the FPA. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."

Yes

We support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. We note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort.

No

Specific language change: Change 20 MVA to 100 MVA The inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System – Project 2010-17, March 30, 2011, at 30. But this

gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result. We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be

required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application for particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.

No

Specific language change: Change 75 MVA to 100 MVA We are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.

Yes

FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained.

As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold lacks an adequate technical justification. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit should be eliminated.

Yes

We strongly support the categorical exclusion of Local Distribution Networks from the BES. For reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are likely the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. We also support, with the reservations discussed below, the LDN exclusion as drafted by the SDT. We believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system. However, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

Yes

We strongly support the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that cannot afford the substantial costs that accompany imposition of mandatory reliability standards. We agree that the small utilities covered by the proposed exemption would have no measurable impact on the operation of the interconnected BES. Our views are borne out by experience in the Pacific Northwest where many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance

therefore will have no measurable effect in improving the reliability of the interconnected grid.

No

We agree that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing some local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed in our answer to Question 1, the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES.

As discussed in our answers to Question 1 and Question 11, the SDT proposal does not reflect the jurisdictional limitations of the FPA.

Individual

Ken Dizes

Salmon River Electric Cooperative

No

First, thank you for the opportunity to comment on the draft Proposed Continent-wide Definition of the Bulk Electric System (BES). We appreciate the work that the Standards Development Team (SDT) has put into a new definition so far and believe the draft is a step in the right direction. We also understand the relatively short timeframe that NERC is working under in order to create a new BES definition to submit to FERC for approval before the imposed deadline. That said, we believe that the draft definition needs significant revision before NERC files it with FERC for approval. In response to question #1, we recommend that NERC revise the draft BES definition so that the first paragraph reads as follows: "Bulk Electric System (BES): Includes anything that meets each of the following three (3) criteria: (1) (a) Is a facility or control system necessary for operating an interconnected electric energy transmission network (or any portion thereof), or (b) Is electric energy from generation facilities needed to maintain transmission system reliability; AND (2) Is not a facility used in the local distribution of electric energy as determined by the Seven Factor Test set out in FERC Order 888; AND (3) (a) Unless included or excluded in subpart (b), is i. A Transmission Element operated at 100kV or higher; or ii. A Real Power Resource identified in subpart (b); or iii. A Reactive Power resource connected at 100kV or higher; (b) [the list of inclusions of exclusions in the draft, as modified by our comments below]" Criteria (1) and (2) of these revisions would capture the limitations on what may be included in the BES due to the jurisdictional limits that Congress placed on FERC, NERC, and the Regional Entities in developing and enforcing mandatory reliability standards. Specifically, Section 215(i) of the Federal Power Act provides that the Electric Reliability Organization (ERO) "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." Section 215(b)(1) of the FPA, 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. With this language, Congress expressly limited FERC, NERC, and the Regional Entities' jurisdiction with regard to local distribution facilities as well as those facilities not necessary for operating a transmission network. Given that these facilities are statutorily excluded from the definition of the BPS, reliability standards may not be developed or enforced for facilities used in local distribution, and therefore the definition of the BES may not include such facilities. In Order No. 672, FERC adopted the statutory definition of the BPS. See Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006). In Order No. 743-A, issued earlier this year, the Commission acknowledged that "Congress has specifically exempted 'facilities used in the local distribution of electric energy'" from the BPS definition. See Order 743-A, 134 FERC ¶ 61,210 at P. 25 (2011). FERC also held that to the extent any facility is a facility used in the local distribution of electric energy, it is exempted from the requirements of Section 215. Id. at P.54. In Order No. 743-A, FERC delegated to NERC the task of proposing for FERC approval criteria and a process to identify the facilities used in local distribution that will be excluded from NERC and FERC regulation. Id. at P 76. The critical first step in this process is for NERC to propose criteria for approval by FERC to determine which facilities are not BPS facilities and therefore not BES facilities. Accordingly, it is critical that NERC create a definition of the BES that first excludes facilities used in local distribution. In Order No. 743-A, the Commission confirmed this, stating: "once a facility is classified as local distribution, the facility will be excluded from the [BES]

unless changes to the system warrant a review of the determination." Order No. 743-A, at P 71 (emphasis added). We believe that the Seven Factor is the appropriate means to determine whether a facility is used in the local distribution of electricity and therefore should be referenced in the definition of the BES. This is the test that applies elsewhere to determine whether facilities qualify as local distribution, and therefore there is strong and clear precedent for using it in the BES definition. See 334 F.3d 48. In fact, the statutory language in Section 201 of the FPA that led to the Seven Factor Test for other purposes is identical to the statutory language in Section 215 of the FPA at issue here. Well established rules of statutory construction call for interpreting identical language to produce similar meanings, therefore applying the Seven Factor Test under both sections of the statute is appropriate. And, without the Seven Factor Test as a means of determining what qualifies as local distribution facilities, there could be significant uncertainty and confusion as to whether certain facilities are part of the BES. Further, the Commission stated in Order 743-A that, "the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes, while also allowing NERC flexibility in applying the test or developing an alternative approach as it deems necessary." Id. at P 69. The Seven Factor Test includes the following factors: 1) Local distribution facilities are normally in close proximity to retail customers; 2) local distribution facilities are primarily radial in character; 3) power flows into local distribution systems, it rarely, if ever, flows out; 4) when power enters a local distribution system, it is not re-consigned or transported on to some other market; 5) power entering a local distribution system is consumed in a comparatively restricted geographical area; 6) meters are based at the transmission/local distribution interface to measure flows into the local distribution system; and 7) local distribution systems will be of reduced voltage. Order No. 888 at 31,771. FERC precedent indicates that a utility does not have to meet every factor of the seven-factor test in order for their facilities to qualify as local distribution. California Pacific Edison Co., Order Granting in Part and Denying in Part Petition for Declaratory Order, 133 FERC ¶ 61,018, 61,075 (Oct. 7, 2010). NERC must also limit the BES to facilities or control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) or electric energy from generation facilities needed to maintain transmission system reliability, as directed by the FPA. Similar to the local distribution exclusion, facilities not falling into either of these categories are not part of the BPS and therefore must be expressly excluded from the BES. In order to establish a process that is consistent with the FPA and NERC's delegated authority from FERC, the proper sequence of steps must be applied in the correct order to determine which facilities are subject to NERC and FERC jurisdiction in the first instance, and only then, from among the jurisdictional facilities, to determine which facilities and control systems must comply with the electric reliability standards. Our revisions to the BES definition would create such a process within the definition of the BES. It would ensure that entities would begin any analysis of whether a particular item qualifies as BES by asking, first, whether that facility is "necessary for operating an interconnected electric energy transmission network (or any portion thereof)" or is "electric energy from generation facilities needed to maintain transmission system reliability," and second, whether that facility is "used in the local distribution of electric energy." Only after addressing these questions might further analysis be appropriate. We understand, but disagree with, the argument that, because the FPA clearly excludes local distribution facilities and facilities necessary for operating an interconnected electric transmission network from FERC, NERC, and Regional Entity jurisdiction, it is not necessary to expressly exclude these facilities again in the definition of the BES. This approach might be legally accurate, but could lead to significant confusion for entities attempting to implement the new BES definition. There are numerous examples of Regional Entities, particularly WECC, attempting to include such facilities in the BES under the current BES definition, and regulated entities are not certain as to which facilities they should consider part of the BES. Clarifying FERC, NERC, and Regional Entity in the BES definition, even if such clarification is already provided in the FPA, would avoid such problems under the new definition. Criterion (3) of these revisions is necessary to resolve the ambiguity in the proposed definition as to whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that would be inserted as Subpart (b) modifies each provision of Subpart (a). Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart (b) of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation

is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Further, we support the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the FPA. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."
Yes
We support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. We note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort.
No
Specific language change: Change 20 MVA to 100 MVA The inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System – Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT

also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result. We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application for particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition

achieves reliability goals in the most efficient manner possible.
No
We are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.
No
We are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.
Yes
FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained.
As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold lacks an adequate technical justification. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit should be eliminated.
Yes
We strongly support the categorical exclusion of Local Distribution Networks from the BES. For reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are likely the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. We also support, with the reservations discussed below, the LDN exclusion as drafted by the SDT. We believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system. However, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.
Yes
We strongly support the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that cannot afford the substantial costs that accompany imposition of mandatory reliability standards. We agree that the small utilities covered by the proposed exemption would have no measurable impact on the operation of the interconnected BES. Our views are borne out by experience in the Pacific Northwest where many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.
No
We agree that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing some local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed in our answer to Question 1, the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES.
As discussed in our answers to Question 1 and Question 11, the SDT proposal does not reflect the

jurisdictional limitations of the FPA.
Individual
Steve Eldrige
Umatilla Electric Cooperative
No
First, thank you for the opportunity to comment on the draft Proposed Continent-wide Definition of the Bulk Electric System (BES). We appreciate the work that the Standards Development Team (SDT) has put into a new definition so far and believe the draft is a step in the right direction. We also understand the relatively short timeframe that NERC is working under in order to create a new BES definition to submit to FERC for approval before the imposed deadline. That said, we believe that the draft definition needs significant revision before NERC files it with FERC for approval. In response to question #1, we recommend that NERC revise the draft BES definition so that the first paragraph reads as follows: "Bulk Electric System (BES): Includes anything that meets each of the following three (3) criteria: (1) (a) Is a facility or control system necessary for operating an interconnected electric energy transmission network (or any portion thereof), or (b) Is electric energy from generation facilities needed to maintain transmission system reliability; AND (2) Is not a facility used in the local distribution of electric energy as determined by the Seven Factor Test set out in FERC Order 888; AND (3) (a) Unless included or excluded in subpart (b), is i. A Transmission Element operated at 100kV or higher; or ii. A Real Power Resource identified in subpart (b); or iii. A Reactive Power resource connected at 100kV or higher; (b) [the list of inclusions of exclusions in the draft, as modified by our comments below]" Criteria (1) and (2) of these revisions would capture the limitations on what may be included in the BES due to the jurisdictional limits that Congress placed on FERC, NERC, and the Regional Entities in developing and enforcing mandatory reliability standards. Specifically, Section 215(i) of the Federal Power Act provides that the Electric Reliability Organization (ERO) "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." Section 215(b)(1) of the FPA, 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. With this language, Congress expressly limited FERC, NERC, and the Regional Entities' jurisdiction with regard to local distribution facilities as well as those facilities not necessary for operating a transmission network. Given that these facilities are statutorily excluded from the definition of the BPS, reliability standards may not be developed or enforced for facilities used in local distribution, and therefore the definition of the BES may not include such facilities. In Order No. 672, FERC adopted the statutory definition of the BPS. See Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006). In Order No. 743-A, issued earlier this year, the Commission acknowledged that "Congress has specifically exempted 'facilities used in the local distribution of electric energy'" from the BPS definition. See Order 743-A, 134 FERC ¶ 61,210 at P. 25 (2011). FERC also held that to the extent any facility is a facility used in the local distribution of electric energy, it is exempted from the requirements of Section 215. Id. at P.54. In Order No. 743-A, FERC delegated to NERC the task of proposing for FERC approval criteria and a process to identify the facilities used in local distribution that will be excluded from NERC and FERC regulation. Id. at P 76. The critical first step in this process is for NERC to propose criteria for approval by FERC to determine which facilities are not BPS facilities and therefore not BES facilities. Accordingly, it is critical that NERC create a definition of the BES that first excludes facilities used in local distribution. In Order No. 743-A, the Commission confirmed this, stating: "once a facility is classified as local distribution, the facility will be excluded from the [BES] unless changes to the system warrant a review of the determination." Order No. 743-A, at P 71 (emphasis added). We believe that the Seven Factor is the appropriate means to determine whether a facility is used in the local distribution of electricity and therefore should be referenced in the definition of the BES. This is the test that applies elsewhere to determine whether facilities qualify as local distribution, and therefore there is strong and clear precedent for using it in the BES definition. See 334 F.3d 48. In fact, the statutory language in Section 201 of the FPA that led to the Seven Factor Test for other purposes is identical to the statutory language in Section 215 of the FPA at issue here. Well established rules of statutory construction call for interpreting identical language to produce similar meanings, therefore applying the Seven Factor Test under both sections of the statute

is appropriate. And, without the Seven Factor Test as a means of determining what qualifies as local distribution facilities, there could be significant uncertainty and confusion as to whether certain facilities are part of the BES. Further, the Commission stated in Order 743-A that, "the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes, while also allowing NERC flexibility in applying the test or developing an alternative approach as it deems necessary." Id. at P 69. The Seven Factor Test includes the following factors: 1) Local distribution facilities are normally in close proximity to retail customers; 2) local distribution facilities are primarily radial in character; 3) power flows into local distribution systems, it rarely, if ever, flows out; 4) when power enters a local distribution system, it is not re-consigned or transported on to some other market; 5) power entering a local distribution system is consumed in a comparatively restricted geographical area; 6) meters are based at the transmission/local distribution interface to measure flows into the local distribution system; and 7) local distribution systems will be of reduced voltage. Order No. 888 at 31,771. FERC precedent indicates that a utility does not have to meet every factor of the seven-factor test in order for their facilities to qualify as local distribution. California Pacific Edison Co., Order Granting in Part and Denying in Part Petition for Declaratory Order, 133 FERC ¶ 61,018, 61,075 (Oct. 7, 2010). NERC must also limit the BES to facilities or control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) or electric energy from generation facilities needed to maintain transmission system reliability, as directed by the FPA. Similar to the local distribution exclusion, facilities not falling into either of these categories are not part of the BPS and therefore must be expressly excluded from the BES. In order to establish a process that is consistent with the FPA and NERC's delegated authority from FERC, the proper sequence of steps must be applied in the correct order to determine which facilities are subject to NERC and FERC jurisdiction in the first instance, and only then, from among the jurisdictional facilities, to determine which facilities and control systems must comply with the electric reliability standards. Our revisions to the BES definition would create such a process within the definition of the BES. It would ensure that entities would begin any analysis of whether a particular item qualifies as BES by asking, first, whether that facility is "necessary for operating an interconnected electric energy transmission network (or any portion thereof)" or is "electric energy from generation facilities needed to maintain transmission system reliability," and second, whether that facility is "used in the local distribution of electric energy." Only after addressing these questions might further analysis be appropriate. We understand, but disagree with, the argument that, because the FPA clearly excludes local distribution facilities and facilities necessary for operating an interconnected electric transmission network from FERC, NERC, and Regional Entity jurisdiction, it is not necessary to expressly exclude these facilities again in the definition of the BES. This approach might be legally accurate, but could lead to significant confusion for entities attempting to implement the new BES definition. There are numerous examples of Regional Entities, particularly WECC, attempting to include such facilities in the BES under the current BES definition, and regulated entities are not certain as to which facilities they should consider part of the BES. Clarifying FERC, NERC, and Regional Entity in the BES definition, even if such clarification is already provided in the FPA, would avoid such problems under the new definition. Criterion (3) of these revisions is necessary to resolve the ambiguity in the proposed definition as to whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that would be inserted as Subpart (b) modifies each provision of Subpart (a). Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart (b) of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Further, we support the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the FPA. For similar reasons, we believe the SDT has improved the

proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."

Yes

We support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. We note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort.

No

Specific language change: Change 20 MVA to 100 MVA The inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System – Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result. We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the

dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application for particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

No
We are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.
Yes
FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained.
As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold lacks an adequate technical justification. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit should be eliminated.
Yes
We strongly support the categorical exclusion of Local Distribution Networks from the BES. For reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are likely the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. We also support, with the reservations discussed below, the LDN exclusion as drafted by the SDT. We believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system. However, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.
Yes
We strongly support the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that cannot afford the substantial costs that accompany imposition of mandatory reliability standards. We agree that the small utilities covered by the proposed exemption would have no measurable impact on the operation of the interconnected BES. Our views are borne out by experience in the Pacific Northwest where many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.
No
We agree that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing some local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed in our answer to Question 1, the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES.
As discussed in our answers to Question 1 and Question 11, the SDT proposal does not reflect the jurisdictional limitations of the FPA.
Individual
Marc Farmer
West Oregon Electric Cooperative
No
First, thank you for the opportunity to comment on the draft Proposed Continent-wide Definition of the Bulk Electric System (BES). We appreciate the work that the Standards Development Team (SDT)

has put into a new definition so far and believe the draft is a step in the right direction. We also understand the relatively short timeframe that NERC is working under in order to create a new BES definition to submit to FERC for approval before the imposed deadline. That said, we believe that the draft definition needs significant revision before NERC files it with FERC for approval. In response to question #1, we recommend that NERC revise the draft BES definition so that the first paragraph reads as follows: "Bulk Electric System (BES): Includes anything that meets each of the following three (3) criteria: (1) (a) Is a facility or control system necessary for operating an interconnected electric energy transmission network (or any portion thereof), or (b) Is electric energy from generation facilities needed to maintain transmission system reliability; AND (2) Is not a facility used in the local distribution of electric energy as determined by the Seven Factor Test set out in FERC Order 888; AND (3) (a) Unless included or excluded in subpart (b), is i. A Transmission Element operated at 100kV or higher; or ii. A Real Power Resource identified in subpart (b); or iii. A Reactive Power resource connected at 100kV or higher; (b) [the list of inclusions of exclusions in the draft, as modified by our comments below]" Criteria (1) and (2) of these revisions would capture the limitations on what may be included in the BES due to the jurisdictional limits that Congress placed on FERC, NERC, and the Regional Entities in developing and enforcing mandatory reliability standards. Specifically, Section 215(i) of the Federal Power Act provides that the Electric Reliability Organization (ERO) "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." Section 215(b)(1) of the FPA, 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. With this language, Congress expressly limited FERC, NERC, and the Regional Entities' jurisdiction with regard to local distribution facilities as well as those facilities not necessary for operating a transmission network. Given that these facilities are statutorily excluded from the definition of the BPS, reliability standards may not be developed or enforced for facilities used in local distribution, and therefore the definition of the BES may not include such facilities. In Order No. 672, FERC adopted the statutory definition of the BPS. See Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006). In Order No. 743-A, issued earlier this year, the Commission acknowledged that "Congress has specifically exempted 'facilities used in the local distribution of electric energy'" from the BPS definition. See Order 743-A, 134 FERC ¶ 61,210 at P. 25 (2011). FERC also held that to the extent any facility is a facility used in the local distribution of electric energy, it is exempted from the requirements of Section 215. Id. at P.54. In Order No. 743-A, FERC delegated to NERC the task of proposing for FERC approval criteria and a process to identify the facilities used in local distribution that will be excluded from NERC and FERC regulation. Id. at P 76. The critical first step in this process is for NERC to propose criteria for approval by FERC to determine which facilities are not BPS facilities and therefore not BES facilities. Accordingly, it is critical that NERC create a definition of the BES that first excludes facilities used in local distribution. In Order No. 743-A, the Commission confirmed this, stating: "once a facility is classified as local distribution, the facility will be excluded from the [BES] unless changes to the system warrant a review of the determination." Order No. 743-A, at P 71 (emphasis added). We believe that the Seven Factor is the appropriate means to determine whether a facility is used in the local distribution of electricity and therefore should be referenced in the definition of the BES. This is the test that applies elsewhere to determine whether facilities qualify as local distribution, and therefore there is strong and clear precedent for using it in the BES definition. See 334 F.3d 48. In fact, the statutory language in Section 201 of the FPA that led to the Seven Factor Test for other purposes is identical to the statutory language in Section 215 of the FPA at issue here. Well established rules of statutory construction call for interpreting identical language to produce similar meanings, therefore applying the Seven Factor Test under both sections of the statute is appropriate. And, without the Seven Factor Test as a means of determining what qualifies as local distribution facilities, there could be significant uncertainty and confusion as to whether certain facilities are part of the BES. Further, the Commission stated in Order 743-A that, "the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes, while also allowing NERC flexibility in applying the test or developing an alternative approach as it deems necessary." Id. at P 69. The Seven Factor Test includes the following factors: 1) Local distribution facilities are normally in close proximity to retail customers; 2) local distribution facilities are primarily radial in character; 3) power flows into local distribution systems, it rarely, if ever, flows out; 4) when power enters a local distribution system, it

is not re-consigned or transported on to some other market; 5) power entering a local distribution system is consumed in a comparatively restricted geographical area; 6) meters are based at the transmission/local distribution interface to measure flows into the local distribution system; and 7) local distribution systems will be of reduced voltage. Order No. 888 at 31,771. FERC precedent indicates that a utility does not have to meet every factor of the seven-factor test in order for their facilities to qualify as local distribution. California Pacific Edison Co., Order Granting in Part and Denying in Part Petition for Declaratory Order, 133 FERC ¶ 61,018, 61,075 (Oct. 7, 2010). NERC must also limit the BES to facilities or control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) or electric energy from generation facilities needed to maintain transmission system reliability, as directed by the FPA. Similar to the local distribution exclusion, facilities not falling into either of these categories are not part of the BPS and therefore must be expressly excluded from the BES. In order to establish a process that is consistent with the FPA and NERC's delegated authority from FERC, the proper sequence of steps must be applied in the correct order to determine which facilities are subject to NERC and FERC jurisdiction in the first instance, and only then, from among the jurisdictional facilities, to determine which facilities and control systems must comply with the electric reliability standards. Our revisions to the BES definition would create such a process within the definition of the BES. It would ensure that entities would begin any analysis of whether a particular item qualifies as BES by asking, first, whether that facility is "necessary for operating an interconnected electric energy transmission network (or any portion thereof)" or is "electric energy from generation facilities needed to maintain transmission system reliability," and second, whether that facility is "used in the local distribution of electric energy." Only after addressing these questions might further analysis be appropriate. We understand, but disagree with, the argument that, because the FPA clearly excludes local distribution facilities and facilities necessary for operating an interconnected electric transmission network from FERC, NERC, and Regional Entity jurisdiction, it is not necessary to expressly exclude these facilities again in the definition of the BES. This approach might be legally accurate, but could lead to significant confusion for entities attempting to implement the new BES definition. There are numerous examples of Regional Entities, particularly WECC, attempting to include such facilities in the BES under the current BES definition, and regulated entities are not certain as to which facilities they should consider part of the BES. Clarifying FERC, NERC, and Regional Entity in the BES definition, even if such clarification is already provided in the FPA, would avoid such problems under the new definition. Criterion (3) of these revisions is necessary to resolve the ambiguity in the proposed definition as to whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that would be inserted as Subpart (b) modifies each provision of Subpart (a). Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart (b) of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Further, we support the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the FPA. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."

Yes

We support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. We note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort.

No

Specific language change: Change 20 MVA to 100 MVA The inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System – Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result. We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the

Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application for particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

No

We are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.

Yes

FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained.

As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold lacks an

adequate technical justification. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit should be eliminated.
Yes
We strongly support the categorical exclusion of Local Distribution Networks from the BES. For reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are likely the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. We also support, with the reservations discussed below, the LDN exclusion as drafted by the SDT. We believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system. However, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.
Yes
We strongly support the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that cannot afford the substantial costs that accompany imposition of mandatory reliability standards. We agree that the small utilities covered by the proposed exemption would have no measurable impact on the operation of the interconnected BES. Our views are borne out by experience in the Pacific Northwest where many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.
No
We agree that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing some local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed in our answer to Question 1, the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES.
As discussed in our answers to Question 1 and Question 11, the SDT proposal does not reflect the jurisdictional limitations of the FPA.
Individual
Kerry Robinson
Wells Rural Electric Company

Dear NERC Standards Drafting Team: Enclosed are Wells Rural Electric Company's comments on NERC's Proposed Continent-wide Definition of Bulk Electric System. We believe that NERC's proposed Continent-wide Definition of Bulk Electric System is proceeding in the right direction on this important topic but that more work needs to the done. We would like to thank the Standards Drafting Team for their hard work. We support the detailed comments of the Snohomish County Public Utility District and Pacific Northwest Generating Cooperative with regard to the questions posed by the Comment Form for Project 2010-17 Definition of BES. We would like to emphasize these portions of Snohomish's and PNGC's comments: • Question 1, both PNGC and Snohomish suggest that NERC start by adopting the statutory definition of the bulk power system as the core definition. We support that approach. That is, "(t) he term 'Bulk Electric System' means: (A) Facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and, (B) Electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy". See 16 U.S.C. § 824o(a)(1)." • Question 7, we support the exclusion for radial lines as drafted. • Question 9, we support the categorical exclusion of Local Distribution Networks from the BES as defined here, but with Snohomish's clarifications. • Question 10, we support exclusion E4, for small utilities, but we are unclear how small utilities are defined in the exclusion language presented here. • Question 11, we support the approach to exclusion of local distribution facilities discussed in the draft but repeat that more work should be done on the definition so that facilities used in local distribution are not swept up into the BES. The primary value of clearly defining the BES is for registration determinations. We realize that clearly defining the BES also has value in determining which standards apply to registered entities. If a registered entity does not own any Elements of the BES that that registered entity should be able to efficiently and effectively demonstrate an exception. We encourage NERC to support the use of the BES definition for registration-issues and to develop the exception procedure for registered entities that do not own or operate any Elements of the BES.
Group
City of Santa Clara, California, dba Silicon Valley Power
Jim Lauth
Yes
Yes, Silicon Valley Power agrees with proposed Exclusion E3 that "Local Distribution Networks (LDNs): Groups of Elements above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System," that are (among the other characterizations) "connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer load" should be specifically excluded from the Bulk Electric System definition. SVP also agrees with the majority of the characteristics of an LDN set forth in proposed Exclusion E3. However, SVP believes that alternative language may be more appropriate with respect to characteristic "b" of proposed Exclusion E3. Part "b" to proposed Exception E3 states "Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation." SVP submits that the use of a fixed level of generation to determine whether an entity qualifies as an LDN is too arbitrary and does not reflect engineering reality. If a fixed level of generation is used, it will often be too high, if the registered entity has a small system, or too low, when the registered entity has a large system. SVP submits that NERC should consider modifying part "b" to proposed Exception E3 to give the Regional Entities discretion to determine whether 75 MVA of generation is the appropriate benchmark for an individual utility. Therefore, SVP submits that with respect to draft exception E3 b), "Limited connected generation to the LDN or its underlying Elements (in aggregate),

as determined by the LDN's Regional Entity, using 75 MVA as a benchmark" may be appropriate. Alternatively, SVP submits that instead of a fixed level of generation, NERC could consider modifying the language of proposed Exception E3 b) to limit an LDN's connected generation to a high percentage of local minimum demand, or to a high percentage of generation not already committed to run to meet local reliability needs. Either option would meet the purpose of the LDN: a registered entity with connected generation that is, for the most part, only used to serve native or local load. SVP thanks NERC for the opportunity to comment on its 1st Draft definition of BES, and its proposed inclusions and exceptions.
Individual
Hertzel Shamash
Dayton Power and Light Company
No
Yes
Yes
Yes
No
Black start resources should not be included in this new proposal, which is being developed in response to FERC Orders 743 and 743A. These orders do not mention the inclusion of black start resources or cranking paths. These resources are undeniably important and we believe the existing CIP and other NERC standards applicable to them provide sufficient and appropriate safeguards. Their inclusion as BES elements would significantly increase the requirements for both distribution and 69kV cranking paths – which would be classed as BES elements and fall under all those requirements. Entities currently include multiple cranking paths for their restoration plans to improve the flexibility of their resources. However, if cranking paths are considered BES and must meet those requirements, they will default to a single cranking path which would potentially decrease their flexibility. The purpose of the bulk electric system is to accommodate the bulk movement of electricity through the interconnected system. In a black start situation, entities would NOT be interconnected and not moving bulk power. In light of the above, there is no sound basis for inclusion of these elements as part of the BES.
Yes
Yes
Yes
Yes
Yes
Yes
No

Individual
David Proebstel
Clallam County PUD No.1
No
As a general matter,Clallam County PUD supports the approach the Standards Development Team ("SDT") has taken to defining the Bulk Electric System ("BES"). In the comments we submit today, we identify several refinements we believe would improve the definition. We also discuss the legal framework the SDT must operate under as we understand it. But we support the SDT's conceptual approach and, if refined as we suggest, we will support the SDT's proposal so long as an acceptable process for defining exceptions accompanies the definition. As to the core definition addressed in Question 1, Clallambelieves the changes made in the revised definition are helpful and represent significant progress toward an acceptable definition. Nonetheless, we are concerned that the core definition is overly-broad and sweeps facilities into the BES that are required by the statute to be excluded, even considering the list of inclusions and exclusions. We therefore suggest two different approaches below that may achieve the SDT's aims more effectively than the proposed core definition. At a minimum, as we explain below, additional clarifications to the core definition are necessary and an acceptable exemption process is necessary to ensure that facilities that are required by statute to be excluded are excluded from the BES as defined by the SDT. At the outset,we urge the SDT to bear in mind the specific restrictions on the definition of "bulk-power system" contained in Section 215 of the Federal Power Act ("FPA") (Following FERC's guidance on the question, we treat the statutory term "bulk-power system" as equivalent to the term ordinarily used in the industry, "Bulk Electric System"). In Section 215(a)(1), Congress defined "bulk-power system" to mean "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" and "electric energy from generation facilities needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1). Congress unequivocally excluded from this definition "facilities used in the local distribution of electric energy." Id. The "bulk-power system" definition thus imposes a clear limit on the reach of the mandatory reliability regime. Congress reinforced that limit in Section 215(i), where it emphasized that the FPA authorizes the imposition of reliability standards "for only the bulk-power system." 16 U.S.C. § 824o(i)(1) (emph. added). Further, the SDT must bear in mind "the cardinal rule that a statute is to be read as a whole since the meaning of statutory language, plain or not, depends on context." City of Mesa v. FERC, 993 F.2d 888, 893 (D.C. Cir. 1993) (citation omitted). In considering how Congress used the term "bulk-power system" in the statute, as well as the limits on the reliability regime imposed in the surrounding statutory language, it is clear that Congress intended the "bulk-power system" to be defined narrowly so that it would incorporate only high-voltage, interstate facilities used to transmit power over long distances, whose failure threatens drastic reliability events such as cascading outages. These limitations are plain from, for example, the statutory definition of "reliability standard," which provides that reliability standards are to encompass only requirements to "provide for reliable operation of the bulk-power system." 16 U.S.C. § 824o(a)(3) (emph. added). Congress further refined the scope of reliability authority by specifically defining "reliable operation" to mean "operating the elements of the bulk-power systemwithin equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance. . . or unanticipated failure of system elements." 16 U.S.C. § 824o(a)(4). Congress's intent to focus the national reliability regime on broad-scale threats to the interconnected, interstate high-voltage system like cascading outages is made clear, as well, by Congress's specific direction that the mandatory reliability system is prohibited from enforcing standards for adequacy of service, which were left to state and local authorities. 16 U.S.C. § 824o(i)(2). When read in the context of the statute as a whole, the definition developed by the SDT should therefore focus on that portion of the interconnected bulk transmission grid for which thermal, voltage, and stability limits must be observed in order to prevent instability, separation events, and cascading outages. Further, in order to honor the specific limits placed on the definition by Congress, the SDT's definition must exclude facilities used in the local distribution of electric power and it must exclude facilities whose operation or mis-operation affects only the level of service and does not threaten cascading outages or other widespread events on the bulk interconnected system. Clallam is concerned that the SDT's proposed definition is overly-broad, and that it will sweep in many Elements that have little or no material impact on the reliable operation of the interconnected bulk transmission

grid. For example, the definition would sweep in all generators with 20 MVA capacity even though generators this small rarely create impacts on the interconnected bulk transmission system that would threaten to violate the thermal, voltage or stability limits of the bulk transmission system and therefore do not threaten instability, separation, or cascading outages on the interconnected transmission system. Accordingly, for the BES definition to conform to the requirements of the statute, the SDT must adopt an effective mechanism to exempt facilities like these that are improperly swept in by the SDT's brightline approach to inclusions and exclusions. For this reason, the Exception process to accompany the SDT's definition is of critical concern. It constitutes the last line of defense against a SDT definition that sweeps in facilities excluded by the statutory definition. Clallam believes the SDT can achieve the goals of FERC's Orders No. 743 and 743-A while honoring these statutory limits by taking one of two alternative approaches to the core definition. First, perhaps the simplest way the SDT could achieve the goals of FERC Order No. 743 while avoiding overbreadth that violates statutory limits is to simply adopt the statutory definition of "bulk-power system" as the core definition. This approach is commonly used by regulatory agencies in defining key jurisdictional terms to ensure that the agency does not cross statutory boundaries when carrying out the duties assigned to it by Congress. Under this approach, the core definition would simply echo the statutory definition, substituting "Bulk Electric System" for its statutory equivalent, "bulk-power system": The term 'Bulk Electric System' means: (A) Facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and, (B) Electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy. See 16 U.S.C. § 824o(a)(1). The inclusions and exclusions developed by the SDT, with the refinements we discuss below, would then be added to provide guidance in the application of this definition to specific classes of electric system facilities and Elements. A second alternative approach is to make the smallest possible adjustment to the current BES definition that suffices to address the central concern expressed by FERC in Orders No. 743 and 743-A. Those orders emphasized that FERC's concerns are with the initial phrase in the current NERC BES definition, which provides that the "Bulk Electric System" is: As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. In Order No. 743, FERC made clear that it views the italicized language as creating unreviewable discretion for Regional Entities to define the BES in their region, and that this unreviewable discretion, rather than lack of uniformity per se, is the problem Order No. 743 is designed to remedy. See, e.g., Order No. 743, 133 FERC ¶ 61,150 at P 16 (2010) (FERC believes the "best way to address these concerns is to eliminate the Regional Entities' discretion to define 'bulk electric system' without ERO or Commission review")(emph. added); id. at 30 (same). In Order No. 743-A, FERC clarified that the primary aim of its rulemaking was to eliminate this unreviewedregional discretion, and it was not, as FERC had originally proposed, to create a uniform national definition that does not allow for any regional variation.Order No. 743-A, 134 FERC ¶ 61,210 at P 11 ("We clarify that the specific issue the Commission directed the ERO to rectify is the discretion the Regional Entities have under the current bulk electric system definition to define the parameters of the bulk electric system in their regions without any oversight from the Commission or NERC.") (emph. added); id. at P 39 ("The Commission's suggested solution simply would eliminate regional discretion that is not subject to review by [NERC] or the Commission") (emph. added). Accordingly, the SDT could achieve the primary aim of Order No. 743 by simply rewriting the current definition to read: As defined by theUnless a different definition has been developed by the Regional Reliability Organization and approved by NERC and FERC, the Bulk Electric System is defined as the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. If the SDT uses this suggested language as its core definition, it will have addressed FERC's primary concern with a minimum of disruption to the current NERC system of definitions. The definition could then be further elaborated with the list of specific inclusions and exclusions of Elements and systems (modified as discussed below), to provide more specific guidance to the industry. If the STD elects not to adopt one of the above suggestions, the core definition proposed on April 28 requires clarification. Specifically, as drafted, the proposed definition is ambiguous in that it is not clear whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition. To eliminate this ambiguity, we suggest that the proposed definition be reordered to read as follows: Bulk Electric System (BES): (A) Unless included or excluded in subpart B, the Bulk Electric System consists of: (1) all Transmission Elements operated at

100 kV or higher; (2) Real Power resources identified in subpart B; and, (3) Reactive Power resources connected at 100 kV or higher. (B) [the list of inclusions and exclusions, modified as discussed in our responses to questions 2 through 9]. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that would be inserted as Subpart B modifies each provision of Subpart A. Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart B of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Clallam supports the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the Federal Power Act ("FPA"), 16 U.S.C. § 824o. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."

No

In concept, we support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A& B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort. Also, the reference to "two windings of 100 kV or higher" may create some confusion because many three-phase transformer bankshave 6 or 9 windings, depending on whether the transformer has a tertiary. We suggest clarifying this provision by changing the clause referencing two windings to read: "the two highest voltage transformer windings of 100 kV per phase that are connected to the Bulk Electric System."

No

Clallam is concerned that the inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215,generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted improperly expands the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of

the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System – Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." But this conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. In fact, we believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result. We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force.". The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Developoment Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES

"Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. The other alternative is to draft standards that apply to a specific type of equipment – again UFLS relays is a good example – rather than to BES facilities categorically. Either approach will fully achieve the goals of bulk system reliability without imposing an undue regulatory compliance burden on local distribution systems. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application fo particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.
No
Clallam is concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition.
Yes
Including "all" blackstart and blackstart cranking paths in the BES may ultimately provide an incentive to the electric industry to reduce the number of resources with blackstart capability. We therefore suggest that essential blackstart resources identified by the Regional Entity should be included in the Bulk Electric System, but non-essential blackstart resources need not be.
No
Clallam agrees that it is important to address wind generation facilities and similar generation facilities in which a large number of generating units, each with a relatively small capacity, are clustered and fed into the grid at a single interconnection point. That being said,Clallam is concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.
Yes
FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained. We believe the exclusion as drafted adequately defines radials.
No
As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold (through reference to Inclusion I2) lacks an adequate technical justification in this context. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit ("standby, back-up, and maintenance power…") should be eliminated.
Yes
Clallam strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. Clallam also supports, with the reservations discussed below, the LDN exclusion as drafted by the SDT. At least conceptually, we believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES.

Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system. Although Clallam supports the LDN exclusion, we believe the exclusion should be refined in the following respects: • The SDT's draft states that: "LDN's are connected to the Bulk Electric System (BES) at more than one location solelyto improve the level of service to retail customer Load." (emphasis added) We are concerned that the use of the term "solely" implies the need for an examination of the motives of a local distribution utility in connecting to the BES at more than one location. This result is problematic because it defeats the purpose of the exclusion, which is to allow LDNs to be excluded from the BES without an in-depth and expensive inquiry into the exact nature of the LDN. In addition, the local utility may have a number of motives for connecting to the BES at more than one location, but the local utility's motives have nothing to do with how the LDN interacts with the interconnected bulk system, which should be the key determinant in including or excluding any Element from the BES. With these concerns in mind, we therefore recommend that the SDT revise the sentence quoted above as follows: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances. • We believe the characteristics specified by the LDN in subsections (b) and (c) of the exclusion are redundant. Subsection b specifies that the LDN would not interconnect more than 75 MVA of generation in aggregate. Subpart c specifies that power flows only into the LDN. We believe the SDT can eliminate subpart b of the definition and simply rely on subpart c because if power only flows into the LDN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system, only with the LDN. Further, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LDN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the subpart c criteria, would be wholly absorbed within the LDN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. In addition, the 75 MVA criterion would make an LDN interconnecting more than 75 MVA part of the BES. For the reasons set forth by the Project 2010-07 SDT, we are concerned the result will be the local utility being improperly classified as a Transmission Owner and Transmission Operator, which would subject the local utility to a number of reliability standards that would significantly increase its compliance burden without substantially improving bulk system reliability. In fact, in the LDN situation, there is even less reason to impose these burdens on the local utility than in the situation addressed by the Project 2010-07 team, where generators are interconnected to the BES by dedicated interconnection facilities. Because the LDN is interconnected at multiple points, the generators interconnected to the LDN could continue to operate even if one or two interconnection points are out of service. On the other hand, in the situation addressed by the Project 2010-07 team, if the dedicated interconnection facility is out of service, the generation is unavailable because there is no alternative route to deliver it to load. Finally, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception.
Yes
Clallam County PUD supports the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that can ill afford the substantial costs that accompany imposition of mandatory compliance with reliability standards. Further, we agree that the small utilities covered by the exemption will have no measurable impact on the operation of the interconnected BES. Our views are borne out by experience in the Pacific Northwest where many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.
No

While Clallam County PUD agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1, Clallam believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. To give a further example, assume that a local distribution utility operates a distribution network that currently would be excluded from the SDT's definition, but that a cogeneration facility with a capacity of 30 MVA and average production of 15 MVA is constructed in one of the industrial areas served by local distribution facility and the output is purchased by one of the industrial customers. Because of inclusion I2, the local utility would now be classified as owning BES facilities, even though the output of the generator rarely exceeds 20 MVA in practice and the output is, as a matter of physics, absorbed by the surrounding industrials loads rather than being transmitting onto the interconnected grid. Further, the fundamental nature of the local distribution facilities has not changed. They are still used to deliver electric power to the utility's end-use customers, not to deliver power on the wholesale market across the interconnected bulk grid. Hence, the result of the SDT's definition is to include "facilities used on the local distribution of electric energy" in contravention of FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). The practical result of the improper classification would be that the local utility would be required to register as a Transmission Owner and Transmission Operator, and would incur substantial costs to comply with requirements that are designed to ensure the reliable operation of transmission lines that are part of the interconnected grid, not local distribution facilities. For the reasons explained in the papers published by the Project 2010-07 Task Force, the result is substantially increased compliance costs that produce little or no improvement in the reliability of the interconnected bulk system. Accordingly, if viewed in isolation, the SDT's core definitions and list of inclusions/exclusions do not comply with the statute or produce optimum benefits for bulk system reliability. Whether the SDT's approach complies with the statute can only be determined by examining the Exception process now under development, in conjunction with the SDT's definition. If the Exception process results in the exclusion of facilities that are improperly swept into the BES by the bright-line thresholds included in the SDT's definition, and the exclusion can be accomplished at a reasonable cost to the involved entities, then the SDT will have achieved a result that complies with the statute. But this conclusion can be reached only upon review of the entire package, not just the core definition and list of inclusions/exclusions. In this regard, as discussed in our answer to Question 3, Clallam notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that "users" of the BES can be subject to reliability regulation. 16 U.S.C. § 824o(b). Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BES Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.

Yes

As noted in our responses to Question 1 and Question 11, we believe the SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used in the local distribution of electric energy. Unless the SDT adopts some approach other than a core definition with inclusions and exclusions based on brightline thresholds, the SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities.

Clallam County PUD has these additional concerns: • The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." Clallam is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BES Task Force approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as

BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. • For the reasons we have explained in our answer to Question 11, we believe the exemption process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the exemption process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process. Further, we believe that the failure to vet all material elements of the BES definition through the Standards Development Process would constitute a violation of NERC's bylaws and the requirements of the Standards Development Process.
Group
Overton Power District No. 5
Randall Ozaki
No
The term does not include facilities used in the local distribution of electric energy.
No
clarification is needed to identify which transformers to include in the BES
Yes
Yes
No
No
Yes
Yes
No
we support Snohomish's clarifications
Yes
We support exclusion E4, for small utilities, but we are unclear how small utilities are defined in the exclusion language presented here.
No
Facilities used in local distribution should not be swept up into the BES
No
Group
Tennessee Valley Authority

Richard Dearman
Yes
No
We suggest I1 to read, "Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, having two windings of 100 kV or higher, unless excluded under Exclusions E1 or E3. Transformers having only one winding of 100 kV or higher are excluded."
No
Other than the NERC Registry Criteria definition, what is the technical justification for the 20 MVA threshold? The threshold level for inclusion should be technically based on the BES capacity and configuration at the location of the generating source's connection to the BES.
No
Other than the NERC Registry Criteria definition, what is the technical justification for the 75 MVA threshold? The threshold level for inclusion should be technically based on the BES capacity and configuration at the location of the generating sources' connection to the BES.
Yes
No
Other than the NERC Registry Criteria definition, what is the technical justification for the 75 MVA threshold? The threshold level for inclusion should be technically based on the BES capacity and configuration at the location of the generating sources' connection to the BES.
No
We suggest the first statement in E1 to read, "Any radial system connected to a single BES transmission source, operating with an automatic interruption device, including the facilities between the connection to the transmission source and the automatic interruption device which are within the transmission source's zone of protection, and:"
No
We suggest adding a reference to "I5" in the (i) section as follows: "the net capacity provided to the BES does not exceed the criteria identified in the inclusions I2, I3, or I5."
No
The following comments are specific to subsections of E3: Section (c): We suggest the section to read, "Power flows out of the LDN shall not exceed the limitations imposed in Inclusions I3 and I5." Section (d): We suggest the section be read, "Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN, except for the power flowing in a normally open switching device between radial systems operating in a make-before-break fashion as defined in exclusion E1."
Yes
No
We cannot be certain of the effect of the BES definition on distribution facilities until our comments to the inclusions and exclusions above are considered.
No
No additional concerns.
Individual
Matt Morais
Electric Reliability Council of Texas, Inc.
No
ERCOT ISO suggests a different approach. In order 743, to remedy its concerns, FERC suggested eliminating RE discretion in defining the BES, and instead basing it upon a bright-line 100kV threshold, provided that elements above and below 100kV could be excluded and included, respectively, based on specific procedures. Consistent with that approach, ERCOT ISO suggests that

the BES definition itself establish a bright line standard, with inclusions and exclusions managed through the exception process (the exception process allows for both exclusions and inclusions of relevant facilities/equipment). With respect to exclusions (and inclusions), FERC contemplated a process involving stages that established "exclusion" criteria in the first instance. If equipment met such criteria, the process ended there and it was excluded or included, as appropriate. If the equipment did not meet the bright-line criteria, then it moved to the "exception" analysis, which contemplated additional critical analysis to determine if exemption was warranted. ERCOT ISO believes that structuring the revised definition in accordance with this approach is more consistent with FERC's intent of having an inclusive definition in the first instance, with modifications occurring subsequently pursuant to critical analysis in a well defined exception process. Revising the BES definition consistent with the above principles would counsel in favor of revisions to the current definition that removed RE discretion and provided for inclusion or exclusion on a case by case basis. ERCOT ISO also believes that the BES definition should provide for a general exclusion of distribution facilities. In Orders 743 and 743-A, FERC made clear that, consistent with the terms of EPAct 2005, distribution systems were excluded from the BES. However, FERC also made clear that it reserved the right to judge whether something was distribution or transmission, and, therefore, subject to its jurisdiction. Consistent with FERC's findings in this regard, ERCOT ISO believes that the definition should provide the general exclusion, with specific exclusions being performed as part of the exception process. This will meet the goal of respecting Congress' exclusion of distribution facilities, while ensuring the distribution/transmission distinction is subject to clear, objective standards the application of which can be critically reviewed by FERC to provide the appropriate procedural and substantive checks FERC envisions to ensure its jurisdiction is applied in all relevant cases to facilitate enhanced system reliability. In addition, ERCOT ISO supports memorializing the generation registration criteria in the BES definition. However, consistent with the approach described above, the BES definition should not be characterized in terms of inclusions or exclusions, but rather as general thresholds, with modifications occurring solely pursuant to the exemption process. Finally, with respect to generation, ERCOT ISO questions the 75 MVA threshold applied to collector system type generation. As indicated by the SDT, this was intended to capture renewable resources (e.g. wind), and ERCOT ISO agrees with this clarification, but questions whether the 20 MVA threshold should apply. These systems can include multiple wind turbines on the collector system, but when they are interconnected at a single point, they are viewed as a single resource and, as such, should be subject to the same 20 MVA threshold as other single units. Applying the approach described above, the BES definition would reflect general thresholds. Specific circumstances warranting exception would occur via a separate process – ERCOT ISO is not disagreeing with any of the SDT's inclusions or exclusions, it is merely suggesting that they be addressed in that separate process. Consistent with this approach, ERCOT ISO offers the following language: The Bulk Electric System shall include: A) all Transmission Elements operated at voltages100 kV or higher; B) all generation resources that: 1) are individual units greater than 20 MVA; 2) multiple units at a single facility that are equal to or greater than 75 MVA in the aggregate, provided that all units have a common point of interconnection; and 3) multiple units connected to a collector system that are equal to or greater than 20 MVA in the aggregate; 4) all Blackstart Resources; and C) Reactive Power resources connected at 100 kV or higher. The BES shall not include distribution facilities, and radial transmission facilities serving only load with one transmission source are generally not included in this definition. The foregoing notwithstanding, any relevant element (e.g. transmission, generation, etc.) may be included or excluded in the BES pursuant to the relevant exception processes criteria and analyses as provided for in the NERC Rules of Procedure.
No
ERCOT ISO agrees that such equipment should be considered for inclusion, but suggests that these issues be addressed relative to the criteria for evaluation in the exception process. In other words, this inclusion doesn't need to be explicitly identified. It would simply be included under the general 100 kV threshold, and to the extent an owner believed the characteristics of its equipment don't warrant inclusion, it would seek an exception.
No
See response to question 1. ERCOT ISO supports redefining generation covered under the BES to reflect the registration threshold, but, consistent with the comments to question 1, believes it should be included within the bright line criteria unless otherwise indicated by application of the inclusion and exclusion criteria of the exception process or analyses.

No
See response to question 3 – ERCOT ISO agrees with substance, but not the approach.
No
See response to question 3 – ERCOT ISO agrees with the substance, but not the approach.
No
See response to question 3 – ERCOT ISO agrees with the substance but not the approach.
No
See response to question 1 – while ERCOT ISO does not necessarily disagree with the substance of the proposed exclusions, it believes all exceptions should occur pursuant to the separate processes and criteria being developed that will be established in the NERC ROP. The BES definition should be more general in nature, focusing on objective thresholds. All exclusions should be addressed in the separate proceeding being conducted in parallel with this proceeding to develop the exception process, and ERCOT ISO reserves its right to comment on the substance of such proposals in that proceeding.
No
See response to question 7.
No
See response to Question 7.
No
These entities should be subject to the exception process. They may warrant "first instance" exclusion in that process, but any such action should occur there, as opposed to the definition of BES. ERCOT ISO believes this is more consistent with FERC's position that BES should reflect an objective threshold, with exceptions being subject to review by the ERO and FERC, as applicable. Accordingly, ERCOT ISO suggests that this issue be raised in the concurrent BES exception proceeding and ERCOT ISO reserves its right to comment on the substance in that proceeding.
No
See response to question 1 – ERCOT ISO agrees that distribution facilities should be excluded, and such facilities are generally excluded in ERCOT ISO's proposed alternative definition. However, FERC stated in 743 and 743-A that it has the right to determine if facilities are distribution or transmission. Accordingly, to respect the FPA explicit exclusion of distribution facilities and FERC's authority to determine if a facility is transmission or distribution, ERCOT ISO position is that the general exemption should be in the BES definition, but any such exemptions must be subject to the exemption process to facilitate FERC's authority to make the relevant determination. With respect to that process, it may provide for a presumptive exclusion with additional at FERC's discretion. ERCOT ISO reserves its rights to comment on the criteria for exclusion/exemption/inclusion in that proceeding. In addition, the exception process should provide for the ability to include certain distribution facilities if the inclusion criteria of the exception process indicate such action is appropriate.
Yes
See response to question 1 – ERCOT ISO believes defining BES in terms of the relevant exclusions may be contrary to FERC's suggested approach in 743 and 743-A. While FERC did not mandate a particular approach, and gave the ERO the opportunity to propose an alternative to its suggested approach, it stated that any alternative must be equal to or greater than its suggested approach in terms of remedying the identified flaws associated with the current definition. Part of the remedy envisioned by FERC included the removal of subjectivity in defining BES and the ability of the ERO and FERC to review any proposed exemptions from the bright line definition. Although the exclusions strive to apply objective criteria, it is arguable that any such circumstances may not be that clear and may require some level of subjective judgment as to whether elements deemed to be distribution according to the exclusion criteria actually are distribution, as opposed to transmission. In addition, FERC expressly stated that it reserved the right to make that determination in the first instance. This approach takes that away from FERC.
Group
Arizona Public Service Company

Janet Smith
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
No
No.
Individual
Martin Kaufman
ExxonMobil Research and Engineering
No
The SDT's attempt to create a structure that clarifies what types of facilities should be included / excluded from the bulk electric system is a positive step; however, the utilization of an automatic fault interrupting device as the end point criteria for bulk electric and start point for local distribution is inappropriate. The Federal Power Act specifically excludes all "facilities used in the local distribution of electric energy" from the bulk power system without mention of how these facilities are isolated from the transmission system.
Yes
Yes
Support is contingent on the continued exclusion of generation based on its net capacity provided to the BES.
Yes
Support is contingent on the continued exclusion of generation based on its net capacity provided to the BES.
Yes
Yes
No

The inclusion or exclusion of radial lines serving load should not be contingent on whether the radial line is isolated by a single automatic fault interrupting device. Many of the radial lines impacted by the requirement for the presence of an automatic fault interrupting device are industrial companies that are fed via 138 kV and 230 kV systems that are hard-tapped or fed from breaker and a half or ring buss transmission substations. The requirement for the installation of an automatic fault interrupting device on the radial line is predicated on the assumption that an event on a hard-tapped line serving load will produce a negative impact on the interconnected transmission network. Accepting this assumption as a true fact, the SDT is following the logic that they should expand the scope of the interconnected transmission network to include the hard-tapped line (used to locally distribute power) due to the fact that the transmission owner has neglected to properly protect their facilities from the impact of an event on the hard-tapped line. In effect, the SDT is allowing the transmission planner to take credit for protective devices installed on the distribution network when they conduct their contingency studies as part of NERC Reliability Standards TPL-002 and TPL-003; thus shifting the responsibility of protecting the interconnected transmission network from the owners of the transmission network to the customers and their local distribution facilities. The SDT should revisit their assertion that facilities should be included based on the presence of an automatic fault interrupting device based on the fact that if a contingency study indicates that an automatic fault interrupting device should be present in order to preserve system stability or prevent a cascading outage during an N-1 or N-2 contingency, the transmission planner should be recommending such a device is installed on the interconnected transmission system and not a customer owned facility or any facility used to locally distribute electric power. It is inappropriate to let transmission owners take credit for customer owned and local distribution facilities in their reliability studies and require customer's and local distribution facilities to protect the interconnected transmission network when those facilities are explicitly excluded from the bulk power system in Section 215 of the Federal Power Act and the interconnected transmission system is owned and operated by entities that the customers and local distribution facility owners pay to provide them with reliable transmission service.
Yes
No
Similar to the comments provided on Exclusion E1, the inclusion of a requirement for automatic fault interrupting device to separate the local distribution network from the interconnected transmission network will in many cases shift the onus of securing a reliable interconnected transmission network from the owners and operators of that interconnected transmission network to the customers and owners of local distribution networks that pay the owners and operators of the interconnected transmission network a fee for providing reliable transmission services. Furthermore, the Federal Power Act excludes all facilities used in the local distribution of electric energy and does not distinguish whether such local distribution facilities must be isolated by automatic fault interrupting devices.
No
While the exclusion for a small utility makes sense, the exclusion should not be limited to a utility company. The SDT should extended the exclusion to similarly situated facilities or organizations with other primary business functions, such as industrial companies.
No
The SDT has defined a specific type of local distribution facility in their bright-line definition of the bulk electric system. The SDT's definition focuses on a specific type of local distribution system that has a minimum impact on an interconnected transmission system when that interconnected transmission system does not include the facilities necessary to properly protect itself from faults originating on its boundary. Section 215 of the Federal Power Act does not qualify the type of local distribution facility that should be excluded. It exempts ALL facilities used in the local distribution of electric energy, regardless of whether the owners and operators of the interconnected transmission system have installed facilities that are necessary to secure the reliability of the interconnected transmission system from incidents originating at its boundaries. Additionally, the SDT should consider making its definition of a local distribution network consistent with exclusion E2. If a generation facility with a net aggregate rating less than 75 MVA or single unit with a net export capacity below 20 MVA is not a part of the bulk electric system, what is the technical justification of including a local distribution network that exports less than 75 MVA in the bulk electric system when it

is not used to transmit electric energy between geographic regions? Many QFs and large industrial facilities may fall under the description of local distribution network due to the breadth of their private use network, connection to mulitple 138 kV / 230 kV substations (done to improve reliability in order to provide safer operation of the industrial process), and possible cyclical generation exports (sometimes exporting / sometimes importing).
Yes
Section 215 of the Federal Power Act excludes facilities used in the local distribution of electric energy without any qualifications of the type of local distribution facility.
There are certain transmission network configurations in the south east portion of the country where the majority of the interconnected transmission network is owned and maintained by a single utility company, but approximately one hundred substations that are located along the interconnected transmission network and utilized to transmit power between regions are owned by separate companies (i.e. many companies own a single transmission substation). The SDT should consider this configuration and the lack of uniform operation and maintenance practices that may exist due to the differences in how the companies implement NERC compliance.
Individual
Laura Lee
Duke Energy
Yes
Yes
Yes
Yes
Yes
No
I5 is not defined clearly enough. It appears that distributed generators connected to a 44 kV load pocket that is fed radially from a 100 kV source would be included, but it's not clear that this was the intent. Adding generator before collector system would provide greater precision.
No
This needs further clarification as to what constitutes a "single Transmission source". Does having a double/multiple circuit line(s) from a single transmission station constitute a radial system?.
Yes
Yes
Yes
No
Group
Imperial Irrigation District
Sammy Alcaraz
Yes
Yes

Yes
Yes
Yes
No
In reference to I5 If the collector system is in the distribution system and after a series of elements and (sub transmission system) is connected to a common point of interconnection to a system element at a voltage of 100 kV and above, is there a criteria of after how many elements before it connects to a system element at a voltage of 100 kV and above is I5 still applicable? IID prefers the following language: Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) after the collector system to the first system Element at a voltage of 100 kV or above.
Yes
Yes
Yes
Yes
Yes
No
None
Individual
Curtis Klashinsky
FortisBC
Yes
We agree with the concept of a bright-line definition and commend the SDT for developing a concept of explicit inclusions and exclusions as part of the definition. This will reduce the number of exception applications for some of the BES elements. However, the inclusion and exclusion requirements are extremely restrictive. For example, radial characteristics should not be limited by the amount of installed generation or single transmission source and/or require an interrupting device. Instead we believe that one or more transmission sources could feed the radial load to provide redundancy as long as there is adequate protection and isolation for improved customer-supply continuity and reliability. This should be considered radial as long as the loss of any transmission source does not affect, and is not necessary for, the operation of the interconnected transmission network. Further, it is imperative to understand that the NERC's revised definition will have a direct impact on entities across North America and will conflict with regulatory requirements, Codes, and Licenses. FERC in its Order 743 and 743A has directed NERC to address these concerns. We suggest the SDT and RoP teams should: • Carefully craft the exception criteria and procedure to be flexible and technically sound, to allow entities to adequately present their case to the ERO for inclusions or exclusions outside of the definition. • Include provisions in both the NERC exception criteria and exception process for federal, state and provincial jurisdictions. These provisions should provide clear guidance so that, if and when there are deviations from the exception criteria, they are properly identified with technical and regulatory justifications ensuring there is no adverse impact on the interconnected transmission network. This burden of proof should be left to the entity seeking exception because it may be difficult if not impossible to define the exception criteria. Further, if such an explicit criteria could be defined, it will in fact become another bright-line BES.

Yes

We agree with the concept of Inclusion I1. However, we suggest that since transformers are already covered by the definition, "all transmission Elements operated at 100 kV and above", and since Inclusions I2 to I5 are commonly related to generation only, Inclusion I1 should be removed and replaced by the following Exclusion: E(x) "Transformers not used as Generator Step-Up (GSU) transformers that have primary or secondary winding at less than 100 kV." We also suggest the SDT to put forward a high-level exception criteria with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) mentioned in Inclusion I1, or any other inclusion(s). These inclusion(s) that are intended for exemption would be based on the entity's technical assessment, evidence and justification for its unique characteristics, configuration, and utilization.

No

We agree with the concept of Inclusion I2 with respect to individual generating units, but do not support having the entire path labeled as BES. In most cases, neither the path or a 20 MVA unit itself will have any impact on the reliability of the interconnected transmission network nor is it necessary for the operation. We also do not support the fact that there should be a blanket application of the BES definition to all individual generating units greater than 20 MVA. It is also important to mention that moving into the future, with the Green Energy and Smart Grid plans advocated by both Canadian and US policy makers, the gross nameplate rating of 20 MVA acquired from NERC registration restricts the penetration of dispersed generation in many parts of North America. We suggest the following: • Generation restriction (20 MVA or 75 MVA) should either be revised or the exception procedure should allow entities, with the support of technical evidence, to exclude element(s) from being labeled as part of the BES. • Entities should be able to use the exception process, with the help of technical evidence, to exclude generating units that do not impact the interconnected grid and the bulk transfer of power. • The path to generating facilities does not need to be BES contiguous. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require a contiguous path unless the unit is identified essential for the operation of transmission network. • Definition and/or exception process should provide clear acknowledgement and flexibility to avoid any regulatory conflicts. - For example: NERC and SDT should consider introducing a concept of a new category of registration or BES Support (BESS) elements. These elements are NOT BES but support the reliable operation of the interconnected transmission network. A sub-set of relevant NERC Standards should still apply to BESS elements such as planning, design, and maintenance. However, they may not be subject to mandatory compliance.

No

We agree with the concept of Inclusion I3 with respect to multiple generating units located at a single site, but do not support that the entire contiguous path has to be BES. The path of a 75 MVA plant or aggregated generation will rarely have any impact on the reliability of the interconnected transmission network nor is it necessary for its operation. We also do not support the fact that there should be a blanket application of this inclusion. As stated earlier, under various green energy, smart grid and dispersed renewable energy plans advocated by both Canadian and US policy makers, the gross nameplate rating of 75 MVA may undermine and deter the future potential of integrating Distributed Generations (DG's) that will be implemented to ensure the reliable operation of the interconnected transmission network BES, and, at the same time, providing the most effective and economical solutions for the rate payers in North America. Local generation can cost-effectively enhance the reliability of load pocket by avoiding transmission, but such restrictions would deter the adoption of good planning decisions. Upcoming load displacement projects would result in the installation of new self-generation facilities at customer sites, with the electricity generated being used on-site by the customer, with a resultant decrease in the consumption of electricity purchased via large scale generation. These projects can be large, and displace a substantial portion of the customer's (or local distribution company's) existing load, even to the extent of total self-sufficiency and the availability of surplus generation. The aggregated surplus generation capacity may very well exceed 75 MVA and would consequently force the facility owners to register as both Generation Owners (GO) and Transmission Owners (TO), which may be in conflict with regulatory rules in many jurisdictions. We suggest the following: • Generation restriction (75 MVA) should either be revised or the exception procedure should allow entities, with the support of technical evidence, to exclude element(s) being labeled as part of BES. • Path to generating facilities need not be BES contiguous. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC

Standards, but should not require contiguous paths. • Entities should be able to use the exception process, with the help of technical evidence, to exclude generating units that do not impact the interconnected grid and the bulk transfer of power. • From a regulatory perspective such an inclusion could also be in conflict with the current regulatory requirements in one or more Canadian jurisdictions. Definition and/or exception process should provide clear acknowledgement and flexibility to avoid any regulatory conflicts. For example, as stated earlier (Q4 response) NERC and SDT should consider introducing a concept of a new category of registration or BES Support elements. These elements are NOT necessarily BES but support the reliable operation of the interconnected transmission network.

No

We do not agree with Inclusion I4. Blackstart resources and transmission facilities on the cranking path should not be classified as BES regardless of size and voltage level. From a regulatory perspective, such an inclusion would be in conflict with the current regulatory requirements in many of the jurisdictions. More importantly, designating these facilities as BES Elements or Facilities beyond the 100 kV bright line, the 20 MVA/unit or 75 MVA/plant criteria, without a regard to their impact on the BES (under conditions other than system restoration) will impose unnecessary requirements for these facilities, which do not contribute to reliability under interconnected operation conditions. For restoration condition, this inclusion is extraneous given there is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. While we do not disagree with the SDT's interpretation of the FERC directives, the BES definition should cover those facilities that are needed for operation under both normal and emergency conditions, which includes situations related to black-start and system restoration. We do not agree that the directives specifically ask for inclusion of blackstart resources and facilities on the crank path in the BES definition. We believe the requirements in EOP-005-2 suffice to address the SDT's interpretation and concern regarding recognition of the reliability impacts and requirements for blackstart resources and facilities used for system restoration. Generating units of any size and transmission facilities of any voltage level may be used for blackstart and restoration. Conceivably, a generator of 10 MW and transmission facilities of 44 kV or 69 kV may be a part of the cranking path. A BES inclusion will then subject these generators and facilities, which are essentially "local" facilities but called upon to begin restoring its bulk interconnected counterpart, to comply with the reliability standards intended for maintaining BES reliability. Included in the BES definition will thus discourage smaller generators from providing blackstart capability, and the transmission facilities from being a part of the cranking path. This may also discourage Transmission Owners and Operators from identifying multiple blackstart resources and cranking paths to provide restoration flexibility. Such an inclusion will ultimately undermine reliability. If indeed any of these facilities are deemed necessary to support bulk power system reliability at times other than system restoration, they would/should have been identified through the basic BES definition and inclusion list or can be addressed through the exception procedure. We suggest and urge the SDT to drop I4 on the basis that: • The availability and performance expectations of blackstart resources and facilities on the cranking path are already specifically addressed in an existing standard; and • Unless they meet the BES definition and the other inclusion criteria, they do not have any perceived reliability impact on everyday operation of the BES.

No

We agree with the concept of Inclusion I5 but do not support that the entire contiguous path has to be BES. The path or aggregate generation will rarely have any impact on the reliability on the interconnected transmission network nor is it necessary for its operation. These are generally referred to as connection facilities. As stated earlier, with the Green Energy and Smart Grid plans and dispersed renewable energy advocated by both Canadian and US policy makers, the gross nameplate rating of 75 MVA may undermine and deter the future potential of integrating DG's that will be implemented to ensure the reliable operation of the interconnected transmission network BES, and, at the same time, provides the most effective and economical solutions for the rate payers in North America. Local generation can cost-effectively enhance the reliability of load pocket, by avoiding transmission, but such restrictions would deter the adoption of good planning decisions. (Refer to Q4 comments).

Yes
We agree with this concept as part of establishing a bright-line definition, as well as clarifying this exclusion as part of the revised BES definition. Although the concept is consistent with the statements in the FERC Order, it is imperative to understand that the limitations of E1 will have a direct impact on many entities (big and small) along with distribution companies across North America. The exclusion requirements are extremely restrictive with little or no technical basis and are limited to the fact that these parametric restrictions may not have any reliability impact in terms of location, configuration of element, and system characteristics. The radial characteristics and/or the reliability of the interconnected transmission network is determined by the amount of installed generation or a single transmission source or an interrupting device. For example, a redundant double circuit designed to supply the load with adequate protection and isolation beyond the radial tap could be significantly better for load supply-continuity and reliability. We suggest if more than one transmission source feed radial load to ensure customer supply continuity and reliability then this should be either part of the bright-line definition as long as there is adequate protection and, the loss of any single transmission source does not affect the interconnected transmission network. Accordingly, it will be an understatement to suggest that the SDT: • Carefully craft the exception criteria and procedure that is flexible and technically sound to adequately allow entities to present their case to the ERO for exclusion • Exception criteria should be at a high-level with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) mentioned in exclusions or inclusions based on technical assessment, evidence and justification for its unique characteristics, configuration, and utilization • Acknowledge and provide provisions in both NERC exception criteria and exception process for federal, state and provincial jurisdictions.
Yes
We agree with most of the changes in Exclusion E2. However, we feel there is a need for evidence or technical study in regards to the limits described in I2 & I3. The real net aggregated power seen by the bulk power system at the interconnection, with the outlook of distributed generation systems, may be different than past experience. Hence it requires to be reassessed based on technical studies with respect to the future integration of DG's. (Please refer to comments in questions: 3 & 4). To establish a bright-line definition, E2 exclusion may be acceptable if the SDT provides adequate provisions within the exception procedure. See response to Q8 Accordingly, we suggest the SDT carefully craft the exception criteria that will allow entities to present their case to the ERO for exclusion from E2 requirements.
Yes
We agree with this concept as part of establishing a bright-line definition along with this clarifying exclusion in the revised BES definition. However, requirements in Exclusion E3 are restrictive and we do not agree to the limits on connected generation for Local Distribution Networks (LDN), described in part (b). The development and implementation of distributed generation will grow considerably in the future and will operate together with conventional sources of energy. The real net aggregated power of distributed generation seen by the bulk power system at the interconnection may be larger than past experience; hence it requires to be reassessed based on technical studies with respect to the future integration of DG's. (Please refer to comments in questions: 3 & 4) Also, we suggest combining exception E3 (c) and (d) as follows: "(c) Power is intended to flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN; The LDN is intended to deliver power to load and not be used to transfer bulk power between different locations in the BES. It is recognized that under specified system conditions, bulk power transfers may take place between different points of the BES via the LDN. However, for these conditions BES reliability is not dependent on the existence of these power flows through the LDN." Finally, we suggest and urge the SDT to carefully craft the exception criteria & procedure that is flexible and technically sound to adequately allow entities to present their case, and/or unique characteristics of the elements under exception to the ERO for exclusion
No
Small utility or distribution provider is a relative term. A smaller distribution provider may have an impact on the transmission network while a large one may not; this is based on their design, configuration and protection. Hence, such an exception should apply regardless of the size of an entity. Having said that, the concept discussed here is to define a radial system and not a small utility, as mentioned in the FERC Order. We do not believe that the SDT had sufficient discussions while crafting the proposed exclusion in regards to small utilities. The language used in the proposed

clause is only appropriate to establish a bright-line definition for a radial system. It is worth noting that many small utilities (and individual load customers or generation connections) would have more than a single transmission source with a solid tap and, at the same time, be adequately protected and effectively isolated without any adverse impact on the transmission network. Such a practice and design is widely used across North America. Hence, we do not agree that this exclusion is an attempt to address the issue of small utilities. The definition and inclusions will force many small entities, load customers and generation unit owners to act and register as Transmission Owners. In some parts of the continent this would be in conflict with state or provincial regulatory act, Codes and Licenses. Consistent with the FERC Order, the ERO and the SDT should be aware of these conflicts and should not ignore them for later. Hence, we suggest the ERO and the SDT address this by providing explicit but simple provisions in the exception procedure by considering sound technical exception criteria that is flexible based on demonstration of evidence to justify the element's necessity for operation. Regulatory Acts and Rules will always trump NERC requirements and hence we suggest that the only evidence that should be required of small utilities/entities is: • Regulatory evidence • Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of their connection.

No

We commend the SDT for their concept in putting forward a 100kV BES bright-line definition. However, we do not believe that the current definition drafted by the SDT has differentiated between Transmission and Distribution or excluded distribution facilities from the BES, or addressed the issue of local distribution facilities above 100kV. It is important for the ERO and the SDT to understand and be consistent with the FERC Order for these important but complex issues. Otherwise, many parts of the continent could be in conflict with state or provincial regulatory act, Codes, and Licenses. We urge the ERO and SDT and RoP teams be aware of these conflicts and not disregard them, as they will pose many implementation complexities and confusion within the industry. Regulatory Acts and Rules will always trump NERC requirements and hence it is important that ERO should neither be caught in regulatory conflict nor put entities in these situations. It is worth noting that different jurisdictions may use different terminology for "distribution" or non transmission facilities or elements. For example, some jurisdictions label certain facilities as distribution which connect and are owned and operated by the distribution utility, customer or a generator customer while other label them as connection facility or elements. As stated earlier (Q10), we believe that the ERO and SDT can address this by providing explicit but simple provisions in the exception criteria (to be used by exception procedure) by putting forward a menu of key technical assessments , which are based on demonstration of evidence to justify the element's necessity for operation. For example, we suggest that for local distribution, the evidence that should be required is: • Regulatory evidence. • Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of their connection. Some of the other key attributes of such an exception criteria should be: • Elements are not to be part of interconnection between two balancing authority or contribute to IROLs • Entire system cannot be classified as contiguous • BESS Elements within exclusion can still be subject to relevant NERC Standards • Entity to justify whether or not the elements are necessary for the operation of the interconnected transmission network • Distinguish if the element in question supplies load centers, major cities, serves the national interest and/or possibly impact national commerce or national security, or is identified by the relevant regulatory authority. Accordingly, we suggest that the exception criteria should ONLY list a menu of items and a prescribed report template that should be assessed and presented by an entity as their evidence and justification for exception to a RE, the ERO and any relevant regulatory authority. This evidence and justification would be used by the ERO as part of its decision making process.

Yes

See earlier comments and suggestions. NERC's revised definition will have a direct impact on many entities across North America and could also be in conflict with regulatory requirements, Codes, and Licenses, which non FERC jurisdictional must comply. It would be impossible to identify each of these conflicts. For example: in one of the energy acts, NERC Standards can only apply to generation over 50 MVA which will cause one or more of the requirements to be in conflict and /or what constitutes distribution and what is not considered transmission (such as connection facility to a load or generation and owned by the proponent). However, we agree to establish a 100kV BES bright-line definition and we believe that the best venue to address avoiding compliance conflicts is through the exception criteria and the exception process. The benefits of such an approach are: • Establishment of

a continent wide bright line definition • Avoidance of regulatory conflicts and legal complexities • Assurance of the reliability of the interconnected transmission network
We believe that the concepts of inclusions and exclusions as part of the bright-line definition are excellent. However, these exclusions do not address several directives in Order No. 743 and 743A, such as: differentiation between Transmission and Distribution, non-jurisdictional concerns, or distribution. We believe that the BES definition itself is not a venue to address these concerns but suggest that these issues should be explicitly addressed by the ERO's exception criteria and exception process. Currently, the posted exception criterion is only a concept with many gaps and TBD, as posted details are later to follow. We suggest that the exception criteria should be a menu of technical items (load flows, stability analysis etc) and non technical items (type of loads such as distribution companies vs. major city center, national security etc). Entities should be required to assess and provide their own justification under each category with a conclusion that takes into account all of the relevant items for element(s) under exception, in a consistent template and table of contents. We suggest the SDT to avoid specification of any parameters as they would differ under different design concepts, system configurations, system characteristics and regulatory requirements.
Group
LG&E and KU Energy LLC
Brent Ingebrigtson
Yes LG&E and KU Energy have a concern that the approval and adoption of the BES definition project and BES exception procedure project are not linked. This would produce the possibility of the BES definition project completing and Registered Entities having to comply without having the appropriate and promised BES exception procedure in place to alleviate unreasonable compliance actions. More specifically, if the BES definition gets approved and BES exception procedure has not yet been approved (whether due to project delay or disapproval), then Registered Entities are required to ensure everything within the new definition is compliant, even if doing so is unreasonable or entirely unnecessary.
Individual
Mark Thompson
Alberta Electric System Operator
Yes
Yes
Yes
Consider adding the word "transformer" after "GSU".
Yes
Consider adding the word "transformer" after "GSU".
Yes
Yes

Yes
Yes
Yes
Yes
Yes
Comments: Alberta’s legislation enables reliability standards, but prevents the AESO from developing rules related to reliability standards. The AESO therefore would like to see retention of the following clause from the NERC “Statement of Compliance Registry Criteria (revision 5) included in the list of inclusions as well as identifying the authority that determines what generators are material to reliability: III.c.4 Any generator, regardless of size, that is material to the reliability of the bulk power system. The wording should reflect that, for example, in the case of Alberta, that the AESO has the authority to make this determination.
Individual
RoLynda Shumpert
South Carolina Electric and Gas
Yes
Yes
Yes
Yes
Yes
Yes
Yes
No
We agree with the first part of E2, but we do not see the rationale for section (ii) and suggest it be deleted.
No
This seems to be covered by E1.
Yes
No
No
Individual
Reggie Wallace

Fayetteville Public Works Commission

No

The changes made by the SDT with respect to Real Power resources in Inclusion I2 do not ensure a consistent determination by independent entities of whether a generator should be included within the BES. The ambiguity in Inclusion I2 has implications on other Inclusions and Exclusions. See the comments on Question 3 for additional detail.

Yes

No

Inclusion I2 contains wording that is ambiguous and does not support a consistent determination by independent parties of whether or not a specific generator should be included in the BES. This definition will be a critical part of the guidance used by registered entities to validate their current registration status and by new entities to properly determine their initial registration status. It will also be used by regional reliability entities during compliance activities to verify proper registration. The ambiguous wording of Inclusion I2 could easily lead to re-interpretation issues between the owner/operator of the generator and regional entities in a compliance audit or other compliance setting. To be specific, the phrase "including the generator terminals through the GSU which has a high side voltage of 100 kV or above" is particularly troublesome. The phrase as written is intended to establish the boundary of the Real Power resource that will be included in the BES if the conditions of Inclusion I2 are met. The intent appears to be to include within the BES the generator, the cables connecting the generator terminals to the GSU, and the GSU, if the GSU has a high side voltage of 100 kV or above. If the GSU, however, does not have a high side voltage of 100 kV or above, then neither the generator, nor the connecting cables, nor the GSU would included within the BES. The crux of the problem lies in the interpretation of the term "GSU" and the phrase "through the GSU which". The term "GSU" or "generator step-up transformer" is commonly applied to a transformer with a generator directly connected to the low side and a bus directly connected to the high side. This is not, however, a defined term within the NERC Glossary and no standard for that interpretation is provided. The very structure of the phrase "through the GSU which" implies that there may be more than one GSU to be considered, some of which do not but at least one of which does have a high side voltage of 100 kV or above. This could be interpreted to include multiple transformers (GSUs) stepping up the generator voltage in series, the first stepping up the generator voltage to a bus, the second stepping up that bus voltge to another bus, and the third, and so on, and so on, until finally 'THE" transformer (GSU?) is encountered "WHICH" does have a high side voltage of 100 kV or higher. Thus, if the registering entity were to apply the commonly accepted definition of "GSU" to a generator, and the GSU directly connected to that generator has a high side of less than 100 kV, that entity would properly conclude that neither the generator nor the leads nor the GSU should be included in the BES. If a regional compliance entity applies the interpretation that transformers in series must be considered until a generator is encountered which does have a high side of 100 kV or higher, then that compliance entity would properly conclude that the generator, all the transformers in series, and the buses connecting those transformers should be included in the BES. Clearly this potential for contradictory conclusions would be better cleared up during this comment period than repeatedly coming up during compliance processes. I offer two suggestions for eliminating this ambiguity. The first and preferred method would be to change the wording of Inclusion I2 to read s follows: "Individual generating units greater than 20 MVA (gross nameplate rating) directly connected to the low side of a GSU which has a high side voltage of 100 kV or higher. The generator, the leads directly connecting the generator terminals to the GSU, and the GSU are all included in the BES." The second method would be to define within the NERC Glossary the term GSU as follows: "A generator step-up transformer (GSU) is a transformer directly connected to the terminals of a generator on the low side and to a bus at a higher voltage on the high side."

No

The same comment made in Question 3 and applicable to Inclusion I2 is also applicable to Inclusion I3.

Yes

No

Because no differentiation has been defined between "power producing resources" in Inclusion I5 and

"generating units" from Inclusions I2 and I3, this Inclusion has the potential to conflict with other Inclusions. It should be modified to read "Dispersed power producing resources with individual capacity of 20 MVA or less (gross nameplate rating) but with aggregate capacity greater than 75 MVA. . ."
No
Exclusion E1 references Inclusions I2 and I3. Therefore the comments provided in Question 3 with respect to Inclusion I2 are pertinent here as well. The radial system cannot be excluded if it includes any generation resources that are included in Inclusion I2. The ambiguity that exists in Inclusion I2 could, therefore, also have consequences in determining if a radial system can be excluded. If the recommended changes are made in Inclusion I2 then Exclusion E1 is acceptable as is.
Yes
Yes
Yes
Yes
No
None
Individual
Gary Kruempel
MidAmerican Energy Company
Yes
Yes
Yes
Yes
Yes
No
It is suggested that the inclusion be modified to include a more definitive description of the portion of the facility that would be considered to be in the BES. It is suggested that the phrase "from the point where the aggregated rating exceeds 75 MVA" be added after collector system in I5. The revised inclusion would then read as follows: Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system from the point where the aggregated rating exceeds 75 MVA through a common point of interconnection to a system Element at a voltage of 100 kV or above.
No
The statement “originating with an automatic interruption device” seems to go beyond differentiating what is radial. If that were removed, the rest of the draft exclusion seems to capture what is radial.
Yes
Yes
Arbitrarily excluding small entities could affect reliability depinding on the specific transmission facilities the entity owns and/or operates.

No
We disagree that the SDT has appropriately excluded local distribution facilities through the revised bright-line core definition and specific inclusions and exclusions. A similar bright line criterion excluding facilities below 100 kV would be better. The intent is to clearly define facilities below 100kV (exclusive of resources added under criterion I4) as local distribution (excluded from FERC jurisdiction in accordance with the Federal Power Act). Critical facilities below 100 kV would be brought back in under the provisions of inclusion exception criteria of the Technical Principles for Demonstrating BES Exceptions procedure.
No
While there were no questions directed to the draft implementation plan in the comment form, if the intent was to also solicit comments on that plan, the schedule in that plan is likely too agressive if the result of the revised BES definition is that new facilites are brought into the BES and are thereby obligated to now comply with standards they had not previously been required to meet. Perhaps a provision should be added to the implementation plan to address this situation and allow an extended schedule for new BES facilities to comply with applicable standards.
Individual
Dennis Minton
Florida Keys Electric Cooperative
Yes
Yes
Yes
Yes
Yes
Yes
Yes
FKEC agrees with the comments of FMPA as shown below: FMPA agrees with the intent / concept, but has suggested wording changes to add clarity. The words “described as” should be deleted from the exclusion to avoid confusion. What matters is how the system is actually connected, not how someone describes it. In addition, “a single Transmission source” should be defined, and should be generic enough to encompass the various bus configurations. It is not the case, for example, that each individual breaker position in a ring bus is a separate Transmission source; in that case, a bus at one voltage level at one substation should be considered “a single transmission source.” Some examples of configurations that should be considered a single transmission source for this purpose are at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf, Examples 1-6. The phrase “automatic interrupting device” should be replaced with the phrase “switching device.” Many radials are connected to ring buses or breaker-and-a-half schemes where the breakers (automatic interrupting devices) are within the bus arrangement where the appropriate division between BES and non-BES is at the disconnect switch as the radial “takes off” from the bus arrangement. As written, E1 would eliminate most radials from automatic exclusion and force most of them into the Exception Procedure. For instance, see examples 2 of the FRCC draft BES definition Appendix A at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf). Switch "A" in example 2 is usually not automatic. Breaker D and E are automatic. Switch A is radial, Breakers D&E may not be. FMPA recommends replacing "automatic interrupting" with "switching" and allow manual switching devices to establish the boundary between BES and non-BES, otherwise we get into splitting up ring-buses or breaker-and-a-half schemes, or flooding the Exception Procedures with a lot of needless requests. Also, "device" is singular whereas the exclusion is for a "radial system". I presume that the SDT intends that if there are two lines originating at the same substation

supply a load in a redundant nature, that the "radial system" would be excluded (see examples 1, 3 and 4 of the FRC draft BES Definition Attachment A), which would mean there would be more than one device. Also, the phrase "A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service." is misplaced in bullet a) and belongs in the non-bulleted section. FMPA recommends re-wording E1 to be: "Any radial system which is connected from a single Transmission source (such as a contiguous bus configuration like a ring bus or breaker-and-a-half scheme) originating with switching device(s) and meeting the criteria in bullets a, b or c below. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. a) Only serving Load b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5 c) A combination of (a) and (b)"
Yes
Yes
FKEC agrees with FMPA's comments shown below: FMPA agrees with the intent / concept, but has suggested wording changes to add clarity. The exclusion refers to groups of Elements that "distribute power to Load rather than transfer bulk power across the interconnected system." The use of the term "bulk power" is vague and could be read incorrectly as a reference to the "bulk-power system," which is defined in the Federal Power Act but is not a NERC defined term. If the LDN is connected to the BES at more than one location, there will by definition be some loop flow. We recommend below that Exclusion 3(d) be revised to quantify the amount of loop flow that is permissible in an excluded LDN. In the context of the first sentence of Exclusion E3, less specificity is needed, and the sentence should only be revised for the sake of accuracy to state: "Groups of Elements operated above 100 kV that are primarily intended to distribute power to load rather than to transfer power across the interconnected System." The exclusion's reference to connection "at more than one location" is vague. The sentence should be revised to read "connected to the Bulk Electric System (BES) from more than one Transmission source solely to improve the level of service to retail customer Load," and "Transmission source" should have the same meaning that it does in E1. E3(a) should require that there be switching devices between the LDN and the BES, not specifically automatic fault-interrupting devices. The term "separable by" in "Separable by automatic fault interrupting devices" is unclear and should be reworded. E3(b) To avoid pulling an LDN into the BES based on very small customer-owned generation (such as rooftop photovoltaics and hospital backup diesel generators) that the utility does not consider or rely on, or necessarily even know about, the item should be reworded: "Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA of generation used to meet the resource-adequacy requirements of electric utilities." E3(d) states "Not used to transfer bulk power." As noted above, "bulk power" is a vague term. There will necessarily be some loop flow on a system that is connected to the BES at more than one location. The amount of permissible loop flow for this purpose needs to be determined and stated in this item.
Yes
Yes
No
Individual
Thad Ness
American Electric Power
No
Rather than a 75 MVA threshold as designated in I3, we suggest a threshold of 100 MVA which we believe to be more appropriate. It is difficult to provide comments regarding the BES definition, given the parallel nature of the other related deliverables currently out for review. For example, there needs to be a defined relationship between an approved definition of BES, the technical principles for

demonstrating BES exception, and the exception process itself. When closely related projects such as these are done simultaneously, no individual deliverable can rely on the completed work of another. As a result, we risk having conflicting decision making across these projects.
Yes
No
The use of the word “including” within I2 seems to imply the inclusion of 20MVA (or greater) generating units beyond those which have a high side voltage of 100 kV or above. Was this intentional? If not, the following wording is preferable: "Individual generating units greater than 20 MVA (gross nameplate rating) having a GSU with a high side voltage of 100 kV or above. This includes equipment installed from the generator terminals through the high side of the GSU."
No
Please see response to question 3.
Yes
While AEP supports the concept of including designated Blackstart Cranking paths as part of the BES, there is concern that doing so without respect to voltage would unnecessarily include elements which should not be included as part of the BES. More clarity is needed to explicitly describe the scope of the inclusion. Is it limited to Transmission facilities or more broad to include Distribution facilities or even sub-Distribution auxiliary systems? If so, this would unnecessarily bring those sub-systems under the purview of PRC-005, for example.
Yes
Yes
AEP supports the concept of the exclusion of radial systems, however further clarification is needed regarding whether or not the source equipment is included as part of the radial system (for example, ring bus or breaker and a half bus configurations). In addition, “automatic interruption device” should be defined to alleviate any ambiguity.
Yes
Yes
Yes
AEP agrees with the proposed exclusion to the extent that such excluded small utilities would continue to provide any needed information the registered entities have requested from the excluded small utilities to ensure the reliability compliance of those registered entities.
Yes
No
AEP is not aware of any conflicts involving the proposed definition and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue.
Usage of the NERC term “Element” clearly excludes associated auxiliary equipment such as protective relay systems and metering systems. If this is not the intent of the SDT, then there needs to be more comprehensive BES nomenclature established that distinguishes among the applicable primary-voltage equipment, the associated auxiliary equipment having an impact to the BES, and the associated ancillary equipment having no electrical impact to the BES. In addition, please see response to question 1 regarding the request for industry input on concurrent, closely related projects (approved definition of BES, the technical principles for demonstrating BES exception, and the exception process itself).
Individual
Rick Drury
East Kentucky Power Cooperative, Inc.
Yes

Yes
Yes
Yes
Yes
Yes
Yes
EKPC has a concern with the wording of the definition for Exclusions: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service." This wording leads EKPC to believe that a radial 138 kv line that steps down into a 69 kv looped system that have no facilities included in the BES would not be excluded as radial. This line cannot have any more impact on the BES than the 69 kv system it connects to that is excluded from the BES. Therefore I would add to exclusion E1a, "or only connecting to a transformer stepping down to a voltage below 100kv".
Yes
Yes
Yes
Yes
Yes
Individual
Andrew Z. Pusztai
American Transmission Company, LLC
Yes
However, to clarify the core definition, ATC proposes to change the text for Real and Reactive Power resources from "connected" to "operated or connected".
Yes
Yes
No
ATC offers the following alternative language: • The wording "connected through a common bus" is drawn from the NERC Compliance Registry Criteria. ATC agrees with the language if the intent is to let entities classify the applicable multiple generating units as part of the BES only when it is connected to one (common) bus. However, if the intent is for entities to also classify multiple generation as part of the BES when it is connected through two or more GSUs to different bus sections of a set of (common) buses that are interconnected through bus-tie breakers [which may be done to provide improved reliability and maintenance flexibility], then wording like "connected through a common bus or set of interconnected buses" would be more appropriate. • It is also ATC's understanding that

entities do not have to classify applicable multiple generating units as part of the BES when the aggregate MVA is connected to different buses at different voltage levels and no more than 75 MVA is connected to any one bus (or set of interconnected buses) at a single voltage level of 100 kV or more. Is this a correct interpretation?
Yes
For clarification, ATC understands that only blackstart resources that are part of a Transmission Operator's Blackstart Restoration plan are included in I4 (Ref. EOP-005) and should be consistent with the upcoming CIP-002 version 4 standard. ATC also recommends that the SDT consider adding Blackstart Resources as a defined term in the NERC Glossary.
Yes
ATC poses the following questions to the SDT for consideration: Which components of the dispersed power resources would be classified as BES? Are the small wind generator units and terminals through the GSUs to a higher voltage (e.g. 34.5 kV) collector bus classified as BES Elements? Are the higher voltage bus, the associated elements (e.g. protection system, cap bank, SVC, etc.), and step up transformer to a system Element of 100 kV or above to be classified as BES Elements?
Yes
ATC offers the following alternative language: ATC suggests replacing the wording of "connected from a single Transmission source" with "connected to the Bulk Electric System". Furthermore, ATC believes that Exclusion E1 is appropriate and should be part of the definition of the BES. However, ATC believes that a registered entity should be given the option to not be required to follow the exclusions in the E1 criteria. Some registered entities for operational and business purposes may wish to continue to classify their radial system assets, which are operated above 100 kV, as BES components.
Yes
Yes
No
ATC believes that small utilities have interfacing responsibilities, and should not be exempt if they own elements (e.g. CTs, batteries, etc.) that are part of a protection scheme that protects the BES Elements.
Yes
ATC agrees that the revised bright-line core definition and associated inclusion and exclusion criteria excludes distribution, however, recognizes that there are protection elements that may be owned by distribution which may trip a BES Element. (Covered by NERC Standard PRC-005)
No
Group
Alabama Public Service Commission
John Free
No

In drafting the inclusions and exclusions that accompany the core BES definition, the SDT needs to be very careful in considering jurisdictional issues. FERC has recognized in its recent orders regarding the BES definition that local distribution facilities are not subject to its jurisdiction under Section 215 of the Federal Power Act. As the SDT considers the scope of the inclusions and exclusions from the BES Definition, it needs to consider whether the proposed provisions only include: 1) facilities or control systems that are "necessary" for operating an interconnected electric transmission network and 2) whether they involve generation facilities that are "needed" to maintain transmission system reliability. If the proposed inclusions and exclusions result in the BES definition applying to facilities beyond this "necessary" and "needed" scope (such as local distribution facilities), then the definition would be inconsistent with Section 215 and could improperly make those facilities subject to "reliability standards" contrary to the Federal Power Act. The APSC generally supports the BES Core Definition and all three Exclusions proposed by the SDT. The APSC strongly supports Exclusion E3 for local distribution networks and Exclusion E1 for radial systems (subject to the concerns below). Exclusion E3 will ensure State jurisdiction over facilities that are used in the local distribution of electric energy. The APSC does not support Inclusion I2 for individual generating units greater than 20 MVA. Inclusion I2 should be eliminated entirely because it will result in too many radial sub-transmission load serving facilities losing their non-BES status, when those facilities are not "necessary" for bulk power system reliability. The APSC supports Inclusion I3 (75MVA) as a sufficient generating unit threshold for purposes of this definition. If Inclusion I2 is eliminated, then the reference to Inclusion I2 within Exclusion E1 should also be eliminated.
Yes
See comments in response to Question 11 above.
The Alabama Public Service Commission (APSC) appreciates the fact that a member of the Oregon PUC Staff is participating on this BES Definition drafting team. In reviewing the proposed definition, the APSC's focus is to ensure that appropriate definitional lines are drawn so that recognized jurisdictional boundaries are acknowledged and respected. The concern underlying this focus of the APSC is the fact that utilities must make significant investments to comply with mandatory reliability standards and, accordingly, compliance with such standards must be necessary and not duplicative. Furthermore, there should be a commensurate reliability benefit associated with the cost of the investments needed for compliance. The proposed definition and NERC's development of standards should focus on reliable operation of the interconnected electric transmission network (BES) in order to prevent local events from affecting other regions, not to ensure reliable operation at the local level.
Individual
Linda Jacobson
Farmington Electric Utility System
Yes
Yes
Yes
Yes
No
The drafting team should consider adopting language similar to CIP-002-4 for Cranking Paths. Cranking Paths up to the the point on the Cranking Path where two or more path options exist.
Yes
Yes
Yes
Yes

Yes
Yes
No
The Rules of Procedure for Exceptions should define the compliance expectation of the entity while an exception is being considered; similar to the CIP TFE process.
Individual
Rich Salgo
Sierra Pacific Power Co d/b/a NV Energy
Yes
The revised core definition serves to address the directives of the Commission Order in 743 and 743A, particularly the elimination of regional discretion, and it also eliminates the ambiguity of the word "generally".
No
We agree with the concept; however there are two issues that must be resolved. First, the "two windings" language should be changed to "two terminals", as in the case of an auto-transformer, there is technically only one winding, and it would fail to be included in this inclusion designation as written. Second, a literal read could have an unintended interpretation that transformers with fewer than 2 windings at 100kV might still be included through the core definition. The SDT should consider whether this I1 inclusion item would be better applied in the converse as an exclusion designation.
Yes
While 20MVA has no technical basis for the threshold above which a generator should be considered to be necessary for the reliable operation of an interconnected transmission network, the industry has not provided any technical data to support a value other than this which has been established in the NERC Statement of Compliance Registry Criteria.
Yes
While 75MVA has no technical basis for the threshold above which an aggregate generation plant should be considered to be necessary for the reliable operation of an interconnected transmission network, the industry has not provided any technical data to support a value other than this which has been established in the NERC Statement of Compliance Registry Criteria.
Yes
Yes
Similar to the response to Q4, the 75MVA has no technical basis as being a threshold for determining necessity in the reliable operation of the interconnected transmission system; however, no technical data supports an alternate value.
Yes
Agree with this exception and emphasize that the make-before-break language is essential to be retained in this exclusion.
Yes
Yes
NV Energy strongly supports the definitional exclusion of LDN's from the BES, and such exclusion is necessary to ensure that the BES definition meets the statutory requirement to exclude all facilities used in the local distribution of electric power. In the characteristics of the LDN, item (d) should be clarified to eliminate the ambiguity that arises from the term "used". We suggest the following revision: Not intentionally used to transfer bulk power: The LDN is not used to provide a transaction scheduling path for, nor intentionally used to accommodate the transfer of, energy originating outside the LDN for delivery through the LDN;

Yes
Yes
Through the radial exclusion and the LDN exclusion (E1 and E3), the definition has made a delineation between distribution and bulk transmission. In this exclusion language, the definition as proposed addresses the quantifiable parameters from the FERC 7-factor transmission test.
No
Group
Western Electricity Coordinating Council
Michelle MIzumori
Yes
Yes
WECC agrees in concept and understands that the intent of the phrase "other than GSU transformers" was used to prevent duplication or conflict with I2. However, it has the unintended consequence of creating the appearance that GSU transformers are not included in the definition, which is more of a conflict. By removing this phrase, such transformers would be clearly included because, if both terminals are connected at greater than 100 kV, it will also be true that the high side is connected at greater than 100 kV, per I2. WECC suggests removing this phrase. Also, the final statement more appropriately should be "…unless excluded under Exclusions E1 or E3." Finally, the term "two windings" may be technically incorrect because some transformers may only have one winding. This wording would exclude single-winding transformers at or above 100 kV. One option may be to change the language to "two terminals" instead of "two windings." It may also be useful to clarify that transformers with one terminal above and one terminal below 100 kV should be excluded.
Yes
WECC agrees in concept, but the language could be clarified on the GSU transformer. Suggested language "Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals up to and including the GSU transformer, which has a high-side voltage of 100 kV or above."
Yes
WECC agrees in concept, but suggests that the phrase "connected through a common bus" may be unclear. For example, if there is also load connected through that common bus, does that net, does it negate the inclusion, or does it not matter? Perhaps a phrase such as "regardless of the amount of load also connected through that common bus" would help. The GSU comment from I2 also applies. Suggested language "…including the generator terminals up to and including the GSU transformer, which has a high-side voltage of 100 kV or above."
Yes
Yes
WECC agrees in concept, but it is unclear why there is the new term "power producing resources." Is this meant to include both Real Power Resources and Reactive Power Resources (terms used in the base definition)? This should be clarified. In addition, it appears from comments of the drafting team that the intent of this inclusion was primarily for wind and solar farms, but the language would also pull in traditional generation that happens to be connected at a single point. The language should be clarified so that it only captures the intended generation.
Yes
WECC generally agrees in concept. However, it is unclear what is required to demonstrate the "make-before-break" connection. Is this intended to mean that the normally-open switch is mechanically or electrically interlocked to ensure the "make-before-break" requirement is met? It would be a normal switching practice to close the normally-open switch to make the parallel before opening the normally-closed switch, but is the normal switching practice sufficient to make this claim? Also, it is

unclear whether the automatic interruption device itself is a part of the BES.
Yes
WECC agrees in concept, but it is unclear what happens if/when the "binding obligation" ends, as well as what constitutes a "binding obligation." E2(ii) should be clarified as to what constitutes "standby, back-up, and maintenance power services provided…pursuant to a binding obligation." This may cause administrative burden to monitor such binding commitments.
Yes
WECC agrees in concept. However, in sub-bullet b), it should be clarified that the 75 MVA is gross-aggregate nameplate, as described in the inclusions. In sub-bullet c), it should be clarified whether this requirement is at any time or is for hourly integrated values. Also, the use of the term "major transfer paths" should be modified to be "major transfer paths in the Table titled Major WECC Transfer Paths in the Bulk Electric System." Finally, the reference to "above 100 kV" should be "at or above 100 kV" for consistency.
No
As written, it is unclear how this exclusion differs from the Radial exclusion. The term "single Transmission source" needs to be clarified – it could be read to be a single line or a single entity, which would change the meaning of this exclusion. It is also improper to include registration criteria in a definition. Furthermore, "small utility" needs to be defined more clearly. The last sentence appears circular because ownership of a transmission element would draw the owner into registration.
Yes
No
The definition should also reference the exception process and technical justification allowed for further inclusion or exclusion from the BES.
Group
Western Montana Electric Generating and Transmission Cooperative
William Drummond
No
As a general matter, Western Montana Electric Generating and Transmission Cooperative (WMG&T) supports the approach the Standards Development Team ("SDT") has taken to defining the Bulk Electric System ("BES"). The changes made in the revised core definition are helpful and represent significant progress toward an acceptable definition. With an effective and efficient exclusion process, the draft will better define the BES as a whole. We urge the SDT to bear in mind the restrictions contained in Section 215 of the Federal Power Act ("FPA") The "bulk-power system" (As per FERC, we treat the statutory term "bulk-power system" as equivalent to the term ordinarily used in the industry, "Bulk Electric System") definition imposes a clear limit on the reach of the mandatory reliability regime. The BES is made up of only those "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" and "electric energy from generation facilities needed to maintain transmission system reliability." Congress reinforced that limit in Section 215(i), where it emphasized that the FPA authorizes the imposition of reliability standards "for only the bulk-power system." WMG&T is concerned that the SDT's proposed definition is overly-broad, and that it will sweep in many Elements that have little or no material impact on the reliable operation of the interconnected bulk transmission grid. For example, the definition uses the arbitrary 20 MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators. Accordingly, for the BES definition to conform to the requirements of the statute, the SDT must adopt an effective mechanism to exempt facilities like these that are improperly swept in by the SDT's brightline approach to inclusions and exclusions. For this reason, the Exception process to accompany the SDT's definition is of critical concern. If the SDT incorporates this statutory language as its core definition, it will have addressed FERC's primary concern with a minimum of disruption to the current NERC system of definitions. The definition could then be further elaborated to show specific points of demarcation for each inclusion and exclusion similar to that Proposal 6 from the WECC Bulk Electric System Definition Task Force ("BESDTF") team to further delineate BES and non-BES facilities.

No
In concept, we support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams noting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort. Also, the reference to "two windings of 100 kV or higher" may create some confusion because many three-phase transformer banks have 6 or 9 windings, depending on whether the transformer has a tertiary. We suggest clarifying this provision by changing the clause reference two windings to read: "the two highest voltage transformer windings of 100 kV per phase that are connected to the Bulk Electric System." We again urge the SDT to consider further delineation of points of demarcation similar to WECC BESDTF Proposal 6.
No
WMG&T is concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Unfortunately, the SDT appears to have concluded that any interconnection facility operating above 100-kV should be classified as BES. The result will be to require Generation Owners to register as Transmission Owners/Operators, as well, producing substantial additional compliance costs for those Generation Owners but resulting in little or no improvement in the reliability of the BES. We recommend that the SDT, like the Project 2010-07 SDT (commonly referred to as the GO/TO Team), give careful consideration to the practical results of its recommendations rather than relying on abstract conclusions about whether a "contiguous" or "non-contiguous" BES is more desirable. We are concerned that the SDT's pursuit of a "contiguous" BES will result in a substantially over-inclusive BES definition. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. NERC's Standards Drafting Team for Project 2010-07, has already considered this question and, based on an in-depth review of potentially applicable reliability standards, has concluded that generation interconnection facilities, even if operated above 100-kV, need to comply only with a limited set of reliability standards in order to achieve the reliability goals. Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability.
No
WMG&T is concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission

system reliability" and are therefore properly included in the BES definition.
Yes
Including "all" blackstart and blackstart cranking paths in the BES may ultimately provide an incentive to the electric industry to reduce the number of resources with blackstart capability. We therefore suggest that essential blackstart resources identified by the Regional Entity should be included in the Bulk Electric System, but non-essential blackstart resources need not be.
No
WMG&T agrees that it is important to address wind generation facilities and similar generation facilities in which a large number of generating units, each with a relatively small capacity, are clustered and fed into the grid at a single interconnection point. That being said, WMG&T is concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.
Yes
FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained. We believe the exclusion as drafted adequately defines radials.
No
As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold (through reference to Inclusion I2) lacks an adequate technical justification in this context. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit ("standby, back-up, and maintenance power…") should be eliminated.
Yes
WMG&T strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. WMG&T supports the LDN exclusion, but we believe the exclusion should be refined in the following respects: • The SDT's draft states that: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load." We recommend that the SDT revise the sentence quoted above as follows: "LDN's are connected to the Bulk Electric System (BES) at more than one location to improve the level of service to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances.
Yes
WMG&T supports the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that can ill afford the substantial costs that accompany imposition of mandatory compliance with reliability standards. Further, we agree that the small utilities covered by the exemption will have no measurable impact on the operation of the interconnected BES. In the Pacific Northwest, many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.
No
While WMG&T agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1, WMG&T believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. As discussed in our

answer to Question 3, WMG&T notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that "users" of the BES can be subject to reliability regulation. Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BESDTF Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.
Yes
The Exceptions process is a necessary part of making this proposal complaint with the Federal Power Act. As noted in our responses to Question 1 and Question 11, we believe the basic SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used in the local distribution of electric energy. The SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities.
WMG&T has these additional concerns: • The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." WMG&T is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BESDTF approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. • For the reasons we have explained in our answer to Question 11, we believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process.
Group
ReliabilityFirst
Jim Uhrin
No
We feel the intent of the FERC Order was to simplify and not complicate the definition and the inclusion/exclusion process. This definition is now even more complex. we also feel that as a result of several defined terms such as the LDN teh proposed definition will in most cases exclude portions of networks in locations such as Washington DC, New York and other Metro Areas, many Munis and citiies that are currently registered. If the intent is to remove entities from the registry this will in most likely do it.
Yes
Yes
Yes

Yes
but needs to state if this is ALL paths or just a single path, there may be many.
Yes
but the term "Dispersed Power Producing Resuorces" needs to be defined.
Yes
teh term "Single Transmission Source" needs defined, and as well what elemnents are defined by "automatic interrupting devices" there is debate out in the industry.
Yes
as long as the resources when removed from service have a load component that accompanies it, otherwise there could be an impact to the BES.
No
the LDN term must be a NERC defined term and if this is allowed as mentioned in the first comment, we feel the intent of the FERC Order was to simplify and not complicate the definition and the inclusion/exclusion process. This definition is now even more complex. we also feel that as a result of several defined terms such as the LDN teh proposed definition will in most cases exclude portions of networks in locations such as Washington DC, New York and other Metro Areas, many Munis and citiies that are currently registered. If the intent is to remove entities from the registry this will in most likely do it.
No
it needs to be clear that "all" items must be met to be excluded in E4, E4b seems to conflict with I2 that states it needs included, E4a should state a single source unless LDNs are allowed mutilple sources and then could be considered networked, E4c needs to define who make a the determination on flow and under all system configurations
No
we feel that BES elements have been included in teh exclusions
No
Individual
Jennifer Eckels
Colorado Springs Utilities
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
No
Colorado Springs Utilities generally supports Exclusion E3 that provides for the exclusion of Local Distribution Networks (LDNs) from the BES, with the following modifications: 1) It is not necessary to

articulate the nature of the LDN's connection to the BES. If the characterizations are met, the number of connections and the reasons for the connections are immaterial. 2) If the LDN is a normal net import, there is no need to limit the amount of connected generation since the generation will have no material effect on the BES. 3) 'Bulk power transfers' are acceptable across an LDN if the transfer is to a nested LDN. Contractual energy, originating outside the LDN and delivered to a nested LDN, for example, is still load delivery and has the same physical characteristics of a holistic LDN and the transfer of bulk power is immaterial. We propose changing Exclusion E3 to read, "Local Distribution Networks (LDN): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the Interconnected System. The LDN is characterized by all of the following: a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices; b) Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN; c) Not used to transfer bulk power, except transfers to nested LDNs: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN, except transfers to nested LDNs; and d) Not part of a Flowgate or Transfer Path: The LDN does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL)."
Yes
Yes
Please refer to comments on question 9 - Exclusion 3
No
Colorado Springs Utilities supports the SDT's efforts to create an acceptable BES definition directly linked to an exemption process. Know that WECC has a task force, the Bulk Electric System Definition Task Force (BESDTF), which has done some notable work on this task. See WECC BESDTF Proposal 6, Appendix C (http://www.wecc.biz/Standards/Development/BES/default.aspx). The BES definition is very complex and the BESDTF has already addressed many of the tough issues that have yet to be addressed in this process, such as: • Local Distribution Network definition for automatic exemption • Determination of radial facilities • Demarcation of BES and non-BES Elements • Alternate dispute resolution process • Assignment of the burden of proof for the exemption process • Technical approach for the inclusion/exclusion determination
Group
Cogeneration Association of California and Energy Producers & Users Coalition
Don Brookhyser
Yes
To respond to WECC's concern, please consider that facilities procure standby service because it is needed for the facility's operation, not to escape registration or compliance. This is a long-term commitment, and the sufficiency of the service will be monitored by the state regulatory authority. "Standby service" is a term well-understood in the industry and generally not further defined in any utility tariff.

Group
Florida Municipal Power Agency
Frank Gaffney
Yes
FMPA appreciates the opportunity to comment on the draft BES definition. We generally support the direction taken by the SDT, with some minor changes. FMPA suggests a few clarifying edits to the core definition. First, the definition should refer to "non-generator Reactive Power resources," to make clear that although all generators provide some reactive power, those that do not meet the criteria of I2-I5 are not included in the BES. There is ambiguity concerning whether a transformer stepping down from >100 kV to <100 kV is included, though FMPA believes that the SDT intends to exclude such transformers. It is clear that transformers with two windings >100 kV are included and GSUs for registered generators are included, but it is somewhat unclear in the current draft whether a 138 kV to 69 kV transformer is included or excluded, for instance. FMPA suggests making it clear that the intent of the SDT is to include (a) GSUs associated with BES generators and (b) transformers with 2 or more windings >100 kV, and that other transformers are excluded. We also believe the drafting team intended to exclude all elements that are not included either under the BES definition and designations or through the exception process. For the sake of clarity, we suggest that a sentence to that effect be added to the core definition. Finally, we note that the definition does not currently refer to the existence of the exception process. We suggest that such a reference be added either to the core definition (as in the revised text suggested by FMPA in this response) or to the lists of Inclusions and Exclusions. The following is the core definition incorporating the changes suggested by FMPA: All Transmission Elements (except transformers) operated at 100 kV or higher, transformers as described below, Real Power resources as described below, and non-generator Reactive Power resources connected at 100 kV or higher unless such designation is modified by the list shown below. The NERC Rules of Procedure [citation] provide an Exception Process through which Elements not included in the BES under this definition and designations may be included in the BES, and Elements included in the BES under this definition and designations may be excluded from the BES. Elements not included in the BES either by application of this definition and designations, or through the BES exception process, are not BES Elements.
Yes
FMPA supports Inclusion I1 but proposes clarifying edits. To minimize possible confusion as to the category of transformers being addressed in I1, and the sufficiency of a single applicable Exclusion, FMPA suggests the following rewording: "Transformers, including phase angle regulators, and not including generator step-up (GSU) transformers, with two windings of 100 kV or higher unless excluded under Exclusion E1 or E3."
Yes
FMPA understands that the intent is to define the BES component of qualifying generators as that equipment from the generator terminals through the GSU. To convey clearly this point, as well as that only generators that are both over 20 MVA and connected through a GSU with a high side voltage of at least 100 kV are included in the BES, I2 should be reworded as follows: "Individual generating units greater than 20 MVA (gross nameplate rating), connected through a GSU with a high-side voltage of 100 kV or above. A BES generator includes the equipment from the generator terminals through the GSU."
Yes
I3 contains language similar to I2, and should be similarly reworded, as follows: "Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating), connected through a common bus operated at a voltage of 100 kV or above. A BES generating plant includes the equipment from the generator terminals through the respective GSUs."
Yes
Yes
FMPA agrees with the concept of Inclusion I5 but suggests a language change to clarify what we

understand to be the drafting team's intent, that the inclusion is intended to apply to dispersed wind and solar generating plants, and not, for example, to a radially-connected city with an aggregate of 75 MW of small generators behind-the-meter. This distinction is appropriate because such a city cannot have the same impact on the grid as a 75 MW wind farm; loss of the radial connecting the city to the grid would result in loss of its load as well as its generation, so that the supply-demand mismatch would be far less significant. FMPA thus suggests that I5 be revised to read: I5 Wind farm or solar power installation with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.

Yes

FMPA agrees with the intent / concept, but has suggested wording changes to add clarity. The words "described as" should be deleted from the exclusion to avoid confusion. What matters is how the system is actually connected, not how someone describes it. In addition, "a single Transmission source" should be defined, and should be generic enough to encompass the various bus configurations. It is not the case, for example, that each individual breaker position in a ring bus is a separate Transmission source; in that case, a bus at one voltage level at one substation should be considered "a single transmission source." Some examples of configurations that should be considered a single transmission source for this purpose are at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf, Examples 1-6. The phrase "automatic interrupting device" should be replaced with the phrase "switching device." Many radials are connected to ring buses or breaker-and-a-half schemes where the breakers (automatic interrupting devices) are within the bus arrangement where the appropriate division between BES and non-BES is at the disconnect switch as the radial "takes off" from the bus arrangement. As written, E1 would eliminate most radials from automatic exclusion and force most of them into the Exception Procedure. For instance, see examples 2 of the FRCC draft BES definition Appendix A at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf). Switch "A" in example 2 is usually not automatic. Breaker D and E are automatic. Switch A is radial, Breakers D&E may not be. FMPA recommends replacing "automatic interrupting" with "switching" and allow manual switching devices to establish the boundary between BES and non-BES, otherwise we get into splitting up ring-buses or breaker-and-a-half schemes, or flooding the Exception Procedures with a lot of needless requests. Also, "device" is singular whereas the exclusion is for a "radial system". I presume that the SDT intends that if there are two lines originating at the same substation supply a load in a redundant nature, that the "radial system" would be excluded (see examples 1, 3 and 4 of the FRC draft BES Definition Attachment A), which would mean there would be more than one device. Also, the phrase "A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service." is misplaced in bullet a) and belongs in the non-bulleted section. FMPA recommends re-wording E1 to be: "Any radial system which is connected from a single Transmission source (such as a contiguous bus configuration like a ring bus or breaker-and-a-half scheme) originating with switching device(s) and meeting the criteria in bullets a, b or c below. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. a) Only serving Load b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5 c) A combination of (a) and (b)"

Yes

We understand that E2 is intended to apply only to retail customers' generation. The exclusion should therefore be revised to make that limitation clear. Specifically, the first sentence should read: "A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the retail customer's side of the retail meter.

Yes

FMPA agrees with the intent / concept, but has suggested wording changes to add clarity. The exclusion refers to groups of Elements that "distribute power to Load rather than transfer bulk power across the interconnected system." The use of the term "bulk power" is vague and could be read incorrectly as a reference to the "bulk-power system," which is defined in the Federal Power Act but is not a NERC defined term. If the LDN is connected to the BES at more than one location, there will by definition be some loop flow. We recommend below that Exclusion 3(d) be revised to quantify the amount of loop flow that is permissible in an excluded LDN. In the context of the first sentence of

Exclusion E3, less specificity is needed, and the sentence should only be revised for the sake of accuracy to state: "Groups of Elements operated above 100 kV that are primarily intended to distribute power to load rather than to transfer power across the interconnected System." The exclusion's reference to connection "at more than one location" is vague. The sentence should be revised to read "connected to the Bulk Electric System (BES) from more than one Transmission source solely to improve the level of service to retail customer Load," and "Transmission source" should have the same meaning that it does in E1. E3(a) should require that there be switching devices between the LDN and the BES, not specifically automatic fault-interrupting devices. The term "separable by" in "Separable by automatic fault interrupting devices" is unclear and should be reworded. E3(b) To avoid pulling an LDN into the BES based on very small customer-owned generation (such as rooftop photovoltaics and hospital backup diesel generators) that the utility does not consider or rely on, or necessarily even know about, the item should be reworded: "Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA of generation used to meet the resource-adequacy requirements of electric utilities." E3(d) states "Not used to transfer bulk power." As noted above, "bulk power" is a vague term. There will necessarily be some loop flow on a system that is connected to the BES at more than one location. The amount of permissible loop flow for this purpose needs to be determined and stated in this item.

Yes

FMPA supports this exclusion. For the sake of clarity, the final sentence should be revised to read as follows: "For purposes of this exclusion, a "small utility" is an entity that performs a Distribution Provider or Load Serving Entity function but is not required to register as a Distribution Provider or Load Serving Entity by the ERO."

Yes

No

Individual

Jianmei Chai

Consumers Energy Company

No

The generic inclusion within the definition of BES, of the NERC-defined term, "Transmission", has the potential to cause confusion and controversy. Small entities that own facilities that have been approved by FERC as being classified as "distribution" according to the FERC Order 888 seven-factor test, could be viewed as owning "Transmission." Therefore, Regional Entities might require these small entities to register as Transmission Owners, Transmission Operators, and/or Transmission Planners. However, these facilities may not form a contiguous system, as expressed in the defined term, "Transmission" and being "An interconnected group of lines and associated equipment". Alternatively, such facilities, because they do not form such a contiguous system (and thus are not, and should not be, classified as Transmission) may inappropriately be excluded from the BES. Therefore, even though "Transmission Facilities" represent a subset of the BES, we urge that NERC avoid the use of the term, "Transmission" within the definition of BES. NERC should more explicitly describe, in a functional manner independent of the term, "Transmission", what is intended to be included within the core definition. For NERC to fail to do so is to invite challenges to the final definition as well as establish inappropriate reliability gaps. We agree with GO/TO Interface Project 2010-07 method of resolving reliability gaps by expanding requirements to the Distribution Provider function as necessary. We propose that "All Transmission Elements …" be replaced with "All network System Elements …"

No

The facilities currently listed in Inclusion I1 are already arguably included in the core definition. Inclusion I1 should be reclassified as an Exclusion to cover transformers that do not meet the criteria in Inclusion I1 such as those transformers with a single winding of 100kV or higher. Following is our proposed language for the exclusion we are proposing. Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, that have less than two windings of 100 kV or

higher.
Yes
We are supportive of Inclusion I2. Generators 20MVA and greater with terminals through a GSU connected at 100kV and above are treated as Bulk Electric System at this time along with their radial connections to the Transmission system. We agree with the SDT that no technical rationale for changing this condition exists.
Yes
No
We recommend that the word, primary, be added, and that the phrase, "regardless of voltage" be removed: "Blackstart Resources and the designated primary blackstart Cranking Paths identified in the Transmission Operator's restoration plan." NERC's May 19, 2011 webinar described this as applying only to the path directly from the blackstart unit to the Transmission System. Is this correct? If so, please clarify within the definition.
Yes
Yes
Yes
Yes
LDN needs to be specifically defined. The draft appears to come close with the term "Groups of Elements operated above 100kV that distribute power to Load rather than transfer bulk power across the interconnected System." These Groups of Elements should be contiguous to avoid confusion. We are also concerned with the limits on connected generation.
No response to be provided to this question.
No
The proposed definition appears to treat "BES" and "Transmission" synonymously, and this is highly likely to have a significant effect on registration, even if this is not intended. To support consistency between reliability and tariffs, we recommend that more direct consideration be given to the FERC 7-factor test that has been consistently used to delineate transmission facilities for tariff purposes, and to discriminate between registration requirements for TO and DP based on this delineation. Further, reliability gaps will not be created (or can be addressed by minor changes to the applicable standards) if this recommendation is adopted because all aspects of the applicable standards/requirements are (or will be) captured by the current registration process.
Yes
The proposed definition creates a tension between FERC Order 888 and the resulting 7-factor test as applied for tariff purposes, and the registry criteria for registration of Transmission Owners and Transmission Operators. Entities with assets defined by FERC as Distribution might challenge any rules that treat Distribution assets as Transmission as not being consistent with the Federal Power Act of 2005.
Yes. We propose an alternative core BES definition to read as follows: "All network System Elements operated at 100 kV or higher, Real Power resources as described below, and Reactive Power resources connected at 100 kV or higher unless such designation is modified by the list shown below." We support extending the transition period to 24 months.
Individual
Chad Bowman
Chelan PUD - CHPD
No
As a general matter, Chelan County Public Utility District (CHPD) supports the approach the Standards Development Team ("SDT") has taken to defining the Bulk Electric System ("BES"). The changes made in the revised core definition are helpful and represent significant progress toward an acceptable definition. With an effective and efficient exclusion process, the draft will better define the

BES as a whole. We urge the SDT to bear in mind the restrictions contained in Section 215 of the Federal Power Act ("FPA") The "bulk-power system" (As per FERC, we treat the statutory term "bulk-power system" as equivalent to the term ordinarily used in the industry, "Bulk Electric System") definition imposes a clear limit on the reach of the mandatory reliability regime. The BES is made up of only those "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" and "electric energy from generation facilities needed to maintain transmission system reliability." Congress reinforced that limit in Section 215(i), where it emphasized that the FPA authorizes the imposition of reliability standards "for only the bulk-power system." CHPD is concerned that the SDT's proposed definition is overly-broad, and that it will sweep in many Elements that have little or no material impact on the reliable operation of the interconnected bulk transmission grid. For example, the definition uses the arbitrary 20 MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators. Accordingly, for the BES definition to conform to the requirements of the statute, the SDT must adopt an effective mechanism to exempt facilities like these that are improperly swept in by the SDT's brightline approach to inclusions and exclusions. For this reason, the Exception process to accompany the SDT's definition is of critical concern. If the SDT incorporates this statutory language as its core definition, it will have addressed FERC's primary concern with a minimum of disruption to the current NERC system of definitions. The definition could then be further elaborated to show specific points of demarcation for each inclusion and exclusion similar to that Proposal 6 from the WECC Bulk Electric System Definition Task Force ("BESDTF") team to further delineate BES and non-BES facilities.

No

In concept, we support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams noting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort. Also, the reference to "two windings of 100 kV or higher" may create some confusion because many three-phase transformer banks have 6 or 9 windings, depending on whether the transformer has a tertiary. We suggest clarifying this provision by changing the clause reference two windings to read: "the two highest voltage transformer windings of 100 kV per phase that are connected to the Bulk Electric System." We again urge the SDT to consider further delineation of points of demarcation similar to WECC BESDTF Proposal 6.

No

CHPD is concerned that I2 inclusion criteria that includes the arbitrary 20 MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted improperly expands the BES definition to include generators that the statute requires to be excluded. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Unfortunately, the SDT appears to have concluded that any interconnection facility operating above 100-kV should be classified as BES. The result will be to require Generation Owners to register as Transmission Owners/Operators, as well, producing substantial additional compliance costs for those Generation Owners but resulting in little or no improvement in the reliability of the BES. We recommend that the SDT, like the Project 2010-07 SDT (commonly referred to as the GO/TO Team), give careful consideration to the practical results of its recommendations rather than relying on abstract conclusions about whether a "contiguous" or "non-contiguous" BES is more desirable. We are concerned that the SDT's pursuit of a "contiguous" BES will result in a substantially over-inclusive BES definition. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. NERC's Standards Drafting Team for Project 2010-07, has already considered this question and, based on an in-depth review of potentially applicable reliability

standards, has concluded that generation interconnection facilities, even if operated above 100-kV, need to comply only with a limited set of reliability standards in order to achieve the reliability goals. Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability.
No
CHPD is concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition.
Yes
Including "all" blackstart and blackstart cranking paths in the BES may ultimately provide an incentive to the electric industry to reduce the number of resources with blackstart capability. We therefore suggest that essential blackstart resources identified by the Regional Entity should be included in the Bulk Electric System, but non-essential blackstart resources need not be.
No
CHPD agrees that it is important to address wind generation facilities and similar generation facilities in which a large number of generating units, each with a relatively small capacity, are clustered and fed into the grid at a single interconnection point. That being said, CHPD is concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.
Yes
FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials should be retained. We believe the exclusion as drafted adequately defines radials.
No
As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold (through reference to Inclusion I2) lacks an adequate technical justification in this context. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit ("standby, back-up, and maintenance power…") should be eliminated.
Yes
CHPD strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. CHPD supports the LDN exclusion, but we believe the exclusion should be refined in the following respects: • The SDT's draft states that: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load." We recommend that the SDT revise the sentence quoted above to delete the word "solely" and add an additional phrase at the end so that the revised sentence will read as follows: "LDN's are connected to the Bulk Electric System (BES) at more than one location to improve the level of service to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers,

and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances.
Yes
CHPD supports the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that can ill afford the substantial costs that accompany imposition of mandatory compliance with reliability standards. Further, we agree that the small utilities covered by the exemption will have no measurable impact on the operation of the interconnected BES. In the Pacific Northwest, many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.
No
While CHPD agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1, CHPD believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. As discussed in our answer to Question 3, CHPD notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that "users" of the BES can be subject to reliability regulation. Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BESDTF Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.
Yes
The Exceptions process is a necessary part of making this proposal compliant with the Federal Power Act. As noted in our responses to Question 1 and Question 11, we believe the basic SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used in the local distribution of electric energy. The SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities.
CHPD has these additional concerns: • The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." CHPD is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BESDTF approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. • For the reasons we have explained in our answer to Question 11, we believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process.

Group
Santee Cooper
Terry L. Blackwell
Yes
We agree with the changes of adding the inclusions and exclusions. We recommend that I3 be 100 MVA or higher. Was there a rationale for using 75 MVA?
Yes
Yes
The inclusion for generating units needs to be consistent with regional entities exclusion criteria for MODO24.
No
We recommend that it say "Single generating units located at a single site with a capacity of greater than or equal to 100 MVA". The use of aggregate capacity greater than 75 MVA pulls in some very small units.
Yes
Yes
What is the rationale for 75 MVA.
Yes
Yes
Yes
Yes
Yes
The commission should remain open to future modifications of the bright-line core definition and specific inclusion and exclusions.
What was the rationale for using aggregate capacity greater than 75 MVA on I2 and I5. I2 and I3 inclusions are not the same as defined by the SERC Regional Entity for MOD-024. The SERC guideline does not include an aggregate value for generating units.
Individual
Michelle R D'Antuono
Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)
No
Please see discussion in response to Questions 2, 7, 9, 10, 11, 12 and 13.
No
Inclusion I1 would be unlawful to the extent that it would include the transformers of retail customers that have self-provided “hard-tapped” facilities behind the retail delivery point. (For the purposes of these Comments, “hard-tapped” means connected without an automatic fault-interrupting device).
No
(Note: Inserted language provided in brackets; deleted language denoted by empty brackets: [ ].) Exclusion E1 contradicts the plain language of Section 215 of the Federal Power Act (“FPA”), which

denies FERC jurisdiction over facilities used in the local distribution of electric energy (16 U.S.C. § 824o(a)(1) (stating the Bulk Power System "does not include facilities used in the local distribution of electric energy")). For example, Exclusion E1 would impermissibly include within the definition of the Bulk Electric System ("BES") a retail customer's self-provided "hard-tapped" radial line that is located behind the retail delivery point. The Standard Drafting Team ("SDT") stated in commentary to Exclusion E1 that it has clarified the existing exclusion for radial systems by specifying that protection for the BES is a required element, and that it believes that faults on radial lines without protection devices could negatively impact the BES. Even if faults on radial lines could negatively impact the BES, however, radial lines that are used in local distribution of electric energy are outside of FERC's jurisdiction. Congress did not place any qualifications on the exclusion of facilities used in the distribution of electric energy, and certainly did not make the exclusion contingent on whether the facility is "originating with an automatic interruption device." Exclusion E1 would rewrite Section 215 of the FPA to exclude from the definition of the BES only "facilities [with an automatic interruption device] used in the local distribution of electric energy." Such an interpretation, as discussed further below in response to Questions 11 and 12, is unlawful as it is in direct contravention of Congress' intent. To make Exclusion E1 consistent with the jurisdictional requirements of Section 215 of the FPA, Exclusion E1 could be rewritten as follows: Any radial system which is described as connected from a single Transmission source [ ] and: a) Only serving Load. [ ] Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5. Please see further discussion in response to Questions 11, 12 and 13.

Yes

No

(Note: Inserted language provided in brackets; deleted language denoted by empty brackets: [ ].) Exclusion E3 is also contrary to the plain language of Section 215 of the FPA. The SDT stated in commentary to E3 that it "believes that any network that simply supports distribution and is providing adequate protection should be excluded from the BES." This statement highlights the fundamental disconnect between the proposal and Section 215 of the FPA, which excludes facilities used in the local distribution of electric energy from the definition of the BES regardless of whether the facilities are "providing adequate protection." That is, Section 215 of the FPA states that the definition of the BES excludes "facilities used in the local distribution of electric energy," not "facilities used in the local distribution of electric energy [providing adequate protection]." With respect to the enumerated criteria in Exclusion E3, the requirement that Local Distribution Networks ("LDNs") "must be connected through automatic fault-interrupting devices" violates the FPA because, as discussed in response to Question 7, it places a condition on the unqualified exemption granted by Congress to facilities used in the local distribution of electric energy. Moreover, the other enumerated criteria also fail under Section 215 of the FPA and case law because they ignore, as discussed further in response to Question 11, a long line of precedent that requires a fact-specific analysis to be conducted to determine whether a facility is used in local distribution (see, e.g., Order No. 888 at 31,980). To make Exclusion E3 consistent with the requirements of Section 215 of the FPA and case law, Exclusion E3 could be rewritten as follows: E3 – [All facilities used in the distribution of electric energy] ([“]Local [D]istribution [N]etworks,[” or “]LDNs[”]): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN[]s are [normally] connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following: a) [ ] b) Limits on connected generation: [Generally], neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation; c) Power flows only into the LDN: The generation within the LDN [normally does] [ ] not exceed the electric Demand within the LDN; d) Not used to transfer bulk power: The LDN is [generally] not used to transfer energy originating outside the LDN for delivery through the LDN; and e) Not part of a Flowgate or transfer path: The LDN normally does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL). Please see further discussion in response to Questions 11 and 12.

No

There is no legal basis to distinguish between "small utilities" and other similarly situated entities. Thus, to avoid unlawful discrimination, Exclusion E4 should be revised as follows: (Deleted language denoted by empty brackets: [ ].) Exclusion E4: Transmission Elements, from a single Transmission source connected at a voltage of 100 kV or greater [ ] whose connection to the BES is solely through this single Transmission source, and without interconnected generation as recognized in the BES Designation Inclusion Items I2, I3, I4, or I5. [ ]

No

Local distribution facilities have not been excluded from the proposed definition of the BES. As FERC recognized in Order No. 743-A in directing NERC to exclude local distribution facilities from the revised definition of the BES, any definition that does not exclude all "facilities used in the local distribution of electric energy" is unlawful. FERC, as well as federal courts, have repeatedly stated that whether a facility is used in local distribution must be determined on a "case-specific" basis (see, e.g., Order No. 888 at 31,980-81). As a threshold matter, before devoting any additional time and resources to developing a definition of the BES, there must be a clear understanding of the factors to consider when determining whether a facility is either a local distribution facility or a transmission facility. Currently, such a determination is made by considering a "seven-factor test" that FERC has adopted, and the U.S. Supreme Court has upheld. The "seven-factor test," of which no one factor is determinative, evaluates the following indicators: (1) Local distribution facilities are normally in close proximity to retail customers. (2) Local distribution facilities are primarily radial in character. (3) Power flows into local distribution systems; it rarely, if ever, flows out. (4) When power enters a local distribution system, it is not reconsigned or transported on to some other market. (5) Power entering a local distribution system is consumed in a comparatively restricted geographical area. (6) Meters are based at the transmission/local distribution interface to measure flows into the local distribution system. (7) Local distribution systems will be of reduced voltage (Order No. 888 at 31,981). The seven-factor test, which recognizes that a bright-line between transmission and distribution is a not a workable approach, is designed to ensure FERC does not impermissibly usurp state and local regulation of local distribution facilities. There is no evidence that the seven-factor test was considered in drafting the proposed definition of the BES. Please see further discussion in response to Question 12.

Yes

The proposed definition conflicts with Section 215 of the FPA and case law because it ignores years of precedent regarding what constitutes "facilities used in local distribution" and defines the BES in such a way as to possibly cover local distribution facilities as well as transmission facilities. Specifically, FERC has jurisdiction over "all users, owners and operators of the bulk-power system" under Section 215 of the FPA (16 U.S.C. § 824o(b)(1)). The bulk-power system is defined as: "(A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy" (Id. at § 824o(a)(1)). By the plain language of Section 215 of the FPA, FERC's jurisdiction over the Bulk Power System cannot include any "facilities used in the local distribution of electric energy." FERC has recognized that "[s]ince such facilities are exempted from the Bulk-Power System, they also are excluded from the bulk electric system" (Order No. 743-A at P 25). Congress specifically recognized that while facilities used in the local distribution of electric energy may be part of the Bulk-Power System, they are not FERC jurisdictional. Thus, "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" that are used in the local distribution of electric energy are not jurisdictional regardless of the potential reliability impact of the facilities. The proposed definition of the BES would rewrite Section 215 of the FPA to exclude only "facilities used in local distribution of electric energy [unless needed for reliability purposes]." As the DC Court of Appeals stated in Detroit Edison Co. v. FERC: "[s]uch an interpretation would eviscerate state jurisdiction over numerous local facilities, in direct contravention of Congress' intent" (Detroit Edison Co. v. FERC, 334 F.3d 48, 54 (U.S. App. D.C. 2003) (citation omitted)). In Detroit Edison Co. v. FERC, the DC Court of Appeals rejected FERC's proposed definition of a "FERC-jurisdictional distribution facility" as any distribution facility that is not "used exclusively to provide service to unbundled retail customers" (Id.). The Court stated: "FERC's position contradicts the plain language of the FPA," and further that "FERC would rewrite the statute to exclude only 'facilities used exclusively in local distribution'" (Id.). The exclusion of facilities used in the local distribution of electric energy from the definition of the BES does not mean that NERC lacks

the ability to maintain the reliability of the BES. For example, if NERC determined that a retail customer's self-provided "hard-tapped" radial line that is located behind the retail delivery point created a reliability issue, NERC could require that the transmission facilities be equipped with automatic fault-interruption devices. NERC could not, however, define the BES to include such local distribution facilities, which is the result of the proposed bright-line core definition and specific inclusions and exclusions. While FERC "granted NERC discretion" in developing the revised definition of the BES because FERC wanted to give NERC "the greatest amount of flexibility to utilize its technical expertise" (Order No. 743-A at PP 70-71), NERC's discretion is not unbounded. Moreover, while FERC stated that it "will evaluate whether the [BES definition] proposal results in any conflicts with the statutory language" (Id. at P 72), it is imperative that NERC work within the statutory limitations of Section 215 of the FPA as to prevent submitting a proposal to FERC that is fundamentally unlawful. It would be a colossal waste of government and industry resources to develop and advance a definition that cannot withstand basic legal review. As provided above, the following are suggested language changes that may clarify the issue: Exclusion E1 - Any radial system which is described as connected from a single Transmission source [ ] and: a) Only serving Load. [ ] Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5. Exclusion E3 – [All facilities used in the distribution of electric energy] (["]Local [D]istribution [N]etworks,[" or "]LDNs["]): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN[]s are [normally] connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following: a) [ ] b) Limits on connected generation: [Generally], neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation; c) Power flows only into the LDN: The generation within the LDN [normally does] [ ] not exceed the electric Demand within the LDN; d) Not used to transfer bulk power: The LDN is [generally] not used to transfer energy originating outside the LDN for delivery through the LDN; and e) Not part of a Flowgate or transfer path: The LDN normally does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL). Exclusion E4 – Transmission Elements, from a single Transmission source connected at a voltage of 100 kV or greater [ ] whose connection to the BES is solely through this single Transmission source, and without interconnected generation as recognized in the BES Designation Inclusion Items I2, I3, I4, or I5. [ ]
Occidental Energy Ventures Corp ("OEVC") would like to emphasize that the proposed definition of the BES does not only impact OEVC and its affiliates. The proposed BES definition would include numerous facilities that are used for the local distribution of electric energy, not transmission, in direct contravention of Section 215 of the FPA. For example, there are likely hundreds, if not thousands, of retail customers that have self-provided "hard-tapped" facilities behind the retail delivery point. Those retail customers, many of who are likely unaware of the proposed BES definition, much less its impact, will have their facilities under the proposed BES definition suddenly become transmission facilities simply because their facilities are not separated from the BES by an automatic fault-interruption device.
Individual
Kenneth A. Goldsmith
Alliant Energy
No
We believe the first sentence should be revised to read "Any radial system which is described as connected from a single Transmission source at 100 kV or above originating with . . ." In this way it is clear that E1 covers radial transmission, not radial distribution systems.

Yes

In general we believe that the bright line has been created. There should however be one additional exclusion – Distribution Protection Systems designed specifically to protect Distribution System assets should not be considered part of the BES, even if they open an element of the BES (ie; Distribution Breaker Failure Relaying), as long as the action is to protect the Distribution System and not the BES.

Individual

Deborah J Chance

Chevron Global Power, a division of Chevron U.S.A. Inc.

See response to question 13

Yes

Chevron U.S.A. Inc. has reviewed the proposed Bulk Electric System definition and is concerned that the proposed changes designed to enhance reliability and accountability of Transmission and Generation are inadvertently catching parties whose prime operations are distribution in nature. Chevron is proposing minor changes that will not affect the necessary regulation of the bulk power industry, but will exempt parties that are not crucial to reliability and provide mostly, if not entirely, distribution or self use service. In remote areas of west Texas, Chevron has hundreds of non contiguous producing properties and facilities located over hundreds of square miles. In some cases where the utility was close and had the capability to serve, Chevron took utility service. Where service was not available or the utility did not have the capability, Chevron built its own private power distribution system to service its own facilities. Chevron has no generation and takes all of its power from transmission providers. In at least one instance Chevron takes power at over 100 kV from a transmission provider. Chevron has an automated interruption device between its facilities and the transmission facilities. Currently this field takes power from an ERCOT transmission owner at above 100 kV and then distributes the power over a Chevron owned and operated power distribution system to Chevron facilities. This Chevron system includes a substation, transformers and other facilities necessary to take power at above 100 kV and distribute and step down the power as necessary. Chevron uses the power for offices, repair facilities, oil wells, separation facilities, gas plants, drilling new wells and other related oil and gas activities. Located within the area of the Chevron power distribution system are ranchers, pump stations, third party oil wells and other small users. These parties are not located near any utility or coop facilities. For decades Chevron has worked to accommodate these parties by working with the local utility, transmission owners and the Texas Public Utility Commission to allow electrical service to these remote users. Many of these ranchers and other users are not located near any utility lines. Costs could run to the hundreds of thousands of dollars (or more) to provide an interconnect from the utility. Instead of leaving these parties with no electrical service, a procedure was developed that allowed parties such as Chevron to accommodate the small end user. For example if a utility/coop was unable or unwilling to serve a rancher at a reasonable cost, the rancher could approach Chevron. The goal would be to execute a three party

agreement between the rancher, Chevron and the service provider. Under the terms of the agreement, the Rancher would interconnect with the Chevron system. A utility quality meter capable of remote reading would be installed and the rancher would be responsible for all costs beginning at the meter. The rancher contracts with a power provider for his power. Every month the meter between the Transmission owner and Chevron would be read. This smart meter located at the interconnect with the transmission system and its soft ware would show all deduct metering (such as our rancher) so that any non Chevron parties on the Chevron distribution system's usage would clearly be listed. The transmission owner then provides the billing information to the rancher's power provider. Chevron receives no compensation from the rancher, power provider or transmission owner. Chevron provides the service strictly on an accommodation basis. The Texas Public Utility Commission recognizes the needs of parties in remote areas of Texas and has blessed this type of service. Chevron is not considered a utility for providing this type of service. Chevron is concerned that the above described private power distribution system may inadvertently be forced to register as a bulk electric system provider. This private distribution system is clearly at the terminus of a radial line and provides service to Chevron owned and operated facilities. The system is large in area and has been built over a period longer than any current employee's memory. Through what can be called "accidents of history" and a good neighbor policy, Chevron has accommodated parties that otherwise could not connect to utility quality power. This arrangement is blessed and encouraged by the State PUC. Chevron charges nothing for the service. The system is entirely distribution in nature and does not contribute to the reliability of the grid in any manner. The intent of the current rule making is not to encompass such a system. NERC needs to encourage parties such as Chevron to help bring power to remote areas and not discourage, or worse yet greatly increase the cost to provide such service. Chevron requests that the NERC include in its definition a statement making it clear that systems such as those described above should not be required to register. Chevron supports the technical changes suggested by ELCON in its filing. A party's facility should not be considered an essential facility where the facility would otherwise be considered exempt except that it is providing distribution services as an accommodation to third parties. This is especially true when 1. The incumbent utility or coop is unable or unwilling to serve the third parties at a reasonable cost 2. The service to the third party is provided as an accommodation 3. The facility is not generating and/or selling power to the third party 4. The third party is purchasing power from a power provider
Individual
Scott Bos
Muscatine Power and Water
Yes
Would like to ask the SDT to please affirm that Reactive Resources within the BES definition are intended to be generator resources and not static resources.
Yes
Yes
No
The phrase "connected through a common bus" is taken from the NERC Compliance Registry Criteria. MP&W would agree with this language if the intent is to let entities categorize the applicable multiple generating units as part of the BES only when it is connected to one (common) bus. However, if the intent is for entities to also classify multiple generation as part of the BES when it is connected through two or more GSUs to different bus sections of a set of (common) buses that are interconnected through bus-tie breakers (which may be done to provide improved reliability and maintenance flexibility), then using language like "connected through a common bus or set of interconnected buses" would be more appropriate.
Yes
This Inclusion I4 provides a defense in depth with CIP-002-4.
No
MP&W recommends to have Inclusion 5 be revised as follows "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system from the point where the aggregated rating exceeds 75 MVA through a common point of

interconnection to a system Element at a voltage of 100 kV or above."
Yes
MP&W recommends to clarify the phrase "originating with an automatic interruption device" regarding the location of the interruption device. An entity may not have interruption devices at both ends of a radial fed line. If the interruption device is at the load end of the radial line, then the "up-stream" portion of the radial line is unprotected. Furthermore, please make it unambiguous that all facilities operated at less than a 100kV are excluded unless those facilities meet the criteria of an Inclusion.
Yes
No
The SDT is defining what a Local Distribution Network is but the expression "transfer bulk power" is ambiguous. Please clarify the purpose of this exclusion.
Yes
Yes
Yes
Within FERC's definition of Bulk Power System, it is plainly stated that BPS does not include facilities used in the local distribution of electrical energy. Does this support or contradict the SDT's concept of Local Distribution Network?
In order to provide a unambiguous and concise definition of the BES, we ask the SDT to please include in the bright-line criteria that "all facilities less than a 100kV are excluded unless those facilities meet the criteria of an Inclusion."
Group
NERC Staff
David Taylor
No
The core definition lacks a clear bright-line designation for generating resources. For such resources, the core definition only references "Real Power resources as described below" which in and of itself is not a bright-line designation. A bright-line designation for generating resources needs to be included in the core definition. A bright-line can be established in the core definition by including generating units based on the MVA ratings as found in current Inclusions I2, I3, and I5. Additional generating unit specifications could be included in the core definition or as Inclusions such as the existing Inclusion I4 for black start generating units. >>>>>>>>>> The core definition also lacks clarity with respect to the facilities included under "Reactive Power resources" and may unintentionally omit Reactive Power resources necessary for reliable operation of the BES. The definition as proposed excludes devices such as shunt reactors connected to the tertiary terminals of a BES transformer and synchronous condensers connected through a transformer, and is unclear whether a static var compensator (SVC) with thyristor switched capacitors and thyristor switched or controlled reactors operated below 100 kV, but connected to the BES through a transformer (similar to a generator connected to the BES through a generator step-up transformer) is included in the BES definition. The qualifications on Reactive Power resources recommended below will include the necessary transmission resources noted above, without unintentionally including distribution capacitors connected on the low voltage side of a distribution transformer. >>>>>>>>>> These concerns can be addressed by revising the core definition as follows: >>>>>>>>>> "Bulk Electric System (BES): All Transmission Elements operated at 100 kV or higher; Real Power resources including, * Individual Generating Units greater than 20 MVA (gross nameplate rating), * Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross nameplate rating) connected through a common point of interconnection, * Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection, and * Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage; and Reactive Power devices (capacitive or inductive, static or actively controlled) greater than 20 Mvar that are directly connected at 100 kV or higher, or connected through a transformer at 100 kV or

higher at the site of transformation; unless such designations are modified by the list of Inclusions and Exclusions shown below." >>>>>>>>>> (Note that the rationale for excluding the 100 kV interconnection threshold on the first three bullets is provided in our responses to Questions 3, 4, and 6.) >>>>>>>>>> In conjunction with the alternative language for the core definition proposed above, NERC staff proposes the following definition of Generating Unit be added to the NERC Glossary of Terms used in Reliability Standards: >>>>>>>>>> Generating Unit - A device, whether spinning or static and whether connected synchronously, asynchronously, or electronically coupled, that produces electrical energy from another source of energy, either directly from the other energy source (such as a combustion turbine from natural gas or light distillate oil, a wind turbine from wind, or a solar array from the sun) or through a storage medium (such as pumped storage hydro, a flywheel, compressed air, or battery).
No
Inclusion I1 is acceptable in general; however, there are two items that should be modified. >>>>>>>>>> The reference to "two windings" is technically incorrect because it would exclude autotransformers with two terminals at 100 kV or higher since the primary and secondary terminals are connected to the same winding. It would be better to replace the phrase "with two windings of 100 kV or higher" with the phrase "with two or more terminals connected at 100 kV or higher." >>>>>>>>>> The phrase "other than Generator Step-up (GSU) transformer" is unnecessary. The qualifier "with two or more terminals connected at 100 kV or higher" already will exclude GSU transformers. In unusual cases in which a generator is connected to the system through a transformer that does have two terminals connected at 100 kV or higher the transformer should be included by Inclusion I1.
No
The interconnection voltage threshold should be removed. The contribution of a generator to system reliability is a function of its MVA rating rather than its interconnection voltage. All generating units greater than 20 MVA should be included in the BES definition because all such units provide similar contributions to system reliability. >>>>>>>>>> Also, the specific inclusion of the GSU transformer implies that all other components of a generating unit, such as its unit auxiliary transformer, start-up transformer, governor, exciter, power system stabilizer, etc., are excluded. The SDT should define "generating unit" or otherwise clarify which components of a generating unit are included in the BES definition.
No
The interconnection voltage threshold should be removed. The contribution of a multiple generating units at a single site to system reliability is a function of the aggregate MVA rating rather than the interconnection voltage. All locations with multiple generating units with aggregate capacity greater than 75 MVA should be included in the BES definition because all such units provide similar contributions to system reliability. >>>>>>>>>> As noted in the comment on Question 3 of this comment request, the specific inclusion of the GSU transformer implies that all other components of a generating unit, such as its unit auxiliary transformer, start-up transformer, governor, exciter, power system stabilizer, etc., are excluded. The SDT should define "generating unit" or otherwise clarify which components of a generating unit are included in the BES definition. >>>>>>>>>> The use of the term "common bus" introduces ambiguity into the definition. It would be better to replace the phrase "connected through a common bus" with the phrase "connected through a common point of interconnection" which also provides consistency with the description of Inclusion I5.
Yes
No
We agree that Inclusion I5 is an effective method for including dispersed resources; however, the interconnection voltage threshold should be removed. The contribution of dispersed power producing resources to system reliability is a function of the aggregate MVA rating rather than the interconnection voltage. All dispersed resources with aggregate capacity greater than 75 MVA should be included in the BES definition because all such units provide similar contributions to system reliability.
No
Exclusion E1 would be acceptable if (i) switching the radial system to connect it to the BES at a second point of interconnection is modified to require that when a make-before-break connection is

used, it occurs at a voltage below 100 kV and (ii) the automatic interrupting device is not excluded as part of the radial system. >>>>>>>>>> The allowance for make-before-break connections of radial facilities at voltages 100 kV or higher will result in operating conditions with the potential to degrade system reliability if the subject Elements are not planned, designed, maintained, and operated in accordance with NERC Reliability Standards. The risk is most pronounced when the make-before-break connection is automated, increasing the likelihood of adverse reliability impacts occurring as a result of placing the system into an unplanned operating condition. If the make-before-break connection is made at a voltage below 100 kV the impedance in the parallel connection will mitigate the reliability impact. When the radial system is connected to the BES at a second point of interconnection 100 kV or higher, the radial system should not be excluded unless a break-before-make connection is used because system protection during the momentary parallel network operation is critical to overall BES reliability. >>>>>>>>>> The reason for requiring an automatic interrupting device between the BES and the excluded radial system is to prevent faults and other abnormal conditions on the radial system from negatively impacting reliability of the BES. Given the reliance on the interrupting device to support BES reliability, it is appropriate to include the interrupting device in the BES so that it is planned, designed, maintained, and operated in accordance with NERC Reliability Standards the same as other BES Elements. Thus, when excluding a radial system operated at 100 kV or higher, the BES line of demarcation should be on the load side of the automatic interrupting device. >>>>>>>>>> The main clause and part (a) of the exclusion should be changed to read; >>>>>>>>>> Exclusion E1 – Any radial system which is described as connected from a single Transmission source originating on the load side of an automatic interruption device and: a) Only serving Load. A normally open switching device between radial systems may operate in a 'break-before-make' fashion at 100 kV or higher or a 'make-before-break' fashion below 100 kV to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, etc. …

No

The second condition (ii) in E2 is confusing. While the condition is appropriate and has specific meaning, the meaning will not be readily understood by most users of the definition. This condition should be clarified.

No

Exclusion E3 is acceptable in general; however, (i) including the word "distribution" in the exclusion could be interpreted to imply that certain distribution facilities are included in the BES unless specifically excluded, (ii) item d) is unclear as to whether it applies to any parallel flow or only to parallel flow for which the group of Element(s) are part of the contract path, and (iii) interrupting devices should be included in the BES for the same reasons as stated above for Exclusion E1. >>>>>>>>>> The concern with the word distribution in the term "Local Distribution Network" can be avoided by eliminating use of this phrase. The proposed definition already defines the Elements covered by Exclusion E2 and does not require defining a term for use in this standard. An alternate solution would be to establish a different term to describe the groups of Elements that does not include the word distribution. >>>>>>>>>> The phrase "is used to" in item d) lacks clarity. Clarity should be provided by stating that the group of Elements does not transfer energy originating outside the group of Elements; this is consistent with item c) that requires that power flows only into the group of Elements. >>>>>>>>>> The reason for requiring automatic interrupting devices between the BES and the excluded LDN is to prevent faults and other abnormal conditions in the LDN from negatively impacting reliability of the BES. Given the reliance on the interrupting devices to support BES reliability, it is appropriate to include the interrupting devices in the BES so that they are planned, designed, maintained, and operated in accordance with NERC Reliability Standards the same as other BES Elements. Thus, when excluding groups of Elements at 100 kV or higher, the BES line of demarcation should be on the load side of the automatic interrupting devices. >>>>>>>>>> To address our concerns, Exclusion E3 should be changed to read: >>>>>>>>>> E3 - Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. Such groups of Elements are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. These groups of Elements are characterized by all of the following: a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the group of Elements must be connected through automatic fault-interrupting devices (the automatic interrupting device is part of the BES); b) Limits on connected generation: Neither the group of Elements, nor any underlying Elements operated at 100 kV or below, includes more than 75 MVA generation (in aggregate); c) Power flows only into the

group of Elements: The generation within the group of Elements shall not exceed the electric Demand within the group of Elements; d) Not used to transfer bulk power: The group of Elements does not transfer energy originating outside the group of Elements for delivery through the group of Elements; and e) Not part of a Flowgate or transfer path: The group of Elements does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
No
The basis for exclusion must be based on system reliability. The need for an interrupting device between the BES and excluded radial Elements is necessary for system reliability independent of ownership of the excluded radial Elements.
Yes
No
The definition should include variable frequency transformers and back-to-back HVdc converters that connect portions of the system operated at 100 kV or higher, regardless of the dc voltage rating of the converter equipment, which often is less than 100 kV. >>>>>>>>>> Assuring reliable operation of nuclear plants requires that Elements subject to Nuclear Plant Interconnection Requirements are planned, designed, maintained, and operated in accordance with NERC Reliability Standards. An additional Inclusion I6 should be added to the definition to include "All transmission Elements subject to Nuclear Plant Interface Requirements (NPIRs) as agreed to by a Nuclear Plant Generator Operator and a Transmission Entity defined in NUC-001." >>>>>>>>>> Assuring reliable operation of the interconnected transmission network also is dependent on reliable operation of generating units that system operators rely on for capacity and Contingency Reserves. Additional Inclusions I7 and I8 should be added to include: * Real Power resources fully or partially relied on to fulfill a capacity obligation, and * Real Power resources (supply-side or Demand-Side Management) relied on to provide Contingency Reserves to its Balancing Authority.
Individual
Bill Keagle
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch
Yes
No comment.
Yes
No comment.
Yes
No comment.
Yes
No comment.
Yes
No comment.
Yes
No comment.
No
BGE generally agrees with the "radial" exclusion, but votes "NO" due to a lack of clarity. The definition does not make it clear if radial facilities operating above 100 kV with automatic interrupting devices (which would otherwise be classified as non-BES under exclusion E1, part a) and serving networks operating below 100 kV are classified as non-BES. We believe E1 should make it clear that such radial facilities are non-BES. BGE would like to note that under the current RFC BES definition, such facilities are not designated as BES. To illustrate and clarify the BGE questions, please see the BGE Diagram attached. The BES designations included on the diagram are BGE's interpretation of BES facilities

under the proposed definition. Questions regarding the BGE Diagram: 1. If the 13.8 kV device TB is operated "normally closed" as shown, is it the SDT's understanding that the two 115 kV lines classified as Non-BES in the diagram are no longer considered "radial"? 2. If the SDT does not consider the two 115 kV lines described above as "radial" with device TB closed, would this configuration be excluded as BES under exclusion E3? Or would the Exception Process be required to classify such a configuration as non-BES?
Yes
No comment.
Yes
No comment.
No
An automatic interruption device should be required as in exclusion E1.
No
BGE votes "NO" due to the lack of clarity in exclusion E1.
No
We are not currently aware of any conflict, but have not had a chance to thoroughly consider the potential conflicts.
BGE agrees with the SDT's position that support equipment such as UVLS and UFLS not be classified as BES. BGE strongly believes that including control centers and other BES support equipment in the BES definition is not necessary and will cause confusion. BGE commends the BES Definition Standards Drafting Team for the informative webinar on 5/19/2011. We were encouraged that the SDT's developed a transition plan for the implementation of the new BES definition. BGE urges the SDT to also address the issue of the addition of new BES elements (i.e., such as new designated blackstart resources which may include a cranking path that is reclassified as BES). A transition period would also be required for these situations. BGE appreciates the work of the drafting team and supports the goal to produce clear definition language so that upwards of 95% of the assets are clearly distinguished as either included or excluded from the BES. We are particularly sensitive to the potential for burdensome processes (e.g. TFEs) to be added to reliability compliance, so we appeal to the team for continued, vigilant consideration of the arduousness of the BES determination process. Also important to consider is that the subject of this comment form, the proposed BES definition, is only one part of the BES definition project. The accompanying technical principles for BES Exceptions and the Rule of Procedure Process must be evaluated together with the BES Definition to sufficiently understand the revisions. In the end, the Technical Principles and the BES Definition must coalesce and be clearly coordinated and understood. The BES Definition language must include reference to the role of the associated defining documents. One unambiguous document must not be made ambiguous by an associated document or process.
Individual
John Bee
Exelon
Yes
Yes
Yes
Yes
No
Exelon believes that the entire designated cranking path should not be included in the BES definition if there are facilities less than 100kV on the path. Doing so may inappropriately include a number of facilities that are local distribution facilities under jurisdiction of the states, i.e, the inclusion of the entire cranking path occurs without an inquiry as to whether or not the facilities are "facilities used in local distribution of electric energy" even though such facilities are by explicit language in the Federal

Power Act not included in the definition of Bulk Power System. In Orders 743 and 743-A, FERC reiterated several times that "facilities that are determined to be local distribution will be excluded from the bulk electric system." (Order No. 743-A, P.22). Furthermore, by including these facilities the Drafting Team has gone beyond the boundaries of Section 215 of the Federal Power Act and Orders 743 and 743-A. It should be noted that there is no reference to black start Cranking Paths in either Order. Practically, it is unclear that including lower voltage facilities on a Cranking Path will have any positive impact on reliability without potential entity registration changes or NERC Reliability Standards changes. For example, NERC Reliability Standards FAC-008 and FAC-009 do not currently apply to Distribution Providers.
Yes
Exelon agrees with this inclusion as long as it's clear that distribution voltage collector systems are not to be included in the BES. Exelon suggests that a clarifying statement be added to the inclusion item, such as "Collector system facilities that are <100kV are excluded from the BES."
No
Exelon points out that this is another case where facilities used in local distribution of electric energy that are presently under state jurisdiction might be included in the BES. Depending on the location of the automatic interrupting device, the radial facilities in between the tap point at the transmission sources and the interrupting device would be included in the BES.
Yes
Exelon agrees with this Exclusion since this language is quoted from the Statement of Compliance Registry Criteria.
No
Exelon has issues with the ambiguity of this Exclusion item. It seems that Local Distribution Networks will all need to be approved via the Rules of Procedure Exception Process because the characteristics of each LDN as described are not bright line. For example, does (b) refer to any generation, including behind-the-meter generation? Does (c) mean always, i.e., generation can never exceed the load under any condition? In theory or in actuality? How does (d) deal with parallel flows under abnormal conditions when some energy may go in and out? Exelon understands the concept that an LDN primarily serves load, but how will the owners prove that there is no impact to the BES under contingency configurations?
Exelon is abstaining from voting on this item. How would this exclusion be different from E1? Furthermore, Exelon suggests that a definition of "Small Utility" would need to be developed.
No
As highlighted in the answers to Questions 5 and 7, Exelon does not believe that facilities used in local distribution of electric energy have been fully excluded in the draft BES definition. For example, there are many examples of black start cranking path facilities that are <100kV and that are currently defined as facilities used in the "local distribution of electric energy".
Yes
To the extent facilities used in local distribution of electric energy may be included in the definition of BES, the proposed definition is in conflict with the Federal Power Act.
The definition assumes some inclusions or exclusions based on levels of generation used in the NERC Compliance Registry Criteria. Exelon does not view Orders 743 and 743-A as requiring a view or justification of these thresholds. See Order No. 743-A at P 47 ("it was not our intent to disrupt the NERC Rules of Procedure or the Statement of Compliance Registry Criteria").
Individual
David C. Kahly
Kootenai Electric Cooperative
No
As a general matter, Kootenai supports the approach the Standards Development Team ("SDT") has taken to defining the Bulk Electric System ("BES"). The changes made in the revised core definition are helpful and represent significant progress toward an acceptable definition. With an effective and efficient exclusion process, the draft will better define the BES as a whole. We urge the SDT to bear in mind the restrictions contained in Section 215 of the Federal Power Act ("FPA") The "bulk-power system" (As per FERC, we treat the statutory term "bulk-power system" as equivalent to the term

ordinarily used in the industry, "Bulk Electric System") definition imposes a clear limit on the reach of the mandatory reliability regime. The BES is made up of only those "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" and "electric energy from generation facilities needed to maintain transmission system reliability." Congress reinforced that limit in Section 215(i), where it emphasized that the FPA authorizes the imposition of reliability standards "for only the bulk-power system." Kootenai is concerned that the SDT's proposed definition is overly-broad, and that it will sweep in many Elements that have little or no material impact on the reliable operation of the interconnected bulk transmission grid. For example, the definition uses the 20 MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators. Accordingly, for the BES definition to conform to the requirements of the statute, the SDT must adopt an effective mechanism to exempt facilities like these that are improperly swept in by the SDT's brightline approach to inclusions and exclusions. For this reason, the Exception process to accompany the SDT's definition is of critical concern. If the SDT incorporates this statutory language as its core definition, it will have addressed FERC's primary concern with a minimum of disruption to the current NERC system of definitions. The definition could then be further elaborated to show specific points of demarcation for each inclusion and exclusion similar to that Proposal 6 from the WECC Bulk Electric System Definition Task Force ("BESDTF") team to further delineate BES and non-BES facilities.

No

In concept, Kootenai supports the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams noting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort. We again urge the SDT to consider further delineation of points of demarcation similar to WECC BESDTF Proposal 6.

No

Kootenai is concerned that I2 inclusion criteria that includes the 20 MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted improperly expands the BES definition to include generators that the statute requires to be excluded. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Unfortunately, the SDT appears to have concluded that any interconnection facility operating above 100-kV should be classified as BES. The result will be to require Generation Owners to register as Transmission Owners/Operators, as well, producing substantial additional compliance costs for those Generation Owners but resulting in little or no improvement in the reliability of the BES. We recommend that the SDT, like the Project 2010-07 SDT (commonly referred to as the GO/TO Team), give careful consideration to the practical results of its recommendations rather than relying on abstract conclusions about whether a "contiguous" or "non-contiguous" BES is more desirable. We are concerned that the SDT's pursuit of a "contiguous" BES will result in a substantially over-inclusive BES definition. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. NERC's Standards Drafting Team for Project 2010-07, has already considered this question and, based on an in-depth review of potentially applicable reliability standards, has concluded that generation interconnection facilities, even if operated above 100-kV, need to comply only with a limited set of reliability standards in order to achieve the reliability goals. Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system."

Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability.
Yes
FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained. We believe the exclusion as drafted adequately defines radials.
Yes
Kootenai strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. Kootenai supports the LDN exclusion, but we believe the exclusion should be refined in the following respects: • The SDT's draft states that: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load." (emphasis added) We recommend that the SDT revise the sentence quoted above as follows: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances.
Yes
Kootenai supports the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that can ill afford the substantial costs that accompany imposition of mandatory compliance with reliability standards. Further, we agree that the small utilities covered by the exemption will have no measurable impact on the operation of the interconnected BES. In the Pacific Northwest, many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.
No
While Kootenai agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1, Kootenai believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. Kootenai notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that "users" of the BES can be subject to reliability regulation. Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BESDTF Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.

Yes
The Exceptions process is a necessary part of making this proposal compliant with the Federal Power Act. As noted in our responses to Question 1 and Question 11, we believe the basic SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used in the local distribution of electric energy. The SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities.
Kootenai has these additional concerns: • We are concerned that the proposed 24-month delay in the effective date of the new definition will delay the potentially beneficial effects of the SDT's efforts, especially for utilities that have been inappropriately registered for BES-related functions, which is a common situation in WECC. We therefore urge the new BES definition to become effective immediately upon approval by FERC or other applicable regulatory agencies. Entities that have been improperly registered for BES functions can then immediately file for deregistration and obtain the benefits of the new definition as soon as possible. For entities that have not previously been registered for BES-related functions but that would be required to register under the new definition, we agree that 24 months is an appropriate transition period to allow the newly-registered entity to attain compliance with newly-applicable reliability standards, many of which require new training for employees, new maintenance procedures, and complex new operational protocols. However, the transition period for newly-registered entities should be structured in a way that does not prevent entities seeking deregistration from benefitting from the new definition at the earliest possible date. • The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." Kootenai is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BESDTF approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. • For the reasons we have explained in our answer to Question 11, we believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process.
Individual
Tracy Richardson
Springfield Utility Board
No
SUB appreciates the effort put forward in this process and is indicating "no" primarily because Springfield Utility Board (SUB) has observed that the statutory term "Bulk Power System" is being applied in some cases as being equivalent and interchangeable with "Bulk Electric System". SUB is concerned that the SDT's proposed BES definition is broad and that it will sweep in many elements that have little or no material impact on the reliable operation of the interconnected bulk transmission grid. Springfield Utility Board requests that NERC create a distinction between the terms BPS and BES. Are the two to be used interchangeably, or will BPS no longer be used? SUB suggests NERC consider adopting the statutory definition of the Bulk Power System as the core definition of the Bulk Electric System.
Yes

In concept, SUB supports an attempt to provide a clear demarcation between BES and non-BES elements. The WECC Bulk Electric System Definition Task Force (BESDTF) has devoted considerable effort to this question and has developed one-line diagrams which note the BES demarcation point for a number of different kinds of elements that are common in the Western Interconnection.
No
SUB raises the questions "Are multiple individual units considered one unit if they have a shared bus?" SUB is concerned that in the instance where individual units have a shared bus that some interpretations would be that these are individual and therefore not part of the BES while other interpretations would result in the units being considered part of the BES because of a shared bus. Given I3, SUB suggests that units connected to a shared bus be considered as if they were not connected to a shared bus if they are individually separable by automatic fault-interrupting devices (e.g. two 15aMW units that have a shared bus would not be included as part of I2 if they each have automatic fault-interrupting devices). Continuing the example of the two 15aMW units, if a shared bus somehow combined the two individual units into one unit for purposes of I2, where does this distinction end? What if they share the same transmission line? Is this transmission line considered being a "bus" for purposes of combining the two units into one individual unit? Because this discussion could go on with multiple examples, SUB suggests that the distinction be the automatic fault-interrupting device. If the devices can be separated from each other and the local network then they should be considered individual. While Springfield Utility Board does not own any generating units, we do recognize the importance of the stability and restoration of the Grid, and the generation necessary for the Grid.
No
While Springfield Utility Board does not own any generating units, we do recognize the importance of the restoration of the Grid, and the generation necessary for the Grid. SUB would recommend that NERC clearly define "location" and "single site". Does single site mean interstate service area location (adding up generation over multiple geographically separate areas), same City?, same common bus?, etc… SUB suggests that for purposes of I3 (and other inclusions and exclusions that reference "same site", "same location", or similar language) that the term "collectively share a common bus" be used.
Yes
While Springfield Utility Board does not own any Blackstart Resources, we do recognize the importance of the restoration of the Grid, and the generation necessary for the Grid should have identified paths that are critical, regardless of voltage level.
No
What is a collector system? Does this include a Local Distribution Network? A Local Distribution Network (E3) may have multiple generating units within its service area that serve all or part of retail load (E2). Would the aggregate nameplate rating of these units be included even though they would otherwise be excluded by application of E2? For example, there may be multiple end users with 500 kW photovoltaic systems whose total nameplate capacity is 100 MVA. All or most of the power used is consumed by the retail consumers. SUB suggests that the language be restated to say "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) that are not excluded under E2 utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above" Or "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a cCollector sSystem through a common point of interconnection to a system Element at a voltage of 100 kV or above. For purposes of this inclusion, a Collector System is any infrastructure not connected to load – where parasitic load associated with a generation unit or units is not considered load." While Springfield Utility Board does not own any power producing resources, we do recognize the importance of the restoration of the Grid, and the generation necessary for the Grid, regardless of voltage level.
No
SUB agrees with the exclusion for radial systems, but would like clarification regarding the definition of "radial". SUB appreciates NERC developing a more clear and consistent definition of "radial". For clarity, SUB suggests the following language: "• Exclusion E1 – Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and that is characterized by any of the following: a)Only serving Load. A normally open switching device between radial systems with the same or different transmission sources may operate in a `make-

before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Systems with a normally open switching device(s) that would otherwise result in a system with more than one transmission source if the switching device(s) is closed are considered radial systems. Or, b)Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c)Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5?" As a side note, some in the industry appear to place a demarcation based on whether there is a fuse separating two systems. SUB is concerned with interpretations that indicate that if there is a fuse, they are separate. This could result in "closed" systems being considered "open" because there are fuses installed within the network. For example, consider a 115 kV interconnection point stepped down to distribution level service with a fuse continues along the distribution network to another fuse that is interconnected to a 115kV system with another transmission source. Is this fused system closed or open? Is this an intended outcome? SUB is hopeful that E1 will provide clarity to this issue.

No

The proposed language for Exclusion E2 refers to the "customer's side of the retail meter". There may be multiple customers with different resources within the geographic area served by a Registered Entity. Because E2 also refers to "net capacity provided to the BES", SUB assumes that E2 is intended to address resources within the Registered Entity that are served to a single customer or multiple customers. A Registered Entity may have Elements that are separate and independent but that are connected to the BES. Individually, these elements may not have resources that serve customer load that meet I2 or I3, but collectively the sum or resources and elements served do meet I2 or I3. SUB believes that the issue of reliability comes down to both resources, load served, and what paths are shared (or not) between resources and loads. SUB suggests that isolated loads and resources that are functionally independent from a Registered Entities overall system do not need to be added together. SUB suggests the following language: "A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity along shared Elements provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority. For purposes of this exclusion, if a Registered Entity is responsible for elements that serve loads and resources that are separate from other elements that the Registered Entity is responsible for, then each set of loads and resources that are connected to Elements the Registered Entity is responsible for shall be evaluated separately and resources will not be added together. While Springfield Utility Board does not own any generating units, we do recognize the importance of the restoration of the Grid, and the generation necessary for the Grid.

No

SUB agrees with items, a), b), and e) of the characteristics of an LDN. SUB believes that the language regarding c) and d) needs clarification. c) states: "Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN." There may be times where a closed system creates a situation where power flows through the system on an unscheduled basis (electron's will follow the path of least resistance). Left as is, there may be a situation where on a planning basis there is no power flowing out of the LDN, but on a real time basis power does flow in and out. "Power flows only into the Local Distribution Network: The sum of all power being delivered into the LDN at the points of measurement is greater than the sum of all the power measured as being delivered out of the LDN at the points of measurement" The generation within the LDN shall not exceed the electric Demand within the LDN." SUB suggests that the generation language should be deleted, but if the language "The generation within the LDN shall not exceed the electric Demand within the LDN." is retained, what does "Demand" mean? The lowest demand? The highest demand? Instantaneous demand? SUB suggests that if some generation language is added that the exclusion read: "Power flows only into the Local Distribution Network: The sum of all power being delivered into the LDN at the points of measurement is greater than the sum of all the power measured as being delivered out of the LDN at the points of measurement The generation within the LDN shall not exceed the maximum electric Demand within the LDN, where the maximum electric Demand is the maximum electric Demand within the LDN as measured for over the prior sixty (60) months." d) states: "Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN". Again, this language needs

clarification. How would an LSE/DP/TO (or other similar entity) know that their system is not being used to transfer bulk power when other parties are scheduling transmission paths via a Balancing Authority or other overarching entity? SUB suggests that the language be clarified to read "Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN. This would be evaluated using scheduled transmission paths and not measured amounts at the point of measurement. It is the responsibility of the Balancing Authority to notify the Registered Entity with an LDN twelve (12) months in advance of when an LDN would be used to schedule the transfer of energy outside the LDN for delivery through the LDN." Collectively, E3 would read: The LDN is characterized by all of the following: a)Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices; and b)Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation; and c)Power flows only into the Local Distribution Network: The sum of all power being delivered into the LDN at the points of measurement is greater than the sum of all the power measured as being delivered out of the LDN at the points of measurement; and d)Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN. This would be evaluated using scheduled transmission paths and not measured amounts at the point of measurement. It is the responsibility of the Balancing Authority to notify the Registered Entity with an LDN twelve (12) months in advance of when an LDN would be used to schedule the transfer of energy outside the LDN for delivery through the LDN.;and e)Not part of a Flowgate or Transfer Path: The LDN does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL). o Local distribution networks were added to the exclusion list after considerable discussions among the SDT and various registered entities that have configurations meeting these conditions. The SDT believes that any network that simply supports distribution and is providing adequate protection should be excluded from the BES.

Yes

Springfield Utility Board supports the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that cannot afford the substantial costs that accompany imposition of mandatory compliance with Reliability Standards. Further, we agree that the small utilities covered by the exemption will have no measureable impact on the operation of the interconnected BES. In the Pacific Northwest, many small entities were required to register by virtue of owning a very small portion of the region's 115 kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance, therefore, will have no measurable effect in improving the reliability of the interconnected Grid.

No

While SUB agrees that the approach adopted by the SDT, a core definition, couple with specific inclusions and exclusions, will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. SUB believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. SUB notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt.

Yes

The exceptions process is a necessary part of making this proposal compliant with the Federal Power Act. As noted in responses to Questions 1 and 11, SUB believes the basic SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used in the local distribution of electric energy. The SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities.

Springfield Utility Board requests that NERC create a distinction between the terms BPS and BES. Are the two to be used interchangeably, or will BPS no longer be used? SUB suggests NERC consider adopting the statutory definition of the Bulk Power System as the core definition of the Bulk Electric System. _____ May 26, 2011 Dear NERC Standards Drafting Team: Thank you for the opportunity to comment on NERC's proposed Continent-wide Definition of Bulk Electric System. We believe that NERC 's proposed Bulk

Electric System definition is proceeding in the right direction, but that more work needs to be done. SUB's specific concerns are as follows: • Bulk Power System (BPS) and Bulk Electric System (BES) - Springfield Utility Board requests that NERC create a distinction between the terms BPS and BES. Are the two to be used interchangeably, or will BPS no longer be used? SUB suggests NERC consider adopting the statutory definition of the Bulk Power System as the core definition of the Bulk Electric System. • Clear definition of Radial – Because there still appears to be inconsistencies in both definition and application, SUB encourages NERC to develop a concise definition of a radial system. For example, if a system is normally operated as radial, but could be operated closed (by manually closing a breaker), would it be considered a radial or close-looped system? If the answer is "that a closed system", is this in all cases, or are there exceptions? • Registration Status – SUB understands that one of the primary values of clearly defining the BES is for registration determinations, as well as determining which of the Standards apply to registered entities. SUB encourages NERC to support the use of the BES definition for entity registration, and to develop the exception procedure for registered entities that do not own or operate any BES Elements. Springfield Utility Board appreciates FERC and NERC's efforts to create a continent-wide definition of Bulk Electric System, and appreciates the opportunity to provide comment. Tracy Richardson Springfield Utility Board SUB requests NERC to consider the situation where an entity has multiple, but separate systems. The entity is required to become a Registered Entity because the sum of their individual systems meets the thresholds, but portions of their physically separated systems taken individually would otherwise not reach the threshold for registration. For example, an entity may be responsible for service over a third party's transmission for distribution service to a single end user with a load less than =<25MW that has a hard tap into the third parties' transmission. Because the load has a hard tap, it is technically served from more than one transmission source. If there are no other loads served along the tap or along the third party's transmission segment, SUB believes that this type of situation warrants exclusion from the BES as it would otherwise be excluded – except for the fact that the combination of that service and other separate systems that the entity is responsible for triggers registration. SUB is concerned that devices such as shunt capacitor banks may be overlooked. For example, is a radial system serving only load with a shunt capacitor bank included or excluded from BES? It does raise the issue "what does "serving only load mean, exactly?" If a capacitor bank is used for purposes of managing reliability within an local network and the local network would otherwise be classified as an LDN, is the local network still classified as an LDN?
Individual
Joe Tarantino
Sacramento Municipal Utility District (SMUD)
Yes
Yes
Sacramento Municipal Utility District (SMUD) agrees with the concept of Inclusion 1. However, to ensure a clarity of the "Bright-Line" criteria, two items for the Drafting Team (DT) to consider are: 1) removal of the phrase other than GSU as it may lead to confusion. The GSUs typically have one winding below 100 kV that disqualify their inclusion. 2) Reference to the transformer terminals each above 100 kV would reduce confusion for single winding transformers and multiple winding transformers.
Yes
SMUD agrees with the concept of Inclusion 2. To ensure the clarity of the "Bright-Line" criteria the GSU when connected to a voltage 100 kV and above as indicated in the proposal should clearly state that the GSU is included as BES.
Yes
SMUD also agrees with the Inclusion 3 concept.
Yes
SMUD agrees with the inclusion of blackstart resources and their cranking paths.
Yes
SMUD agrees with the Inclusion 5 concept. However, there are a few terms that require clarification to support the "Bright-Line" application. It is unclear what is meant to be captured by the term "Dispersed power producing resources". As reflected in the intent statement it would be preferred to

indicate the applicability of the wind and solar resources or the term intermittent in the Inclusion 5 language. The term "collector system through a common point" is rather vague that lends to varied interpretations that perhaps a defined level of MW through a single element bottleneck would help quantify BES impacts. In addition, the BES delineation should be the single "bottleneck" element for aggregate connection of 75 MVA as it is that element's interruption is what would impact the BES. Additional concerns of I-5 suggests that the wind and solar resources would be BES components where their singular contribution has no appreciable impact to the BES. Including the bottleneck option seems to identify an aggregate BES impact for a loss of a 75 MW block that could have an impact on the BES.
Yes
SMUD support with the Exclusion 1 concept. However to maintain the clarity for a "Bright-line" the term "single Transmission source" needs to be expanded as it could be read to be a single line, common bus or a single entity, that will change the meaning of this exclusion.
Yes
Yes
SMUD agrees with the concept for Exclusion 3. However, sub-bullet "C" should address potential for integral values for variations of the load to the connected resource.
Yes
As written, it is unclear how this exclusion differs from the Radial exclusion. Furthermore, "small utility" needs to be defined more clearly. The last sentence appears circular because ownership of a transmission element would draw the owner into registration. Small entities have no measurable impact to the BES and should not be burdened with the exemption process.
Yes
SMUD does agree that the differentiation is established between the transmission & distribution systems. Although there is concern that the general "Bright-line" is not definitive and could afford additional value through incorporating clarifying language.
No
SMUD supports the SDT's efforts to create an acceptable BES definition directly linked to an exemption process. SMUD would also like to bring to the BES SDT's attention that the WECC the Bulk Electric System Definition Task Force has constructed the framework on this task that we encourage the SDT to review their work. SMUD would like to thank the BES SDT for consideration of these comments.
Group
NERC Transmission Issues Subcommittee (TIS)
Mark Byrd
No
Although the wording can work as it is, the TIS believes clearer wording would be: "All Transmission Elements operated at 100 kV or higher, Real Power and Reactive Power resources as described below, connected at 100 kV or higher unless such designation is modified by the list shown below."
No
It is not necessary to exclude generator step-up transformers because a GSU should be considered to be part of the generating Unit. >>>>>>>>>>The reference to two windings is technically incorrect because it would exclude autotransformers which technically only have one winding. It would be better to say that both the high-side and the low side of the transformer connected at 100 kV or higher. >>>>>>>>>>"I1 - Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings both the high-side and the low side of the transformer connected at 100 kV or higher unless excluded under Exclusions E1 and E3."
No
It is commonly understood that a generating unit includes the generator itself, and all of the components that connect it to the grid, including the GSU. The specific inclusion of the GSU implies that other components of a generating unit, such as its auxiliary transformers and loads, the

governors, exciters, etc., are not included. >>>>>>>>>>The TIS suggests the following wording: >>>>>>>>>>"I2 - Individual generating units greater than 20 MVA (gross nameplate rating) generator terminals through the GSU which has a high side connected at a voltage of 100 kV or above."
No
The use of the term "common bus" technically has a very specific meaning and would openly exclude most modes of connection. There is no "common bus" in a ring-bus or a breaker-and-one-half configuration. Also, it is not necessary to include the GSU (s), as commented in 3 above. >>>>>>>>>>The TIS suggests using wording similar to that contained in I5: >>>>>>>>>>"I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common bus operated at a common point of interconnection to a system Element at a voltage of 100 kV or above."
The last sub-bullet in E2 is terribly confusing. The TIS does not offer alternate wording because we are unsure of the meaning of the phrase: >>>>>>>>>> "…pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority."
The definition should include variable frequency transformers and back-to-back HVdc converters that connect portions of the system operated at 100 kV or higher, regardless of the dc voltage rating of the converter equipment.
Group
Rayburn Country Electric Cooperative, Inc.
Eddy Reece
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
No

Individual
Rick Hansen
City of St. George
Yes
The definition is okay as long as proper inclusions and exclusions are included in the definition.
Yes
No
It is understood that this mirrors the Registry Criteria and this is a simple way to address the issue. The justification states there is no technical rationale to change the 20 MVA threshold, however the technical rationale for the 20 MVA criteria has not been provided to the industry either. Having a 20 MVA unit treated the same and subject to all of the same standard requirements as a unit with several hundred MVA of capacity doesn't make sense either. The requirements for an entity or facility should match the impact of that facility to the system.
No
It is understood that this mirrors the Registry Criteria and this is a simple way to address the issue. The justification states there is no technical rationale to change the 75 MVA threshold, however the technical rationale for the 75 MVA criteria has not been provided either. Having a 75 MVA plant treated the same as a plant with a rating of several hundred or several thousand MVA doesn't make sense either. The requirements for an entity or facility should match the impact of that facility to the system.
Yes
No
See comments to questions 3 & 4 above. The requirements for an entity or facility should match the impact of that facility to the system.
No
Radial systems should be excluded as outlined in E1a; however the generation level requirements of 20 MVA and 75 MVA (I2, I3, & I5) should be revisited. As long as the normal power flow is into the radial system, the amount of generation on a radial segment should not automatically trigger an inclusion to the BES.
Yes
The limits on generation levels need to be revisited, with similar concerns as noted to questions 7 & 9 for exclusions E1 & E3.
No
Local distribution networks should have an exclusion provision. However, the local generation limit of 75 MVA is too restrictive. As long as power flows into a LDN the amount of generation should not trigger a LDN to be included in the BES. E3b should be removed from these exclusion criteria or maybe a reasonable ratio of load level to allowed generation on the LDN.
No
Is the transmission source a single line, a single substation? This needs to be defined. What is a small utility? This needs to be defined. Generation limits should also be revisited, see previous comments.
No
The way the definition is currently written it will include many entities with lines, generation and other facilities whose only purpose is for the local generation and distribution of energy to local customers. The generation restrictions and other language in the proposed definition will add additional registrations (i.e. TO/TOP) to many smaller entities which will have a significant economic impact to those utilities with little or no benefit to the main bulk system. The problems may stem more from the "one size fits all" approach to the standards requirements, with the TO/TOP requirements being the most onerous and difficult to comply with especially for smaller entities. Allowed generation levels and the actual use of the transmission and generation facilities should be considered in what is and is not

included in the BES. As the proposed definition stands now along with the current reliability standards a small utility with a few segments of 115 kV or 138 kV lines and with some generation to serve local load must comply with the same requirements as a very large utility with hundreds of miles of 345 kV or 500 kV lines and 1,000's of MVA of generation. The use of applying small, medium and large criteria to many of the standard requirements, similar to what is being considered for the CIP standards with low, medium and high requirements should be considered.
No
What are proposed transition implementation plans for facilities that will now be included in the definition? The implementation plan indicates 24 months which may or may not be enough depending on the response time to exception process. How will a pending exception action affect compliance requirements and effective dates? It should be at least 24 months after it has been determined that a facility must be included.
Individual
John Brockhan
CenterPoint Energy
No
CenterPoint Energy believes that some radial systems described in Exclusion E1 are similar to the local distribution networks (LDNs) described in Exclusion E3. A radial system may be connected to more than one automatic interrupting device in certain substation designs, such as a ring bus configuration. CenterPoint Energy believes similar wording should be used for Exclusion E1 and Exclusion E3. Utilizing wording from Exclusion E3, CenterPoint Energy recommends changing the beginning of Exclusion E1 to "Any radial system which is described as separable by automatic fault interrupting devices: Wherever connected to the BES, the radial system must be connected through automatic fault-interrupting devices; and:".
CenterPoint Energy appreciates the opportunity to provide comments. In reviewing the draft definition, CenterPoint Energy believes the SDT may have unintentionally expanded the definition of the BES beyond the statutory definition in Section 215. Facilities included in the BES should be those facilities that are necessary for the reliable operation of the BES. Many interconnected facilities operated at 100kV and above, particularly those that are operated between 100kV and 200kV, are interconnected primarily to enhance the service provided to customers, rather than to maintain reliable operation of the BES. In addition; CenterPoint Energy is concerned with the addition of another exception process to the Rules of Procedure (ROP). In orders 743 and 743-A, the Commission allowed the ERO latitude to develop a definition that varied from the Commission's recommendation. CenterPoint Energy supports the inclusion/exclusion approach of the SDT and believes it should be possible to define what constitutes the BES without an exception process. Historically, exception processes within the ROP have been cumbersome, labor intensive, confusing, and require on-going maintenance and quarterly or annual updates. Indeed, in question 10 of this comment form the SDT recognizes the burden of administrating an exception process. While CenterPoint Energy understands the SDT may feel pressure to produce a product quickly, the Company does not believe the expedited nature justifies an inferior product. CenterPoint Energy recommends the SDT continue developing criteria that clearly defines BES facilities based on the Section 215 language. Once that is accomplished, an exception process will not be needed.

Individual
Sunitha Kothapalli
Puget Sound Energy
Yes
E3. Local distribution networks (LDNs): In this exclsion criteria, it was unclear about the size of the LDN that could be excluded from BES. There was a limit on connected generation but not connected load. If there is any mention of total aggregate load served by this LDN then that would clarify the definition better. We would like to suggest using a limit say lesser than or equal to 300 MW of total aggregate load served by LDN could be excluded from BES definition in addition to all the 5 (a-e) characteristics mentioned.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
As suggested in Q1. If a limit on total aggregate load served by LDN is included, that would improve the clarity of this exclustion.
Yes
No
The language on total aggregate load served by LDN should be added for the exclusion list.
No
Individual
Linda Esparza
Public Utility District No. 1 of Franklin County
No
As a general matter, Franklin PUD supports the approach the Standards Development Team ("SDT") has taken to defining the Bulk Electric System ("BES"). The changes made in the revised core definition are helpful and represent significant progress toward an acceptable definition. With an effective and efficient exclusion process, the draft will better define the BES as a whole. We urge the SDT to bear in mind the restrictions contained in Section 215 of the Federal Power Act ("FPA") The "bulk-power system" (As per FERC, we treat the statutory term "bulk-power system" as equivalent to the term ordinarily used in the industry, "Bulk Electric System") definition imposes a clear limit on the reach of the mandatory reliability regime. The BES is made up of only those "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" and "electric energy from generation facilities needed to maintain transmission system reliability." Congress reinforced that limit in Section 215(i), where it emphasized that the FPA authorizes the imposition of reliability standards "for only the bulk-power system." Franklin PUD is concerned that the SDT's proposed definition is overly-broad, and that it will sweep in many Elements

that have little or no material impact on the reliable operation of the interconnected bulk transmission grid. For example, the definition uses the arbitrary 20 MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators. Accordingly, for the BES definition to conform to the requirements of the statute, the SDT must adopt an effective mechanism to exempt facilities like these that are improperly swept in by the SDT's brightline approach to inclusions and exclusions. For this reason, the Exception process to accompany the SDT's definition is of critical concern. If the SDT incorporates this statutory language as its core definition, it will have addressed FERC's primary concern with a minimum of disruption to the current NERC system of definitions. The definition could then be further elaborated to show specific points of demarcation for each inclusion and exclusion similar to that Proposal 6 from the WECC Bulk Electric System Definition Task Force ("BESDTF") team to further delineate BES and non-BES facilities.

No

In concept, we support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams noting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort. Also, the reference to "two windings of 100 kV or higher" may create some confusion because many three-phase transformer banks have 6 or 9 windings, depending on whether the transformer has a tertiary. We suggest clarifying this provision by changing the clause reference two windings to read: "the two highest voltage transformer windings of 100 kV per phase that are connected to the Bulk Electric System." We again urge the SDT to consider further delineation of points of demarcation similar to WECC BESDTF Proposal 6.

No

Franklin PUD is concerned that I2 inclusion criteria that includes the arbitrary 20 MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted improperly expands the BES definition to include generators that the statute requires to be excluded. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Unfortunately, the SDT appears to have concluded that any interconnection facility operating above 100-kV should be classified as BES. The result will be to require Generation Owners to register as Transmission Owners/Operators, as well, producing substantial additional compliance costs for those Generation Owners but resulting in little or no improvement in the reliability of the BES. We recommend that the SDT, like the Project 2010-07 SDT (commonly referred to as the GO/TO Team), give careful consideration to the practical results of its recommendations rather than relying on abstract conclusions about whether a "contiguous" or "non-contiguous" BES is more desirable. We are concerned that the SDT's pursuit of a "contiguous" BES will result in a substantially over-inclusive BES definition. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. NERC's Standards Drafting Team for Project 2010-07, has already considered this question and, based on an in-depth review of potentially applicable reliability standards, has concluded that generation interconnection facilities, even if operated above 100-kV, need to comply only with a limited set of reliability standards in order to achieve the reliability goals. Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with

the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability.
No
Franklin PUD is concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition.
Yes
Including "all" blackstart and blackstart cranking paths in the BES may ultimately provide an incentive to the electric industry to reduce the number of resources with blackstart capability. We therefore suggest that essential blackstart resources identified by the Regional Entity should be included in the Bulk Electric System, but non-essential blackstart resources need not be.
No
Franklin PUD agrees that it is important to address wind generation facilities and similar generation facilities in which a large number of generating units, each with a relatively small capacity, are clustered and fed into the grid at a single interconnection point. That being said, Franklin PUD is concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.
Yes
FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained. We believe the exclusion as drafted adequately defines radials.
No
As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold (through reference to Inclusion I2) lacks an adequate technical justification in this context. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit ("standby, back-up, and maintenance power…") should be eliminated.
Yes
Franklin PUD strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. Franklin PUD supports the LDN exclusion, but we believe the exclusion should be refined in the following respects: The SDT's draft states that: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load." We recommend that the SDT revise the sentence quoted above as follows: "LDNs are connected to the Bulk Electric System (BES) at more than one location to improve the level of service to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances.
Yes
Franklin PUD supports the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that can ill afford the substantial costs that accompany imposition of mandatory compliance with reliability standards. Further, we agree that the small utilities covered by the exemption will have no measurable impact on the operation of the interconnected BES. In the Pacific Northwest, many small entities were required to register by virtue

of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.

No

While Franklin PUD agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1, Franklin PUD believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. As discussed in our answer to Question 3, Franklin PUD notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that "users" of the BES can be subject to reliability regulation. Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BESDTF Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.

Yes

The Exceptions process is a necessary part of making this proposal complaint with the Federal Power Act. As noted in our responses to Question 1 and Question 11, we believe the basic SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used in the local distribution of electric energy. The SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities.

Franklin PUD has these additional concerns: • The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." Franklin PUD is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BESDTF approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. • For the reasons we have explained in our answer to Question 11, we believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process.

Individual

Patrick Farrell

Southern California Edison Company

No

The current approach seems to be based on the assumption that the presence of particular equipment is more important than the manner in which the equipment is used. Before SCE can support the BES

Definition, the definition should be revised to include "All Transmission and Generation Elements and Facilities operated at voltages 100 kV or higher, Real Power resources as described below, and Reactive Power resources connected at 100 kV or higher that operate in parallel with the integrated networked transmission system and are necessary for operating the interconnected transmission network, unless such designation is modified by the list shown below." This modification will provide the clarification needed to better ascertain what facilities should be identified as part of the BES and lessen the need to trigger the Rules Of Procedure exceptions process. If "Inclusions" and "Exclusions" continue to be a part of the BES definition, they will need additional clarification to ensure the exclusion of radial and distribution facilities which (1) do not have interconnected operations risk and (2) are not used for inter-utility transfers on the BES and, therefore, are not necessary for operating the interconnected transmission network. They also need to be modified to work in tandem with the "Technical Principles for Demonstrating BES Exceptions", so that these types of facilities don't continually have to be validated by the ROP exceptions process. Example: The exclusion of facilities which are radial or distribution in nature and that have connecting generation of 20MVA or higher for the purpose of serving local load and that are not used to transfer power between "systems" to the BES should be automatic under the BES Definition.
No
Identifying specific equipment within the "Inclusions" or "Exclusions" component is too prescriptive, and itemizing them in this fashion misses the intent of this endeavor which should be to ultimately ensure the risks to region wide reliability are captured. Therefore, it is SCE's position that the proposed BES Definition should not single out specific pieces of equipment, and that they should be included or excluded based on the criteria of the definition. To do otherwise could: (i) generate confusion due the many types and variations of equipment, and what should/should not be included In the BES; and (ii) include radial or distribution systems into scope that might not otherwise have been considered, and which pose no regional reliability risk. If the BES Definition continues to reference transformer types, it should clarify what specific attributes qualify for inclusion. This might best reside in companion documentation that would accompany the definition to ensure consistency in application.
No
Inclusions I2, I3, and I5 should either be modified or removed, because as currently written, these three Inclusion criteria force the definition to be arbitrarily demarcated by the size of generators connecting to the system, or the aggregate thereof, rather than focusing on the risk characteristics that should define the BES, as SCE identified in its response to Question No. 1. In the WECC, it can safely be said that the vast majority of 20MVA generators are located in local distribution systems and are used to off-set local load, rather than transfer power to the BES. In SCE's case, our distribution system has a number of components which are marginally above the 100kV BES threshold, are radial in nature, and were previously exempted from the BES by the WECC. These radial systems have interconnecting generation units larger than 20 MVA and/ or aggregate generation exceeding 75 MVA. In many cases, the generation levels on those radial systems exceed the limits proposed in I2, I3, and I5, but the loading on those same systems is such that generation will rarely exceed the local load. Therefore, there is little to no power flow back to the BES from these radial systems. If the BES definition continues to heavily focus its inclusion criteria on generator/ generation size, SCE feels that the SDT also consider incorporating the concept of "potential exports to the BES" from these generating sources. An example being: "I2 – Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above and have no more than 5% net flows into the BES based on the past XXX calendar years." This "Net Flow" concept would negate the need for Section 1C of the "Technical Principles for Demonstrating BES Exceptions", or conversely, provide the framework for a more quantifiable criteria in Section 1C.
No
Please refer to SCE's answer for Question No. 3 above.
Yes
No
Please refer to SCE's answer for Question No. 3 above. If the SDT goes forward and includes I5 into either the proposed BES definition or the Technical Principles for Demonstrating BES Exceptions, the

following additional clarification should be made: (i) Clarify the terms "Dispersed power producing resources" and "collector system"; (ii) When referencing "collector system," does it include the lines connecting the generation?; (iii) Why the 75 MVA threshold? This seems to be a somewhat arbitrary number which does not correlate with specific operational risks, operational limits, or network capability. This is highlighted when taking SCE's system into consideration, as we carry operational spinning reserves that are 10 to 20 times greater than the 75 MVA threshold identified in the proposed BES Definition. If SCE were to lose 75 MVA in an event, there would be no reliability risk or perceptible frequency deviation that would attend the event. The proportionality of risk and benefit does not seem to fit within the application and philosophy behind the mandatory limit. Setting the BES Definition in this manner in order to bring in the smallest utilities is not appropriate for application to the larger utilities.; and (iv) As written, I5 could unintentionally bring into scope sub-trans/distribution systems with enough generation as these radial systems could be categorized as "collector systems". Specifically, there are radially-connected distribution systems in the Desert Southwest designed to enable the interconnection of multiple renewable resources which could be viewed as grouping this collective generation at the point of interconnection with the transmission system. In many cases, the sum total of this generation could be greater than 75 MVA.

No

SCE cannot support this exclusion as it will only apply if generation on the radial system does not exceed the criteria identified in I2, I3 and I5. SCE has identified its concerns regarding these aforementioned items in its previous responses. If the SDT goes forward with E1 criteria, the criteria should be modified as follows: (i) Delete "originating with an automatic interrupting device." This statement does not change or describe the flow to or from a radial system; (ii) E1 should be modified to identify that generation interconnected to a radial system should not exceed a measureable threshold of electrical demand on the radial system – an example being "5% occurrence in the past XXX years". This would negate some of the concerns identified regarding I2, I3 and I5; and (iii) SCE also feels that if the core BES definition is to reference protection devices, it should not identify the particular type of protection device as it did in E1, by specifically calling out "make before break" switching, as there are other types of protection with similar functionality.

No

SCE does not believe that the size of generator should dictate what system facilities, regardless of voltage, will or will not be included in the BES definition. More important, is the issue of whether or not the generation has net flow(s) out to the greater integrated networked transmission system. It is the "generation" and not the "generator" which has impacts on the BES. In addition, it would seem that if these are truly "behind-the-meter", non-export interconnected generation, then there is no scenario that would result in flow back onto the BES, no matter what the interconnection level. The focus should not be restricted to only "behind-the-meter" generation, but rather on the flow generation from the radial system.

No

SCE is in support of the general LDN premise, but believes that this definition should more closely track the FERC seven-factor test from Order 888. As written, the five factors identified could lead to the reclassification of radial sub-transmission system facilities above 100kV from "distribution facilities" to "network facilities". For example, interconnection amounts within an LDN may exceed an aggregate level of 75MVA, but will not exceed the load in the LDN. SCE suggests striking characteristics "B" and "D" from Exclusion E3, and allowing characteristic "C" to stand alone as the generation characteristic which would define an LDN. The SDT may want to incorporate the following revision: "LDN's are connected to the Bulk Electric System (BES) at one or more location solely to improve the level of service to retail customer load."

No

Small utilities should not be automatically excluded from the BES if the BES Definition continues to focus on the size of interconnecting generators to determine what facilities are included in the BES. Instead, small utilities should be required to justify their exclusion using the exemption procedure and the Technical Principles for Demonstrating BES Exceptions. This would provide the necessary oversight to ensure these smaller systems continued to stay under the thresholds stipulated in the BES definition. In many areas, it is both faster and less expensive for renewable generators to interconnect with these systems, thus potentially allowing for the addition of large amounts of generation totaling more than the draft BES allowances within a relatively short period of time.

No
SCE believes that the BES Definition, as currently proposed, relies too heavily on the characterization of interconnected generation in its "Inclusion" criteria.
Yes
For participants in an ISO/RTO, such as the CAISO, the final BES Definition may change the party who will control system facilities, even if they are distribution or radial in nature, based on the amount or size of interconnected generation. Generally, within the CAISO, facilities that are included in the BES Definition are under CAISO's direct control, while radial and distribution facilities are not.
As discussed during the May 19, 2011 NERC Webinar, SCE supports having one-line diagrams illustrating examples of the line and bus arrangements as they pertain to the BES Definition included as part of a set of support documents. A good start for these diagrams would be the ones developed by the WECC Bulk Electric System Definition Task Force (WECC BESDTF). These diagrams were developed by WECC to better illustrate the demarcation between BES and non-BES facilities and provide important information and insight into the WECC system.
Individual
Thomas Weller
Midstate Electric Cooperative
No
As a general matter, MSEC supports the approach the Standards Development Team ("SDT") has taken to defining the Bulk Electric System ("BES"). The changes made in the revised core definition are helpful and represent significant progress toward an acceptable definition. With an effective and efficient exclusion process, the draft will better define the BES as a whole. We urge the SDT to bear in mind the restrictions contained in Section 215 of the Federal Power Act ("FPA") The "bulk-power system" (As per FERC, we treat the statutory term "bulk-power system" as equivalent to the term ordinarily used in the industry, "Bulk Electric System") definition imposes a clear limit on the reach of the mandatory reliability regime. The BES is made up of only those "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" and "electric energy from generation facilities needed to maintain transmission system reliability." Congress reinforced that limit in Section 215(i), where it emphasized that the FPA authorizes the imposition of reliability standards "for only the bulk-power system." MSEC is concerned that the SDT's proposed definition is overly-broad, and that it will sweep in many Elements that have little or no material impact on the reliable operation of the interconnected bulk transmission grid. For example, the definition uses the arbitrary 20 MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators. Accordingly, for the BES definition to conform to the requirements of the statute, the SDT must adopt an effective mechanism to exempt facilities like these that are improperly swept in by the SDT's brightline approach to inclusions and exclusions. For this reason, the Exception process to accompany the SDT's definition is of critical concern. If the SDT incorporates this statutory language as its core definition, it will have addressed FERC's primary concern with a minimum of disruption to the current NERC system of definitions. The definition could then be further elaborated to show specific points of demarcation for each inclusion and exclusion similar to that Proposal 6 from the WECC Bulk Electric System Definition Task Force ("BESDTF") team to further delineate BES and non-BES facilities.
No
In concept, we support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams noting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort. Also, the reference to "two windings of 100 kV or higher" may create some confusion because many three-phase transformer banks have 6 or 9 windings, depending on whether the transformer has a tertiary. We suggest clarifying this provision by changing the clause reference two windings to read: "the two highest voltage transformer windings of 100 kV per phase that are connected to the Bulk Electric System."

We again urge the SDT to consider further delineation of points of demarcation similar to WECC BESDTF Proposal 6.

No

MSEC is concerned that I2 inclusion criteria that includes the arbitrary 20 MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted improperly expands the BES definition to include generators that the statute requires to be excluded. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Unfortunately, the SDT appears to have concluded that any interconnection facility operating above 100-kV should be classified as BES. The result will be to require Generation Owners to register as Transmission Owners/Operators, as well, producing substantial additional compliance costs for those Generation Owners but resulting in little or no improvement in the reliability of the BES. We recommend that the SDT, like the Project 2010-07 SDT (commonly referred to as the GO/TO Team), give careful consideration to the practical results of its recommendations rather than relying on abstract conclusions about whether a "contiguous" or "non-contiguous" BES is more desirable. We are concerned that the SDT's pursuit of a "contiguous" BES will result in a substantially over-inclusive BES definition. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. NERC's Standards Drafting Team for Project 2010-07, has already considered this question and, based on an in-depth review of potentially applicable reliability standards, has concluded that generation interconnection facilities, even if operated above 100-kV, need to comply only with a limited set of reliability standards in order to achieve the reliability goals. Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability.

No

MSEC is concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition.

Yes

Including "all" blackstart and blackstart cranking paths in the BES may ultimately provide an incentive to the electric industry to reduce the number of resources with blackstart capability. We therefore suggest that essential blackstart resources identified by the Regional Entity should be included in the Bulk Electric System, but non-essential blackstart resources need not be.

MSEC agrees that it is important to address wind generation facilities and similar generation facilities in which a large number of generating units, each with a relatively small capacity, are clustered and fed into the grid at a single interconnection point. That being said, MSEC is concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4. This would lump together many IPP's that are spread out over a large distribution network that happen to be tied into a single point of interconnection.

Yes

FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be

retained. We believe the exclusion as drafted adequately defines radials.
No
As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold (through reference to Inclusion I2) lacks an adequate technical justification in this context. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit ("standby, back-up, and maintenance power…") should be eliminated.
Yes
MSEC strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. MSEC supports the LDN exclusion, but we believe the exclusion should be refined in the following respects: • The SDT's draft states that: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load." (emphasis added) We recommend that the SDT revise the sentence quoted above as follows: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances.
Yes
MSEC supports the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that can ill afford the substantial costs that accompany imposition of mandatory compliance with reliability standards. Further, we agree that the small utilities covered by the exemption will have no measurable impact on the operation of the interconnected BES. In the Pacific Northwest, many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.
No
While MSEC agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1,MSEC believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. As discussed in our answer to Question 3, MSEC notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that "users" of the BES can be subject to reliability regulation. Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BESDTF Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.
Yes
The Exceptions process is a necessary part of making this proposal complaint with the Federal Power Act. As noted in our responses to Question 1 and Question 11, we believe the basic SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used in the local distribution of electric energy. The SDT's approach can meet the statutory requirements only if the Exception process currently under development results in

facilities that are not properly classified as BES being exempted from regulation as BES facilities.
Yes MSEC has these additional concerns: • The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." MSEC is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BESDTF approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. • For the reasons we have explained in our answer to Question 11, we believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process. Dear NERC Standards Drafting Team: Enclosed are MSEC's comments on NERC's Proposed Continent-wide Definition of Bulk Electric System. We believe that NERC's proposed Continent-wide Definition of Bulk Electric System is proceeding in the right direction on this important topic but that more work needs to the done. We would like to thank the Standards Drafting Team for their hard work. We support the detailed comments of the Snohomish County Public Utility District and Pacific Northwest Generating Cooperative with regard to the questions posed by the Comment Form for Project 2010-17 Definition of BES. We would like to emphasize these portions of Snohomish's and PNGC's comments: • Question 1, both PNGC and Snohomish suggest that NERC start by adopting the statutory definition of the bulk power system as the core definition. We support that approach. That is, "(t) he term 'Bulk Electric System' means: (A) Facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and, (B) Electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy". See 16 U.S.C. § 824o(a)(1)." • Question 7, we support the exclusion for radial lines as drafted. • Question 9, we support the categorical exclusion of Local Distribution Networks from the BES as defined here, but with Snohomish's clarifications. • Question 10, we support exclusion E4, for small utilities, but we are unclear how small utilities are defined in the exclusion language presented here. • Question 11, we support the approach to exclusion of local distribution facilities discussed in the draft but repeat that more work should be done on the definition so that facilities used in local distribution are not swept up into the BES. The primary value of clearly defining the BES is for registration determinations. We realize that clearly defining the BES also has value in determining which standards apply to registered entities. If a registered entity does not own any Elements of the BES that that registered entity should be able to efficiently and effectively demonstrate an exception. We encourage NERC to support the use of the BES definition for registration-issues and to develop the exception procedure for registered entities that do not own or operate any Elements of the BES.
Individual
Jason Snodgrass
GTC
Yes
Yes

Yes
Yes
Yes
Yes
Yes
Agree, but further clarification requested. E1 reads as if the originating automatic interrupting device is to be excluded with the radial system. Can the drafting team clarify this intent with respect to breakers protecting radial lines versus for example a breaker or circuit switcher protecting an excluded transformer which is not part of the BES? Drawings would be very beneficial here.
Yes
Yes
Yes
No
Since distribution facilities are to be excluded can the drafting team clarify if the automatic interrupting protective device (breaker or circuit switcher) operating at 100kV or above and protecting an excluded transformer (non-BES) should be excluded with the excluded transformer? Perhaps an additional separate exclusion could eliminate any uncertainty.
No
see comments above.
Individual
Diane Barney
New York State Dept of Public Service
No
1) We do not agree with the core definition. The core definition starts with the premise that the definition must be drafted based on a 100 kV brightline designation. FERC's Order 743 and 743-A clearly state that is just one approach and would entertain other approaches that demonstrate the same level of reliable operation and is responsive to FERC's reliable operation concerns. As the EPAct 2005 recognizes, the industry technical expertise is preserved in the NERC and does not reside at FERC. Therefore, FERC's jurisdiction is expressly limited by Section 215 of the Federal Power Act. Moreover, FERC cannot, under the guise of "policy" concerns, exceed the limits of its statutory authority. FERC's orders recognize this, and repeatedly acknowledge that FERC must exclude facilities used in local distribution from the definition of BES. FERC's orders, at most, assert that "some" 115/138 kV facilities are needed to reliably operate the bulk system. FERC has made no showing that all facilities of 100kV or greater are necessary for reliable operation of the grid. Without a record based finding that all such facilities are necessary for reliable operation of the grid, FERC cannot include all such facilities within its definition of BES. FERC has even explicitly acknowledged within a New York transmission tariff rate case that a 115 kV loop around a significant size city should not be included in the transmission account as it existed solely to serve load in that city. Given the technical expertise to devise a definition more refined lies with the industry, FERC wisely deferred to NERC processes the ability to employ a different approach other than a brightline. Therefore, NERC should apply its expertise to fashion a definition of "bulk electric system" that comports with the statutory jurisdictional limitations Congress imposed upon FERC in FPA Section 215. NERC's efforts should be checked at every step that they are not exceeding the originating authority contained in FPA Section 215. Overall, the definition must be guided by, and limited to, the FPA definition of reliable operation which is explicitly defined as limited to protection of the bulk system by "operating the elements of

the bulk-power system … so that instability limits, uncontrolled separation, or cascading failures of such systems will not occur….", and expressly excludes facilities used in local distribution. 2) NERC fails to make any technical demonstration that using the existing definition as a starting point is valid. Moreover, NERC has resisted pursuing alternative avenues. The NPCC study submitted to FERC in the combined NERC-NPCC compliance filing in September 2009, clearly demonstrated the movement from the NPCC regional criteria to a 100 kV brightline provided little, if any, increased levels of reliable operation. Through extrapolation, a study of other areas is likely to indicate that reliable operation levels throughout the rest of the country could be assured by a more refined selection of which facilities under 200 kV should be included as part of the bulk system. Note that FERC did not reject use of material impact assessmensts; they only objected to the fact that the NPCC test did not include some regional interconnection facilities, some nuclear interconnections and a particular load area. NERC's failure to evaluate other approaches than a brightline 100 kV standard is a failure to ensure adequate levels of reliable operation at a sustainable level consistent with provisions of the FPA. All remaining comments on the definition, as presented by NERC, are based on our belief that the proposed definition is overreaching in its basic premise of starting with a brightline 100 kV as its core definition of the bulk system. 3) It is not clear why the core definition has dropped "generation" interconnected at the specified voltage level. The following inclusions/exclusions included generation facilities and it appears inconsistent to not include generation in the core definition.
No
The inclusion of 20 MVA generation seems inconsistent with I3 that sets the aggregate threshold at 75 MVA. It is not rational that a 20 MVA facility could be the cause of instability, uncontrolled separation of the system or cascading events. This inclusion should be dropped.
I3 should be revised to read all generation – individually or aggregate – 75 MVA and above.
No
This inclusion is problematic at a couple levels. First, blackstart resources can be facilities smaller than the previous thresholds located deep within the local distribution system. Second, given you do not know ahead of time how the system might come apart, often there are multiple cranking paths specified. To avoid incurring the costs of upgrading facilities all along multiple paths, there will be an inclination to designate only one path involving the fewest impacted facilities. The result could be reduced reliable operation – not more.
Yes
We agree with exclusion E1. As described, the facilities are clearly local distribution. Requiring a "make-before-break" switching device, between the BES and the excluded radial system, as a condition-precedent for such exclusion is proper. Such switches are necessary to promote reliable operation by enabling removal of radial systems principally serving load for maintenance and other reliable system operations. If the "make-before-break" switching capability is not included as part of the exclusion, the specification would undermine reliable system operation.
Yes
This exclusion is appropriately specified. Behind the meter generation is mainly on the local distribution system and most likely modeled in power flow cases used to study the bulk system as netted against load. For the few sizable behind the meter generation that are: 1) connected at the 100 kV level and above; and, 2) exceed the 75 MVA threshold, if it is believed that these facilities will impact the bulk system they can be petitioned for inclusion under the rules of procedure.
Yes
This exclusion properly recognizes that local distribution facilities can be at any voltage level. It also properly recognizes that reliable service to load often requires parallel circuits. As written, the exclusion respects FERC's concern that major generation facilities should not be part of the LDN, by limiting the exclusion to generation of75 MVA or less, and to only facilities that move energy down to the LDN.
Yes
This exclusion is consistent with E1 and E2. There should not be discrimination against similarly situated loads.
No

See comments under question 1.
Yes
As expressed in comments under question 1, we believe that use of a 100 kV brightline definition is an overreach of authority and that any definition must respect the limitations itemized in FPA 215. The FPA recognizes that only a subset of the electric system facilities have the capacity to impact multi-state portions of the electric system and rise to the level of federal attention. As a practical matter, however, the electric system is a continuous machine and efforts to maintain reliability on both the transmission and local distribution portions of the electric system must be compatible. That is the key role that the regional entities play and that role should be maintained and respected by NERC efforts. The time and effort it takes to draft standards to address issues on the bulk system is directly attributable to the many different options to design and operate transmission facilities, and options to ensure reliability are different for each design and mode of operation. Multiply that a hundred fold to the different approaches there are to design, operate and to ensure reliability on the local distribution system. Attempts at the federal level to design uniform standards to apply at lower and lower levels of the system are doomed to failure given the nuances of each local system. These attempts will only lead to needless complications and the actual undermining of the reliability on the local distribution system. NERC staff comments seeking to sweep into NERC standards behind the meter generation, meters and relays located deep within the distribution system, etc. and then insist that the bulk system be contiguous is a phenomenal overreach and an intrusion on the design and functioning of the distribution system which will a) complicate efforts to maintain a reliable distribution system; and 2) will needlessly incur costs on ratepayers. NERC needs to stay focused on the authorities extended to it in the FPA. Leave it to the regions to interface locally with utilities, state authorities and other stakeholders to shape seamless reliability protocols that will benefit us all. The question asks if there are orders that relate to this effort. In 1997, the New York Public Service Commission held a proceeding Case No. 97-E-0251 that supplemented the FERC Seven Factor Test with three additional factors to be used in New York to distinguish between transmission and local distribution. This order can be found at the following link: http://documents.dps.state.ny.us/public/Common/ViewDoc.aspx?DocRefId={3C7602E0-62E0-4831-82B6-8C34A72934F4}
Group
New York State Reliability Council
Roger Clayton
No
HVDC and VFT technologies are not addressed specifically. Consideration should be given to expanding the core BES definition to clarify that it includes all AC and DC system Element(s).
Yes
No
The use of a 20 MVA threshold based on NERC's Registry Criteria may be administratively convenient but is arbitrary when based upon BES reliability considerations. Suggest use of a 300 MW or other regionally and technically acceptable threshold such as NPCC's A-10 criterion.
No
The use of a 75 MVA threshold based on NERC's Registry Criteria may be administratively convenient but is arbitrary when based upon BES reliability considerations. Suggest use of a 300 MW or other regionally and technically acceptable threshold such as NPCC's A-10 criterion.
Yes
BS facilities and their cranking paths are critical to the maintenance of system reliability under system restoration conditions. However, they are a special case and should not be construed as a precedent for inclusion of all BES contiguous elements.
No
Distributed resources are comprised of multiple small units that cycle on and off depending upon local ambient conditions. They have multiple feeders collecting at the point of interconnection. It is not credible that simultaneous loss of multiple units and/or collector system feeders could occur and they

should be excluded from the BES based upon reliability considerations. It is noted that system Element(s) beyond the point of interconnection are subject to BES inclusion per the core definition.
No
E1 too prescriptive. Suggest developing a general, flexible definition of radial system in NERC Glossary such as "A system connected from a single Transmission source originating with an automatic interruption device".
Yes
Individual
Bob Thomas
Illinois Municipal Electric Agency
Yes
With the following clarifying edits. The BES definition should refer to "non-generator Reactive Power resources," to clarify that although all generators provide some reactive power, the generators that do not meet the criteria of I2 through I5 are not included in the BES.
Yes
With the following clarifying edits. "Transformers, including phase angle regulators, and not including generator step-up (GSU) transformers, with two windings of 100 kV or higher unless excluded under Exclusion E1 or E3."
Yes
Please see comments under Question 13.
Yes
Please see comments under Question 13.
Yes
Please see comments under Question 13.
Yes
Please see comments under Question 13.
Yes
With the following clarifying edits. Delete the words "described as" in the first sentence. Also, "a single Transmission source" should be defined to encompass various bus configurations. For example, an individual breaker position in a ring bus is not a single Transmission source, but a bus at one voltage level at one substation should be considered a single Transmission source. Also, the phrase "automatic interrupting device" should be replaced with the phrase "switching device". The current wording does not take into account that a radial system is often connected to a ring bus or a breaker-and-a-half scheme where the breaker/automatic interrupting device is within the bus arrangement. The appropriate division between BES and non-BES is at the disconnect switch where the radial line attaches to the bus arrangement.
Yes
Please see comments under Question 13.
Yes
With the following clarfying edits. "Local Distribution Networks (LDN): Groups of Elements operated above 100 kV that are primarily intended to distribute power to Load rather than to transfer bulk power across the Interconnected System." The second sentence should be revised as follows: "LDN's are connected to the Bulk Electric System (BES) from more than one Transmission source solely to improve the level of service to retail customer Load."
Yes

With the following clarifying edits. The final sentence should be revised as follows: "For purposes of this exclusion, a 'small utility' is an entity that performs a distribution provider or load serving entity function but is not required to register as a Distribution Provider or Load Serving Entity by the ERO."
Yes
Please see comments under Question 13.
No
Being a Joint Action Agency and Joint Registration Organization representing small municipal utility interests, IMEA appreciates this initiative to better define electric systems that should and should not be considered part of the Bulk Electric System. In addition to those comments provided above, IMEA supports comments addressing other concerns as submitted by the Transmission Access Policy Study Group and the Small Entity Working Group.
Individual
Kim Wissman
Public Utilities Commission of Ohio
No
FERC jurisdiction is limited by the Federal Power Act, Section 215. To make a bright line designation as the starting point, without a demonstration that ALL facilities at 100 kV and greater affect the reliability of the bulk power system is a step beyond FERC jurisdictional boundaries. The Federal Power Act explicitly excludes facilities used in local distribution from the bulk power system. NERC should give serious consideration to other (non bright-line) approaches to ensure bulk system reliability.
No
FERC jurisdiction is limited by the Federal Power Act, Section 215. To make a bright line designation as the starting point, without a demonstration that ALL facilities at 100 kV and greater affect the reliability of the bulk power system is a step beyond FERC jurisdictional boundaries. The Federal Power Act explicitly excludes facilities used in local distribution from the bulk power system. NERC should give serious consideration to other (non bright-line) approaches to ensure bulk system reliability.
No
The inclusion of individual generating units between 20 MVA and 75 MVA nameplate capacity is inappropriate and over-reaching. Inclusion I3 sets the aggregate threshold at 75 MVA for multiple generating units. Technical justification for assuming a 20 MVA generating facility could cause instability, uncontrolled separation, or cascading events on the bulk system appears to be lacking. This appears to simply be based on that fact the NERC used it in a separate framework, which has no basis. Inclusion I2 should be removed. Regarding the contiguous standard - simply because an element is connected to the BES does not make it a part of the BES. By the very nature, a radial or distribution element should pose limited or no impact on the BES. They are easily isolated from the rest of the system. This contiguous measurement could impose standards unnecessarily on systems with no ultimate impact on the bulk system, thereby enabling far-reaching authority into the distribution system.
No
This should be expanded to also refer to individual generation capacity, as well as aggregate, at 75 MVA and above.
No
this should be determined by an impact analysis, not inclusive of all Blackstart Resources, regardless of location on the system.
None
Yes
Exclusion E1 is appropriate. However, any inclusion that are inconsistent with this exclusion should be eliminated. Any facility that has an impact on the bulk system could be considered for inclusion under a case by case basis.
Yes

Exclusion E2 is appropriate. Same as 7.
Yes
Exclusion 3 is appropriate. This reflects the reality that local distribution can be at any level. As a reminder the Commission proposed seven indicators of local distribution to be evaluated on a case-by-case basis: (1) Local distribution facilities are normally in close proximity to retail customers. (2) Local distribution facilities are primarily radial in character. (3) Power flows into local distribution systems; it rarely, if ever, flows out. (4) When power enters a local distribution system, it is not reconsigned or transported on to some other market. (5) Power entering a local distribution system is consumed in a comparatively restricted geographical area. (6) Meters are based at the transmission/local distribution interface to measure flows into the local distribution system. (7) Local distribution systems will be of reduced voltage. This test clearly indicates that not all radial circuit lines are the same. This exclusion would not only appropriately apply the seven factor test, but also comply with the Federal Power Act regarding appropriate authority.
Yes
It appears this could be applied consistently with other exclusions.
No
While it appears there was an attempt to draft the standard to comply with the Federal Power Act, the issues outlined throughout the questions above raise concerns that local distribution could easily get captured in NERC and FERC reliability standards needlessly and inappropriately.
Yes
See concerns above with exceeding authority under the Federal Power Act Section 215. State Utility Commissions are charged with assuring safe, reliable service to their customers. We are in a much better situated position than FERC or NERC to provide any necessary regulation and oversight of the local distribution system.
No
Group
Dominion
Louis Slade
No
Dominion believes the core BES definition should include any non-radial Element or Facility operated at 100 Kv or higher and should exclude any radial Element or Facility (regardless of operating voltage) as well as non-radial Element or Facility operated below 100 kV. The core definition should also include defined criteria that are applied to an Element or Facility to determine whether or not it meets the intent of the Section 215 of Federal Power which defines the bulk power system as (1) facilities and control systems necessary for operating an interconnected electric energy transmission network; and (2) electric energy from generation facilities needed to maintain transmission system reliability. (3) However, Section 215 excludes facilities used in the local distribution of electric energy From the definition of the bulk power system . An Element or Facility should be included where the Element or Facility is necessary for operating an interconnected electric energy transmission network or is needed to maintain transmission system reliability. Likewise an Element or Facility should be excluded where the Element or Facility is not necessary for operating an interconnected electric energy transmission network or is needed to maintain transmission system reliability. Dominion agrees that the BES definition should exclude local distribution facilities under state jurisdiction. In specific instances (including UFLS programs and transmission protection systems that are implemented on distribution elements or radial transmission) local distribution facilities can be included in approved NERC reliability standards following under explicit standards dedicated to their explicit mission without their automatic inclusion in a definition of BES that could infringe on state jurisdiction. Dominion is also concerned at how complicated these lists of inclusions and exclusions has become! Dominion had implemented the 100 kV threshold, as displayed in prior drafts of this bright line test (without all these distractions provided in this BES definition version). With the complexity of inclusion and exclusion criteria now provided in this draft, Dominion is not sure it can replicate the list of facilities that are now qualified for inclusion in the BES as seen through the eyes of different auditors and this will expose Dominion to undesirable disputes down the road on what should have been included or excluded.
No

While Dominion appreciates the SDT's attempt to respond to initial comments, unfortunately the response does not squarely address Dominion's concerns. Rather, the SDT proposes that all transformers, whether for transmission or generation should be included. The SDT's response to SERC also seems to indicate that the facility associated with generators should be included in the BES. In order to provide clarity Dominion restates its comment. Dominion's position is that all transformers with two windings at 100 kV or higher should be included in the BES. Dominion does not agree that a transformer with two windings at 100 kV or higher should be excluded merely because it is a generator step up (GSU). And, while Dominion does not agree that a generation resource, Element or Facility should automatically be classified as part of the BES, if the SDT decides to do so, then it is Dominion's position that the GSU should also be included in the BES. It doesn't seem to make sense to include the generator itself, but exclude an associated element that is operated at 100 kV or above. If the SDT's intent was to 'carve out' GSUs in Inclusion -I1, but to include GSUs in Inclusion I2 and 3, then Dominion suggests revising the phrase "….including the generator terminals through the GSU…." to read "….including the generator terminals and the GSU."
No
As stated in its response to Question 2 above, Dominion disagrees that a generation resource, Element or Facility should automatically be included in the BES. Dominion agrees that the Generator Owner and Generator Operator, as users of the bulk power system, should have to abide by applicable reliability standards, but do not agree that this should automatically require the inclusion of a generation resource, Element or Facility in the BES. Further, Dominion prefers that the SDT use the term "generation resources" as stated in the current BES definition contained in the Glossary of Terms instead of the proposed term "generating unit".
No
As stated in its response to Question 2 above, Dominion disagrees that a generation resource, Element or Facility should automatically be included in the BES. Dominion agrees that the Generator Owner and Generator Operator, as users of the bulk power system, should have to abide by applicable reliability standards, but do not agree that this should automatically require the inclusion of a generation resource, Element or Facility in the BES. Further, Dominion prefers that the SDT use the term "generation resources" as stated in the current BES definition contained in the Glossary of Terms, instead of the proposed term "generation unit"
No
Dominion continues to disagree that a generation resource, Element or Facility should automatically be included in the BES. Dominion agrees that the Generator Owner and Generator Operator, as users of the bulk power system, should have to abide by applicable reliability standards, but do not agree that this should automatically require the inclusion of a generation resource, Element or Facility in the BES.
No
Dominion disagrees that an Element or Facility operated below 100 kV should be included automatically in the BES. Dominion agrees that users of the bulk power system should be required to abide by applicable reliability standards. Dominion questions why the SDT chose to use the phrase 'Dispersed power producing resources' As opposed to the phrase 'Dispersed generating resources'. Dominion asks that the SDT provide an explanation for its choice of phrases.
No
Dominion can agree with Exclusion E1 only if the exclusion is applied to any radial Facility, regardless of whether it is used to connect load or generation to the bulk power system.
Yes
Dominion agrees with Exclusion E2 because we agree that specific criteria can be applied and will indicate the Element or Facility is not necessary for operating an interconnected electric energy transmission network or is needed to maintain transmission system reliability. . However Dominion suggests that the SDT add a defined interval of time for measurement of net capacity so that planners can be assured that the exclusion should really be applied at the location. Dominion suggests use of an hour as the time increment.
No
An Element or Facility should only be excluded where the Element or Facility is not necessary for operating an interconnected electric energy transmission network or is needed to maintain

transmission system reliability.
No
It is Dominion's position that, all things being equal a generator or a load have similar, but typically inverse impacts of the bulk power system. The burden for small entities is similar, whether that entity is a LSE, DP, GO or GOP.
No
Dominion believes the core BES definition should include any non-radial Element or Facility operated at 100 Kv or higher and should exclude any radial Element or Facility (regardless of operating voltage) as well as non-radial Element or Facility operated below 100 kV. The core definition should also include defined criteria that are applied to an Element or Facility to determine whether or not it meets the intent of the Section 215 of Federal Power Act Section 215 defines the bulk power system as (1) facilities and control systems necessary for operating an interconnected electric energy transmission network; and (2) electric energy from generation facilities needed to maintain transmission system reliability. (3) However, Section 215 excludes facilities used in the local distribution of electric energy From the definition of the bulk power system. An Element or Facility should be included where the Element or Facility is necessary for operating an interconnected electric energy transmission network or is needed to maintain transmission system reliability. Likewise an Element or Facility should be excluded where the Element or Facility is not necessary for operating an interconnected electric energy transmission network or is needed to maintain transmission system reliability. Dominion agrees that the BES definition should exclude local distribution facilities under state jurisdiction. In specific instances (including UFLS programs and transmission protection systems that are implemented on distribution elements or radial transmission) local distribution facilities can be included in approved NERC reliability standards following under explicit standards dedicated to their explicit mission without their automatic inclusion in a definition of BES that could infringe on state jurisdiction.
Yes
The inclusion of an element or facility that is not integral to the reliable operation of the integrated bulk power system is in conflict with the intent of Section 215 of the FPA . This is especially true for radial facilities, whether used to connect generators or load to the bulk power system.
Does the SDT assert that there is no reliability gap because the impact of load on the BES is covered because the DP and LSE are registered and therefore must comply with applicable reliability standards? If so, why shouldn't the same apply to generation elements? GO and GOPs, just like DPs and LSEs are registered users of the bulk power system and must adhere to applicable reliability standards. Other comments Dominion also has the following comments which are based, to a large degree upon the webinar of May 19th. Dominion is concerned that while the BES definition is going through the standards development process, where stakeholders have the ability to ballot, the exception process is being treated as a change to the Rules of Procedure, with no associated stakeholder ballot. For this reason, Dominion prefers that the exception criteria itself be part of the BES definition standards development process. As Dominion reviews the Inclusions and Exclusions included by the SDT in the BES definition, we believe that the SDT could just have easily developed criteria to determine whether impact on the BES is material. We believe this would negate the need for the exception process proposed for the Rules of Procedure. However, if this course is not chosen, then Dominion requests the NERC BOT apply these changes in an 'all or none' fashion. That is, the BES definition and the exception process should both require NERC BOT approval or neither should be moved to FERC for its approval. We are confused as to how the definition, in particular the Inclusions and Exclusions, and the exception process are meant to be applied to, or by, the registered entity. We thought we heard differing views from the panel; one stating that, if the Element or Facility met the Inclusion or Exclusion in the BES definition, then an exception request submittal is not required. On the other hand, we thought we heard that, unless an exception request submittal had been approved then 'status quo' applies. What is 'status quo' based on, the current BES definition or the BES definition being proposed? Would an entity need to track the effective date of the BES definition change in order to determine 'status quo'? How will submittal or non-submittal of an exception request by the registered entity be applied for compliance purposes? Dominion believes the correct answer is that and Element or Facility that meets the BES definition is included and if it doesn't meet the BES definition, isn't included. Only when an exception request has been submitted by an entity, approved and any appeal resolved, is inclusion or exclusion based on the impact to the bulk power system as determined by the criteria used in the exception process.

Group
SPP Standards Review Group
Robert Rhodes
No
A reference needs to be made to the ROP changes which also provide a mechanism whereby Elements may be excluded/included in the BES. Without that reference the proposed definition does not completely include all means for exceptions/inclusions. We would suggest the definition be expanded to say '…modified by the list shown below or as provided by Appendix 5C of the NERC Rules of Procedure.'
Yes
No
With the inclusion of a voltage criteria in the definition an inconsistency is created between Elements that are not a part of the BES but are still required to be part of the NERC Compliance Registry. Does this create an issue? Did the SDT intend to create this inconsistency? A large generating unit or group of units that are connected to the interconnection via 69kV does not qualify as a part of the BES. Although the generation level could be substantial, it is still not a part of the BES. If said generation is 20 MVA or 75 MVA, respectively, it would have to be registered in the Compliance Registry. While an entity may be able to petition to include such a facility in the BES, what is the incentive to do so? This seems to detract from the 'bright line' definition.
No
The comment provided for Question 3 above applies here also.
No
While we understand the necessity of including the Cranking Path in the BES, we are equally concerned about the broad usage of the term BES throughout the NERC Reliability Standards and the ramifications of extending the requirements associated with those standards to parts of the distribution system that do not have a logical association with the BES. For example, some of the TPL standards require studies of the BES. Does this then mean those studies would apply to those Cranking Paths on the distribution system? We think Cranking Paths that include portions of the distribution system should be excluded from the BES definition. Could the SDT please provide us with an explanation of why these Elements would be included in the BES and what would be gained if they were included? We'd also like to ask the SDT to identify the standards and requirements that would be applied to the distribution system Cranking Paths. Is there any way that the significance of the distribution Cranking Paths could be maintained without going as far as including them in the BES? Also, if a Distribution Provider has a portion of his distribution system designated an Element of the BES, as in the Cranking Path scenario, does that then require the DP to register as a TO or TOP?
No
Limiting this to 75 MVA does allow the opportunity for a significant amount of generation to 'slip under the fence' regarding inclusion in the BES. Was this the intent of the SDT? For example, in order to circumvent the BES issue a developer may decide to build 2-74 MVA sites rather than a single 148 MVA site. Regarding the similarity of the I3 and I5, what is the difference between a 'single site' and a 'common point of interconnection'? Shouldn't they be the same in the two inclusions?
No
We could concur with this exception providing the 'automatic interruption device' is not considered a part of the BES. Additionally, what are the implications for a radial element connected in a ring bus via two breakers or a radial element connected via a breaker and a half scheme?
No
We think we may concur with E2, but we are uncertain as to what is included in (ii). Could you please clarify?
No
While the principle contained in (c) is valid, the explanation following it is too restrictive. This does not allow the LDN to maintain any excess generation for contingencies and normal load fluctuations. In (b) the implication is that the LDN is being treated like a single site in I3 whereby the total generation capability is restricted to 75 MVA. Is this a valid assumption for municipals? In (e) permanent

flowgates may change from month to month, therefore an LDN could bounce into and back out of the BES depending upon what happens regarding a specific facility which may be included as part of a flowgate. This creates a very fluid situation which can lead to confusion.
No
What's the difference between the proposed E4 and E1(a)? Wouldn't they be the same? Would it be more appropriate to use single point of Transmission interconnection rather than single Transmission source in E1 and E4?
No
The inclusion of Cranking Paths into the BES without regard to voltage level has the potential to pull distribution facilities into the BES. (See Question 5)
Yes
See our responses to Questions 5 and 11 regarding the issue of distribution facilities and Cranking Paths.
No
Group
MRO's NERC Standards Review Forum
Carol Gerou
Yes
Please quantify that Reactive Resources within the BES definition are meant to be generator resources and not static resources.
Yes
Please clarify that an exclusion would be a tertiary winding for example an auto transformer.
Yes
No
The wording "connected through a common bus" is drawn from the NERC Compliance Registry Criteria. NSRF agrees with the language if the intent is to let entities classify the applicable multiple generating units as part of the BES only when it is connected to one (common) bus. However, if the intent is for entities to also classify multiple generation as part of the BES when it is connected through two or more GSUs to different bus sections of a set of (common) buses that are interconnected through bus-tie breakers [which may be done to provide improved reliability and maintenance flexibility], then wording like "connected through a common bus or set of interconnected buses" would be more appropriate. It is the NSRF's understanding that entities do not have to classify applicable multiple generating units as part of the BES when the aggregate MVA is connected to different buses at different voltage levels and no more than 75 MVA is connected to any one bus (or set of interconnected buses) at a single voltage level of 100 kV or more. Is this a correct interpretation?
Yes
It does provide a defense in depth with CIP-002-4.
No
We propose the following questions for your consideration: Which components of the dispersed power resources would be classified as BES? Are the individual small wind generator units and terminals through the GSUs to a higher voltage (e.g. 34.5 kV) collector bus classified as BES Elements? Are the higher voltage bus, the associated elements (e.g. protection system, cap bank, SVC, etc.), and step up transformer to a system Element of 100 kV or above to be classified as BES Elements? With these questions, the NSRF is confused on what the SDT is trying to formulate as an Inclusion. If a dispersed power systems meets the threshold of 75MVA and connected at 100kV or higher, does this make the entire dispersed system considered to be part of the BES? We recommended that one solution is that I5 to be revised as follows "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system from the point where the aggregated rating exceeds 75 MVA through a common point of interconnection to a system Element at a voltage of 100 kV or above. "
Yes

We recommend the phrase "originating with an automatic interruption device" be clarified as to the location of the interruption device. An entity may not have interruption devices at both ends of a radial fed line. If the interruption device is at the load end of the radial line, then the "up-stream" portion of the radial line is unprotected. Please clarify. Please add the Brightline Criteria that all facilities less than a 100kV are excluded unless those facilities meet the criteria of an Inclusion.
Yes
No
The SDT is defining what a Local Distribution Network is but the term transfer bulk power is ambiguous. Please clarify what the intent of this exclusion is.
Yes
Yes
Yes
Within the Commission's definition of BPS, it is clearly stated that BPS does not include facilities used in the local distribution of electrical energy.
In order to provide a clear and concise definition, please add the Brightline Criteria that all facilities less than a 100kV are excluded unless those facilities meet the criteria of an Inclusion.
Group
Transmission Access Policy Study Group
Cynthia S. Bogorad
Yes
TAPS appreciates the opportunity to comment on the draft BES definition. We generally support the direction taken by the SDT, with some minor changes. TAPS suggests a few clarifying edits to the core definition. First, the definition should refer to "non-generator Reactive Power resources," to make clear that although all generators provide some reactive power, those that do not meet the criteria of I2-I5 are not included in the BES. There is ambiguity concerning whether a transformer stepping down from >100 kV to <100 kV is included, though TAPS believes that the SDT intends to exclude such transformers. It is clear that transformers with two windings >100 kV are included and GSUs for registered generators are included, but it is somewhat unclear in the current draft whether a 138 kV to 69 kV transformer is included or excluded. TAPS suggests making it clear that the intent of the SDT is to include (a) GSUs associated with BES generators and (b) transformers with 2 or more windings >100 kV, and that other transformers are excluded. We also believe the drafting team intended to exclude all elements that are not included either under the BES definition and designations or through the exception process. For the sake of clarity, we suggest that a sentence to that effect be added to the core definition. Finally, we note that the definition does not currently refer to the existence of the exception process. We suggest that such a reference be added either to the core definition (as in the revised text suggested by TAPS in this response) or to the lists of Inclusions and Exclusions. The following is the core definition incorporating the changes suggested by TAPS: All Transmission Elements (except transformers) operated at 100 kV or higher, transformers as described below, Real Power resources as described below, and non-generator Reactive Power resources connected at 100 kV or higher, unless such designation is modified by the list shown below. The NERC Rules of Procedure [citation] provide an Exception Process through which Elements not included in the BES under this definition and designations may be included in the BES, and Elements included in the BES under this definition and designations may be excluded from the BES. Elements not included in the BES either by application of this definition and designations, or through the BES exception process, are not BES Elements.
Yes
To minimize possible confusion as to the category of transformers being addressed in I1, and the sufficiency of a single applicable Exclusion, TAPS suggests the following rewording: "Transformers, including phase angle regulators, and not including generator step-up (GSU) transformers, with two windings of 100 kV or higher unless excluded under Exclusion E1 or E3."
Yes

TAPS understands that the intent is to define the BES component of qualifying generators as that equipment from the generator terminals through the GSU. To convey clearly this point, as well as that only generators that are both over 20 MVA and connected through a GSU with a high side voltage of at least 100 kV are included in the BES, I2 should be reworded as follows: "Individual generating units greater than 20 MVA (gross nameplate rating), connected through a GSU with a high-side voltage of 100 kV or above. A BES generator includes the equipment from the generator terminals through the GSU."

Yes

I3 contains language similar to I2, and should be similarly reworded, as follows: "Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating), connected through a common bus operated at a voltage of 100 kV or above. A BES generating plant includes the equipment from the generator terminals through the respective GSUs."

Yes

TAPS agrees with the concept of Inclusion I5 but suggests a language change to clarify what we understand to be the drafting team's intent, that the inclusion is intended to apply to dispersed wind and solar generating plants, and not, for example, to a radially-connected city with an aggregate of 75 MW of small generators behind-the-meter. This distinction is appropriate because such a city cannot have the same impact on the grid as a 75 MW wind farm; loss of the radial connecting the city to the grid would result in loss of its load as well as its generation, so that the supply-demand mismatch would be far less significant. TAPS thus suggests that I5 be revised to read: I5 Wind farm or solar power installation with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.

Yes

TAPS suggests some clarifying changes: The words "described as" should be deleted from the exclusion to avoid confusion. What matters is how the system is actually connected, not how someone describes it. In addition, "a single Transmission source" should be defined, and should be generic enough to encompass the various bus configurations. It is not the case, for example, that each individual breaker position in a ring bus is a separate Transmission source; in that case, a bus at one voltage level at one substation should be considered "a single transmission source." Some examples of configurations that should be considered a single transmission source for this purpose are at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf, Examples 1-6. The phrase "automatic interrupting device" should be replaced with the phrase "switching device." Many radials are connected to ring buses or breaker-and-a-half schemes where the breakers (automatic interrupting devices) are within the bus arrangement where the appropriate division between BES and non-BES is at the disconnect switch as the radial "takes off" from the bus arrangement.

Yes

We understand that E2 is intended to apply only to retail customers' generation. The exclusion should therefore be revised to make that limitation clear. Specifically, the first sentence should read: "A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the retail customer's side of the retail meter."

Yes

The exclusion refers to groups of Elements that "distribute power to Load rather than transfer bulk power across the interconnected system." The use of the term "bulk power" is vague and could be read incorrectly as a reference to the "bulk-power system," which is defined in the Federal Power Act but is not a NERC defined term. If the LDN is connected to the BES at more than one location, there will by definition be some loop flow. We recommend below that Exclusion 3(d) be revised to quantify the amount of loop flow that is permissible in an excluded LDN. In the context of the first sentence of Exclusion E3, less specificity is needed, and the sentence should only be revised for the sake of accuracy to state: "Groups of Elements operated above 100 kV that are primarily intended to distribute power to load rather than to transfer power across the interconnected System." The exclusion's reference to connection "at more than one location" is vague. The sentence should be revised to read "connected to the Bulk Electric System (BES) from more than one Transmission

source solely to improve the level of service to retail customer Load," and "Transmission source" should have the same meaning that it does in E1. E3(a) should require that there be switching devices between the LDN and the BES, not specifically automatic fault-interrupting devices. The term "separable by" in "Separable by automatic fault interrupting devices" is unclear and should be reworded. E3(b) To avoid pulling an LDN into the BES based on very small customer-owned generation (such as rooftop photovoltaics and hospital backup diesel generators) that the utility does not consider or rely on, or necessarily even know about, the item should be reworded: "Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA of generation used to meet the resource-adequacy requirements of electric utilities." E3(d) states "Not used to transfer bulk power." As noted above, "bulk power" is a vague term. There will necessarily be some loop flow on a system that is connected to the BES at more than one location. The amount of permissible loop flow for this purpose needs to be determined and stated in this item.

Yes

TAPS supports this exclusion. For the sake of clarity, the final sentence should be revised to read as follows: "For purposes of this exclusion, a "small utility" is an entity that performs a Distribution Provider or Load Serving Entity function but is not required to register as a Distribution Provider or Load Serving Entity by the ERO."

Yes

Individual

Jeff Nelson

Springfield Utility Board

No

These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion. SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3). The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.

Yes

These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion. SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3). The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of

the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
No
These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion. SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3). The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
No
These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion. SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3). The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
Yes
These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion. SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3). The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
No

These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion. SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3). The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.

No

These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion. SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3). The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.

No

These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion. SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3). The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.

No

These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion. SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES.

For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3). The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.

Yes

These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion. SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3). The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.

No

These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion. SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3). The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.

Yes

See SUB's May 26 Comments filed by Tracy Richardson

These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion. SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3). The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in

generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
Individual
David Angell
Idaho Power
Yes
Yes
I generally agree but the definition accidently excludes autotransformers. It should be restated as transformers with two terminal at or above 100 kV. Also, there should be clarification about any tertiary windings that a transformer might have. I would assume that the tertiary winding and any real or reactive load or generation connected to it to be excluded as the tertiary winding are typically of distribution class voltage. Finally, there is no need to exclude GSUs in this definition because they will be excluded unless the two terminals are at 100 kV or above. Additionally, the GSUs will be covered by other inclusion statements related to generators.
No
Generators at 20 MVA are not material to the BES. I would recommend combining I2, I3, and I5 with the limit at 75 MVA for plant nameplate capability regardless of the number of generators and type of generators.
Yes
Generally agreed but please revise to inlcude I2, I3 and I5 at 75 MVA, see Question 3 and 6 comments.
Yes
Yes
Generally agreed but please revise to one Inclusion for I2, I3 and I5 at 75 MVA, see Question 3 and 4 comments.
Yes
Generally agreed assuming that the make-before-break may be performed manually.
Yes
Yes
No
As written, it is unclear how this exclusion differs from the Radial exclusion. The term "single Transmission source" needs to be clarified – it could be read to be a single line or a single entity, which would change the meaning of this exclusion. It is also improper to include registration criteria in a definition. Furthermore, "small utility" needs to be defined more clearly. The last sentence appears circular because ownership of a transmission element would draw the owner into registration.
Yes
No
Group
New York Power Authority
Randy D. Crissman
Yes

The New York Power Authority (NYPA) supports the Standards Drafting Team's development of a revised Bulk Electric System (BES) definition in response to FERC Order 743 that is directly linked to an exception process for inclusions and exclusions. The definition must be closely coupled to the exception process and the two must be integrated in the standard that is ultimately adopted. This will ensure that the regulatory requirements apply to only those facilities that materially affect the reliability of the BES. In general, NYPA agrees with the proposed definition and the objectives the Standards Drafting Team has established. NYPA recommends that the team make additional clarifications to provide industry with a better understanding of the inclusions and exclusions, as well as the impact of the inclusions/exclusions on the BES. The definition should exclude generator leads for generating units that do not materially affect the reliability of the BES regardless of the BES designation of the generating unit. In addition, the definition should not require the inclusion of contiguous elements. Generating units that are designated BES are currently required to comply with a subset of NERC Reliability Standards, but may not be material to the reliable operation of the interconnected BES. This portion of the definition should not require that both BES and non-BES generating units have their generator leads defined as BES transmission elements. A length-based criterion for generator leads ought to be considered. For example, the definition should exclude generator leads that are one mile or less between BES elements. The Standards Drafting Team should engage and coordinate with the Standards Drafting Team for Project 2010-07 (the GO/TO task force). This coordination is needed to determine the impacts of the new BES definition on Transmission Owner (TO) and Transmission Operator (TOP) registration. In addition, NYPA recommends that the Standards Drafting Team and the GO/TO Task Force consider, if they have not already done so, the impacts of ownership and operating agreements on registration. For example, clarification of registration impacts for BES elements that are jointly owned by two utilities (e. g. where one utility owns 5 of 20 towers and the other utility owns the remaining towers and the conductor of a transmission line) is required. The definition does not provide clarity on the state of the system conditions (normal or emergency) that should be applied. The definition should apply to only normal operating conditions.
Yes
Yes
The definition should exclude generator leads for generating units that do not materially affect the reliability of the BES regardless of the BES designation of the generating unit. In addition, the definition should not require the inclusion of contiguous elements. Generating units that are designated BES are currently required to comply with a subset of NERC Reliability Standards, but may not be material to the reliable operation of the interconnected BES. This portion of the definition should not require that both BES and non-BES generating units have their generator leads defined as BES transmission elements. A length-based criterion for generator leads ought to be considered. For example, the definition should exclude generator leads that are one mile or less between BES elements. This comment has been raised in Question number 1 as well.
Yes
No
The Standards Drafting Team needs to clarify whether this inclusion is intended to apply to local transmission operator restoration plans or only to the Balancing Authority's restoration plans. This inclusion should be stated as follows: Blackstart Resources and the designated cranking paths identified in the Balancing Authority's Restoration Plan regardless of voltage." Local restoration plans may not be material to the restoration and operation of the BES, but black start resources for the Balancing Authority's restoration plan are material to the reliable restoration of the BES.
Yes
This inclusion should be specific to the type of generation that the team envisioned it to capture (e.g. wind and solar). Since the term "dispersed power producing resources" can be interpreted to include generation resources from a few KW up to 50 MW, this inclusion can be misinterpreted to include "peaker GT's", fuel cells and microturbines, etc.
No
The definition of Exclusion E1 does not cover radial systems that are connected to a single transmission source by more than one automatic interruption device, such as occurs with a "breaker-

and-a-half" arrangement. The definition should be modified as follows: "Any radial system which is described as connected from a single Transmission source originating with one or more automatic interruption devices and: …." This exclusion uses many terms that are not defined under NERC's standard definitions: "radial load", "automatic interruption device" and "make–before-break". If these terms are used to define an exclusion and can be understood or interpreted differently by different people, then the terms should be formally defined.
Yes
Yes
Yes
Yes
No
General comments are listed under Question 1.
Group
SERC Planning Standards Subcommittee
Charles W. Long
Yes
Yes
Yes
Yes
Yes
Yes
Yes
No
While we agree with the first part of E2, but we do not see the rationale for section (ii) and suggest it be deleted.
No
This seems to be covered by E1.
Yes
No
The comments expressed herein represent a consensus of the views of the above-named members of the SERC EC Planning Standards Subcommittee only and should not be construed as the position of SERC Reliability Corporation, its board, or its officers.
Individual
Robert Ganley
Long Island Power Authority

Yes
Yes
For clarification it is recommended that "windings" be replaced with "connection points".
Yes
Yes
We recommend clarifying that I3 only covers units under 20 MVA and that the aggregation similarly just applies to those units that are under 20MVA. Example: a 100 MVA generating unit and a 15 MVA generating unit at a single site only the 100 MVA generating unit would be BES per Inclusion I2 but Inclusion I3 would not apply.
Yes
Need to define Cranking Paths.
Yes
Yes
For clarification purposes, we understand "Transmission source" to be a substation and not a line. A substation connected to only one other substation "source" by two lines would still be considered radial and thus excluded.
Yes
No
Revise last two sentences in the introductory paragraph to read as follows: "LDN's are connected to the bulk electric system (BES) at several points and are characterized by all of the following:"; This removes ambiguity that exists in the deleted portion of the text. See also response to question 11 regarding Exclusion E3-b.
Yes
No
We don't believe the bright-line definition and specific inclusions and exclusions prevents distribution from being considered as BES. It seems like the intent to exclude non bulk distribution systems would still be included because of E3b. We don't believe that the SDT has fully excluded local distribution facilities as required by the FERC Order. Specifically E3b should be eliminated. The other remaining items a,c,d,e adequately define the LDN.
No
The SDT should clarify that Local Distribution Networks, including any facilities that are within the LDN, are not subject to Reliability Standard Requirements pursuant to Section 215 of the Federal Power Act.
Group
Michigan Public Service Commission(MPSC)
Don Mazuchowski
No
MPSC Staff Comments: The BES definition proposed by the SDT should not use the term "transmission", if that term is defined as facilities that are at 100 kV or above. Not all facilities at 100 kV or above are properly considered transmission facilities. Use of "transmission" is causing unnecessary uncertainty and much debate among NERC stakeholders in the standards development and outreach processes over potential effects on jurisdiction, ownership, and possible new NERC registration requirements. This is especially true in states such as Michigan where Michigan Public Service Commission-regulated utilities sold their transmission facilities to independent transmission companies. Using FERC's Order 888 seven-factor technical-functional test as the basis for technical studies presented and evaluated in individual state dockets, the Michigan Public Service Commission

approved, and subsequently FERC deferred to, those transmission and distribution classifications. Using "transmission" in the BES definition could cause unintended consequences. Entities already registered with NERC as Distribution Providers, Load Serving Entities, or Generation Owners, etc. which own facilities previously classified as distribution by state regulatory agencies, may also now be required to register with NERC as Transmission Planners, Owners, or Operators. A system element defined as BES should not determine jurisdiction, ownership, or require duplicative or additional NERC registration. Much compliance with reliability standards is already being done by RTOs and entities already registered with NERC. Unnecessary and costly duplication of standards work should be avoided. We support that "All Transmission Elements …" be replaced with "All network System Elements …" in the BES definition.
No
MPSC Staff Comments: This inclusion should be eliminated entirely for the reasons provided in E1 above. If the BES is required to be contiguous, this I2 threshold will result in many radial subtransmission lines losing their non-BES status and having to comply with NERC security and reliability requirements. Two different generation thresholds, one for I2 and one for I3, should not be used. The I3 inclusion (75MVA) threshold should be sufficient.
MPSC Staff Comments: The MPSC supports this exclusion with the exception that Inclusion I2 should be removed from the E1(c) provision. Keeping the I2 here will result in too many subtransmission load-serving elements losing their non-BES status.
Yes
Yes
MPSC Staff Comments: The MPSC strongly supports this exclusion because it should exclude a large number of subtransmission facilities that are used for the distribution of local load. Also, this exclusion together with E1 parallels the seven-factor technical-functional test for classifying transmission and distribution. The problem with the seven-factor test is that it does not provide an on-going clear bright line for BES determination. For example, an engineer cannot apply the seven-factor test using a one-line diagram of an electric power network and determine - without supplemental evidence - that an element is classified as distribution or not.
No
MPSC Staff Comments: The BES definition proposed by the SDT should not use the term "transmission". BES should not equal transmission. A system element defined as BES should not determine jurisdiction, ownership, or require duplicative NERC registration.
No
MPSC Staff Comments: The intent of the updated BES definition should be to classify facilities required to meet mandatory NERC reliability standards. Unnecessary and costly duplication of standards work should be avoided.
Yes
MPSC Staff Comments: The proposed BES definition creates friction with Order 888's seven-factor technical-functional test as implemented by state regulatory agencies. The resulting inconsistent treatment is likely to result in challenges by entities with FERC-defined distribution assets being now considered as transmission assets as inconsistent with the FPA. FERC's Order 888 discusses the two components of an unbundled transaction in interstate commerce has "for jurisdictional purposes -- a transmission component and a local distribution component." p 439 The Order also states that the Commission "will defer to recommendations by state regulatory authorities concerning where to draw the jurisdictional line under FERC's technical test for local distribution facilities" p 437, also known as the seven-factor technical-functional test. This test was applied by Michigan utilities, filed with the Michigan Public Service Commission in contested case-specific dockets, and after deliberation approved. These state-approved jurisdictional bright-line determinations were subsequently filed with and approved by FERC.

Group
Southern Company
Antonio Grayson
No
Inclusion of individual units less than 75MVA was established when these smaller units were significant to the reliability of the BES and is outdated.
Yes
No
The inclusion criterion I3 and I5 establish the level of generation that has been deemed to be the important threshold for the amount of generation at a facility. The individual generating unit size criteria should match that same aggregate size given in I3 and I5. It doesn't make sense to specify a 20 MVA level for a single unit compared to multiple smaller unit plants whose aggregate totals 75 MVA. To provide equivalent weight to each configuration of plant structure, the individual generating unit size should be 75 MVA rather than 20 MVA. The NERC Registry Criteria should also be changed from 20 MVA to 75 MVA for a single generator size. Further, a significant number of respondents to the first BES definition posting stated that the 20 MVA generator threshold is too low. Many Generator Owners and Operators do not understand the technical basis for including individual generators rated 75 MVA or less. The NERC Registry Criteria alone does not clearly define the technical basis for the 20 MVA threshold, and appears to use this as a conservative generator rating to cover some areas where units this size may have a material impact on the local area reliability. We do not believe this translates to material impact on BES reliability in terms of wide area blackouts and cascading outages. We believe that the technical basis for including any single generator of 75 MVA or less needs to be more clearly concisely established and documented to support Inclusion Criterion I2.
Yes
No
Inclusion I4 should be removed from this definition. There is an existing standard, EOP-005-2 (System Restoration from Blackstart Resources), which specifically addresses Blackstart Resources and the designated Blackstart Cranking Paths "regardless of voltage". Also, use of "regardless of voltage" in Inclusion I4 as part of the BES definition will expand the applicability of some NERC Reliability Standards, which pertains to the BES, to connected facilities at voltage levels below 100Kv.
Yes
Yes
No
Section (i) is confusing because it mixes MW with MVA. The net capacity in section (i) would be in MW while the values referenced in I2 and I3 would be in MVA. This will create confusion. Also, we do not see any need for section (ii). Section (i) is sufficient without section (ii). We recommend Exclusion E2 to be re-written as follows: Exclusion E2 - A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer’s side of the retail meter if the net capacity provided to the BES does not exceed 20 MW for a single generating unit or 75 MW for multiple generating units located at a single site.
Yes
No
This seems to be covered by Exclusions E1 and E3.
Yes
No

Group
Luminant Energy
Dennis Hogan
Yes
Yes
Yes
Yes
Yes
Yes
No
E1 a) Omit or clarify-Sentence beginning "A normally open switch…" Does not say what to do with it. Is it included or excluded. Suggested wording would be "An example would be a line with a normally open switching device between radial systems that may operate in a 'make –before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service." E1 b)-Clarify-Sentence beginning "Only including…"Are those resources that are included in the exclusions that are not included in the inclusions? Or are they resources that are included in the inclusions that are not included in the inclusions? This meaning of this sentence is not clear. It should not be necessary to say that resources are excluded that are not included. Suggested wording would be "Generation resources that are not specifically described in the Inclusions I2, I3, I4 and I5."
Yes
Yes
Yes
Yes
No
Individual
Mike Hirst
Cogentrix Energy, LLC
No
I would like to see a definition for clarity of an "Individual Generating Unit" Example: Solar farm with 300 photovoltaic units. Each is a stand-alone unit with its own inverter, but all come together at a common tie breaker to connect to the BES. Questions: 1. Would each one be considered directly tied to the BES through one common tie breaker? 2. Would each photovoltaic unit be considered an individual generating unit? 3. Would the combined total of 300 units be considered an individual generating unit or would they be considered a facility?
Yes

No
We also strongly suggest the term GSU be defined in the NERC Glossary of Terms to prevent potential compliance re-interpretation of this requirement. A suggested definition is: "Generator Stepup Transformer (GSU) should be defined as a transformer directly connected to a generator on the low side and to a bus on the high side."
No
GSUs need to be defined – see response to question 3 above
No
The SERC SRG is concerned that this provision may have the effect of incenting transmission operators to limit the available generator options to the minimum necessary for a reliable option as opposed to every possible option that might be utilized in a pinch. We recommend the following adjusted language: "Essential Blackstart Resources and the designated essential blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage"
Yes
No
This exclusion is acceptable if the suggestions in Questions 3 and 4 are incorporated.
No
This exclusion is acceptable if the suggestions in Questions 3 and 4 are incorporated.
No
B)The SERC SDT believes you intended to grant exception E2 in this case; however, it is not explicitly identified. C)Is this intended for each hour of the year or is it possible for some hours that generation may exceed load? This needs to be clarified.
No
We suggest that our comments to Question 3 and Question 4 be incorporated. We also question whether this is going to have an unintended consequence of requiring Distribution Providers to register that otherwise wouldn't have to register because some technical aspect has not been included in this exception.
Yes
No
No
Individual
Jack Stamper
Clark Public Utilities
No
Clark is concerned that the core definition is overly-broad and sweeps facilities into the BES that are required by the statute to be excluded, even considering the list of inclusions and exclusions. Clark urges the SDT to bear in mind the specific restrictions on the definition of "bulk-power system" contained in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress defined "bulk-power system" to mean "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" and "electric energy from generation facilities needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1). Congress unequivocally excluded from this definition "facilities used in the local distribution of electric energy." The "bulk-power system" definition thus imposes a clear limit on the reach of the mandatory reliability regime. Congress reinforced that limit in Section 215(i), where it emphasized that the FPA authorizes the imposition of reliability standards "for only the bulk-power system." 16 U.S.C. § 824o(i)(1). Clark believes it is clear that Congress intended the "bulk-power system" to be defined narrowly so that it would incorporate only high-voltage, interstate facilities used to transmit power over long distances, whose failure threatens drastic reliability events such as system instability, uncontrolled separation, or cascading outages. In addition, the Federal Energy Regulatory Commission clearly stated that Order No. 743 did not mandate or direct NERC to adopt a 100 kV

bright-line threshold (Order No. 743-A, 134 FERC ¶ 61,210 at P 20. The Commission goes on to state that the 100 kV bright-line threshold is only one way to address the Commission's concerns. The Commission only requires that NERC use the Commission's recommendation or propose a different solution that is as effective as, or superior to, the Commission's proposed approach. The Commission also acknowledges that Congress has specifically exempted facilities used in the local distribution of electric energy. The definition developed by the SDT should therefore focus on that portion of the interconnected bulk transmission grid for which thermal, voltage, and stability limits must be observed in order to prevent instability, uncontrolled separation, or cascading outages. Further, in order to honor the specific limits placed on the definition by Congress, the SDT's definition must exclude facilities used in the local distribution of electric power and it must exclude facilities whose operation or mis-operation affects only the level of service and does not threaten cascading outages or other widespread events on the bulk interconnected system. Clark asserts that the adoption of a bright-line threshold of 100 kV is arbitrary and not based on any investigation of the potential for facilities at this voltage level to cause instability, uncontrolled separation, or cascading outages or for the general need of these facilities for the operation of an interconnected electric energy transmission network. The threshold excludes transmission facilities below 100 kV without any determination on a general basis of whether these facilities affect interconnected system operation. It goes without saying that these low voltage transmission facilities should be subject to an inclusion process in the event that regional reliability entities believe they do have an impact on reliability but on a case-by-case basis. Clark agrees with this concept and does not believe bringing low voltage transmission facilities into the BES through an inclusion process causes any BES reliability issues. Similarly, Clark believes that the majority of facilities between 100 kV and 200 kV can be shown to have no impacts on interconnected system operation and do not threaten instability, uncontrolled separation, or cascading outages. Clark also points out that the vegetation outage standard (FAC-003) uses this approach. The standard applies to facilities operated at 200 kV or above and "lower voltage lines designated by the RRO as critical to the reliability of the electric system in the region." Clark believes the use of 100 kV as the bright-line threshold will result in a large number of facilities being brought into the definition of the BES that are either 1) part of a Local Distribution Network, 2) are radial serving only load from one transmission source, or 3) that can be shown to have no affect on interconnected system operation or cannot cause instability, uncontrolled separation, or cascading outages. This unnecessary inclusion will cause a large amount of effort on the part of the owners of these facilities and on the part of the Regional Reliability Organizations that will have to review the many exclusion filings that will result. Utilizing a 200 kV threshold with a low voltage inclusion process will eliminate much of the unnecessary paperwork since very few owners of 200 kV or above facilities will seek exclusions. This will free up regional reliability entities to focus on low voltage transmission facilities that truly have an impact on interconnected system operations. Clark believes that the SDT and the NERC should consider adopting a bright-line threshold higher than 100 kV with low voltage inclusion and develop the arguments necessary to demonstrate to the Commission that this solution is as effective as, or superior to, the Commission's proposed approach. These arguments should include the following: • Eventually, a 200 kV bright-line threshold with a low voltage inclusion process will incorporate into the BES the same facilities that a 100 kV bright-line threshold with an exclusion process. This means that these two concepts both have the same effect on the reliability and the operability of the BES. • Utilizing a 200 kV bright-line will reduce the amount of initial effort by transmission owners and Regional Reliability Organizations and allow these entities to concentrate on low voltage facilities that truly have an impact on the BES. Clark is similarly concerned that the SDT's proposed definition is overly-broad in including all generating units greater than 20 MVA capacity connected to transmission at 100 kV or above. Clark believes that there are many small to medium sized generators that individually have no affect on interconnected system operations and do not threaten the BES with instability, uncontrolled separation, or cascading outages. Many of these generators are connected to Local Distribution Networks with minimum loads that exceed maximum generation. While the generators do support system reliability collectively, it is questionable whether many of these generators individually represent a facility necessary for interconnected system operations. The adoption by the SDT of a 200 kV bright-line threshold would eliminate many of these smaller generating units. Again, the RROs must have an inclusion process for smaller generating units it believes support interconnected system operations. Clark believes that eventually both thresholds (with appropriate inclusion and exclusion processes) will result in the same 100 kV to 200 kV connected generators being included in the BES so there will be no difference in the reliability of the BES. Adopting the higher of the two thresholds and adopting a generating capacity threshold higher

than 20 MVA will allow generator owners and Regional Reliability Organizations to devote resources to small generating units that truly have an impact on interconnected system operations.
No
Transformers should only be part of the Bulk Electric System if they are transforming voltage from one BES element to another BES element. The current inclusion language would apply to all transformers with two windings operated at greater the 100 kV subject to the E1 and E3 exclusions. There is no indicated exclusion referring to the exception process. If a facility is excluded from the BES by the exception process, connected transformers should also be excluded. Clark believes if the inclusion language was changed slightly, the exclusion references to E1 and E3 would not be necessary. Without this change, it appears that a transformer with two winding connected to greater than 100 kV would be a BES asset even if both of the facilities these windings were connected to had been excluded (E1 or E3) or excepted (BES Exception Process). I1 should be rewritten to state: Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings of 100 kV or higher connected to Transmission Elements determined to be part of the Bulk Electric System.
No
Generators should only be part of the Bulk Electric System if they are connected through a GSU to a Transmission Element determined to be part of the BES. The current inclusion language would apply to all generators connected to facilities greater the 100 kV with no exclusion or exception process. Without a change, it appears that a generator connected to a facility greater than 100 kV would be a BES asset even if the transmission assets could be excluded or excepted. I2 should be rewritten to state: Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side winding connected to a Transmission Element determined to be part of the Bulk Electric System. Additionally, as indicated by Clark in its comments on the core definition of the BES, Clark believes the 20 MVA threshold lacks an adequate technical justification and is a purely arbitrary quantity. The use of a capacity threshold in the definition of the BES should have technical reasons.
No
Generators should only be part of the Bulk Electric System if they are connected through a GSU to a Transmission Element determined to be part of the BES. The current inclusion language would apply to all generators connected to facilities greater the 100 kV with no exclusion or exception process. Without a change, it appears that a generator connected to a facility greater than 100 kV would be a BES asset even if the transmission assets could be excluded or excepted. I3 should be rewritten to state: Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus to a Transmission Element determined to be part of the Bulk Electric System. Additionally, as indicated by Clark in its comments on the core definition of the BES, Clark believes the 75 MVA threshold lacks an adequate technical justification and is a purely arbitrary quantity. The use of a capacity threshold in the definition of the BES should have technical reasons.
Yes
No
Generators should only be part of the Bulk Electric System if they are connected through a GSU to a Transmission Element determined to be part of the BES. The current inclusion language would apply to all generators connected to facilities greater the 100 kV with no exclusion or exception process. Without a change, it appears that a generator connected to a facility greater than 100 kV would be a BES asset even if the transmission assets could be excluded or excepted. I5 should be rewritten to state: Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a Transmission Element determined to be part of the Bulk Electric System. Additionally, as indicated by Clark in its comments on the core definition of the BES, Clark believes the 75 MVA threshold lacks an adequate technical justification and is a purely arbitrary quantity. The use of a capacity threshold in the definition of the BES should have technical reasons.
Yes

No
As indicated by Clark in its comments on the core definition of the BES, Clark believes the 20 MVA and the 75 MVA thresholds lack adequate technical justification and are a purely arbitrary quantities. The use of a capacity thresholds in the definition of the BES should have technical reasons.
Yes
Clark strongly supports the categorical exclusion of Local Distribution Networks from the BES. Clark also believes that adopting a 200 kV bright-line threshold will result in most, if not all, LDN being exempted from the BES without any need to analyze or self-certify an LDN. This is another case where a higher threshold (with an appropriate inclusion process) will have no affect on BES reliability but will focus resources on investigation low voltage facilities that truly have an impact on interconnected system operations. Clark does recommend a revision to the LDN exclusion language. E3 - Local distribution networks (LDNs): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system. The LDN is characterized by all of the following:
No
This proposed exclusion has no affect or benefit. If an entity is not required to register as a DP or LSE why do they then need to be exempted from a standard that does not apply to the entity. The Commission was obviously focusing on a small utility with facilities greater that 100 kV making that entity a Transmission Owner. A 100 kV facility owned by a utility with a small amount of load is either material or immaterial to the reliability of the BES irrespective of the amount of load that entity serves. Therefore the term 'small utility" must refer to some other measure of size. This may be size of load, but also may include circuit miles of transmission greater than 100 kV, capacity of largest line greater than 100 kV line, and possible other measures of "smallness."
Yes
Yes
The BES Definition does not have any reference to the exception process being developed. Both the exclusion and inclusion sections of the BES Definition should have a reference to the process where "BES Definition included" Transmission Elements may be excluded and "BES Definition excluded" Transmission Elements may be included.
The process for identifying facilities as part of an LDN needs to be stated. Clark has heard that this will be through a self-certification process, however, there is no written description how a utility classifies its transmission facilities as an LDN.
Individual
John A. Gray
The Dow Chemical Company
No
See Dow's specific comments on some of the following questions.
No
An additional exclusion for industrial distribution facilities needs to be added for the reasons expressed in Dow's comments on Exclusion E3. Dow's manufacturing sites have transformers, other than generator step up transformers, that have two windings of 100 kV or higher and that are between on-site generation and individual manufacturing plants at such sites. Such transformers should be excluded, because they are part of electricity distribution facilities. However, such transformers do not fall within proposed Exclusion E1 or E3.
No
It should be clarified that if something falls within an Inclusion and an Exclusion, then it is excluded. See ELCON comments.
No
It should be clarified that Exclusion E2 over-rides this Inclusion. See ELCON comments.
Yes

No
The language is not clear enough to understand what is covered.
No
The existing language in the NERC Statement of Compliance Registry for radial exclusions should be maintained since the change proposed by the SDT could result in a significant increase in entities and/or facilities that would have to be registered or included (because of the addition of the automatic interruption device). See ELCON comments for additional details.
No
Clause (ii) should be revised as follows: "(ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or pursuant to a binding obligation with another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority."
No
The Dow Chemical Company ("Dow) is an international chemical and plastics manufacturing firm and a leader in science and technology, providing chemical, plastic, and agricultural products and services to many essential consumer markets throughout the world. Dow and certain of its worldwide affiliates and subsidiaries, including Union Carbide Corporation, own and operate electrical facilities at a number of industrial sites within the U.S., principally, in Texas and Louisiana. The electrical facilities at these various industrial sites are configured similarly and perform similar functions. In most cases, a tie line or lines connect the industrial site to the electric transmission grid. Power is delivered from the electric transmission grid to the industrial site through the tie line(s). Lines within the industrial site then deliver power to individual manufacturing plants within the site. Additionally, cogeneration facilities are located at a number of industrial sites owned by Dow and its subsidiaries. These cogeneration facilities generate power that is distributed within the industrial site and used for manufacturing plant operations. In some instances, excess power not required for plant operations is delivered back into the electric transmission grid through the tie line(s) connecting the industrial site to the grid. Under all circumstances, electricity is not flowing into and out of such industrial sites at the same time. While the tie lines and some of the internal lines at these industrial sites operate at 100kV or higher, they do not perform anything that resembles a transmission function. Rather than transmit power long distances from generation to load centers, the tie lines and internal lines perform primarily a local distribution function consisting of the distribution of power brought in from the grid or generated internally to different plants within each industrial site. In some cases, the facilities also perform an interconnection function to the extent they enable power from cogeneration facilities to be delivered into the grid. The voltage of the tie lines and internal lines at these industrial sites is dictated by the load and basic configuration of each site. Higher voltage lines are used when necessary to meet applicable load requirements or to reduce line losses. That does not mean that such lines perform a transmission function. At some sites, Dow is registered as a Generation Owner and Generation Operator. At other sites, the applicable Regional Entity has found that such registration is not required because of the relatively small amount of power supplied to the grid from the applicable cogeneration resources, even though those cogeneration resources have an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating). Tie lines (to the grid) and internal lines at an industrial site that operate at 100kV or higher should be excluded from the BES definition if, due to the relatively small amount of power supplied to the grid from the generation resources at the site, the owner of those generation resources is not required to be registered as a Generation Owner and the operator of those generation resources is not required to be registered as a Generation Operator. At sites where the owner of the generation resources is registered as a Generation Owner and the operator of those generation resources is registered as a Generation Operator, the internal lines (between the generation resources and the manufacturing plants) that operate at 100kV or higher should be excluded from the BES definition, because they are distribution and not transmission facilities. The lines interconnecting the generation resources at such sites to the transmission grid should be included in the BES definition, but the owner and operator of such interconnection lines should not be registered as a Transmission Owner or Transmission Operator. In no instance has a Regional Entity determined that Dow or any subsidiary should be registered as a Transmission Owner or Transmission Operator. Instead, such interconnection lines should be considered as part of the generation resource and Generation Owners and Generation Operators

should be subject to reliability standards specifically developed for such interconnection lines. Dow is strongly opposed to any BES definition that would result in either the tie lines or the internal lines at industrial sites being subject to the mandatory reliability standards applicable to Transmission Owners and Transmission Operators. Complying with reliability standards would cause Dow and its subsidiaries to incur substantial compliance costs and create potential exposure to penalties in the future for noncompliance. Perhaps such costs and exposure could be justified if subjecting these facilities to compliance with reliability standards resulted in a material increase in reliability of the BES, but there is no reason to believe that will be the case. In fact, the opposite might be true. The tie lines and internal lines at industrial sites owned by Dow and its subsidiaries have been operated for decades as distribution and interconnection facilities, and practices and procedures have developed over the years that have enabled such operations to achieve a high degree of reliability for such sites. Requiring these facilities to now operate in a different manner as transmission facilities may well result in a degradation of the reliability of the manufacturing plants located at such sites. For example, outages would have to be coordinated with the RTO, which may not be interested in coordinating such outages with scheduled manufacturing plant outages. Dow recommends that a separate exclusion be added to the BES definition to address industrial distribution facilities. Proposed exclusion E-3 for local distribution networks is not sufficient to ensure that all industrial distribution facilities are excluded. For example, criteria b), entitled "Limits on connected generation" states that "Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation". This criteria makes no sense for an industrial site with on-site electricity generation and a number of manufacturing plants that has internal power lines and lines interconnecting with the transmission grid that operate at 100 kV or higher where the owner and operator of the on-site electricity generation facilities are not registered as a Generation Owner and a Generation Operator because only a small amount of electricity is ever exported from the on-site electricity generation facilities to the transmission grid. This criteria also makes no sense with respect to internal electric lines (operated at 100 kV or higher) at such industrial sites even where the owner and operator of the on-site electricity generation facilities are registered as a Generation Owner and a Generation Operator. Criteria c) also causes proposed exclusion E-3 not to be sufficient to ensure that all industrial distribution facilities are excluded where the owner and operator of the on-site electricity generation facilities are not registered as a Generation Owner and a Generation Operator because only a small amount of electricity is ever exported from the on-site electricity generation facilities to the transmission grid. Criteria c), entitled "Power flows only into the LDN", states: "The generation within the LDN shall not exceed the electric Demand within the LDN." Criteria c) also makes no sense with respect to internal lines at such industrial sites even where the owner and operator of the on-site electricity generation facilities are registered as a Generation Owner and a Generation Operator.

No

If this is adopted, it should apply to industrial sites as well as small utilities.

No

The Dow Chemical Company ("Dow) is an international chemical and plastics manufacturing firm and a leader in science and technology, providing chemical, plastic, and agricultural products and services to many essential consumer markets throughout the world. Dow and certain of its worldwide affiliates and subsidiaries, including Union Carbide Corporation, own and operate electrical facilities at a number of industrial sites within the U.S., principally, in Texas and Louisiana. The electrical facilities at these various industrial sites are configured similarly and perform similar functions. In most cases, a tie line or lines connect the industrial site to the electric transmission grid. Power is delivered from the electric transmission grid to the industrial site through the tie line(s). Lines within the industrial site then deliver power to individual manufacturing plants within the site. Additionally, cogeneration facilities are located at a number of industrial sites owned by Dow and its subsidiaries. These cogeneration facilities generate power that is distributed within the industrial site and used for manufacturing plant operations. In some instances, excess power not required for plant operations is delivered back into the electric transmission grid through the tie line(s) connecting the industrial site to the grid. Under all circumstances, electricity is not flowing into and out of such industrial sites at the same time. While the tie lines and some of the internal lines at these industrial sites operate at 100kV or higher, they do not perform anything that resembles a transmission function. Rather than transmit power long distances from generation to load centers, the tie lines and internal lines perform primarily a local distribution function consisting of the distribution of power brought in from the grid or generated internally to different plants within each industrial site. In some cases, the facilities also

perform an interconnection function to the extent they enable power from cogeneration facilities to be delivered into the grid. The voltage of the tie lines and internal lines at these industrial sites is dictated by the load and basic configuration of each site. Higher voltage lines are used when necessary to meet applicable load requirements or to reduce line losses. That does not mean that such lines perform a transmission function. At some sites, Dow is registered as a Generation Owner and Generation Operator. At other sites, the applicable Regional Entity has found that such registration is not required because of the relatively small amount of power supplied to the grid from the applicable cogeneration resources, even though those cogeneration resources have an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating). Tie lines (to the grid) and internal lines at an industrial site that operate at 100kV or higher should be excluded from the BES definition if, due to the relatively small amount of power supplied to the grid from the generation resources at the site, the owner of those generation resources is not required to be registered as a Generation Owner and the operator of those generation resources is not required to be registered as a Generation Operator. At sites where the owner of the generation resources is registered as a Generation Owner and the operator of those generation resources is registered as a Generation Operator, the internal lines (between the generation resources and the manufacturing plants) that operate at 100kV or higher should be excluded from the BES definition, because they are distribution and not transmission facilities. The lines interconnecting the generation resources at such sites to the transmission grid should be included in the BES definition, but the owner and operator of such interconnection lines should not be registered as a Transmission Owner or Transmission Operator. In no instance has a Regional Entity determined that Dow or any subsidiary should be registered as a Transmission Owner or Transmission Operator. Instead, such interconnection lines should be considered as part of the generation resource and Generation Owners and Generation Operators should be subject to reliability standards specifically developed for such interconnection lines. Dow is strongly opposed to any BES definition that would result in either the tie lines or the internal lines at industrial sites being subject to the mandatory reliability standards applicable to Transmission Owners and Transmission Operators. Complying with reliability standards would cause Dow and its subsidiaries to incur substantial compliance costs and create potential exposure to penalties in the future for noncompliance. Perhaps such costs and exposure could be justified if subjecting these facilities to compliance with reliability standards resulted in a material increase in reliability of the BES, but there is no reason to believe that will be the case. In fact, the opposite might be true. The tie lines and internal lines at industrial sites owned by Dow and its subsidiaries have been operated for decades as distribution and interconnection facilities, and practices and procedures have developed over the years that have enabled such operations to achieve a high degree of reliability for such sites. Requiring these facilities to now operate in a different manner as transmission facilities may well result in a degradation of the reliability of the manufacturing plants located at such sites. For example, outages would have to be coordinated with the RTO, which may not be interested in coordinating such outages with scheduled manufacturing plant outages. Dow recommends that a separate exclusion be added to the BES definition to address industrial distribution facilities. Proposed exclusion E-3 for local distribution networks is not sufficient to ensure that all industrial distribution facilities are excluded. For example, criteria b), entitled "Limits on connected generation" states that "Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation". This criteria makes no sense for an industrial site with on-site electricity generation and a number of manufacturing plants that has internal power lines and lines interconnecting with the transmission grid that operate at 100 kV or higher where the owner and operator of the on-site electricity generation facilities are not registered as a Generation Owner and a Generation Operator because only a small amount of electricity is ever exported from the on-site electricity generation facilities to the transmission grid. This criteria also makes no sense with respect to internal electric lines (operated at 100 kV or higher) at such industrial sites even where the owner and operator of the on-site electricity generation facilities are registered as a Generation Owner and a Generation Operator. Criteria c) also causes proposed exclusion E-3 not to be sufficient to ensure that all industrial distribution facilities are excluded where the owner and operator of the on-site electricity generation facilities are not registered as a Generation Owner and a Generation Operator because only a small amount of electricity is ever exported from the on-site electricity generation facilities to the transmission grid. Criteria c), entitled "Power flows only into the LDN", states: "The generation within the LDN shall not exceed the electric Demand within the LDN." Criteria c) also makes no sense with respect to internal lines at such industrial sites even where the owner and operator of the on-site electricity generation facilities are registered as a Generation Owner and a Generation Operator.

Yes
Comments: Section 215 of the Federal Power Act denies FERC jurisdiction over facilities used in the local distribution of electric energy. FERC has recognized that since facilities used in the local distribution of electric energy "are exempted from the Bulk-Power System, they also are excluded from the bulk electric system." Section 215 of the Federal Power Act does not qualify the exclusion from FERC jurisdiction of "facilities used in the local distribution of electric energy." For example, Section 215 does not state that: ♣ The term "bulk power system" "does not include facilities used in the local distribution of electric energy [unless needed for reliability purposes];" or ♣ The term "bulk power system" "does not include facilities [with automatic interruption devices] used in the local distribution of electric energy." Any definition of the bulk electric system that does not exclude all "facilities used in the local distribution of electric energy" is unlawful. Further, the definition of the bulk electric system must recognize that Section 215 of the Federal Power Act does not allow the potential reliability impact of a facility to determine whether the facility is local distribution or transmission. By excluding all facilities used in the local distribution of electric energy from the definition of the Bulk-Power System in Section 215, Congress recognized that while facilities used in the local distribution of electric energy may be part of the Bulk-Power System, they are, nonetheless, not FERC jurisdictional. Thus, "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" that are used in the local distribution of electric energy are not FERC jurisdictional regardless of the potential reliability impact of the facilities.
Not that we are aware of at this time.
Group
Pennsylvania Public Utility Commission
Darren D. GIll
The Pennsylvania Public Utility Commission offers the following comments in response to Standards Announcement Project 2010-17 BES Definition: As you know, Section 1211 of the Energy Policy Act of 2005, amending Section 215 of the Federal Power Act, provided for the promulgation of standards for the bulk power system by an Electric Reliability Organization subject to the approval of the U.S. Federal Energy Commission. Section 215 (a) states: 'SEC. 215. ELECTRIC RELIABILITY. ''(a) DEFINITIONS.—For purposes of this section: (1) The term 'bulk-power system' means— (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy. EPAct 2005, Section 1211, 16 U.S.C. § 824o [emphasis supplied] While the PaPUC acknowledges the need for a more explicit definition of the Bulk Electric System (or, as it is stated in EPAct 2005, the "bulk power system"), we are concerned that the existing draft definition and stated exclusions is insufficiently clear and may be erroneously extended to distribution facilities that are currently subject to state jurisdiction expressly reserved by the language of EPAct 2005, Section 1211 (a). Exceptions E1-E4 are plainly drafted to address this issue, but there is a concern that the definition of "local distribution networks" contained in Exception E3 may not fully comport with the intent of Congress, particularly Exception E3 (d) which excepts facilities that are [n]ot used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery

through the LDN. The proposed language appears to be contrary to Congressional intent as it implies that some local distribution facilities which "transfer bulk power" are indeed subject to the ERO standards process. Additionally, the draft BES, which distinguishes local distribution facilities between those that "transfer bulk power" and those that do not appears insufficiently precise, as bulk power is ultimately transferred through every portion of the local distribution network to end users. Our major concern is that this draft standard definition will collide with state regulation of distribution facilities, particularly where state commissions are seeking to impose standards and protective arrangements more stringent than might be required by the Electric Reliability Organization or Regional Reliability Organization. Accordingly, it is recommended that the Draft BES be modified to specifically define distribution facilities and exclude them from the ambit of the Bulk Electric System definition, as well as making it clear that State reliability standards relating to the local distribution network are not overridden or modified by standards applicable to the Bulk Electric System.
Individual
David Thorne
Pepco Holdings Inc
Yes
Do reactive power resources include reactors?
Yes
Clarification needed: If a generator greater than 20mva connected to a bus less than 100kv, but the bus is connected through a transformer (high side greater then 100kv) to the BES, are the generator, GSU or transformer considered BES?
Clarification needed: Same situation as described in #3 above.
No
1)In many cases the cranking path or portions of it may consist of facilities less than 100kv. Many of these facilities are local distribution facilities and should not be included in the BES. 2) If there is an identified cranking path that is transmission designated, but the path is not contiguous with the BES, must the elements in-between be included as BES?
Yes
Yes
Yes
No
see answer to #5
1) It would be very helpful to include examples (with an explanation and diagram) of the various configurations that meet each of the inclusions and exclusions. Can the next draft include such examples to provide further clarity to the definitions? Consideration should be given to developing an attachment for this material and a method to add appropriate examples in the future. 2) The proposal is silent on whether associated auxiliary and protection and control system equipment that could automatically trip a BES facility independent of the protection and control equipment's voltage level are included as part of the BES. The RFC BES definition specially addresses this issue as an example. Does IRO-005 cover those elements so it is not necessary to address these in this proposal? Consideration should be given to referencing the issue in the BES document.
Individual
Gary Ferris
Vigilante Electric Cooperative

Dear NERC Standards Drafting Team: Enclosed are Vigilante Electric Cooperative, Inc's (VIEC) comments on NERC's Proposed Continent-wide Definition of the Bulk Electric System (BES). We believe that NERC's proposed definition of the Bulk Electric System is moving in the right direction and we thank the Standards Drafting Team for their hard work. We support the comments of the Snohomish County Public Utility Distric and Pacific Northwest Generating Cooperative with regard to questions posed by the comment form for Project 2010-17. We would like to add the following additional comments: With regard to exclusion E3, part e) - we do not believe that just because an element is on a list that it cannot be excluded. If an element meets all of the criteria to be excluded, then it should be excluded and removed from the list. Otherwise, we strongly agree that LDNs have no material impact on the BES. We also strongly encourage the continued development of a reasonable method for determination of inclusion/exclusion. We believe that there should be a clearer path that would ultimately allow a utility to pursue being included/excluded from registration with WECC. Many small utilities have an element that may actually have no material impact on the BES yet is required to comply with all WECC standards. We also would like to comment on the WECC compliance bulletin of April 15, 2011. While we greatly appreciate the recognition that radial T-Taps with transformer or distribution protection schemes have no material impact to the BES, we would encourage you to take this the additional logical step to actually remove these instances from WECC responibilities. This would help reduce the burden both on WECC and the individual entities and save everyone involved a tremendous amount of time, effort and money. We again thank the Team for their efforts and appreciate the opportunity to be allowed to comment on these issues.
Individual
Steve Alexanderson
Central Lincoln
No
We support the PNGC comments suggesting beginning with the statutory definition of BPS that excludes local distribution. The definition should also be further elaborated to show specific points of demarcation for each inclusion and exclusion by the use of diagrams similar to those included with Proposal 6 from the WECC Bulk Electric System Definition Task Force. We also note that per the flowchart at http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf, any >100 kV element that does not meet an inclusion or an exclusion ends up being included. We don't think that was the SDT's intent. For example a 5 kW solar project connected at 115 kV does not meet any inclusions so proceed to the exclusion box. It is not radial load, behind a retail meter, or part of an LDN so it is BES by application of the definition. We realize this flowchart was drafted by another team. It therefore becomes imperative that the definition team clearly specifies exactly what becomes of an element that does not meet an inclusion.
No
We support the SDT's intent, but it is unclear from the language how single winding transformers (autotransformers) are handled. We suggest replacing "two windings…" with "two sets of terminals…." Please also indicate how transformers with only one set of terminals above 100 kV are treated, since we don't believe the flowchart at http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf properly expresses the SDT's intent to classify these transformers as non-BES.
Yes

But please indicate how generators below 20 MVA are treated, since we don't believe the flowchart at http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf properly expresses the SDT's intent to classify these small units as non-BES.
Yes
Please indicate how aggregate generation below 75 MVA is to be treated, since we don't believe the flowchart at http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf properly expresses the SDT's intent to classify these small plants as non-BES.
Yes
But please indicate how blackstart resources (regardless of voltage) not in the TO's restoration plan are treated, since we don't believe the flowchart at http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf properly expresses the SDT's intent to classify these resources (when also below the 20 or 75 MVA thresholds) as non-BES.
Yes
But please indicate how dispersed aggregate generation below 75 MVA is to be treated, since we don't believe the flowchart at http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf properly expresses the SDT's intent to classify these resources as non-BES.
Yes
FERC has made clear throughout the Order No. 743 process that the exclusion for radials be retained. We believe the exclusion as drafted adequately defines radials.
No
We support excluding behind the meter generation below the limits, but the string of "ands" and "ors" in this exclusion are far too confusing with numerous ways to parse them. Suggest eliminating bullet (ii) since the existence of obligations has no bearing on impact.
No
Central Lincoln strongly supports the exclusion of LDNs. These networks are used for improving local service, not for BES reliability; and their use should not be discouraged. However, we see problems with the language of part d. Part d uses the term the undefined term "bulk power" as part of the overall definition of "bulk power system," leading to a circular definition. Did the SDT mean to indicate that no power may be transferred though an LDN? If so, suggest striking the word "bulk." We also believe the SDT meant to define the LDN in terms of normal operating conditions, since all LDNs would transfer power under the right contingency (such as a complete loss of load within the LDN). Please make it clear that part d test applies during normal operating conditions.
Yes
Central Lincoln supports the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that can ill afford the substantial costs that accompany imposition of mandatory compliance with reliability standards. Further, we agree that the small utilities covered by the exemption will have no measurable impact on the operation of the interconnected BES. In the Pacific Northwest, many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.
No
We believe the SDT has excluded most distribution facilities, but not all. The remaining distribution facilities will find it necessary to go through a lengthy exception process. As stated in Q1, we support the PNGC comments stating that local distribution as determined by the seven factor test should be excluded by definition. We note that the SDT has also developed a technical principal document that uses language similar to the seven factor test. To use it, though, an entity must apply for exception first. We believe the seven factors or technical principles should be part of the definition in order to avoid numerous exception applications and resulting delays.
Yes
Improper classification of local distribution facilities, even if only for the duration of the exceptions process; puts these facilities under the regulatory jurisdiction of NERC contrary to the Federal Power Act when they should be under the exclusive jurisdiction of state utility commissions or local utility

boards.
We believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process. We note also that the SAR still does not apply the definition to all registered entity types in violation of the FERC order to provide a continent-wide definition. Please include PSEs in the SAR also. We are concerned that the proposed 24-month delay in the effective date of the new definition will delay the potentially beneficial effects of the SDT's efforts, especially for utilities that have been inappropriately required to meet BES reliability standards, which is a common situation in WECC. We therefore urge the new BES definition to become effective immediately upon approval by FERC or other applicable regulatory agencies. Entities that have been improperly required to meet standards can then immediately redirect resources to where they are truly needed. For entities that have not previously been registered for BES-related functions but that would be required to register under the new definition, we agree that 24 months is an appropriate transition period to allow the newly-registered entity to attain compliance with newly-applicable reliability standards, many of which require new training for employees, new maintenance procedures, and complex new operational protocols. However, the transition period for newly-registered entities should be structured in a way that does not prevent other entities from benefitting from the new definition at the earliest possible date.
Individual
Neil Phinney
Georgia System Operations
It is unclear to us what the phrase "including the generator terminals through the GSU..." means. Is the GSU itself included (it apparently would not be under I-1)? We understand terminals to be in essence points, and therefore don't see how they go "through" a GSU. Is the intention perhaps to mean "including the generator terminals at the GSU" or even "including the generator terminals at the GSU and the GSU itself"?
A. The phrase "which is described as" is unclear. If the intention is to mean "which is defined as," the term "Radial System" should be capitalized and added to the glossary. Otherwise, consider deleting the phrase. B. It is not clear whether the automatic interruption device on the excluded system is itself in or out of the BES. Can the drafting team clarify this intent with respect to breakers protecting radial lines (perhaps compared to circuit switchers protecting load serving transformers)? Drawings could be very beneficial here. C. The second part of sub-bullet "a" (the sentence beginning "A normally open switching device...") applies not only to "a" but to all the sub-bullets, and therefore should be moved to either the initial sentence or to be a closing item after the last sub-bullet. For example, if the sub-bullets are indented, and then this sentence returns to the original margin, that would show that it applies to any "radial system" and not just to a system falling under a single sub-bullet.
How is "net capacity provided to the BES" measured (e.g., by nameplate capacity minus peak load, by actual generated energy – rather than capacity - minus actual load at each moment or over some period of time, etc.)? It is possible that a larger than currently necessary generator may be installed in anticipation of future load growth, but that it is never used to generate significantly more than what is needed for load. Depending on how "net capacity" is calculated, such a generator might unnecessarily be pulled into the BES.

In item c, What is meant by "generation" and by "electric Demand," and how is whether "generation within the LDN...exceed[s] the electric Demand within the LDN" to be calculated? Is this installed nameplate capacity (rather than energy) minus peak Demand, or minus forecast Demand, or minus actual Demand – in each case either for some period of time or at every moment (the NERC Glossary defines Demand as either)? Is it the actual generated energy minus actual or forecast Demand for some period of time or at every moment? If the definition is based on capacity, this exclusion should allow for the possibility that a larger than currently necessary generator may be installed in anticipation of future load growth, so long as it is never used to generate significantly more than what is needed for load. If actual generated energy is intended, the exclusion should provide for inadvertent and/or de minimis power flows.
Individual
Bill Harm
PJM
Yes
Yes
Yes
No
As written I3 implies a contiguous system from the unit to a "common bus operated at a voltage above 100 kV" there is no technical justification for a contiguous system. The requirement should read "Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSU"
No
Black start units are used to start other units to when the BES is compromised. There is no technical justification to include all elements in the "cranking path" as BES facilities.
No
As written I5 implies a contiguous system from the unit to a "point a system element at a voltage above 100 kV" there is no technical justification for a contiguous system. The requirement should read "– Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection."
Yes
Yes
Yes
No
There is no technical justification to include/exclude elements based on the asset size of the owning company. The exclusion should be based on the technical merits.
No
The bright line exclusion includes facilities that would normally be BES facilities but are excluded based on the asset size of the owner.
No

Individual

Heather Hunt

New England States Committee on Electricity

Yes

The New England States Committee on Electricity ("NESCOE") appreciates the work of NERC's standard drafting team as well as the opportunity to provide comments on the proposed Bulk Electric System ("BES") definition. The proposed revision to the BES definition could have significant impacts on New England's transmission grid and ratepayers. As NESCOE noted in prior comments to FERC on this issue, NESCOE shares the interest in continually assessing means to improve system reliability. Comments of the New England States Committee on Electricity, Docket Nos. RM 09-18 and RM10-6 (May 10, 2010). However, NESCOE is concerned that the definition, as proposed, may impose substantial new costs on New England transmission owners. In NESCOE's view, any new costs a revised definition imposes – which fall ultimately on consumers - should provide meaningful reliability benefits. NESCOE's suggestions are intended to capture in the BES definition only those facilities having a direct impact on the reliability of the BES and to ensure that costs imposed have attendant reliability benefits. The concept of clarifying inclusions and exclusions is generally helpful. However, the language needs to be refined and/or clarified further. One primary concern relates to sub transmission networks. New England's electric transmission system is comprised of networks operated at voltages greater than 100 kV and at voltages less than 100 kV. The networks operated below 100 kV are referred to as "sub transmission" networks. They employ various operating voltages including 13.8 kV, 34.5 kV, 46 kV and 69 kV. NESCOE is concerned that the proposed BES definition and the proposed Inclusions I1 through I5 may bring many elements (generators, transformers and lines) of these sub transmission networks into the BES at substantial costs to New England ratepayers, without providing meaningful reliability benefits. To address this concern, NESCOE suggests that the proposed Inclusions be clarified to exclude generation connected to New England's sub transmission networks from the BES regardless of MVA rating. A second concern relates to the treatment of renewable generation. NESCOE believes that renewable generation complexes, either multiple or dispersed, should be granted flexibility regarding the Inclusion 3 rating threshold for inclusion in the BES. Finally, while NESCOE is still assessing the impacts and necessity of inclusion I4, NESCOE suggests that black start units and associated cranking paths not be considered BES. Please see further comments below.

Yes

Inclusion I1 now appears to exclude transformers that connect the BES to the sub transmission networks (the sub transmission elements connected to one of the windings is less than 100 kV). This suggests that the intent of this language is to exclude such transformers and all sub transmission elements (unless included by the other Inclusion criteria) from the BES. With that understanding, NESCOE supports Inclusion I1.

No

Inclusion Criteria I2 through I4 relate to generation connected with GSU High side voltages greater than 100 kV and refer to generators with MVA limits exceeding either 20 or 75 MVA aggregate depending on their configuration. It should be made clear that all generation connected to sub transmission are not BES as these units are adequately covered under other applicable NERC and/or regional reliability organization criteria. These units have no direct impact on the reliability of the BES. This includes black start units because they do not directly impact normal or contingency operation of the BES. These units and their associated cranking paths are used only for restoration and not operation. Further, they are appropriately covered under regional restoration procedures and NERC standards (see for example, Emergency Operating Procedure EOP-005-2). Use of varying generator MVA thresholds as inclusion criteria under I2 and I3 could lead to inconsistent treatment of generation facilities. For example, a generation facility with a single 30 MVA generator would qualify as BES under I2. However, if an additional 30 MVA generator was added at the same site, the facility's status would change to non-BES under I3 even though the facility's capacity had doubled. NESCOE is also concerned that if the BES is required to be contiguous, the I2 threshold will result in many radial sub transmission lines becoming BES, resulting in substantial costs without significant justifying benefits. NESCOE suggests deleting Inclusion I2 or adopting a threshold that is consistent with I3, and which in no event should be lower than 75 MVA. Regarding facilities connected at 100 kV and above, some generation units in paper mills or other entities operating on the retail side of the meter may exceed the Inclusion Criteria. The Exception Process, which will be the subject of future comments, should

provide some flexibility in this area. NESCOE further notes that in the case of radially connected generation, the contiguous connection paths should not be BES even if the operating voltage is greater than 100 kV. This is due to the fact that loss of a path has no greater impact than loss of the connected generator. This is simply a first contingency loss that has no significant impact on the BES. Inclusion I2 should be clarified to include only connections that impact the BES.
No
Please refer to comments under 3 above. Additionally, regardless of the connection voltage, the 75 MVA limit may unintentionally impose unnecessary added costs to renewable generation, thus inhibiting the development of these resources. This is of particular concern to New England, which has aggressive renewable energy objectives and is working to develop resources in and around the region to meet them in the most cost-effective way. Looking forward, the exception process should provide criteria allowing flexibility as to the aggregate MVA rating as related to the specific connection and impact on a region. This will be discussed further in comments on the Exception Process as appropriate.
No
Please refer to comments under 3 above. Black start units should be excluded from BES. These units and their associated cranking paths are used only for restoration and not operation. Such units are appropriately covered under regional restoration procedures and applicable NERC standards (see for example, Emergency Operating Procedure EOP-005-2). NESCOE is still exploring the impact and necessity of this proposed inclusion.
No
As noted in comment under 4 above, the 75 MVA threshold may unintentionally impose unnecessary added costs that may ultimately be paid by New England ratepayers. The exception process should provide flexibility as to total MVA rating. In addition, NESCOE believes this language should be clarified to exclude collector systems and include only elements that actually impact the BES.
Yes
NESCOE generally supports these exclusions. However, NESCOE also notes that subsections (b) and (c) could (depending on the final definition of Inclusions I2 through I5) sweep many sub-transmission load serving elements into the BES, at a cost that is not justified in terms of reliability benefits. Regarding sub transmission, Exclusion Criteria E1 and E2 are concerned with radial configurations while E3 relates to Local Distribution Networks (LDN's). None of these apply to sub transmission networks that may contain both looped and radial configurations. Also, sub transmission networks may have power flowing parallel to the BES and may have power flowing into the BES with no potential for adverse impact on the reliability of the BES. Sub transmission networks operated at voltages less than 100 kV, connected to the BES via non-GSU transformers, should be excluded from the BES regardless of their configuration. It should be clear that all generation facilities connected to sub transmission are not BES as these units are adequately covered under other applicable NERC and/or regional reliability criteria. These units have no direct impact on the reliability of the BES. Regarding facilities at operated at 100 kV and above, the switching configuration as defined is not clear and possibly overly restrictive. The definition should incorporate language related to avoiding "parallel paths" with diverse electrical nodes in the BES.
Yes
Please refer to comments in number 7 above. Additionally, there appears to be an inconsistency in how generating units are expressed in E2 (net capacity) and in I2 and I3 (MVA).
Yes
NESCOE believes that this language appropriately excludes facilities that serve local distribution loads from the BES.
No
This appears overly restrictive in that it only includes networks connected at a single source. Please see comments under 7 above.
No
As stated in 1 above, NESCOE is concerned that the proposed definition may unintentionally incorporate facilities into the BES that do not have a direct impact on the reliability of the system, potentially imposing significant costs without meaningful reliability benefits.

Yes
A possible conflict exists with respect to state renewable resource objectives. Please refer to number 4 above regarding renewable energy objectives, which includes state legislation regarding renewable portfolio standards.
As a general matter, the definition should reference the Exception Process, which may cause assets and facilities to be further "included" or "excluded." In particular, once a facility has qualified for Exclusion it is not clear how that status is maintained.
Individual
Darryl Curtis
Oncor Electric Delivery Company LLC
Yes
No
The reference to two windings is technically incorrect because it would exclude autotransformers which technically only have one winding. Recommend rephrasing this to say that both the high-side and the low side of the transformer connected at 100 kV or higher. I1 Suggested Language: "I1 - Transformers, including phase angle regulators, with both the high-side and the low side of the transformer connected at 100 kV or higher unless excluded under Exclusions E1 and E3."
Yes
No
The ERCOT Region already considers load in any combination equal to and over 20 MVA through a single Point of Interconnect as part of the BES
Yes
No
The ERCOT Region already considers load in any combination equal to and over 20 MVA through a single Point of Interconnect as part of the BES
Yes
Yes
Yes
Yes
Yes
No
Individual
Charles Yeung
Southwest Power Pool
No
SPP generally agrees with the substance of the SDT's changes, but suggests a different approach. In order 743, to remedy its concerns, FERC suggested eliminating RE discretion in defining the BES, and instead basing it upon a bright-line 100kV threshold, provided that elements above and below 100kV could be excluded and included, respectively, based on specific procedures. Consistent with that approach, SPP suggests that the BES definition itself establish a bright line standard, with inclusions and exclusions managed through the exemption process. With respect to exclusions (and inclusions),

FERC contemplated a process involving stages that established "exclusion" criteria in the first instance. If equipment met such criteria, the process ended there and it was exempt. If the equipment did not meet the bright-line criteria, then it moved to the "exemption" analysis, which contemplated additional critical analysis to determine if exemption was warranted. SPP believes that structuring the revised definition in accordance with this approach is more consistent with FERC's intent of having an inclusive definition in the first instance, with modifications occurring subsequently pursuant to critical analysis in a well defined exemption process. Revising the BES definition consistent with the above principles would counsel in favor of revisions to the current definition that removed RE discretion and provided for inclusion or exclusion on a case by case basis. SPP also believes that the BES definition should provide for a general exclusion of distribution facilities. In Orders 743 and 743-A, FERC made clear that, consistent with the terms of EPAct 2005, distribution systems were excluded from the BES. However, FERC also made clear that it reserved the right to judge whether something was distribution or transmission, and, therefore, subject to its jurisdiction. Consistent with FERC's findings in this regard, the SRC believes that the definition should provide the general exclusion, with specific exclusions being performed as part of the exception process. This will meet the goal of respecting Congress' exclusion of distribution facilities, while ensuring the distribution/transmission distinction is subject to clear, objective standards the application of which can be critically reviewed by FERC to provide the appropriate procedural and substantive checks FERC envisions to ensure its jurisdiction is applied in all relevant cases to facilitate enhanced system reliability. However, consistent with the approach described above, the BES definition should not be characterized in terms of inclusions or exclusions, but rather as general thresholds, with modifications occurring solely pursuant to the exemption process. Applying the approach described above, the BES definition would reflect general thresholds. Specific circumstances warranting exclusion/exception/inclusion would occur via a separate process –SPP is not disagreeing with any of the SDT's inclusions or exclusions, it is merely suggesting that they be addressed in that separate process. Consistent with this approach, SPP offers the following language: The Bulk Electric System shall include: A) all Transmission Elements operated at voltages 100 kV or higher; B) all generation resources that: 1) are individual units greater than 20 MVA; 2) multiple units at a single facility that are equal to or greater than 75 MVA in the aggregate, provided that all units have a common point of interconnection; and 3) multiple units connected to a collector system that are equal to or greater than 75 MVA in the aggregate; 4) all Blackstart Resources regardless of size; and C) Reactive Power resources connected at 100 kV or higher. The BES shall not include distribution facilities, and Radial transmission facilities serving only load with one transmission source are generally not included in this definition. The foregoing notwithstanding, any relevant element (e.g. transmission, generation, etc.) may be identified as an exception and excluded or included in the BES pursuant to the process delineated in the NERC Rules of Procedure and subject to the exclusion or inclusion criteria. All equipment specific issues that affect exclusions/exceptions/inclusions would then be addressed via the Rules of Procedure processes and the exclusion and inclusion criteria.
Yes
SPP agrees that such equipment should be included, but suggests that these issues be addressed in the exception process. In other words, this inclusion doesn't need to be explicitly identified. It would simply be included under the general 100 kV threshold, and to the extent an owner believed the characteristics of its equipment don't warrant inclusion, it would seek an exception, which can be for either an exclusion or an inclusion.
Yes
Please refer to SPP's response to question 1. but, consistent with the comments to question 1, believes it should be reflected as part of the general definition, as opposed to inclusions/exclusions, which should all be addressed pursuant to the separate processes.
Yes
Please see SPP's response to question 3 – SPP agrees with substance, but not the approach.
No
Please see SPP's response to question 3 – SPP agrees with the substance, but not the approach.
No
Please see SPP's response to question 3 – SPP agrees with the substance but not the approach.
No
Please refer to SPP's response to question 1 – while SPP does not necessarily disagree with the

substance of the proposed exclusions, it believes all exceptions, which may be either exclusions or inclusions, should occur pursuant to the separate process and criteria being developed that will be established in the NERC ROP. The BES definition should be more general in nature, focusing on objective thresholds. All exclusions should be addressed in the separate proceeding being conducted in parallel with this proceeding to develop the exception process, and SPP reserves its right to comment on the substance of such proposals in that proceeding.
No
See response to question 7.
No
See response to question 7.
No
These entities should be subject to the exception process within the exclusion criteria. They warrant a "first instance" exclusion in that process, but any such action should occur there, as opposed to the definition of BES. SPP believes this is more consistent with FERC's position that BES should reflect an objective threshold, with exceptions being subject to review by the ERO and FERC, as applicable. It may prove through that process that these entities receive the presumption of exclusion, but that should take part in that process as opposed to being granted a de jure exemption from the definition. Accordingly, SPP suggests that this issue be raised in the concurrent BES exception proceeding as an exclusion criterion, and SPP reserves its right to comment on the substance in that proceeding.
No
See response to question 1 – SPP does not necessarily disagree with the characterization of excluded distribution facilities, but believes that issue should be addressed in the concurrent BES exemption proceeding for the reasons described in question 1. SPP reserves its rights to comment on the criteria for exclusion/inclusion in that proceeding.
Yes
See SPP's response to question 1 – SPP believes defining BES in terms of the relevant exclusions may be contrary to FERC's suggested approach in 743 and 743-A. While FERC did not mandate a particular approach, and gave the ERO the opportunity to propose an alternative to its suggested approach, it stated that any alternative must be equal to or greater than its suggested approach in terms of remedying the identified flaws associated with the current definition. Part of the remedy envisioned by FERC included the removal of subjectivity in defining BES and the ability of the ERO and FERC to review any proposed exemptions from the bright line definition. Although the exclusions strive to apply objective criteria, it is arguable that any such circumstances may not be that clear and may require some level of subjective judgment as to whether elements deemed to be distribution according to the exclusion criteria actually are distribution, as opposed to transmission. In addition, FERC expressly stated that it reserved the right to make that determination in the first instance. This approach takes that away from FERC.
Group
Texas Industrial Energy Consumers (TIEC)
Katie Coleman
Yes
TIEC supports excluding radial loads serving only load or generation resources that do not trigger NERC registration requirements. This is consistent with the FERC's intent and the existing BES definition. However, TIEC believes that this exclusion should not be contingent upon a radial system "originating with an automatic interruption device" as proposed by the SDT. Radial feeds serving a system that contains only load and generation that does not trigger registration requirements should

be categorically excluded from the BES definition regardless of whether the radial lines originate with an automatic interruption device. It should be the responsibility of the transmission provider to ensure that its facilities and interconnection properly protect the grid from facilities that fall under this exclusion, just as the transmission providers do for other load and unregistered generation. The absence of automatic interruption device should not trigger inclusion as a part of the BES, but should trigger a requirement upon the transmission provider to install such a device on its side of the facilities or take other measures to insulate the grid from the activities of a radial network. Accordingly, TIEC would proposed to strike the phrase "originating with an automatic interruption device" from the proposed exclusion language.

Yes

TIEC supports this exclusion with two clarifications. The language currently excludes generation on the customer's side of the meter as long at "the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3." There are special circumstances in which an regional Reliability Coordinator may ask that customer-owned generation export to its maximum capability (i.e., with its load curtailed to the lowest level) in order to support grid reliability. Circumstances such as this should not be considered in determining whether the "net" capacity exported to the BES exceeds the threshold for registration. Additionally, there are often instances when customer-owned generation and associated load are in start-up or shut-down processes that may cause the net export to the BES to vary such that it temporarily exceeds the registration thresholds. Outlying situations such as these should not trigger registration. Rather, the "net" capacity should be interpreted as the typical amount exported during steady-state operation of the site. This interpretation of "net capacity" should also apply to exclusions E1 and E3.

Yes

Proposed exclusion E3 should be revised to categorically exclude all facilities that are part of a local distribution network (LDN), regardless of the specifics of the LDN's interconnection with the Bulk Electric System. As currently drafted, Exclusion 3 places a number of inappropriate limits on a whether a local distribution system is excluded from the Bulk Electric System definition. As recognized by the Commission in Order No. 743-A, Section 215 of the Federal Power Act categorically excludes local distribution systems from the Bulk Power System definition without qualification. As a result, LDNs are outside the FERC's jurisdiction and are outside the scope of this rulemaking. The SDT should revise the approach to Exclusion 3 to exclude all facilities that are part of a LDN, regardless of how the LDN is interconnected to the grid. Specifically, making exclusion of an LDN contingent upon the LDN being connected through automatic fault-interrupting devices is inappropriate. Similar to the concerns TIEC expressed in response to Question 7, above, if there are concerns about LDNs impacting the Bulk Electric System, then it is the responsibility of the transmission provider serving the LDN to ensure that systems and facilities are in place to protect the grid. The specifics of an LDN's interconnection to the grid should not dictate whether it is subject to regulation. TIEC would therefore recommend removing proposed qualification (a) to the LDN exclusion. Further, the requirement that generation in the LDN can never exceed demand is inappropriate. As the SDT properly recognized in Exclusion 2, as long as the generation within an LDN does not trigger registration requirements, the LDN should be able to export power to the grid without subjecting itself to regulation. Many LDNs export small amount of power intermittently to balance the flow within the LDN. Subjecting these networks to regulation as a result of this balancing activity is inconsistent with the existing generation registration requirements and would exceed the scope of this rulemaking. The existing generation registration requirements exempt customer-owned generation that serves retail load from generation registration requirements as long as the net capacity provided to the bulk power system does not exceed the nameplate requirements for stand-alone generators. Consistent with this approach, an LDN should not have to be registered as long as its net exports to the grid do not exceed the generation registration requirements. TIEC accordingly requests that proposed LDN characteristics (c) and (d) be removed as qualifications to the LDN exclusion, and that the exclusion be revised to allow generation output to the grid as long the net export to the grid does not exceed the threshold levels for registration as a generator owner/operator.

No

TIEC appreciates the SDT's effort to identify situations where facilities rated above 100 kV should still be categorically excluded from the BES definition This recognition is consistent with the concerns raised by TIEC and many of its individual members in comments to the FERC in Docket RM09-18-000.

However, TIEC submits that the SDT's approach to these exclusions should be revised to meet FERC's express recognition in Order No. 743-A that "facilities used for local distribution are excluded from the Bulk-Power System definition under section 215, and thus are excluded from the bulk electric system." Order No. 743-A at ¶58. It is crucial that the BES definition is drafted in a way that recognizes that it is the transmission provider's responsibility to ensure that equipment is in place to protect the BES from the operations of excluded facilities, not the responsibility of a person owning facilities involved in the local distribution of electricity. These issues are addressed in further detail in response to the specific exclusions.

Individual

Geoff Carr

Northwest Requirements Utilities

No

As a general matter, Northwest Requirements Utilities (NRU) supports the approach the Standards Development Team ("SDT") has taken to defining the Bulk Electric System ("BES"). The changes made in the revised core definition are helpful and represent significant progress toward an acceptable definition. With an effective and efficient exclusion process, the draft will better define the BES as a whole. We urge the SDT to bear in mind the restrictions contained in Section 215 of the Federal Power Act ("FPA") The "bulk-power system" (As per FERC, we treat the statutory term "bulk-power system" as equivalent to the term ordinarily used in the industry, "Bulk Electric System") definition imposes a clear limit on the reach of the mandatory reliability regime. The BES is made up of only those "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" and "electric energy from generation facilities needed to maintain transmission system reliability." Congress reinforced that limit in Section 215(i), where it emphasized that the FPA authorizes the imposition of reliability standards "for only the bulk-power system." NRU is concerned that the SDT's proposed definition is overly-broad, and that it will sweep in many Elements that have little or no material impact on the reliable operation of the interconnected bulk transmission grid. For example, the definition uses the arbitrary 20 MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators. Accordingly, for the BES definition to conform to the requirements of the statute, the SDT must adopt an effective mechanism to exempt facilities like these that are improperly swept in by the SDT's brightline approach to inclusions and exclusions. For this reason, the Exception process to accompany the SDT's definition is of critical concern. If the SDT incorporates this statutory language as its core definition, it will have addressed FERC's primary concern with a minimum of disruption to the current NERC system of definitions. The definition could then be further elaborated to show specific points of demarcation for each inclusion and exclusion similar to that Proposal 6 from the WECC Bulk Electric System Definition Task Force ("BESDTF") team to further delineate BES and non-BES facilities.

No

In concept, we support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams noting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort. Also, the reference to "two windings of 100 kV or higher" may create some confusion because many three-phase transformer banks have 6 or 9 windings, depending on whether the transformer has a tertiary. We suggest clarifying this provision by changing the clause reference two windings to read: "the two highest voltage transformer windings of 100 kV per phase that are connected to the Bulk Electric System." We again urge the SDT to consider further delineation of points of demarcation similar to WECC BESDTF Proposal 6.

No

Northwest Requirements Utilities is concerned that I2 inclusion criteria that includes the arbitrary 20

MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted improperly expands the BES definition to include generators that the statute requires to be excluded. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Unfortunately, the SDT appears to have concluded that any interconnection facility operating above 100-kV should be classified as BES. The result will be to require Generation Owners to register as Transmission Owners/Operators, as well, producing substantial additional compliance costs for those Generation Owners but resulting in little or no improvement in the reliability of the BES. We recommend that the SDT, like the Project 2010-07 SDT (commonly referred to as the GO/TO Team), give careful consideration to the practical results of its recommendations rather than relying on abstract conclusions about whether a "contiguous" or "non-contiguous" BES is more desirable. We are concerned that the SDT's pursuit of a "contiguous" BES will result in a substantially over-inclusive BES definition. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. NERC's Standards Drafting Team for Project 2010-07, has already considered this question and, based on an in-depth review of potentially applicable reliability standards, has concluded that generation interconnection facilities, even if operated above 100-kV, need to comply only with a limited set of reliability standards in order to achieve the reliability goals. Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability.

No

Northwest Requirements Utilities is concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition.

Yes

Including "all" blackstart and blackstart cranking paths in the BES may ultimately provide an incentive to the electric industry to reduce the number of resources with blackstart capability. We therefore suggest that essential blackstart resources identified by the Regional Entity should be included in the Bulk Electric System, but non-essential blackstart resources need not be.

No

Northwest Requirements (NRU) agrees that it is important to address wind generation facilities and similar generation facilities in which a large number of generating units, each with a relatively small capacity, are clustered and fed into the grid at a single interconnection point. That being said, NRU is concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.

Yes

FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained. We believe the exclusion as drafted adequately defines radials.

No

As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold (through

reference to Inclusion I2) lacks an adequate technical justification in this context. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit ("standby, back-up, and maintenance power…") should be eliminated.

Yes

Northwest Requirements Utilities (NRU) strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. NRU supports the LDN exclusion, but we believe the exclusion should be refined in the following respects: • The SDT's draft states that: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load." (emphasis added) We recommend that the SDT revise the sentence quoted above as follows: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances.

Yes

Northwest Requirements Utilities supports the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that can ill afford the substantial costs that accompany imposition of mandatory compliance with reliability standards. Further, we agree that the small utilities covered by the exemption will have no measurable impact on the operation of the interconnected BES. In the Pacific Northwest, many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.

No

While Northwest Requirements Utilities (NRU) agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1, NRU believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. As discussed in our answer to Question 3, NRU notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that "users" of the BES can be subject to reliability regulation. Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BESDTF Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.

Yes

The Exceptions process is a necessary part of making this proposal complaint with the Federal Power Act. As noted in our responses to Question 1 and Question 11, we believe the basic SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used in the local distribution of electric energy. The SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities.

Northwest Requirements Utilities (NRU) has these additional concerns: • The current definition

provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." NRU is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BESDTF approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. • For the reasons we have explained in our answer to Question 11, we believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process.
Individual
Jonathan Appelbaum
United Illuminating
The definition should incorporate the language in Energy Policy Act of 2005 that defines bulk power system. UI agrees in general that facilities operated at 100 kV and above are part of bulk power system. Without the clarification in the definition the possibility of facilities that are not necessary for the operation of the interconnected transmission will be pulled into scope.
No
Inclusion I1 is an attempt to limit the scope of the core definition to only those transformers with a high and low side connection at or above 100 kV. However it is not clear that a transformer connected solely on the high side at 100 kV, that is a distribution transformer, is not included in the BES by the definition. This is because the core definition includes all transmission elements connected at 100 kV, this would include the distribution transformer. Then Inclusion I1 does not eliminate the distribution transformer explicitly. It is only implied that the core definition applies only to those transformers with a high and low side connection at or above 100 kV. UI would prefer a more explicit description. Such as: I1- Only those Transformers, including phase angle regulators, with two windings of 100 kV or higher unless excluded under Exclusions E1 and E3 are included in the definition of BES. Generator Step Up Transformers are included based on the generator. A similar comment can be made for the other inclusions. An alternative solution is to change word Inclusions to a sentence that explicitly states: for the category of element below only include the type of equipment specified. Also The use of the descriptor two windings implies auto transformers with one winding is excluded. UI understands that is not the intent of the team.
UI suggests the following change to E1 eliinating the automatic device: Any radial system which is described as connected from a single Transmission source. These taps are not necessary for the opeation of the interconnected system.
No

The core definition should state that local distribution facilities are not included.
Group
Electricity Consumers Resource Council (ELCON)
John P. Hughes
Yes
We support the expanded structure of the core definition that provides for inclusions and exclusions. This clarification establishes a rebuttable presumption that excluded elements are not BES and appropriately shifts the burden of proof for any subsequent inclusion to Regional Entities or the ERO, thereby minimizing the regulatory burden on the industry, an outcome consistent with the Commission's stated assumption that revising the BES definition should have relatively minor impacts on registrations in non-NPCC regions.
No
Although the BES Standards Drafting Team has stated that it will not propose changing the 20-MVA/75-MVA thresholds, we think the thresholds should be set based on the BA/RC needs in each area and that a suggested range (perhaps by taking a survey of the operational entities) should be in the new BES Definition. Having an arbitrary and capricious number in the new BES Definition just because it is in the current Statement of Compliance Registry Criteria, and requiring significant technical justification for change, does not seem appropriate when so many expert industry commenters have indicated the existing thresholds are too low to be operationally significant.
No
Same response as item 3 above.
Yes
No
The existing language in the NERC Statement of Compliance Registry for radial exclusions should be maintained since the change proposed by the SDT could result in a significant increase in entities and/or facilities that would have to be registered or included (because of the addition of the automatic interruption device). The burden for proving the need for such significant changes should be placed on the ERO and the Regional Entities through the BES Exception Process, not on the users of the BES. In particular, it could force retail load (customers) to register as transmission owners, or engage in other maneuvers to avoid registration, when this is clearly a transmission owner/customer issue (as to whether to install automatic interruption devices). These lines are non-jurisdictional and are obvious under the purview of the state commissions.
Yes
No
There are two different types of LDN: utility owned and customer owned. They should not be treated the same. Criteria (a) through (e) in Exclusion E3 may be appropriate for distinguishing between utility-owned LDN and utility-owned BES transmission often owned and operated by the same integrated utility. A separate, stand-alone exclusion criteria should be established for customer-owned elements that serve to distribute electric energy to on-site loads, including all or part of the electric energy from behind-the-meter generation. Thus, E3 criteria (a) through (e) would apply exclusively to utility-owned elements. For customer-owned elements, the new criterion (f) might read: "Or the LDN is also characterized by: "f) The Elements are customer owned and used to distribute electric energy to on-site loads, including all or part of the electric energy from behind-the-meter generation." See response to #11 below for further justification for this recommendation.
No
We support the concept and intent of the exclusion but it should apply equally to similarly situated loads such as manufacturing facilities that have loads comparable to small municipalities or rural

cooperative utilities. Thus the language should be amended as noted below: "Exclusion E4: Transmission Elements, from a single Transmission source connected at a voltage of 100 kV or greater, owned by a small utility or similarly situated load whose connection to the BES is solely through this single Transmission source, and without interconnected generation as recognized in the BES Designation Inclusion Items I2, I3, I4, or I5. A small utility or similarly situated load is recognized as an entity that performs a Distribution Provider or Load Serving Entity function but is not required to register as a Distribution Provider or Load Serving Entity by the ERO."

No

Section 215 of the Federal Power Act denies FERC jurisdiction over facilities used in the local distribution of electric energy. FERC has recognized that since facilities used in the local distribution of electric energy "are exempted from the Bulk-Power System, they also are excluded from the bulk electric system." Section 215 of the Federal Power Act does not qualify the exclusion from FERC jurisdiction of "facilities used in the local distribution of electric energy." For example, Section 215 does not state that: --The term "bulk power system" "does not include facilities used in the local distribution of electric energy [unless needed for reliability purposes];" or --The term "bulk power system" "does not include facilities [with automatic interruption devices] used in the local distribution of electric energy." Any definition of the bulk electric system that does not exclude all "facilities used in the local distribution of electric energy" is unlawful. Further, the definition of the bulk electric system must recognize that Section 215 of the Federal Power Act does not allow the potential reliability impact of a facility to determine whether the facility is local distribution or transmission. By excluding all facilities used in the local distribution of electric energy from the definition of the Bulk-Power System in Section 215, Congress recognized that while facilities used in the local distribution of electric energy may be part of the Bulk-Power System, they are, nonetheless, not FERC jurisdictional. Thus, "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" that are used in the local distribution of electric energy are not FERC jurisdictional regardless of the potential reliability impact of the facilities.

Yes

See response to question 11 above. The definition of "local distribution" should be as defined and practiced in each state (US only) under state laws and regulations, and similarly by the Canadian provincial governments.

Group

Central Maine Power Company

Brian Conroy

Yes

No

By definition above, a transformer with a 100 kV winding is already an "element operated at 100 kV or above." This inclusion is actually intended to exclude transformers with only one winding operated at 100 kV or higher voltage. Therefore, Inclusion I1 should be deleted and a new Exclusion should be made: "Transformers with only one winding of 100 kV or higher, including phase angle regulators, unless included under Inclusions I2, I3, or I5."

Yes

lease note that this departs from NERC's Registry Criteria in that the unit of measurement is MVA instead of MW.

Yes

Please note that this departs from NERC's Registry Criteria in that the unit of measurement is MVA instead of MW.

No

Inclusion I4 should be stricken for several reasons: 1. The SDT states that "One of the basic tenets that the SDT is following is to avoid changes to registration due to the revised definition if such changes are not technically required for the definition to be complete." Adding every black start generator and the designated cranking path is not technically required. All significant black start generation is already included in I2 and I3 and I5. 2. The NERC Compliance Registry notes that not

every generator that is a blackstart unit is "material" – it may not be necessary to the restoration plan or to bulk power system reliability. 3. There is already an existing standard to ensure reliability of blackstart performance. NERC Reliability Standard EOP-005-2 ensures that the facilities critical to system restoration are functional when needed. 4. In CMP's case, there are two generator locations which are part of the Black Start capability, and they are small hydroelectric stations connected to our 34.5 kV transmission system. Under this inclusion, these small hydroelectric stations and 34.5 kV paths would inappropriately be classified as BES. Other, critical blackstart facilities are already included in the BES definition without I4.
Yes
Please note that this departs from NERC's Registry Criteria in that the unit of measurement is MVA instead of MW.
No
The definition of radial needs to be clear and comply with Order 743. We do not know what a radial "system" is. Also, "automatic interruption device" is not defined. This exclusion includes "radial" "systems" with more than one supply from a single "source" – including normally-open switches, even those which are intended to be normally closed before further switching takes place ("make-before-break"). This seems to be a problem, per Order page 32. We suggest a compliant and straightforward "radial" exclusion, and recommend that E1 be replaced with, "Those Transmission Elements interconnected to only one other substation through only one transmission line; except those elements included in I2, I3, and I5." It is clear and it can be applied in a "bright-line", consistent fashion.
No
E2 refers to "net capacity provided to the BES" (which seems to be a flow on an interconnection, not generator capacity), yet I2 and I3 refer to generator MVA. These are not the same unit which leads to inconsistency. This Exclusion appears to add confusion or additional criteria to that of the Compliance Registry. We recommend that E2 be stricken.
No
This exclusion is vague, but needs to be clear and comply with Order 743. Also, "distribution" is already excluded from transmission and therefore "BES." Also, E1 refers to "automatic interruption device" and E3 refers to "automatic fault interrupting device", neither of which are defined. We think that large portions of the network may be inappropriately excluded under this exclusion and exclusion E3 should be deleted.
No
This exclusion E4 seems to already be covered under the E1 "radial" exclusion.
No
Transmission and distribution facilities are already mutually exclusive and are already classified and reported in FERC Form 1. The SDT definition may have rolled in considerable portions of the distribution system for consideration as BES. A small generator that is entered into the black start program would make the complete cranking path BES. As documented previously this inclusion of immaterial generators and subsequently their distribution cranking paths is at odds with the Compliance Registry.
No
No.
Individual
John Cummings
PPL Energy Plus and PPL Generation
No
See the response to Question 13
No
See comments in Question 13.
No

See comments in Question 13
No
See comments in Question 13
No
See comments in Question 13.
Yes
See comments in Question 13.
The BES definition strives to draw a line between transmission customers (load and generation) and the "network" that makes up the bulk electric system. All transmission customers served by the network are not necessarily part of the network just like an on-ramp is not part of the Interstate highway, even though on-ramps deliver cars to the Interstate highway. FERC Order 743 paragraph 115 clearly gives guidance to the NERC BES Definition Team (BESDT) on developing fair exclusion criteria for facilities not necessary for the operation of the grid. PPL Generation and PPL Energy Plus (PPL) are concerned that the FERC order is being read overly expansively to include much more generation in the BES than FERC intended. In the NERC BESDT's latest proposed version of a BES definition, the definition appears to apply to small radial generators (Inclusions I2 and I3) but not to large radial loads (Exclusions E1 and E3). The BESDT has chosen to exclude or include LDNs based solely on the direction of power flow (see for example Exclusion E3-c) when the magnitude of the power flow is more critical than the direction. An example of the stark contrast between treatment of looped and radial facilities is exemplified by the exclusion of looped load and generation facilities of almost any size (Exclusion E3) from the BES, versus the seeming omission of any effort to exclude radially connected generation facilities over 20 MVA. Clearly, FERC Order 743-A paragraph 55 instructs the BESDT to consider "additional facility characteristics" other than voltage to come up with a fair inclusion/exclusion process. The exclusion of looped facilities serving load and generation and the inclusion of radial facilities serving only generation does not appear consistent. Moreover, it ignores the physical reality that radial generator lead lines cannot be overloaded by outages on parallel paths because there are no parallel paths. Further, the MW flow on a radial line is well known and limited to a known maximum (limited to the larger of the generation or load on the end of the line): clearly reasons for exclusion. The BESDT should look carefully at FERC Order 743 paragraph 73 which describes the characteristics of the electrical network that the BES is trying to define. In that order, FERC justified its bright-line, 100 kV threshold, explaining that "many facilities operated at 100 kV and above have a significant effect on the overall functioning of the grid" because they share the following characteristics: 1. "operate in parallel with other high voltage and extra high voltage facilities" i. The "bright line" at 100 kV recognizes many 100 kV lines parallel other HV/EHV lines and can be significantly loaded by failure of the HV/EHV lines. This does not apply to radial lines, even at 100 kV and above. 2. "interconnect significant amounts of generation sources" 3. "operate as part of a defined flow gate" 4. have a "parallel nature" and are capable of "caus[ing] or contribute[ing] to significant bulk system disturbances". i. Radial lines cannot cause significant BES disturbances since the outage of a radial line is studied in all N-1 planning studies and if the TPL standards are followed, an N-1 should not cause such disturbances. To their credit, the BESDT recognizes part of paragraph 73 in Exclusion E3-d and E3-e (possibly exempting many hundreds of MVA load) but yet fails to exclude radial lines serving generators from the BES "network". Generation should be excluded from the definition of the BES on the same basis as load. PPL requests the BESDT clearly exclude radial generators up to 200 MVA (1200 amps at 100 kV). This exclusion is clearly justified because it would recognize many (if not all) loads and generators served radially do NOT possess the Network Transmission Facilities characteristics described in FERC Order 743 paragraph 73. PPL hopes that the NERC BESDT will recognize (as FERC Order 743 in paragraph 120 recognizes) that radial facilities and distribution facilities can both be excluded.
Individual
Joe Petaski

Manitoba Hydro
Yes
We recommend that the definition be prefaced with the statement 'except where provided otherwise by applicable law…'
No
Inclusion I1 requires clarification. The intention of I1 is to include transformers that have both their primary and secondary windings operated at 100kV and the wording in I1 should reflect this. Requiring that only 'two windings' must be connected at 100kV or greater for inclusion is not sufficient in the case of 3 separate single phase banks connected to form a delta-wye connection for example. As currently written, even if only the primary windings of this bank were connected at greater than 100kV, this transformer would be included in the BES regardless of the secondary voltage. -Suggested wording: "Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, that are connected at 100kV or above on their primary and secondary windings unless excluded under Exclusions E1 and E3. OR "Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings of 100 kV or higher in the same phase unless excluded under Exclusions E1 and E3."
Yes
No
It is not clear if this inclusion only applies if the generators at a single site have an aggregate capacity greater than 75 MVA AND are connected through a common bus operated at 100kV or if the inclusion applies if the generators at a single site have an aggregate capacity of over 75MVA regardless of whether or not they are connected through a common bus operated at 100kV or above. For example, would this inclusion apply if a utility has over 75MVA at single generating site but only a small portion of the generating capacity is connected through the GSU to a common bus at 100kV or above and the rest is connected through a common bus operating at less than 100kV? Suggested wording: "Multiple generating units located at a single site connected to a common bus operated at a voltage of 100kV or above with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs.
No
Inclusion I4 should be modified so that only the Blackstart Resources and designated Cranking Paths required for compliance with the NERC Emergency Preparedness and Operations Standards are included in the BES Definition.
Yes
Yes
No
It is not clear what is meant by "retail Load". This is not a NERC defined term. Additional detail is required.
No
Exclusion E3 needs to be strengthened to ensure that the LDN will have no impact on the BES. The protective elements preventing the LDN from impacting the BES should be included in the BES. As well, the term Local Distribution Network (LDN) should be defined as a separate NERC Glossary term, instead of being defined in the BES definition.
No
Small utilities should be excluded under the definition of the BES without requiring an additional and specific exclusion.
Yes
Yes
Canadian Entities are not under FERC jurisdiction, so the revised BES Definition may not apply. A number of Canadian Entities have the BES defined within their provincial legislation. This may

introduce differences and even contradictions between elements that are included in the BES according to provincial legislation and the NERC definition.
Manitoba Hydro supports a 100kV bright line definition of the BES (excluding radial systems) that is consistent across all regions. We do not agree with the proposed impact based exception procedure and believe that the BES definition should be stand-alone. In addition, the complexity of the proposed BES definition and associated exception process may not provide the goal of uniform application of the BES definition and moves the burden of assessment and approval to the ERO.
Individual
Kathleen Goodman
ISO New England, Inc.
Yes
This definition does not indicate that there may be other "inclusions" and "exclusions" for which an entity has to seek ERO/RRO approval. Therefore our recommendation is that this definition be modified to resolve this concern. This questionnaire contains information as part of the definition description that is different from the draft Implementation Plan and definition of Bulk Electric System document, specifically the entirety of E4 is included in the questionnaire but in neither of the other two documents; this may lead to confusion by commenters.
Yes
Yes
Yes
No
The SDT states that "One of the basic tenets that the SDT is following is to avoid changes to registration due to the revised definition if such changes are not technically required for the definition to be complete." However, adding every black start generator and the designated cranking path to the definition of the BES is at odds with the Statement of Compliance Registry Criteria which states: III.c.3 Any generator, regardless of size, that is a blackstart unit material to and designated as part of a transmission operator entity's restoration plan, or; The SDT should use the registry language in order to not expand the BES to every cranking path on the distribution system from a small generator entered into the black start program. Furthermore, the SDT cannot simply disregard voltage level, because: (a) FERC Order 743 expresses preference for a bright line definition, and (b) Section 215 of the Federal Power Act defines the "bulk-power system" as, in part, "electric energy from generation facilities needed to maintain transmission reliability". As the NERC Compliance Registry has long recognized, not every generator that is a blackstart unit is "material" – i.e., may not be necessary – to the restoration plan or, therefore, to bulk-power system reliability.
Yes
No
The definition of radial needs clarification; we suggest "fed from a single transmission source, i.e. fed from a single substation at a single voltage". It is clear and it can be applied in a "bright-line", consistent fashion. As currently drafted, if the interruption device is not automatic, E1 would not exclude tapped "radial - i.e. single fed" equipment. Does the SDT mean to imply that even transformers which do not have an automatic interruption device on the high side, but have low voltage side at lower than 100 kV, will be considered part of the BES? If so, is the BES considered to extend to where the circuit has an automatic interruption device? Would the bus conductor and leads to the high side of the transformer be BES? This would not be acceptable if the answer is yes. It is important to keep in mind that the in the instance of a radial line served via a tap, the system needs to be designed for loss of the line in any event and requiring an automatic switching device is not necessary. In short, the term radial should be better defined and the requirement for an automatic interruption device should be eliminated.
No
E2 refers to net capacity and yet I2 and I3 refer to MVA. These are not the same unit which leads to

inconsistency. This Exclusion appears to add additional criteria than that of the Compliance Registry; we suggest simply using the language from the Compliance Registry.
No
We think that large portions of the network may be inappropriately excluded under this exclusion and the exclusion should be deleted. If E-3 is retained, then it is recommended that the SDT change the sentence "LDN's are connected to the Bulk Electric System (BES)" to "LDN's include transmission connected to the Bulk Electric System (BES)..." An Automatic Interruption device needs to be defined. For example, Iis a fuse an Automatic Interruption device? The definition needs clarification in the phrase: Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN; Should this be "Net power …"? One transmission path could be exporting power but the net sum of all paths would always be importing power.
No
This exclusion would not be required if the automatic disconnect requirement was removed from E1. If E1 is not modified as proposed herein then a MW threshold might have to be considered for this E4 definition. E4 should have also been included in the draft definition as well as this comment form.
No
The SDT definition will unnecessarily roll in portions of the distribution system for consideration as BES. A small generator that is entered into the black start program would make the complete cranking path BES. As documented previously this inclusion of immaterial generators and subsequently their distribution cranking paths is at odds with the Compliance Registry.
Yes
The proposal to include all Blackstart units' cranking paths has the potential to roll into the BES facilities distribution level circuits. Inclusion of those circuits would appear to conflict with statutory exclusion of set out in Section 215(a)(1) of the Federal Power Act, which states that the term "bulk power system": "does not include facilities used in the local distribution of electric energy." Section 215 sets the limits on what may be included within the bulk electric system, and thus subject to regulation by the ERO and FERC under the reliability standards regime.
None.
Group
New York State Electric & Gas and Rochester Gas & Electric
John Allen
Yes
No comments
No
By definition above, a transformer with a 100 kV winding is already an "element operated at 100 kV or above." This inclusion is actually intended to exclude transformers with only one winding operated at 100 kV or higher voltage. Therefore, Inclusion I1 should be deleted and a new Exclusion should be made: "Transformers with only one winding of 100 kV or higher, including phase angle regulators, unless included under Inclusions I2, I3, or I5."
Yes
Please note that this departs from NERC's Registry Criteria in that the unit of measurement is MVA instead of MW.
Yes
Please note that this departs from NERC's Registry Criteria in that the unit of measurement is MVA instead of MW.
No
Inclusion I4 should be stricken for several reasons: 1. The SDT states that "One of the basic tenets that the SDT is following is to avoid changes to registration due to the revised definition if such changes are not technically required for the definition to be complete." Adding every black start generator and the designated cranking path is not technically required. All significant black start generation is already included in I2 and I3 and I5. 2. The NERC Compliance Registry notes that not every generator that is a blackstart unit is "material" – it may not be necessary to the restoration plan or to bulk power system reliability. 3. There is already an existing standard to ensure reliability

of blackstart performance. NERC Reliability Standard EOP-005-2 ensures that the facilities critical to system restoration are functional when needed.
Yes
Please note that this departs from NERC's Registry Criteria in that the unit of measurement is MVA instead of MW.
No
The definition of radial needs to be clear and comply with Order 743. We do not know what a radial "system" is. Also, "automatic interruption device" is not defined. This exclusion includes "radial" "systems" with more than one supply from a single "source" – including normally-open switches, even those which are intended to be normally closed before further switching takes place ("make-before-break"). This seems to be a problem, per Order page 32. We suggest a compliant and straightforward "radial" exclusion, and recommend that E1 be replaced with, "Those Transmission Elements interconnected to only one other substation through only one transmission line; except those elements included in I2, I3, and I5." It is clear and it can be applied in a "bright-line", consistent fashion.
No
E2 refers to "net capacity provided to the BES" (which seems to be a flow on an interconnection, not generator capacity), yet I2 and I3 refer to generator MVA. These are not the same unit which leads to inconsistency. This Exclusion appears to add confusion or additional criteria to that of the Compliance Registry. We recommend that E2 be stricken.
No
This exclusion is vague, but needs to be clear and comply with Order 743. Also, "distribution" is already excluded from transmission and therefore "BES." Also, E1 refers to "automatic interruption device" and E3 refers to "automatic fault interrupting device", neither of which are defined. We think that large portions of the network may be inappropriately excluded under this exclusion and exclusion E3 should be deleted.
No
This exclusion E4 seems to already be covered under the E1 "radial" exclusion.
No
Transmission and distribution facilities are already mutually exclusive and are already classified and reported in FERC Form 1. The SDT definition may have rolled in considerable portions of the distribution system for consideration as BES. A small generator that is entered into the black start program would make the complete cranking path BES. As documented previously this inclusion of immaterial generators and subsequently their distribution cranking paths is at odds with the Compliance Registry.
No
No additional comments.
Individual
Manny Robledo
City of Anaheim
Yes
I1: Change the "and" to an "or" at the end of the sentence, i.e. Exclusions E1 or E3. E3 (b): Use the same language in E1 (b), i.e. Only including generation resources not identified in Inclusions I2, I3, I4, and I5.
Yes
Change the "and" to an "or" at the end of the sentence, i.e. Exclusions E1 or E3. This appears to be the intent.
Yes
Yes

Yes
Yes
Yes
Yes
Yes
In E3 (b) use the same language as in E1 (b), i.e. Only including generation resources not identified in Inclusions I2, I3, I4, and I5. This avoids re-defining all of the generator provisions here. At a minimum "operated at a voltage of 100 kV or above" should be added at the end of E3 (b).
Yes
No
A functional test, similar to the seven factor test used for FERC Order 888, should be used to identify transmission network facilities independent of voltage. All other electrical facilities not identified as transmission network facilities should be deemed local distribution facilities, and should excluded from the Bulk Electric System pursuant to the statutory Bulk Power System definition provided under federal law (18 CFR 39.1, Title 18, Chapter I, Subchapter B, Part 39)i.e. "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof), and electric energy from generating facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Please note that the statute does not reference any voltage level, therefore both transmission network and local distribution facilities each can operate at voltages higher or lower than 100 kV. The radial (E1) and local distribution network (E3)exclusions are a good starting point under the definition, but the exception procedure should have a functional exception for local distribution facilities independent of voltage level.
No
Individual
Chris de Graffenried
Consolidated Edison Co. of NY, Inc.
Guidance Document - The SDT should develop a BES Definition Guidance Document which includes a fairly comprehensive list of Elements considered to be potentially necessary for operating an interconnected electric energy transmission network. This list would include references to Real Power and Reactive Power resources.
No
Recommended changes to the wording used in Inclusion I#1, et al: Formatting - When referring to an Inclusion (or Exclusion), the SDT should use a number/pound sign ("#") between the "I" and number to avoid confusing "I" with the numerical value "1."
No
The inclusion of generation to the BES should be subject to an impact test.
No
The inclusion of generation to the BES should be subject to an impact test.
No
Please define the terms "collector system" and "common point."
No
We agree with the concept of a allowing a radial exclusion from the BES. However, we ask that the term "device" be modified to include the optional plural; "device(s)." Some radial systems may

require isolation by more than one automatic interrupting device.
No
Multiple Connections - The current wording in the second sentence “at more than one location” could be misinterpreted. Replace this sentence with the following wording: LDN’s use multiple connections to the Bulk Electric System (BES) solely to improve the level of service to retail customer load.
Yes
As FERC stated in Order 743-A “… the Commission uses the term “exclusion” herein when discussing facilities expressly excluded by the statute (i.e., local distribution) and the term “exemption” when referring to the exemption process NERC will develop for use with facilities other than local distribution that may be exempted from compliance with the mandatory Reliability Standards for other reasons.” (Footnote 82) Thereby, the Commission clearly established its preferred terminology; “exclusion” for local distribution and “exemption” for exceptions allowed under the NERC designations and Exception Process. The BES Definition and Designations do not fully utilize this FERC wording convention.
The ‘core’ definition is not clear as to whether an Element would be included if it meets any one (or must meet more than one) of the 5 Inclusion criteria for inclusion?
Group
Western Area Power Administration
Brandy A. Dunn
Yes
As a Transmission Operator (TO) it helps us define and write O & M, and operating agreements for our Load Serving Entities (LSE/customers) that prefer to contract the responsibilities to the TO. The definition 'Bright Line Threshold' is a general statement, that needs more definition for the special circumstances in the southwestern U.S. where pump loads provide necessary irrigation. Based upon NERC's compliance registry criteria, small entities prefer to contract responsibilities to the TO in order to forego NERC registration, or the exception process for special circumstances.
Yes
Appreciate the bullet comments that help explain the reasoning for the inclusion.
Yes
the bullet comments that define a specific point for demarcation.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
As discussed in the Applicability of Federal Power Act Section 215 to Qualifying Small Power Production and Cogeneration Facilities document, the concerns regarding the Regulatory Flexibility Act Analysis of 1980 stated in section VII does not define the phrase a 'significant economic impact' from the perspective of a small entity. A small entity may have staffed maintenance personnel, to accomplish its' own maintenance but now prefers to transfer by written agreement with another entity based upon NERC's compliance registry criteria, in order to bypass the NERC registration. The

significant economic impact is the cost associated with the reduced work load for the small entity, maintenance personnel, and the work contracted to another entity.
No
Numerous distribution lines in the western US are 115kV, and some are being upgraded from 115kV to 230kV.
No
Individual
Scott Miller
MEAG Power
Yes
MEAG Power supports the Standards Drafting Team's development of a revised Bulk Electric System (BES) definition in response to FERC Order 743 that is directly linked to an exception process for inclusions and exclusions. The definition must be closely coupled to the exception process and the two must be integrated in the standard that is ultimately adopted. This will ensure that the regulatory requirements apply to only those facilities that materially affect the reliability of the BES. In general, MEAG agrees with the proposed definition and the objectives the Standards Drafting Team has established. MEAG recommends that the team make additional clarifications to provide industry with a better understanding of the inclusions and exclusions, as well as the impact of the inclusions/exclusions on the BES. The definition should exclude generator leads for generating units that do not materially affect the reliability of the BES regardless of the BES designation of the generating unit. In addition, the definition should not require the inclusion of contiguous elements. Generating units that are designated BES are currently required to comply with a subset of NERC Reliability Standards, but may not be material to the reliable operation of the interconnected BES. This portion of the definition should not require that both BES and non-BES generating units have their generator leads defined as BES transmission elements. A length-based criterion for generator leads ought to be considered. For example, the definition should exclude generator leads that are one mile or less between BES elements. The Standards Drafting Team should engage and coordinate with the Standards Drafting Team for Project 2010-07 (the GO/TO task force). This coordination is needed to determine the impacts of the new BES definition on Transmission Owner (TO) and Transmission Operator (TOP) registration. In addition, MEAG recommends that the Standards Drafting Team and the GO/TO Task Force consider, if they have not already done so, the impacts of ownership and operating agreements on registration. For example, clarification of registration impacts for BES elements that are jointly owned by two utilities (e. g. where one utility owns 5 of 20 towers and the other utility owns the remaining towers and the conductor of a transmission line) is required. The definition does not provide clarity on the state of the system conditions (normal or emergency) that should be applied. The definition should apply to only normal operating conditions.
Yes
Yes
The definition should exclude generator leads for generating units that do not materially affect the reliability of the BES regardless of the BES designation of the generating unit. In addition, the definition should not require the inclusion of contiguous elements. Generating units that are designated BES are currently required to comply with a subset of NERC Reliability Standards, but may not be material to the reliable operation of the interconnected BES. This portion of the definition should not require that both BES and non-BES generating units have their generator leads defined as BES transmission elements. A length-based criterion for generator leads ought to be considered. For example, the definition should exclude generator leads that are one mile or less between BES elements. This comment has been raised in Question number 1 as well.
Yes
Yes
The Standards Drafting Team needs to clarify whether this inclusion is intended to apply to local

transmission operator restoration plans or only to the Balancing Authority's restoration plans. This inclusion should be stated as follows: Blackstart Resources and the designated cranking paths identified in the Balancing Authority's Restoration Plan regardless of voltage." Local restoration plans may not be material to the restoration and operation of the BES, but black start resources for the Balancing Authority's restoration plan are material to the reliable restoration of the BES.
Yes
This inclusion should be specific to the type of generation that the team envisioned it to capture (e.g. wind and solar). Since the term "dispersed power producing resources" can be interpreted to include generation resources from a few KW up to 50 MW, this inclusion can be misinterpreted to include "peaker GT's", fuel cells and microturbines, etc.
No
The definition of Exclusion E1 does not cover radial systems that are connected to a single transmission source by more than one automatic interruption device, such as occurs with a "breaker-and-a-half" arrangement. The definition should be modified as follows: "Any radial system which is described as connected from a single Transmission source originating with one or more automatic interruption devices and: ...." This exclusion uses many terms that are not defined under NERC's standard definitions: "radial load", "automatic interruption device" and "make–before-break". If these terms are used to define an exclusion and can be understood or interpreted differently by different people, then the terms should be formally defined.
Yes
Yes
Yes
Yes
No
NO. General comments are listed under Question 1.
Individual
Alice Ireland
Xcel Energy
Yes
Yes
The drafting team should consider how components such as autotransformers would be considered under this aspect, and if additional language needs to be added to clearly include certain autotransformers.
Yes
Xcel Energy thanks the SDT for their work and appreciates the clarification that BES extends from the generator out and does not include the prime mover and balance of plant equipment.
Yes
Yes
No
For dispersed power producing resources, such as wind farms, we do not see the value in making each individual 1-2 MW wind turbine a BES element. The BES applicability should be focused on the point when the collective becomes large enough to impact the grid. So, we recommend that I5 apply from the point of aggregation of 75 MW or more to a system element operated at 100 kV or more. Specifically, we feel it should be limited to the feeder bus and aggregating transformer.

Yes
Yes
Yes
No
There seems to be an implication that if a facility is determined to be BES, registration is required. Yet, the registration criteria already includes exclusion of users, owners and operators of the BES from registration, if they do not meet all the criteria. So, we fail to see why a special exclusion is necessary.
Yes
No
No.
Individual
Michael Falvo
Independent Electricity System Operator
No
We agree with the BES definition principles in general, the concept of Inclusions and Exclusions, as well as the proposal for an Exception Process. However, since the Exception Process and the Technical Principles and Criteria (TPC) for justifying BES Exceptions are being developed and will be approved independently, albeit concurrently with the BES definition, there is a risk that the revised definition may be approved while the TPC and Exception Process may not come to fruition in the form anticipated during development of the BES definition. In short, our support for any revised BES definition would be conditional to the establishment of the associated TPC. As such we advocate developing the revised BES definition and TPC as a "single package". Thus, we do not agree with the blanket inclusion of generation units and Facilities meeting the thresholds of 20 MVA and 75 MVA respectively. We also do not agree with using these same thresholds in determining when Exclusions are applicable. Instead, we believe the impact on BES reliability of all generation units and Facilities meeting these capacity thresholds, should be assessed against the TPC and if found to be impactive, these units and Facilities should be included as part of the BES after going through the Exception Process. We believe this change in the approach to defining the BES will take into account the evolving reality of distributed generation, particularly in the context of radial systems and local distribution networks (LDNs), where generation units are installed in lieu of transmission reinforcements. We offer our further comments on the Definition and its Inclusions and Exclusions against the backdrop of this general philosophy. The BES definition refers to Reactive Power resources "connected at" 100 kV or higher as opposed to "operated at" 100 kV or higher. Is the intent of this wording to include in the BES a reactive resource (capacitor, reactor, etc.) operating at a voltage below 100 kV and connected to the BES via a step-up transformer? If yes, would the transformer be excluded from the BES to be consistent with Inclusion I1?
No
We agree with the concept of Inclusion I1. We suggest that since transformers with at least two windings greater than 100 kV are already part of "all transmission Elements operated at 100 kV and above" in the definition, and since inclusions I2 to I5 are commonly related to only generation, Inclusion 1 should be removed and replace by the following Exclusion: E(x) "Transformers that have a primary or secondary winding at less than 100 kV except for those included by I2 and I3"
No
We agree with the goal of inclusion of I2 but as stated earlier in our response to Q1, we do not support the blanket application of the BES definition to all individual generating units and Facilities meeting the respective capacity thresholds. Entities should be able to assess the impact of these units and Facilities against the TPC and use the Exception Process, with the help of technical evidence, to include generating units and Facilities that impact the interconnected grid and the bulk transfer of

power.
No
See our responses to Q1 and Q3.
No
This inclusion is extraneous given there is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. We therefore suggest removing Inclusion I4.
No
We agree with the goal of Inclusion I5 but have the same concerns expressed in our responses to Q1 and Q3. For the dispersed power resources referred to in Inclusion I5, we do not see the benefit of including the collector system, switchgear, associated medium voltage equipment and step-up transformer(s) in the BES. As before, these Facilities should be subject to assessment and included if found to impact BES reliability after going through the Exception Process. To reinforcing what was stated during the NERC BES webinar, we do not believe that the entire contiguous path has to be BES.
No
Again, we agree with the goal of E1 but we repeat the same concerns expressed in our responses to Q1 and Q3 with respect to the generation capacity thresholds. A majority of the transmission elements excluded by E1 would already be excluded by E3 and, therefore, E1 may be redundant. The SDT may wish to consider combining Exclusion E1 with Exclusion E3, modified as proposed in our response to Q9. In Exclusion E1, we suggest changing "automatic interruption device" to "automatic fault-interrupting device" for consistency with E3(a).
No
Again, we echo the same comments stated in our responses to Q1 and Q3. We do not agree with the Exclusion E2 for the very same reasons specified in responses to questions 3, 4, and 6. Additionally, we are not clear of the intent for the restriction stated in Exclusion E2 (ii).
No
Consistent with our earlier comments in response to Q1, we do not agree that an LDN should be characterized by a 75 MVA limit on the connected generation as described in part (b). It is expected that under various "green energy" programs that the development and implementation of distributed generation will grow considerably in the future. The 75 MVA generation limit may discourage this development of distributed generation (in general, it may discourage the installation of generation in lieu of transmission to supply load) because installing generation in an LDN would cause the entire LDN to be classified as BES and, as a result, subject the LDN to NERC planning standards that are inconsistent with well established jurisdictional planning criteria. To avoid subjecting the LDN to NERC requirements, the planning authority may elect to build generation outside of the LDN, which is undesirable because of increased transmission losses and reduced reliability. We suggest that (b) be deleted or revised in keeping with our earlier suggestions. We also suggest modifying Exception E3 (c) and (d) for consistency with language used in Technical Principles for Demonstrating BES Exceptions, since Bullet 1 recognizes that the system for which the exemption is being applied, may not be necessary for BES reliability and may experience power flows out to the BES under specified conditions. The suggested modified wording for E3 (c) and (d) is shown below: (c) Power is intended to flow only into the LDN: the total net Generation output within the LDN shall not exceed the total electric Demand of the LDN. (d) Not intended for use in transferring bulk power: While the LDN is intended to deliver power to load and not transfer bulk power between different locations in the BES, it is acceptable that under specified system conditions, bulk power transfers may take place between different points of the BES via the LDN, when it can be demonstrated that these power flows through the LDN are not necessary for maintaining BES reliability.
No
Small utilities may be impactive to the bulk power system and as such should not be subject to a carte-blanche exemption but should be subject to assessment and if necessary exclusions after going through the exception process. The outcome of the exception process may well be that such small

utilities can be excluded but this cannot be determined a priori. In addition, Exclusion E4 is worded very similarly to Exclusion E1. It is not clear what additional facilities will be excluded by E4 that are not already excluded by E1.
No
The existing definition and the associated inclusions and exclusions do not exclude local distribution facilities because the 75 MVA limit on generation within LDNs in E3 (b) will result in portions of the power system that are serving a distribution function being classified as BES. As stated before, we suggest subjecting the LDNs to assessment to determine their impact on the BES and including them if impactive by using the Exception Process.
No
At this point, we are not aware of conflicts for our own jurisdiction. However, NERC must exercise caution while developing the exception criteria and the associated processes as these may result in jurisdictional issues between state/provincial and federal entities. We repeat our earlier point that the BES definition and TPC must be developed and approved simultaneously to provide assurances that mechanisms are in place to exclude those Facilities from BES classification that are not impactive on the BES.
We have no other concerns with the definition but we believe a guide demonstrating the correct application of the definition under various transmission system configurations would be useful.
Individual
Randy MacDonald
NB Power Transmission
Currently, the posted exception criterion is only a concept with many gaps and TBD, as posted details are later to follow. The exception criteria should be a menu of technical items (load flows, stability analysis etc). Entities should be required to assess and provide their own justification under each category with a conclusion that takes into account all of the relevant items for element(s) under exception, in a consistent template and table of contents. Suggest the SDT to avoid specification of any parameters as they would differ under different design concepts, system configurations, system characteristics and regulatory requirements. An "all encompassing" comment is that the definition is too lengthy with an overly prescriptive exception process. The importance of the BES definition is recognized throughout the industry for its importance, and as such it should be simple, clear, and straightforward.
Group
National Association of Regulatory Utility Commissioners
Robin Lunt
No
The inclusion of individual generating units between 20 MVA and 75 MVA nameplate capacity is inconsistent with I3 that sets the aggregate threshold at 75 MVA. There is no technical justification for including a facility as low as 20 MVA and no rational basis for thinking that these generators could be

the cause of instability, uncontrolled separation, or cascading events. We recommend removing this inclusion or raising the threshold to 75 MVA.
Yes
We agree with Exclusion E1. Radial systems are clearly local distribution and excluded from FERC and NERC jurisdiction. This is consistent with FERC Order 743 and 743a (see e.g. Order 743A P 1, 76 Fed. Reg. 16264 (March 23, 2011)). We suggest that I2 be removed from this exclusion (and from the standard as a whole) as discussed in response to question 3.
Yes
Yes
Exclusion 3 is essential for the standard to conform to Federal Power Act Section 215 that clearly excludes local distribution from FERC and NERC jurisdiction. The exclusion properly recognizes that local distribution can operate at above 100 kV. This exclusion seems to reflect the essence of the Seven Factor test from FERC's Order 888. Although FERC Order 743A did not bind NERC to the Seven Factor test, it makes sense to pursue consistency between these tests.
The standard as currently written seems to exempt most local distribution from NERC and FERC reliability standards. Section 215 of the Federal Power Act requires such exemptions. There remain some outstanding concerns, however. For example, earlier comments from NERC staff have suggested that the BES needs to be contiguous. If the definition were to require continuity, it would likely sweep in many local distribution facilities that should not (and cannot under the statute) be included in the BES definition.
Congress clearly recognized that State utility commissions are concerned about and committed to reliability at the distribution level; that's why Congress explicitly limited FERC's reach, and directed FERC not to attempt to regulate facilities used in local distribution. The NERC standard setting process for defining the Bulk Electric System must respect the statutory limitations under Federal Power Act Section 215 that explicitly excluded local distribution from the definition of the Bulk Power System (BPS). The Bulk Electric System, while not necessarily equivalent to the BPS (See FERC Order 743 A P 102), cannot exceed the limitations of the BPS and cannot include facilities used in the local distribution of electric energy. State Utility Commissions are concerned about and committed to reliability. These Commissions are in the best position to provide reliability oversight and standards for the local distribution system in their State.
Individual
Glen Sutton
ATCO Electric
While we agree generally with the inclusion, we have some questions based on specific examples: 1. A load substation has two 144/25kV transformers that connects to two separate 144kV transmission lines (i.e. two separate 144kV buses). However, the two transformers joins on one 25kV bus. Should these two 144/25kV transformers be part of BES? 2. A protection relay is on 72kV side of a 144/72 tie transformer and its purpose is to remove 72kV weak source (i.e. trip 72kV breakers) during 144kV bus fault. Should this protective relay be included in BES? 3. According to Inclusion I1, a 144/25kV transformer is not a BES element. The transformer's 144kV side has a Motor Operated Disconnecting Switch (MOD), and this MOD connects to one or two 144kV line breakers. The transformer's protections trip the 144kV line breakers. Should the transformer protection systems be part of BES?
If a generator connects to 2 back to back transformers (25kV/72kV and 72kV/144kV), which transformer is GSU? 25/72kV transformer only or both transformers.

Is a load substation categorized as a "radial substation" if its 144kV bus connects to another 144kV bus at an adjacent substation via two 144kV parallel transmission lines?
Individual
David Burke
Orange and Rockland Utilities, Inc.
In the core definition, “the list shown below” is still not clearly defined and causes some confusion.
Yes
No
: X I2 should pertain to individual generating unit impact to the Bulk system, rather than the size unit only. Oftentimes there are cases when neither the path nor a 20 MVA unit itself will have any impact on the reliability of the interconnected transmission network, nor is it necessary for its operation.
No
X I3 should pertain to multiple generating units impact to the Bulk system, rather than the size unit only. Oftentimes there are cases when neither the path nor a 75 MVA unit itself will have any impact on the reliability of the interconnected transmission network, nor is it necessary for its operation.
No
See comments from question 4.
Yes
Yes
It was mentioned that Cranking Paths of Blackstart Resources are defined as BES. How about the path(s) of generation units that will be deemed as BES? Please clarify.
Individual
Shane McMinn
Golden Spread Electric Cooperative, Inc.
Yes
Yes
Yes
Yes
Yes

Yes
No
We recommend modifying "Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and..." to read EITHER 1. "Any radial system which is described as connected from a single Transmission source and... [remove originating with an automatic interruption device] OR 2. "Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device or manual isolating switch..."
Yes
Yes
No
Suggested revision: Transmission Elements, from a single Transmission source connected at a voltage of 100 kV or greater, owned by a small utility whose connection(s) to the BES is(are) solely through this(these) single Transmission source(s), and without interconnected generation as recognized in the BES Designation Inclusion Items I2, I3, I4, or I5. The intent of the revision is to exlude a small utility with multiple radial connections to BES elements owned by others.
No
All load serving radials need to be excluded from the BES.
No
Individual
Rick Spyker
AltaLink
Yes
We agree with the concept of a bright-line definition and commend the SDT for developing a concept of explicit inclusions and exclusions as part of the definition. This will reduce the number of exception applications for some of the BES elements. However, the inclusion and exclusion requirements are extremely restrictive. For example, radial characteristics should not be limited by the amount of installed generation or single transmission source and/or require an interrupting device. Instead we believe that one or more transmission sources could feed the radial load to provide redundancy as long as there is adequate protection and isolation for improved customer-supply continuity and reliability. This should be considered radial as long as the loss of any transmission source does not affect, and is not necessary for, the operation of the interconnected transmission network. We suggest the SDT and RoP teams should: • Carefully craft the exception criteria and procedure to be flexible and technically sound, to allow entities to adequately present their case to the ERO for inclusions or exclusions outside of the definition. • Include provisions in both the NERC exception criteria and exception process for federal, state and provincial jurisdictions. These provisions should provide clear guidance so that, if and when there are deviations from the exception criteria, they are properly identified with technical and regulatory justifications ensuring there is no adverse impact on the interconnected transmission network. This burden of proof should be left to the entity seeking exception because it may be difficult if not impossible to define the exception criteria. Further, if such an explicit criteria could be defined, it will in fact become another bright-line BES.
Yes
We agree with the concept of Inclusion I1. However, we suggest that since transformers are already covered by the definition, "all transmission Elements operated at 100 kV and above", and since Inclusions I2 to I5 are commonly related to generation only, Inclusion I1 should be removed and replaced by the following Exclusion: E(x) "Transformers not used as Generator Step-Up (GSU) transformers that have primary or secondary winding at less than 100 kV." We also suggest the SDT to put forward a high-level exception criteria with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) mentioned in Inclusion I1, or

any other inclusion(s). These inclusion(s) that are intended for exemption would be based on the entity's technical assessment, evidence and justification for its unique characteristics, configuration, and utilization.

No

We agree with the concept of Inclusion I2 with respect to individual generating units, but do not support having the entire path labeled as BES. In most cases, neither the path or a 20 MVA unit itself will have any impact on the reliability of the interconnected transmission network nor is it necessary for the operation. Generation restriction (20 MVA or 75 MVA) should either be revised or the exception procedure should allow entities, with the support of technical evidence, to exclude element(s) from being labeled as part of the BES. The path to generating facilities does not need to be BES contiguous. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require a contiguous path unless the unit is identified essential for the operation of transmission network. Definition and/or exception process should provide clear acknowledgement and flexibility to avoid any regulatory conflicts.

No

We agree with the concept of Inclusion I3 with respect to multiple generating units located at a single site, but do not support that the entire contiguous path has to be BES. The path of a 75 MVA plant or aggregated generation will rarely have any impact on the reliability of the interconnected transmission network nor is it necessary for its operation. Generation restriction (75 MVA) should either be revised or the exception procedure should allow entities, with the support of technical evidence, to exclude element(s) being labeled as part of BES. Path to generating facilities need not be BES contiguous. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require contiguous paths.

No

We do not agree with Inclusion I4. Blackstart resources and transmission facilities on the cranking path should not be classified as BES regardless of size and voltage level. From a regulatory perspective, such an inclusion would be in conflict with the current regulatory requirements in many of the jurisdictions. More importantly, designating these facilities as BES Elements or Facilities beyond the 100 kV bright line, the 20 MVA/unit or 75 MVA/plant criteria, without a regard to their impact on the BES (under conditions other than system restoration) will impose unnecessary requirements for these facilities, which do not contribute to reliability under interconnected operation conditions. For restoration condition, this inclusion is extraneous given there is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. While we do not disagree with the SDT's interpretation of the FERC directives, the BES definition should cover those facilities that are needed for operation under both normal and emergency conditions, which includes situations related to black-start and system restoration. We do not agree that the directives specifically ask for inclusion of blackstart resources and facilities on the crank path in the BES definition. We believe the requirements in EOP-005-2 suffice to address the SDT's interpretation and concern regarding recognition of the reliability impacts and requirements for blackstart resources and facilities used for system restoration. Generating units of any size and transmission facilities of any voltage level may be used for blackstart and restoration. Conceivably, a generator of 10 MW and transmission facilities of 44 kV or 69 kV may be a part of the cranking path. A BES inclusion will then subject these generators and facilities, which are essentially "local" facilities but called upon to begin restoring its bulk interconnected counterpart, to comply with the reliability standards intended for maintaining BES reliability. Included in the BES definition will thus discourage smaller generators from providing blackstart capability, and the transmission facilities from being a part of the cranking path. This may also discourage Transmission Owners and Operators from identifying multiple blackstart resources and cranking paths to provide restoration flexibility. Such an inclusion will ultimately undermine reliability. If indeed any of these facilities are deemed necessary to support bulk power system reliability at times other than system restoration, they would/should have been identified through the basic BES definition and inclusion list or can be addressed through the exception procedure. We suggest and urge the SDT to drop I4 on the basis that: • The availability and performance expectations of blackstart resources and facilities on the cranking path are already specifically addressed in an existing standard; and • Unless they meet the BES definition and the

other inclusion criteria, they do not have any perceived reliability impact on everyday operation of the BES.
No
We agree with the concept of Inclusion I5 but do not support that the entire contiguous path has to be BES. The path or aggregate generation will rarely have any impact on the reliability on the interconnected transmission network nor is it necessary for its operation. These are generally referred to as connection facilities.
Yes
We agree with this concept as part of establishing a bright-line definition, as well as clarifying this exclusion as part of the revised BES definition. Although the concept is consistent with the statements in the FERC Order, it is imperative to understand that the limitations of E1 will have a direct impact on many entities (big and small) along with distribution companies across North America. The exclusion requirements are extremely restrictive with little or no technical basis and are limited to the fact that these parametric restrictions may not have any reliability impact in terms of location, configuration of element, and system characteristics. The radial characteristics and/or the reliability of the interconnected transmission network is determined by the amount of installed generation or a single transmission source or an interrupting device. Accordingly, it will be an understatement to suggest that the SDT: • Carefully craft the exception criteria and procedure that is flexible and technically sound to adequately allow entities to present their case to the ERO for exclusion • Exception criteria should be at a high-level with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) mentioned in exclusions or inclusions based on technical assessment, evidence and justification for its unique characteristics, configuration, and utilization • Acknowledge and provide provisions in both NERC exception criteria and exception process for federal, state and provincial jurisdictions.
Yes
We agree with most of the changes in Exclusion E2. However, we feel there is a need for evidence or technical study in regards to the limits described in I2 & I3. The real net aggregated power seen by the bulk power system at the interconnection, with the outlook of distributed generation systems, may be different than past experience. Hence it requires to be reassessed based on technical studies with respect to the future integration of DG's. To establish a bright-line definition, E2 exclusion may be acceptable if the SDT provides adequate provisions within the exception procedure. Accordingly, we suggest the SDT carefully craft the exception criteria that will allow entities to present their case to the ERO for exclusion from E2 requirements.
Yes
We agree with this concept as part of establishing a bright-line definition along with this clarifying exclusion in the revised BES definition. However, requirements in Exclusion E3 are restrictive and we do not agree to the limits on connected generation for Local Distribution Networks (LDN), described in part (b). The development and implementation of distributed generation will grow considerably in the future and will operate together with conventional sources of energy. The real net aggregated power of distributed generation seen by the bulk power system at the interconnection may be larger than past experience; hence it requires to be reassessed based on technical studies with respect to the future integration of DG's. We suggest and urge the SDT to carefully craft the exception criteria & procedure that is flexible and technically sound to adequately allow entities to present their case, and/or unique characteristics of the elements under exception to the ERO for exclusion.
No
Small utility or distribution provider is a relative term. A smaller distribution provider may have an impact on the transmission network while a large one may not; this is based on their design, configuration and protection. Hence, such an exception should apply regardless of the size of an entity. Having said that, the concept discussed here is to define a radial system and not a small utility, as mentioned in the FERC Order. We do not believe that the SDT had sufficient discussions while crafting the proposed exclusion in regards to small utilities. The language used in the proposed clause is only appropriate to establish a bright-line definition for a radial system. It is worth noting that many small utilities (and individual load customers or generation connections) would have more than a single transmission source with a solid tap and, at the same time, be adequately protected and effectively isolated without any adverse impact on the transmission network. Such a practice and design is widely used across North America. Hence, we do not agree that this exclusion is an attempt

to address the issue of small utilities. The definition and inclusions will force many small entities, load customers and generation unit owners to act and register as Transmission Owners. In some parts of the continent this would be in conflict with state or provincial regulatory act, Codes and Licenses. Consistent with the FERC Order, the ERO and the SDT should be aware of these conflicts and should not ignore them for later. Hence, we suggest the ERO and the SDT address this by providing explicit but simple provisions in the exception procedure by considering sound technical exception criteria that is flexible based on demonstration of evidence to justify the element's necessity for operation. Regulatory Acts and Rules will always trump NERC requirements and hence we suggest that the only evidence that should be required of small utilities/entities is: • Regulatory evidence • Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of their connection.
No
We commend the SDT for their concept in putting forward a 100kV BES bright-line definition. However, we do not believe that the current definition drafted by the SDT has differentiated between Transmission and Distribution or excluded distribution facilities from the BES, or addressed the issue of local distribution facilities above 100kV. We believe that the ERO and SDT can address this by providing explicit but simple provisions in the exception criteria (to be used by exception procedure) by putting forward a menu of key technical assessments , which are based on demonstration of evidence to justify the element's necessity for operation. For example, we suggest that for local distribution, the evidence that should be required is: • Regulatory evidence • Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of their connection We suggest that the exception criteria should ONLY list a menu of items and a prescribed report template that should be assessed and presented by an entity as their evidence and justification for exception to a RE, the ERO and any relevant regulatory authority. This evidence and justification would be used by the ERO as part of its decision making process.
Yes
We believe that the concepts of inclusions and exclusions as part of the bright-line definition are excellent. However, these exclusions do not address several directives in Order No. 743 and 743A, such as: differentiation between Transmission and Distribution, non-jurisdictional concerns, or distribution. We believe that the BES definition itself is not a venue to address these concerns but suggest that these issues should be explicitly addressed by the ERO's exception criteria and exception process. Currently, the posted exception criterion is only a concept with many gaps and TBD, as posted details are later to follow. We suggest that the exception criteria should be a menu of technical items (load flows, stability analysis etc) and non technical items (type of loads such as distribution companies vs. major city center, national security etc). Entities should be required to assess and provide their own justification under each category with a conclusion that takes into account all of the relevant items for element(s) under exception, in a consistent template and table of contents. We suggest the SDT to avoid specification of any parameters as they would differ under different design concepts, system configurations, system characteristics and regulatory requirements.
Group
ACES Power Participating Members
Jason Marshall
Yes
Yes
We agree with limiting transformers to bulk power transformers and not including step-down or distribution transformers. Some regions have been enforcing standards on protection equipment that is on the low-side of these step-down or distribution transformers. Additional language further clarifying that this low-side protection equipment is not part of the BES should be added to for consistency across regions. Additionally, the drafting team might consider using the terms primary and secondary rather than windings. Otherwise, autotransformers which have a sing
Yes
Yes

No
Blackstart resources are rarely used. For many reasons, restoration almost always starts with synchronizing to other systems (the Interconnection) that are already intact. Because Blackstart Resources can actually be on the distribution system, the distribution system can then become subject to the enforceable standards. This results in significant increased costs in tracking compliance for these distribution systems without a commensurate increase in reliability. Because a Blackstart Resource must be included in the Transmission Operator's restoration plan, this creates a perverse incentive to un-designate the Blackstart Resource that is on a distribution system to avoid the distribution system becoming part of the Bulk Electric.
Yes
Yes
Yes
Yes
Yes
Yes
No
It is not clear if E1 covers networked sub-transmission. Consider the situation where a 138 kV line terminates into a 138/69 kV transformer, the 69 kV is networked and only serves load and possibly generation that does not meet any of the inclusion criteria. This is a situation that appears to meet the intent to exclude radial load under E1 and local distribution networks under E3 but does not appear to explicitly meet either criteria. E1 is not met because the 69 kV network is not radial and E3 is not met because it specifically limits the exclusion to 100 kV and above. This issue could be solved by making clear that E1 applies to even networked sub-transmission or by removing the voltage limit on E3 so that sub-transmission could be included within this exclusion criterion.
Group
SERC OC Standards Review Group
Jim Case
Yes
The SERC Standards Review Group (SRG) still believes that 200KV is the correct bright line for the BES definition
Yes
No
SERC proposes the following as an alternative to the Inclusion I2 wording in the draft BES definition: "Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through its GSU which has a high side voltage of 100 kV or above." The only difference in proposed text is that the word "the" preceding "GSU" has been changed to "its". The text in the draft clearly defines that the inclusion begins with the generator, continues through the terminals, and ends at a GSU. The wording in the draft text does not, however, explicitly limit the scope of equipment that should be evaluated for inclusion to the GSU which is directly connected to the generator terminals. Since GSU is not a defined term there is a strong potential for inconsistent interpretation of this boundary to include multiple transformers in series until ultimately a transformer which does operate at a voltage of greater than 100 kV is included in the flow path. To eliminate this potential for compliance re-interpretation, we also strongly suggest the term GSU be defined in the NERC Glossary of Terms . A suggested definition is: "Generator Step-up Transformer (GSU) should be

defined as a transformer directly connected to a generator on the low side and to a bus on the high side."
No
"Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above." GSUs need to be defined – see response to question 3 above.
No
"Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage." The SERC SRG is concerned that this provision may have the effect of incenting transmission operators to limit the available generator options to the minimum necessary for a reliable option as opposed to every possible option that might be utilized in a pinch. We recommend the following adjusted language: "Essential Blackstart Resources and the designated essential blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage"
Yes
No
This exclusion is acceptable if the suggestions in Questions 3 and 4 are incorporated. We also suggest modifying Exclusion E1a as follows: a) Only serving Load or only connecting to a transformer stepping down to a voltage below 100kv. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or,
No
This exclusion is acceptable if the suggestions in Questions 3 and 4 are incorporated.
No
"b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;" The SERC SDT believes you intended to grant exception E2 in this case; however, it is not explicitly identified "c)Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN;" Is this intended for each hour of the year or is it possible for some hours that generation may exceed load? This needs to be clarified.
No
We suggest that our comments to Question 3 and Question 4 be incorporated. We also question whether this is going to have an unintended consequence of requiring Distribution Providers to register that otherwise wouldn't have to register because some technical aspect has not been included in this exception.
Yes
Exception E4 potentially does have issues – see our response to Question 10.
No
No other concerns "The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."
Individual
Benjamin A Friederichs
Big Bend Electric Cooperative, Inc.
No
As a general matter, BBEC supports the approach the Standards Development Team ("SDT") has taken to defining the Bulk Electric System ("BES"). The changes made in the revised core definition are helpful and represent significant progress toward an acceptable definition. With an effective and efficient exclusion process, the draft will better define the BES as a whole. We urge the SDT to bear in mind the restrictions contained in Section 215 of the Federal Power Act ("FPA") The "bulk-power

system" (As per FERC, we treat the statutory term "bulk-power system" as equivalent to the term ordinarily used in the industry, "Bulk Electric System") definition imposes a clear limit on the reach of the mandatory reliability regime. The BES is made up of only those "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" and "electric energy from generation facilities needed to maintain transmission system reliability." Congress reinforced that limit in Section 215(i), where it emphasized that the FPA authorizes the imposition of reliability standards "for only the bulk-power system." We're concerned that the SDT's proposed definition is overly-broad, and that it will sweep in many Elements that have little or no material impact on the reliable operation of the interconnected bulk transmission grid. For example, the definition uses the arbitrary 20 MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators. Accordingly, for the BES definition to conform to the requirements of the statute, the SDT must adopt an effective mechanism to exempt facilities like these that are improperly swept in by the SDT's brightline approach to inclusions and exclusions. For this reason, the Exception process to accompany the SDT's definition is of critical concern. If the SDT incorporates this statutory language as its core definition, it will have addressed FERC's primary concern with a minimum of disruption to the current NERC system of definitions. The definition could then be further elaborated to show specific points of demarcation for each inclusion and exclusion similar to that Proposal 6 from the WECC Bulk Electric System Definition Task Force ("BESDTF") team to further delineate BES and non-BES facilities.

No

In concept, we support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams noting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort. Also, the reference to "two windings of 100 kV or higher" may create some confusion because many three-phase transformer banks have 6 or 9 windings, depending on whether the transformer has a tertiary. We suggest clarifying this provision by changing the clause reference two windings to read: "the two highest voltage transformer windings of 100 kV per phase that are connected to the Bulk Electric System." We again urge the SDT to consider further delineation of points of demarcation similar to WECC BESDTF Proposal 6.

No

BBEC is concerned that I2 inclusion criteria that includes the arbitrary 20 MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted improperly expands the BES definition to include generators that the statute requires to be excluded. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Unfortunately, the SDT appears to have concluded that any interconnection facility operating above 100-kV should be classified as BES. The result will be to require Generation Owners to register as Transmission Owners/Operators, as well, producing substantial additional compliance costs for those Generation Owners but resulting in little or no improvement in the reliability of the BES. We recommend that the SDT, like the Project 2010-07 SDT (commonly referred to as the GO/TO Team), give careful consideration to the practical results of its recommendations rather than relying on abstract conclusions about whether a "contiguous" or "non-contiguous" BES is more desirable. We are concerned that the SDT's pursuit of a "contiguous" BES will result in a substantially over-inclusive BES definition. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. NERC's Standards Drafting Team for Project 2010-07, has already considered this question and, based on an in-depth review of potentially applicable reliability standards, has concluded that generation interconnection facilities, even if operated above 100-kV,

need to comply only with a limited set of reliability standards in order to achieve the reliability goals. Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability.
No
BBEC is concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition.
Yes
Including "all" blackstart and blackstart cranking paths in the BES may ultimately provide an incentive to the electric industry to reduce the number of resources with blackstart capability. We therefore suggest that essential blackstart resources identified by the Regional Entity should be included in the Bulk Electric System, but non-essential blackstart resources need not be.
No
BBEC agrees that it is important to address wind generation facilities and similar generation facilities in which a large number of generating units, each with a relatively small capacity, are clustered and fed into the grid at a single interconnection point. That being said, we are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.
Yes
Our only concern about this exclusion is the timeframe we'd have to get an appropriate automatic interruption device installed. Currently, we have a short radial that hasn't yet caused us to be registered as a TO or TOP. Having time to get a solution in place would be crucial for us, as a small utility, to avoid additional regulatory fees and requirements.
No
As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold (through reference to Inclusion I2) lacks an adequate technical justification in this context. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit ("standby, back-up, and maintenance power…") should be eliminated.
BBEC strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. BBEC supports the LDN exclusion, but we believe the exclusion should be refined in the following respects: • The SDT's draft states that: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load." (emphasis added) We recommend that the SDT revise the sentence quoted above as follows: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at

wholesale over long distances.
BBEC supports the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that can ill afford the substantial costs that accompany imposition of mandatory compliance with reliability standards. Further, we agree that the small utilities covered by the exemption will have no measurable impact on the operation of the interconnected BES. In the Pacific Northwest, many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.
No
While BBEC agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1, BBEC believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. As discussed in our answer to Question 3, BBEC notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that "users" of the BES can be subject to reliability regulation. Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BESDTF Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.
Yes
The Exceptions process is a necessary part of making this proposal complaint with the Federal Power Act. As noted in our responses to Question 1 and Question 11, we believe the basic SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used in the local distribution of electric energy. The SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities.
BBEC has these additional concerns: The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." BBEC is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BESDTF approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. For the reasons we have explained in our answer to Question 11, we believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process.
Individual

J. McFeely, PE
Modern Electric Water Company
Yes
Taken by itself, the proposed core definition directly accomplishes the following: i) it re-affirms the 100kV bright-line and ii) it removes Regional discretion to define the BES. However, the language continues to inject ambiguity in that it introduces the use of the separately-defined capitalized term "Transmission". In NERC's Glossary of Terms (May 24, 2011), "Transmission" is defined in terms of function rather than voltage. Strictly interpreted, the core definition implies that only Elements used for the transfer of energy to points where it transformed for delivery to customers as well as certain resources are considered to be included in the BES. Under this viewpoint, there exists a two-stage qualifier for non-resource Elements – namely that it must first be used for Transmission and not for "Distribution", and secondly, that it be operated above 100kV. Rather, the BES cannot contain Elements used for "Distribution" (a term not explicitly defined, but extrapolated from other NERC glossary terms to mean the "wires" between the transmission system and the end-use customer, and NOT defined by voltage). If this is the case, the SDT has established that an Element's function is equally important to its voltage, and has simultaneously excluded all Transmission Elements under 100kV – even if used for bulk transfers. While the Exclusions detail characteristics of specific distribution-like Elements, we suggest that the core BES definition contain language explicitly excluding Distribution (there are Elements that are neither qualifying radials as defined in E1 nor local distribution networks as defined in E3).
Yes
The use of "terminals" rather than "windings" might be more clear.
Yes
Clear exclusionary language for radial systems is absolutely necessary for a usable BES definition, particularly since radial systems serving load are already excluded from the existing NERC definition, radial systems serving load can only be used for the local distribution of energy (and are thus excluded by Congress in Sec. 215 of the FPA), and radial systems serving load have been confirmed excluded from the BES by previous FERC Orders. However, the proposed language could be improved to be more explicit and further remove the opportunity for improper/unintended interpretation. The currently-drafted E1 language has several issues that need to be addressed. For instance: The use of "automatic interruption device" in E1 is not consistent with "automatic fault interruption device" in E3-a, and could lead to different interpretations. Another issue is the use of the un-clarified phrase "single Transmission source", and deserves additional attention. Presumably, this language exists to describe the commonly-used radial tap from a networked (two-station) line, as detailed in NERC Project 2009-17-Response to Request for an Interpretation of PRC-004-1 and PRC-005-1 for Y-W Electric and Tri-State G&T. In Project 2009-17, diagrams show a radial tap placed on a line between Station A and Station B, and could be interpreted to indicate that the tap connects to two sources. Unless "single Transmission source" is clarified, then a radial line originating from a Double-Bus-Double-Breaker or a Breaker-and-a-Half station would also connect to two sources. The drafted language does not go far enough to consider how networked lines are operated – sometimes radially, sometimes with multiple protection and isolation schemes and equipment. As drafted, this exclusion cannot be utilized by many insignificant taps (some of such insignificant length that no automatic fault interrupting device was deemed necessary). This situation leaves those insignificant elements to apply the LDN exclusion whose characteristics are dissimilar to a simple, load-serving radial tap. We support the intent of the language of E1-a, "A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service….", but suggest that it be re-written as follows: "The existence and use of 'make-before-break' switching devices, which temporarily connect otherwise radial load-serving systems to alternate sources for purposes of service continuity, do not affect the BES status of the system before, during, or after their use." This clarification is needed to address a position held in the WECC region (WECC Compliance Bulletin #4, April 15, 2011) that make-before-break switches render systems part of the BES, and discourage distribution providers from "reliably" serving their

customers. We do not intend to air grievances, but ambiguous radial exclusion language has led to an extreme misuse of resources in the WECC region. It is imperative that industry and the SDT get this exclusionary language correct and put into use as soon as possible. In an explanatory bullet below Exclusion E1-c (herein) the SDT states "The SDT believes that faults on radial lines without protection devices could negatively impact the BES." Where this reasoning errs is that it assumes that everything upstream of a radial element is already determined to be BES. Many radial taps connect to LDN lines without AFIDs. The language proposed does not allow for a radial exclusion directly, but forces the insignificant tap to apply the LDN exclusion E3 – E1's success at being complete depends on another exclusion. Additionally, this reasoning implies that the mere existence of a AFID is the cure-all to reliability or that technical analysis hasn't already established the proper balance of equipment to adequately serve and protect these elements. We suggest including additional isolation devices as the demarcation point of small radial systems wishing to apply this exclusion.

Yes

Similar to our Question #7 comments regarding radial exclusions in E1, a usable BES definition excluding local distribution networks (LDNs) is needed to allow this industry to focus on and conduct business in a fashion that promotes reliable and efficient system operation. In line with a 1/18/2011 Executive Order directing federal regulatory agencies to base their practices on science and to consider costs, excluding LDNs from the BES definition would achieve that aim on a national scale. While differing only in connectivity, LDNs operate and function exactly as radial systems. We suggest modifying the second and third sentences of E3 as "LDNs are normally operated such that they are connected to the BES through more than one AFID simultaneously, and exist to promote the level of service to Loads as commonly defined by states' utility commissions. For a System to be characterized as an LDN, it must meet all of the following:" Sub-bullet E3-c should be clarified to indicate conditions, timeframes and metrics used to demonstrate power flow direction. We support the intent of the remaining sub-bullets.

No

The BES definition has already had a significant economic (and operational) impact on a substantial number of small entities and those small entities have not adversely impacted the reliability of the BES. The Commission (and the SDT) should also consider the other side of the coin - an improved BES definition could have a positive impact on a significantly greater number of small entities than it will negatively impact small entities otherwise not currently registered. Crafting exclusions properly with industry suggestions should limit the small number affected by this proposed definition. Additionally, we point out that in one instance the SDT states that the BES definition does not address registration or the applicability of standards, yet in another instance is concerned what impact the definition will have on an entity's possible registration status. We don't believe you can have it both ways or continue to keep one's proverbial head in the sand any longer. We understand the SDTs scope is to provide a USABLE definition of the BES, but also understand that its intent is two-fold: 1) to correct what the Commission believes is a gap in reliability due to regional discretion, and 2) to remove ambiguity in what constitutes the BES so that industry can focus on and conduct business in a fashion that promotes reliable and efficient system operation and so that the RROs can implement their CMEPs. This second point is absolutely related to registration and the applicability of standards, and shouldn't be ignored. As drafted, Exclusion E4 still would not allow for the exclusion of ALL small utilities that may inadvertently be included in the BES based on the currently-drafted definition, even though they are, indeed, small utilities that should be excluded from the BES. It appears that the SDT is struggling with the idea that the BES definition should properly evaluate every single element in North America by itself. We believe this is why the term "generally" was used in NERC's Statement of Compliance Registry Criteria (SCRC), and why the issue of the BES definition presently in front of the SDT cannot be entirely separated from registration and applicability of standards. If the SCRC will not be examined and modified similarly as the NERCs Rules of Procedure, then the BES definition must include some "grey area deference" for small utilities such as is the intent of E4. If it is the intent of the definition to exclude most small utilities from the BES, then exclusions should be granted based entirely on the definition. Otherwise, as the SDT correctly states, the RoP-based exclusion process will be flooded and ineffectual. As stated in the SCRC, the definition will initially identify those necessary, but still allows for refinements later. The SCRC utilizes NERC's approved definition of the BES, and will be "improved" by this BES definition. Therefore, craft E4 with language that does not limit its intent to exclude small utilities from the BES. Do not use metrics already used in other exclusions. Do not

reference registration requirements in exclusions that comprise the definition of the BES – the BES should not be defined in terms of registration criteria. In Order 743, FERC defines a small utility in terms of an entity's annual MWhs sold. Consider aligning NERC's and FERC's definitions similarly.
No
The proposed definition continues to inject ambiguity in that it introduces the use of the separately-defined capitalized term "Transmission". In NERC's Glossary of Terms (May 24, 2011), "Transmission" is defined in terms of function rather than voltage. As it should, the core definition implies that only Elements used for the transfer of energy to points where it is transformed for delivery to customers as well as certain resources are considered to be included in the BES. However, it also uses voltage, and we do not believe that the proposed definition goes far enough to distinguish between T and D. Under the language of the core definition, there exists a two-stage qualifier for non-resource Elements – namely that it must first be used for Transmission and not for "Distribution", and secondly, that it be operated above 100kV. Rather, the BES cannot contain Elements used for "Distribution" (a term not explicitly defined, but extrapolated from other NERC glossary terms to mean the "wires" between the transmission system and the end-use customer, and NOT defined by voltage). While the Exclusions detail characteristics of specific distribution-like Elements, we suggest that the core BES definition contain language explicitly excluding Distribution (there are Elements that are neither qualifying radials as defined in E1 nor local distribution networks as defined in E3). Section 215(a)(1) contains specific language that could be used in the core definition in this instance.
Yes
Exclusion E1 and WECC Compliance Bulletin #4 (April 15, 2011) conflict. We support the intent of E1 and have provided suggested language modifications to it in Question #7 herein. Link - http://compliance.wecc.biz/Documents/2%20-%20WECC%20-%20Compliance%20Bulletins/01.04%20-%20Compliance%20Bulletin%20-%204%20Interpretation%20PRC-004,%20PRC-005%20-%20April%2015,%202011.pdf
1) The SDT states that "one of the basic tenets that the SDT is following is to avoid changes in registration due the revised definition". We stress the implications of a missed opportunity and the importance of a usable BES definition, because if the revised definition does not allow the industry (both registered and non-registered entities) as well as the regional reliability organizations to focus on and conduct business in a fashion that promotes reliable and efficient system operation (not just ultra-conservative compliance monitoring), then NERC has failed to do its job in this particular instance. 2) The proposed implementation plan indicates that the effective date of this definition is not for at least 24 months after regulatory approval. We strongly disagree with this suggested approach as it does not provide for any benefit from this much-needed improvement. We believe the SDT intended to imply that entities not currently registered would have at least 24 months to become compliant with applicable standards if the improved BES definition suddenly swept them into the BES as it did for many small utilities on June 18, 2007. The definition should become effective immediately upon regulatory approval, and transition plans for newly-registered entities could specify longer timeframes. 3) As currently drafted, NERC's Statement of Compliance Registry Criteria (Revision 5.0) contains the text of NERC's approved BES definition. Upon approval of any other language, the SCRC will become inaccurate without review and modification.
Group
Northern California Power Agency
Scott Tomashefsky
Yes
NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.
Yes
NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.
Yes
NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.
Yes
NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.
Yes

NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.
Yes
NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.
Yes
NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.
Yes
NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard. In addition to this support, NCPA asks for consideration of an alternative approach for determining an exception in this regard, as opposed to having it based on a somewhat arbitrary fixed level of generation (75 MVA). NCPA suggests consideration be given for an approach based on a determined percentage of actual demand for a given LDN. As such, NCPA submits the following with respect to draft exception E3 (b), Limits on Connected Generation: Neither the LDN, nor its underlying Elements (in aggregate), include more than a certain percentage of minimum area load, as determined by the regional entity." Such an approach would require the regional entity to look at the amount of connected generation on a case-by-case basis.
Yes
NCPA supports the comments of the Transmission Access Policy Study Group in this regard.
Yes
NCPA supports the comments of the Transmission Access Policy Study Group in this regard.
Individual
Gary Carlson
Michgan Public Power Agency
Yes
My concern centers on the intent of FERC Order 743 language “we certify that this Final Rule will not have a significant economic impact on a substantial number of small entities” still falls short from being met by this definition change. This is a good start but additional work remains to be done. As pointed out in FERC Order 743A the 100 KV bright-line was not required but NERC can provide an alternative which can be supported technically. Also I have concerns for the FERC Order 743A language “facilities used in the local distribution of energy should be excluded from the revised bulk electric system definition” also needs additional work remains to be done.
Yes
Yes
Generally I would agree with I2 but question the technical justification for 20 MVA without also considering its capacity factor.
Yes
See comments to question 3
No
I would agree to this for Blackstart Resources only designated Blackstart Cranking Paths in the Transmission Operator’s restoration plan regardless of voltage.
Yes
I would suggest I5 be revised to say Wind farm or solar power installation with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system
Yes
I would suggest the following changes be considered: The words “described as” should be deleted from the exclusion to avoid confusion. What matters is how the system is actually connected, not how someone describes it. In addition, “a single Transmission source” should be defined, and should be generic enough to encompass the various bus configurations. It is not the case, for example, that each individual breaker position in a ring bus is a separate Transmission source; in that case, a bus at one voltage level at one substation should be considered “a single transmission source.” Some

examples of configurations that should be considered a single transmission source for this purpose are at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf, Examples 1-6. The phrase "automatic interrupting device" should be replaced with the phrase "switching device"." Many radials are connected to ring buses or breaker-and-a-half schemes where the breakers (automatic interrupting devices) are within the bus arrangement where the appropriate division between BES and non-BES is at the disconnect switch as the radial "takes off" from the bus arrangement.
Yes
I understand that E2 is intended to apply only to retail customers' generation. If that is the case then I would suggest the following changes be made to make that limitation clear. Specifically, the first sentence should read: "A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the retail customer's side of the retail meter."
Yes
I question the technical justification for the 75 MVA and the 100 KV as pointed out in my comments above. But given those points addressed above I would suggest the following clarification be considered. The exclusion refers to groups of Elements that "distribute power to Load rather than transfer bulk power across the interconnected system." The use of the term "bulk power" is vague and could be read incorrectly as a reference to the "bulk-power system," which is defined in the Federal Power Act but is not a NERC defined term. If the LDN is connected to the BES at more than one location, there will by definition be some loop flow. We recommend below that Exclusion 3(d) be revised to quantify the amount of loop flow that is permissible in an excluded LDN. In the context of the first sentence of Exclusion E3, less specificity is needed, and the sentence should only be revised for the sake of accuracy to state: "Groups of Elements operated above 100 kV that are primarily intended to distribute power to load rather than to transfer power across the interconnected System." The exclusion's reference to connection "at more than one location" is vague. The sentence should be revised to read "connected to the Bulk Electric System (BES) from more than one Transmission source solely to improve the level of service to retail customer Load," and "Transmission source" should have the same meaning that it does in E1. E3(a) should require that there be switching devices between the LDN and the BES, not specifically automatic fault-interrupting devices. The term "separable by" in "Separable by automatic fault interrupting devices" is unclear and should be reworded. E3(b) To avoid pulling an LDN into the BES based on very small customer-owned generation (such as rooftop photovoltaics and hospital backup diesel generators) that the utility does not consider or rely on, or necessarily even know about, the item should be reworded: "Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA of generation used to meet the resource -adequacy requirements of electric utilities." E3(d) states "Not used to transfer bulk power." As noted above, "bulk power" is a vague term. There will necessarily be some loop flow on a system that is connected to the BES at more than one location. The amount of permissible loop flow for this purpose needs to be determined and stated in this item.
Yes
But I question if the "Small Entity definition" as indicated in Order 743 language "we certify that this Final Rule will not have a significant economic impact on a substantial number of small entities." has been appropriately addressed.
No
As I have indicated in my comments above the "small entity definition" is not being used when the 100 KV, 20 MVA, and 75 MVA aggregate are being used only. A unit with a long start up time and a low capacity factor and/or availability factor and connected to a local distribution system is interconnected to the BES has little opportunity to be counted on to support the BES during a critical event. With the environmental issues out there it could be expected that owners of these types of units may well decide on economics of the issue and retire such units. How would the reliability of the BES be served then?
No
No
Group

Hydro One Networks Inc
David Curtis
Yes
We agree with the concept of a bright-line definition and commend the SDT for developing a concept of explicit inclusions and exclusions as part of the definition. This will reduce the number of exception applications for some of the BES elements. However, the inclusion and exclusion requirements are extremely restrictive. For example, radial characteristics should not be limited by the amount of installed generation or single transmission source and/or require an interrupting device. Instead we believe that one or more transmission sources could feed the radial load to provide redundancy as long as there is adequate protection and isolation for improved customer-supply continuity and reliability. This should be considered radial as long as the loss of any transmission source does not affect, and is not necessary for, the operation of the interconnected transmission network. Further, it is imperative to understand that the NERC's revised definition will have a direct impact on entities across North America and will conflict with regulatory requirements, Codes, and Licenses. FERC in its Order 743 and 743A has directed NERC to address these concerns. We suggest the SDT and RoP teams should: • Carefully craft the exception criteria and procedure to be flexible and technically sound, to allow entities to adequately present their case to the ERO for inclusions or exclusions outside of the definition. This burden of proof should be left to the entity seeking exception because it may be difficult if not impossible to define the exception criteria. If such a criteria could be defined, it will in fact become another bright-line BES. • Include provisions in both the NERC exception criteria and exception procedure for federal, state and provincial jurisdictions. These provisions should provide clear guidance so that, if and when there are deviations from the exception criteria, they are properly identified with technical and regulatory justifications ensuring there is no adverse impact on the interconnected transmission network.
Yes
We agree with the concept of Inclusion I1. However, we suggest that since transformers are already covered by the definition, "all transmission Elements operated at 100 kV and above", and since Inclusions I2 to I5 are commonly related to generation only, Inclusion I1 should be removed and replaced by the following Exclusion: E(x) "Transformers not used as Generator Step-Up (GSU) transformers that have primary or secondary winding at less than 100 kV." We also suggest the SDT to put forward a high-level exception criteria with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) mentioned in Inclusion I1, or any other inclusion(s). These inclusion(s) that are intended for exemption would be based on the entity's technical assessment, evidence and justification for its unique characteristics, configuration, and utilization.
No
We agree with the concept of Inclusion I2 with respect to individual generating units, but do not support having the entire path labeled as BES. In most cases, neither the path nor a 20 MVA unit itself will have any impact on the reliability of the interconnected transmission network nor is it necessary for the operation. Hence, we do not support the fact that there should be a blanket application of the BES definition to all individual generating units greater than 20 MVA and its connection to the system. It is also important to mention that moving into the future, with the Green Energy and Smart Grid plans advocated by both Canadian and US policy makers, the gross nameplate rating of 20 MVA acquired from NERC registration restricts the penetration of dispersed generation in many parts of North America. We suggest the following: • Generation restriction (20 MVA or 75 MVA) should either be revised or the exception procedure should allow entities, with the support of technical evidence, to exclude element(s) from being labeled as part of the BES. • Entities should be able to use the exception process, with the help of technical evidence, to exclude generating units that do not impact the interconnected grid and the bulk transfer of power. • The path to generating facilities does not need to be BES contiguous. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require a contiguous path unless the unit is identified essential for the operation of transmission network.
No
We agree with the concept of Inclusion I3 with respect to multiple generating units located at a single site, but do not support that the entire contiguous path has to be BES. The path of a 75 MVA plant or aggregated generation will rarely have any impact on the reliability of the interconnected transmission

network nor is it necessary for its operation. We also do not support the fact that there should be a blanket application of this inclusion. As stated earlier, under various green energy, smart grid and dispersed renewable energy plans advocated by both Canadian and US policy makers, the gross nameplate rating of 75 MVA may undermine and deter the future potential of integrating Distributed Generations (DG's) that will be implemented to ensure the reliable operation of the interconnected transmission network BES, and, at the same time, providing the most effective and economical solutions for the rate payers in North America. Local generation can cost-effectively enhance the reliability of load pocket by avoiding transmission, but such restrictions would deter the adoption of good planning decisions. Upcoming load displacement projects would result in the installation of new self-generation facilities at customer sites, with the electricity generated being used on-site by the customer, with a resultant decrease in the consumption of electricity purchased via large scale generation. These projects can be large, and displace a substantial portion of the customer's (or local distribution company's) existing load, even to the extent of total self-sufficiency and the availability of surplus generation. The aggregated surplus generation capacity may very well exceed 75 MVA and would consequently force the facility owners to register as both Generation Owners (GO) and Transmission Owners (TO), which may be in conflict with regulatory rules in many jurisdictions. We suggest the following: • Generation restriction (75 MVA) should either be revised or the exception procedure should allow entities, with the support of technical evidence, to exclude element(s) being labeled as part of BES. • Path to generating facilities need not be BES contiguous unless the unit is identified essential for the operation of transmission network. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require contiguous paths. • Entities should be able to use the exception process, with the help of technical evidence, to exclude generating units that do not impact the interconnected grid and the bulk transfer of power. • From a regulatory perspective such an inclusion could also be in conflict with the current regulatory requirements. Definition and/or exception process should provide acknowledgement and flexibility to avoid any regulatory conflicts. For example, as stated earlier (Q3 response) NERC and SDT should consider introducing a concept of a new category of registration or BES Support elements. These elements are NOT necessarily BES but support the reliable operation of the interconnected transmission network.

No

We do not agree with Inclusion I4. Blackstart resources and transmission facilities on the cranking path should not be classified as BES regardless of size and voltage level. From a regulatory perspective, such an inclusion would be in conflict with the current regulatory requirements in many of the jurisdictions. More importantly, designating these facilities as BES Elements or Facilities beyond the 100 kV bright line, the 20 MVA/unit or 75 MVA/plant criteria, without a regard to their impact on the BES (under conditions other than system restoration) will impose unnecessary requirements for these facilities, which do not contribute to reliability under interconnected operation conditions. For restoration condition, this inclusion is extraneous given there is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. While we do not disagree with the SDT's interpretation of the FERC directives, the BES definition should cover those facilities that are needed for operation under both normal and emergency conditions, which includes situations related to black-start and system restoration. We do not agree that the directives specifically ask for inclusion of blackstart resources and facilities on the crank path in the BES definition. We believe the requirements in EOP-005-2 suffice to address the SDT's interpretation and concern regarding recognition of the reliability impacts and requirements for blackstart resources and facilities used for system restoration. Generating units of any size and transmission facilities of any voltage level may be used for blackstart and restoration. Conceivably, a generator of 10 MW and transmission facilities of 44 kV or 69 kV may be a part of the cranking path. A BES inclusion will then subject these generators and facilities, which are essentially "local" facilities but called upon to begin restoring its bulk interconnected counterpart, to comply with the reliability standards intended for maintaining BES reliability. Included in the BES definition will thus discourage smaller generators from providing blackstart capability, and the transmission facilities from being a part of the cranking path. This may also discourage Transmission Owners and Operators from identifying multiple blackstart resources and cranking paths to provide restoration flexibility. Such an inclusion will ultimately undermine reliability. If indeed any of these facilities are deemed necessary to

support bulk power system reliability at times other than system restoration, they would/should have been identified through the basic BES definition and inclusion list or can be addressed through the exception procedure. We suggest and urge the SDT to remove I4 on the basis that: • The availability and performance expectations of blackstart resources and facilities on the cranking path are already specifically addressed in an existing standard; and • Unless they meet the BES definition and the other inclusion criteria, they do not have any perceived reliability impact on everyday operation of the BES.
No
We agree with the concept of Inclusion I5 but do not support that the entire contiguous path has to be BES. The path or aggregate generation will rarely have any impact on the reliability on the interconnected transmission network nor is it necessary for its operation. These are generally referred to as connection facilities. In addition, renewable generation units are intermittent and the planning and operational standards and practices make sure that their unavailability or unexpected (sudden) loss of generation won't jeopardize reliability of the network; therefore, they should not be BES. As stated earlier, with the Green Energy and Smart Grid plans and dispersed renewable energy advocated by both Canadian and US policy makers, the gross nameplate rating of 75 MVA may undermine and deter the future potential of integrating DG's that will be implemented to ensure the reliable operation of the interconnected transmission network BES, and, at the same time, provides the most effective and economical solutions for the rate payers in North America. Local generation can cost-effectively enhance the reliability of load pocket, by avoiding transmission, but such restrictions would deter the adoption of good planning decisions. (Refer to Q4 comments).
Yes
We agree with this concept as part of establishing a bright-line definition, as well as clarifying this exclusion as part of the revised BES definition. Although the concept is consistent with the statements in the FERC Order, it is imperative to understand that the limitations of E1 will have a direct impact on many entities (big and small) along with distribution companies across North America. The exclusion requirements are extremely restrictive with little or no technical basis and are limited to the fact that these parametric restrictions may not have any reliability impact in terms of location, configuration of element, and system characteristics. The radial characteristics and/or the reliability of the interconnected transmission network should not be determined by the amount of installed generation or a single transmission source or an interrupting device. For example, a redundant double circuit designed to supply the load with adequate protection and isolation beyond the radial tap could be significantly better for load supply-continuity and reliability. We suggest if more than one transmission source feed radial load to ensure customer supply continuity and reliability then this should be either part of the bright-line definition as long as there is adequate protection and, the loss of any single transmission source does not affect the interconnected transmission network. We suggest SDT to consider revising E1 as follows: Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device or can be isolated with adequate protection without affecting the BES and: a) Serves load, or, b) Includes generation resources not identified in Inclusions I2, I3, I4 and I5, unless excluded by E2, or, c) Has any combination of items (a) and (b). The radial system can have a normally open switching device for connecting it to a second Transmission source in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.
Yes
We agree with most of the changes in Exclusion E2. However, we feel there is a need for evidence or technical study in regards to the limits described in I2 & I3. The real net aggregated power seen by the bulk power system at the interconnection, with the outlook of distributed generation systems, may be different than past experience. Hence it requires to be reassessed based on technical studies with respect to the future integration of DG's. (Please refer to comments in questions: 3 & 4). To establish a bright-line definition, Exclusion E2 may be acceptable if the SDT provides adequate provisions within the exception procedure. (See response to Q7)
Yes
We agree with this concept of LDN as part of establishing a bright-line definition along with Exclusion E3. However, restrictions for LDN such as connected Generation must neither be more restrictive than radial nor should generation limits be applicable unless they impact the reliability of interconnected transmission network. Requirements in Exclusion E3 are very restrictive and we do not agree to the

limits on connected generation for Local Distribution Networks (LDN), described in part (b). We suggest that bullet b) be revised and limits on connected generation must not include generation resources identified in Inclusions I2, I3, I4 and I5. The development and implementation of distributed generation will grow considerably in the future and will operate together with conventional sources of energy. The real net aggregated power of distributed generation seen by the bulk power system at the interconnection may be larger than past experience; hence it requires to be reassessed based on technical studies with respect to the future integration of DG's. (Please refer to comments in questions: 3 & 4) Also, we suggest combining exception E3 (c) and (d) as follows: "(c) Power is intended to flow only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN; The LDN is intended to deliver power to load and not be used to transfer bulk power between different locations in the BES. It is recognized that under specified system conditions, bulk power transfers may take place between different points of the BES via the LDN. However, for these conditions BES reliability is not dependent on the existence of these power flows through the LDN."

No

Small utility or distribution provider is a relative term. A smaller distribution provider may have an impact on the transmission network while a large one may not; this is based on their design, configuration and protection. Hence, such an exception should apply regardless of the size of an entity. Having said that, the concept discussed here is to define a radial system and not a small utility, as mentioned in the FERC Order. We do not believe that the SDT has proposed exclusion in regards to small utilities. The language used in the proposed clause is only appropriate to establish a bright-line definition for a radial system. It is worth noting that many small utilities (and individual load customers or generation connections) would have more than a single transmission source with a solid tap and, at the same time, be adequately protected and can be effectively isolated without any adverse impact on the transmission network. Such a practice and design is widely used. Hence, we do not agree that this exclusion is an attempt to address the issue of small utilities. The definition and inclusions may force many small entities, load customers and generation unit owners to act and register as Transmission Owners. In some parts of the continent this could be in conflict with state or provincial regulatory act, Codes and Licenses. Consistent with the FERC Order, the ERO and the SDT should be aware of these conflicts and should not ignore them for later. Hence, we suggest that SDT address this by providing explicit but simple provisions in the exception procedure by considering technical assessment of exception criteria to justify the element's necessity for operation. We suggest that the only evidence that should be required of small utilities/entities is: • Regulatory evidence • Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of their connection and operations.

No

We commend the SDT for their concept in putting forward a 100kV BES bright-line definition. However, we do not believe that the current definition drafted by the SDT has differentiated between Transmission and Distribution or excluded distribution facilities from the BES, or addressed the issue of local distribution facilities above 100kV. It is worth noting that different jurisdictions may use different terminology for "distribution" or non transmission facilities or elements. For example, some jurisdictions label certain facilities as distribution which connect and are owned and operated by the distribution utility, customer or a generator customer while other label them as connection facility or elements. (See Q10 response)

See earlier comments and suggestions. NERC's revised definition will have a direct impact on many entities across North America and could also be in conflict with regulatory requirements, Codes, and Licenses, which non FERC jurisdictional must comply. It would be hard if not impossible to identify the conflicts. For example: in one of the the provincial energy acts, NERC Standards maycan only apply to generation over 50 MVA which will cause one or more of the requirements to be in conflict and /or what constitutes distribution and what is not considered transmission (such as connection facility to a load or generation and owned by the proponent). However, we agree to establish a 100kV BES bright-line definition and we believe that the best venue to address avoiding compliance conflicts is through the exception criteria and the exception procedure. The benefits of such an approach are: • Establishment of a continent wide bright line definition • Avoidance of regulatory conflicts and legal complexities • Assurance of the reliability of the interconnected transmission network

We believe that the concepts of inclusions and exclusions as part of the bright-line definition are excellent. However, these exclusions do not address adequately several complex issues along with

directives in Order No. 743 and 743A, such as: differentiation between Transmission and Distribution, non-jurisdictional concerns, or distribution. BES definition itself is not a venue to address these complex issues and suggest that these should be addressed by the ERO's exception procedure. We suggest that SDT consider • Removing I5 and adding E4 to exclude intermittent renewable generation (wind and solar). As stated earlier, such units are intermittent and the planning and operational standards and practices ensure that their unavailability or unexpected (sudden) loss of generation won't jeopardize reliability of the network; therefore, they should not be BES. • That the definition and/or exception process should provide acknowledgement and flexibility to avoid any regulatory conflicts. • Introducing a concept of a new category of registration or BES Support (BESS) elements. These elements are NOT BES but support the reliable operation of the interconnected transmission network. A sub-set of relevant NERC Standards should still apply to BESS elements such as planning, design, and maintenance. However, they may not be contiguous or subject to mandatory compliance. We do plan to submit our comments on exception criteria and procedure as part of its process. However, we do suggest that the SDT: • Carefully craft the exception criteria that is flexible and technically sound to adequately allow entities to present their case to the ERO for exception • Verify that the exception criteria should be at a high-level with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) mentioned in exclusions or inclusions based on technical assessment, evidence and justification for its unique characteristics, configuration, and utilization • Acknowledge and provide provisions in both NERC exception criteria and exception process for federal, state and provincial jurisdictions.

Group

PacifiCorp

Sandra Shaffer

Yes

In general PacifiCorp agrees with the direction of the proposed BES definition. Specific exceptions are discussed in questions 2 - 13

No

Transformers with two or more windings greater than 100 kV exclusively serving local distribution networks should be excluded from the BES.

No

Although certain areas of the country may have a need for generating units of this magnitude to be included in the BES for reliability, the 20 MVA minimum rating essentially discriminates against the owners of these generators. In I3 and I5 a 75 MVA limit has been established for different combinations of generation. This limit should also be used for a single generating unit. Those areas that require generator units less than 75 MVA for reliability should add them back to the BES via the inclusion/exclusion process to be proposed in NERC's Rules of Procedure ("ROP"). • The 20 MVA threshold was intended to mirror the existing NERC Compliance Registry Criteria. This registry value was adopted without the benefit of having been scrutinized through a NERC Reliability Standards Development Process, so the technical record justifying the 20 MVA threshold is non-existent. The BES Drafting Team will need to have technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different framework (i.e., for entity registration). Absent any technical justification, Inclusion I2 should be eliminated. This would leave the 75 MVA threshold in Inclusion I3 and Inclusion I5 as the minimum BES thresholds for generation.Also, please refer to additional comments in question 13 regarding a contiguous BES.

Yes

PacifiCorp understands the SDT is looking for technical reasons for something other than 75 MVA. PacifiCorp believes it is not feasible to determine a value that is consistent across the continent. Although PacifiCorp believes 75 MVA is too low, it is an acceptable number for any configuration of generation (see comment on question 3). Those above 75 MVA believed to be exempt from the BES definition can be processed through the proposed ROP inclusion/exclusion process. PacifiCorp submits the following suggested wording for I3: "Multiple generating units with an aggregate capacity greater than 75 MVA or a single generating unit with a generating capacity greater than 75 MVA….."

No

PacifiCorp supports the concept of unique or singular blackstart paths being included in the BES. However, once the uniqueness of the path disappears PacifiCorp believes the multiple non-unique

blackstart paths should be excluded by definition from the BES. This approach could be equated to pending version 4 of the CIP Reliability Standards, in which the Critical Asset Criteria of CIP-002-4 set forth the facilities comprising the Cranking Paths that are considered Critical Assets, up to the point on the path where two or more path options exist.
Yes
PacifiCorp understands the SDT is looking for technical reasons for something other than 75 MVA. PacifiCorp believes it is not feasible to determine a value that is consistent across the continent. Although PacifiCorp believes 75 MVA is too low, it is an acceptable number for any configuration of generation. Those above 75 MVA believed to be exempt from the BES definition can be processed through the proposed ROP inclusion/exclusion process.
Yes
: Please refer to additional comments in question 13 regarding a contiguous BES.
Yes
Yes
PacifiCorp believes this meets FERC's intent in Order Nos. 743 and 743A, however additional clarification may be added particularly around items b and c. Regardless of the generation level (item b), if the power only flows into the Local Distribution Network ("LDN") (item c) then the the level of generation is not material and should have no impact on the reliable operation of the BES.
Yes
PacifiCorp believes this concept is appropriate with the following concern: Essentially the only difference between this proposed exclusion and E1a is this proposed exclusion does not include "an automatic interruption device". So if the proposed E4 is left as a stand-alone exclusion it should also require "an automatic interrupting device" qualifier. Technical justification for requiring an interrupting device is the same justification used by the SDT in E1.
Yes
PacifiCorp understands that no single bright line can accommodate all the various scenarios of local distribution. The proposed definition appears to capture a high percentage of LDNs. Additional LDNs can be addressed through the exemption process. Also, please refer to additional comments in question 13 regarding a contiguous BES.
Yes
The SDT proposal combined with the ROP may be in conflict with Section 215 of the Federal Power Act ("FPA") which excludes "facilities used in the local distribution of electric energy" from the definition of "bulk-power system." As identified in other responses, without a technical reason for setting the generation limit to 20 MVA and even 75 MVA and/or requiring a contiguous BES to include such generators may be over-inclusive and by default require several elements which are not required for the reliable operation of the BES to be included in the BES definition.
• Effective dates: While understanding that additional facilities will require up to two years to come into compliance, several facilities will also be excluded that are currently under the current bright line definition. Are utilities going to be responsible to maintain all NERC reliability standards during the two year period for facilities or elements that will be excluded by the new bright line definition? PacifiCorp proposes that the effective date for facilities being removed from the bright line become effective on the first day of the first calendar quarter after applicable regulatory approval. It is reasonable to retain the two year period for facilities that will be added to the BES. • NERC Staff has submitted written comments to this project stating that the BES "must be contiguous." Instituting a contiguous BES with Inclusion I2, for example, would result in a substantially over-inclusive BES definition. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of distribution elements that have nothing to do with improving or protecting the reliability of bulk transmission system. There is no compelling reason to adopt a "contiguous" BES that covers local distribution systems. Section 215 of the FPA provides FERC with jurisdictional authority over "users" as well as "owners" and "operators" of the bulk power system. Consequently, FERC has the jurisdictional authority to require generation and other entities to comply with applicable NERC requirements. Hence, even where an entity does not own or operate BES assets, it could still be required, for example, to provide necessary information to the applicable Reliability Coordinator or Planning Coordinator and to participate in programs to prevent instability, uncontrolled

separation, or cascading outages to the bulk transmission system. This approach would fully achieve the goals of bulk transmission system reliability without imposing the full BES regulatory compliance burden on local distribution elements. • Although not specifically the responsibility of the SDT, it should closely coordinate its efforts with the team developing the inclusion/exclusion process in the ROP. For instance, if the ROP team develops an overly onerous process to exclude elements which are not required to reliably operate the interconnected BES yet are not excluded through the bright-line definition then PacifiCorp would consider the bright-line definition to be over-inclusive.
Individual
Peter Mackin
Utility System Efficiencies, Inc.
Yes
USE believes the final phrase in I1 more appropriately should be "…unless excluded under Exclusions E1 or E3." Also, the term "two windings" may be technically incorrect because some transformers may only have one winding per phase. This wording would exclude single-winding transformers (e.g., autotransformers) at or above 100 kV. One option may be to change the language to "two terminals" instead of "two windings." It may also be useful to clarify that transformers with one terminal above and one terminal below 100 kV should be excluded.
No
The 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System – Project 2010-17, March 30, 2011, at 30. But this response gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. § 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry.
No
USE is concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition.
Yes
No
USE agrees that it is important to address wind generation facilities and similar generation facilities in which a large number of generating units, each with a relatively small capacity, are clustered and fed into the grid at a single interconnection point. That being said, Snohomish is concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.
Yes
USE agrees in concept with this Exclusion. However, it is unclear what is required to demonstrate the "make-before-break" connection. Is this statement intended to mean that the normally-open switch is mechanically or electrically interlocked to ensure the "make-before-break" requirement is met? It would be a normal switching practice to close the normally-open switch to make the parallel before

opening the normally-closed switch, but is the normal switching practice sufficient to make this claim? Also, it is unclear whether the automatic interruption device itself is a part of the BES.
No
As noted in USE's response to Question 3, we believe the inclusion of the 20 MVA threshold (through reference to Inclusion I2) lacks an adequate technical justification in this context. In addition, whether or not there is provision of standby, back-up, and maintenance power services to the unit(s) or the load is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the item (ii) in this Exclusion should be eliminated.
Yes
USE agrees in concept with this Exclusion. However, in sub-bullet b), as noted in our response to Question 4, there is no technical justification for the 75 MVA threshold on connected generation. In sub-bullet c), it should be clarified whether this requirement is at any time or is for hourly integrated values. Also in sub-bullet e), the use of the term "major transfer paths" should be modified to be "major transfer paths in the Table titled Major WECC Transfer Paths in the Bulk Electric System." Finally, the reference to "above 100 kV" should be "at or above 100 kV" for consistency with the rest of the definition.
Yes
Yes
No
The definition should also reference the exception process and technical justification allowed for further inclusion or exclusion from the BES.
Individual
Keith Morisette
Tacoma Power
Tacoma Power generally supports clarifying changes to the BES definition by the SDT and the goal of including only those facilities that materially impact the reliable operation of the interconnected bulk transmission system. We propose one change to help guide the industry as the definition is applied. Currently, the definition includes the clause 'unless such designation is modified by the list shown below,' positioned after the reactive resources clause. Due to the position of the clause, it can be misinterpreted to apply only to reactive resources. To eliminate this ambiguity, we suggest that the proposed definition be reordered to read as follows: "Bulk Electric System (BES) definition: (A) Unless included or excluded in Section B below, the BES consists of: (1) All Transmission Elements operated at 100 kV or higher; (2) Real Power resources identified in Section B below; and (3) Reactive Power resources connected at 100 kV or higher. (B) [BES designation criteria, list of inclusions and exclusions]." Additionally, the BES definition should not require the inclusion of contiguous elements as the definition is further developed. Lastly, the proposed BES definition for comments is not clear on the state of the system conditions (normal or emergency) that should be assumed when applying the definition. The definition should apply to only normal operating conditions.
Tacoma Power agrees with Inclusion I1. However, we believe the reference to 'two windings' is ambiguous and propose changing it to read, "Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, with two or more connections to Elements at 100 kV or higher, unless excluded under Exclusions E1 and E3."

Tacoma Power generally supports Inclusion I2. However, the term 'gross nameplate rating' is not defined and should be replaced with a specific definition. Additionally, no justification for the 20 MVA level has been provided and therefore it appears arbitrary. Since this measurement will define Elements for absolute inclusion in the BES, the threshold for generation units should be based on a need to maintain transmission reliability. Generation units located within a Local Distribution Network (LDN), which do not exit the LDN, should not be included. We propose changing Inclusion I2 to read, "Individual generating units greater than 20 MVA (ratings based on the Code of Federal Regulation, CFR 18, Part 11.1 definition "Authorized Installed Capacity") including the generator terminals through the GSU which has a high side voltage of 100 kV or above, except generating units that are within a Local Distribution Network (LDN) and do not have a net export out of the LDN."
Tacoma Power generally supports Inclusion I3. However, the term 'gross aggregate nameplate rating' is not defined and should be replaced with a specific definition. Additionally, no justification for the 75 MVA level has been provided and therefore it appears arbitrary. Since this measurement will define Elements for absolute inclusion in the BES, the threshold for multiple generation units located at a single site should be based on a need to maintain transmission reliability. Such single sites located within a Local Distribution Network (LDN), which do not exit the LDN, should not be included. We propose changing Inclusion I3 to read, "Multiple generating units located at a single site with an aggregate capacity greater than 75 MVA (aggregate capacity based on the Code of Federal Regulation, CFR 18, Part 287.1, "Determination of powerplant design capacity") including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above, except multiple generating units located at a single site that are within a Local Distribution Network (LDN) and do not have a net export out of the LDN."
Tacoma Power generally supports Inclusion I4. We believe additional consideration should be given to identifying only the Blackstart Resources that support a regional recovery. Based on that criteria, we propose changing Inclusion I4 to read, "Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan, regardless of voltage, and included in a regional restoration plan."
Tacoma Power generally supports Inclusion I5. However, the term 'gross aggregate nameplate rating' is not defined and should be replaced with a specific definition. Additionally, no justification for the 75 MVA level has been provided and therefore it appears arbitrary. Since this measurement will define Elements for absolute inclusion in the BES, the threshold for dispersed power producing resources should be based on a need to maintain transmission reliability. Further, there is no traceable definition for 'collector system.' Rather than defining it, it can be replaced with a 'common interconnection point.' Lastly, such dispersed resources located within a Local Distribution Network (LDN), which do not exit the LDN, should not be included. We propose changing Inclusion I5 to read, "The common interconnection point for dispersed power producing resources with aggregate capacity greater than 75 MVA (aggregate capacity based on the Code of Federal Regulation, CFR 18, Part 287.1, "Determination of powerplant design capacity") connected to an Element that is part of the BES, except for common interconnection points that are within a Local Distribution Network (LDN) and do not have a net export out of the LDN."
Tacoma Power supports Exclusion E1.
Tacoma Power generally supports Exclusion E2. However, no justification for the 20 MVA and 75 MVA levels in Inclusion I2 and Inclusion I3 have been provided and therefore they appear arbitrary. Since this measurement will define Elements for absolute inclusion in the BES, the thresholds should be based on a need to maintain transmission reliability. We strongly urge the SDT to accept our proposed changes to Inclusion I2 and Inclusion I3, listed above in items 3 and 4.
Tacoma Power generally supports Exclusion E3 that provides for the exclusion of Local Distribution Networks (LDNs) from the BES, with the following modifications: 1) It is not necessary to articulate the nature of the LDN's connection to the BES. If the characterizations are met, the number of connections and the reasons for the connections are immaterial. 2) If the LDN is a normal net import, there is no need to limit the amount of connected generation since the generation will have no material effect on the BES. 3) 'Bulk power transfers' are acceptable across an LDN if the transfer is to a nested LDN. Contractual energy, originating outside the LDN and delivered to a nested LDN, for example, is still load delivery and has the same physical characteristics of a holistic LDN and the transfer of bulk power is immaterial. We propose changing Exclusion E3 to read, "Local Distribution Networks (LDN): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the Interconnected System. The LDN is characterized by all of the

following: a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices; b) c) Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN; d) Not used to transfer bulk power, except transfers to nested LDNs: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN, except transfers to nested LDNs; and e) Not part of a Flowgate or Transfer Path: The LDN does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL)."

Tacoma Power supports the SDT's thoughtful approach to minimizing impacts to small entities. They have no measureable impact to the BES and should not be burdened with the exemption process.

Tacoma Power supports the work of the SDT towards a revised BES definition directly linked to the exemption process of inclusions and exclusions. The definition must be closely coupled to the exemption process and the two must move forward together. This will ensure that only the facilities that materially impact the reliability of the BES will be burdened with the regulatory requirements.

Tacoma Power is not aware of any conflicts at this time.

Tacoma Power supports the SDT's efforts to create an acceptable BES definition directly linked to an exemption process. Please be aware that the WECC has a task force, the Bulk Electric System Definition Task Force (BESDTF), which has done some notable work on this task. See WECC BESDTF Proposal 6, Appendix C (http://www.wecc.biz/Standards/Development/BES/default.aspx). The BES definition is very complex and the BESDTF has already addressed many of the tough issues that have yet to be addressed in this process, such as: • Local Distribution Network definition for automatic exemption • Determination of radial facilities • Demarcation of BES and non-BES Elements • Alternate dispute resolution process • Assignment of the burden of proof for the exemption process • Technical approach for the inclusion/exclusion determination Thank you for consideration of our comments.

Individual

Russell A. Noble

Cowlitz County PUD

No

Cowlitz supports the approach the Standards Development Team ("SDT") has taken to defining the Bulk Electric System ("BES"). The changes made in the revised core definition are helpful and represent significant progress toward an acceptable definition. With an effective and efficient exclusion process, the new definition will better define the BES as a whole. However, the SDT should bear in mind the restrictions contained in Section 215 of the Federal Power Act ("FPA") regarding the definition of the term "bulk-power system" and FERC's past statements in acceptance of NERC's term "bulk electric system." FERC clearly states that the statutory term "bulk-power system" is not clearly defined, but also cannot be subject to the ANSI standard development process under the ERO. Further, FERC has "chosen to defer, for the time being, to the ERO as to which entities must comply with Reliability Standards," and rely on the NERC definition of "bulk electric system" to facilitate this end. Therefore, although the SDT may not attempt to define "bulk-power system" or equate it as equal to the BES, the SDT should make every effort to draw upon the stated restrictions within the FPA concerning the "bulk-power system" in its revised BES definition. The "bulk-power system" definition imposes limits on the reach of the mandatory reliability regime as those "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" and "electric energy from generation facilities needed to maintain transmission system reliability." Further, "[t]he term does not include facilities used in the local distribution of electric energy." Congress reinforced that limit in Section 215(i), where it emphasized that the FPA authorizes the imposition of reliability standards "for only the bulk-power system." Cowlitz is concerned that the SDT's proposed definition is overly-broad, and that it will sweep in many Elements that have little or no material impact on the reliable operation of the interconnected bulk transmission grid. For example, the definition uses the arbitrary 20 MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators. Accordingly, for the BES definition to conform to the requirements of the statute, the SDT must adopt an effective mechanism to exempt facilities like these that are improperly swept in by the SDT's brightline approach to inclusions and exclusions. For this reason, the Exception and Inclusion process to accompany the SDT's core definition is of critical

concern. However, the revised core definition should by default exclude those elements of the electric system that unquestionably are not necessary for operating an interconnected electric energy transmission network. Likewise, the revised core definition should by default include only those elements that unquestionably are necessary. From this, the SDT can further define a subset and provide adequate technical basis for each inclusion and exclution. Cowlitz believes the core definition should reflect the statutory limits, while at the same time realizing that the BES is a subset thereof. Taking from FERC's past orders, the full set of facilities, control systems, and generation of the "bulk-power system" need not all be subject to enforceable reliability standards; a sub-set is permissible as long as there is sufficient technical basis for any exclusion. For now, FERC has allowed unsubstantiated exclusions (e.g. generation below 20 MW) due to the need for expedient implementation of standards, yet allowing for some relief towards unwarranted over compliance burden. Cowlitz suggests a core definition as follows: "Interconnected Transmission Elements, generation resources necessary to maintain the interconnected Transmission Elements reliability unless such designation is modified by the list shown below. Local distribution facilities are excluded." Cowlitz believes the 100 kV demarcation should be removed from the core definition since it is necessary to allow for certain lower voltage interconnected facilities to be included in the BES for reliability; this demarcation should be relocated in the Inclusions listing along with provision for including lower voltage facilities. If the SDT incorporates this statutory language as its core definition, it will have addressed FERC's primary concern with a minimum of disruption to the current NERC system of definitions. The definition could then be further elaborated to show specific points of demarcation for each inclusion and exclusion similar to that Proposal 6 from the WECC Bulk Electric System Definition Task Force ("BESDTF") team to further delineate BES and non-BES facilities. Finally, Cowlitz proposes the following concept: for the "bulk-power system" to be reliable, not all its elements need be reliable unto themselves. If the BES as a subset is properly defined, and is successfully maintained and operated reliably, then the rest of the "bulk-power system" will then benefit and be reliable as a whole.

No

In concept, we support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams noting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort. Also, the reference to "two windings of 100 kV or higher" may create some confusion because many three-phase transformer banks have 6 or 9 windings, depending on whether the transformer has a tertiary. We suggest clarifying this provision by changing the clause reference two windings to read: "with two voltage transformer windings of 100 kV or higher per phase that are connected to an interconnected transmission system unless excluded..." We again urge the SDT to consider further delineation of points of demarcation similar to WECC BESDTF Proposal 6.

No

Cowlitz is concerned that I2 inclusion criteria that includes the arbitrary 20 MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators is over-inclusive. We believe that after thorough engineering review, this value should increase. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted improperly expands the BES definition to include generators that the statute requires to be excluded. We understand that it is not in the scope of the SDT to redefine the Registry Criteria, however we also believe it is not proper for the SDT to use the Registry Criteria as a measure of what to include in the BES. Again we reiterate that the BES is a subset of the "bulk-power system" (BPS). As such, other elements of the BPS can be subject to limited standard compliance to assure reliability of the BES, but not for reliability unto itself. Development of decentralized generation should not be discouraged by overregulation as it in aggregate is more difficult to mount an attack to neutralize it. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at

this level in order to be reliable." Unfortunately, the SDT appears to have concluded that any interconnection facility operating above 100-kV should be classified as BES. The result will be to require Generation Owners to register as Transmission Owners/Operators, as well, producing substantial additional compliance costs for those Generation Owners but resulting in little or no improvement in the reliability of the BES. We recommend that the SDT, like the Project 2010-07 SDT (commonly referred to as the GO/TO Team), give careful consideration to the practical results of its recommendations rather than relying on abstract conclusions about whether a "contiguous" or "non-contiguous" BES is more desirable. We are concerned that the SDT's pursuit of a "contiguous" BES will result in a substantially over-inclusive BES definition. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. NERC's Standards Drafting Team for Project 2010-07, has already considered this question and, based on an in-depth review of potentially applicable reliability standards, has concluded that generation interconnection facilities, even if operated above 100-kV, need to comply only with a limited set of reliability standards in order to achieve the reliability goals. Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability.

No

Cowlitz is concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore not properly included in the BES definition.

Yes

Including "all" blackstart and blackstart cranking paths in the BES may ultimately provide an incentive to the electric industry to reduce the number of resources with blackstart capability. We therefore suggest that essential blackstart resources identified by the Regional Entity or Transmission Operator should be included in the Bulk Electric System, but non-essential blackstart resources need not be.

No

Cowlitz agrees that it is important to address wind generation facilities and similar generation facilities in which a large number of generating units, each with a relatively small capacity, are clustered and fed into the grid at a single interconnection point. That being said, we are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.

Yes

FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained. Cowlitz believes the exclusion as drafted adequately defines radials. Further, we would point out that two transmission systems that are operated radial with a normal open between them can't be operated reliably with the normal open indefinitely closed. Such extended closures are not possible were transmission protection systems are not designed for networked systems.

No

As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold (through reference to Inclusion I2) lacks an adequate technical justification in this context. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit ("standby, back-up, and maintenance power…") should be eliminated.

Yes
Cowlitz strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. Cowlitz supports the LDN exclusion, but we believe the exclusion should be refined in the following respects: • The SDT's draft states that: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load." (emphasis added) We recommend that the SDT revise the sentence quoted above as follows: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances. We propose that a reliable BES will help insure a reliable LDN. If the LDN is not reliable, it should then be an issue to be resolved by the local authorities. If the BES is not reliable, the local authorities lack the tools to remedy the situation.
Yes
Cowlitz supports the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that can ill afford the substantial costs that accompany imposition of mandatory compliance with reliability standards. Further, we agree that the small utilities covered by the exemption will have no measurable impact on the operation of the interconnected BES. In the Pacific Northwest, many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid. Further, the such resources used to comply with the reliability efforts unjustly take away from necessary resources needed for local quality of service efforts.
No
While Cowlitz agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions – will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1, Cowlitz believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. As discussed in our answers to several questions, Cowlitz notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that "users" of the BPS can be subject to reliability regulation. Hence, even where an entity does not own BES or BPS assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BESDTF Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.
Yes
The Exceptions process is a necessary part of making this proposal complaint with the Federal Power Act. As noted in our responses to Question 1 and Question 11, we believe the basic SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used in the local distribution of electric energy. The SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities. Cowlitz understands the difficulty in demonstrating what is and is not distribution to FERC due to the vague statute language. Cowlitz will work to help provide technical arguments which will buttress the BES definition in the future.

Cowlitz has these additional concerns: • The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." Cowlitz is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BESDTF approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. • For the reasons we have explained in our answer to Question 11, we believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process.
Individual
Mihai Cosman
California Public Utilities Commission
Yes
The CPUC supports the changes, especially the exclusions and the flexibility given to facilities to prove that they are not part of the BES. However, the CPUC is concerned about the automatic imposition of deterministic standards that are arbitrary rather than technically-based: (1) the 100kV "bright line" test for transmission facilities, and the (2) 20 MVA threshold for generating units. In general, the current BES definition is largely deterministic rather than based on economics or probabilities. An arbitrary number such as a "bright line" test should not be the singular gauge for inclusion in the BES. A robust BES definition should consider the actual impact on the system and the cost. The courts have spoken on the issue, Illinois Commerce Commission v. Federal Energy Regulatory Commission, 576 F.3d 476, and instructed FERC to approve projects, "pricing scheme", only if the benefits outweigh the cost. Further, the 20 MVA threshold for generating facilities is coincident with the NERC threshold for registered entities. While a logical threshold to require generators to register with NERC, the required reliability assessments, and subsequent reliability upgrades may be prohibitively expensive for small generating units.
Yes
The CPUC would like a technical justification/rational for the 20 MVA threshold. We understand and agree with the ability to show no impact through a technical impact assessment, but such an assessment may be costly for a small 20-50 MW peaker plant that may operate for few hours during any given month. The cost imposed to small generating plants that operate a few hours a month may be too excessive given the probability of the generator causing an event and the cost associated with the event. The BES definition should be more than a deterministic standard and should properly assess every asset it proposes to include, especially given what the courts have ruled. We believe it would be preferable to include individual elements at power plants that can impact the BES (governors, system stabilizers, breakers,…) rather than to extend the definition of the BES to include all small power plants.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Consideration of Comments on the Revisions Made to the Definition of Bulk Electric System — Project 2010-17

The Definition of Bulk Electric System Drafting Team thanks all commenters who submitted comments on the revisions made to the definition of BES. The definition and supporting documents were posted for a 30-day public comment period from April 28, 2010 through May 27, 2010. The stakeholders were asked to provide feedback on the standards through a special Electronic Comment Form. There were 154 sets of comments, including comments from more than 279 different people from approximately 213 companies representing 10 of the 10 Industry Segments as shown in the table on the following pages.

http://www.nerc.com/filez/standards/Project2010-17_BES.html

The SDT has made numerous clarifying changes to the definition due to comments received:

- The bright-line core definition has been revised to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists.
- An additional inclusion (I5) was developed for Reactive Resources and an additional exclusion (E4) was developed to clarify that Reactive Resources that are owned by retail customers for their own use are not to be included.
- In Inclusion I1, deleted the Generator Step-Up and Phase Angle Regulating transformer language, changed the wording from "windings" to "terminals", and added the terms "primary" and "secondary".
- Inclusion I2 has been eliminated and Inclusion I3 (now numbered as Inclusion I2) has been revised to include generating resourceswith gross aggregate nameplate rating per the ERO Statement of Compliance Registry Criteria for consistency between the two documents.
- The SDT agreed that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system elements and has removed the inclusion for Cranking Paths.
- Inclusion I4 has been revised to eliminate the term 'collector system.'
- Within Exclusion E1, the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system.
- Within Exclusion E2, the SDT clarified the generation allowed within the system
- Within Exclusion E3, the SDT eliminated the term "Distribution" in the label, eliminated the provision which referred to automatic fault interrupting devices, clarified the connection point of the local network, inserted a provision in the local network exclusion to limit the operating voltage of the local network to 300 kV, and effectively removed the comparison test between generation and minimum demand of the local network.
- Included in the core definition a statement that excludes facilities used in local distribution of electric energy.

Several commenters objected to simply carrying through the generation thresholds from the ERO Statement of Compliance Registry Criteria as part of the revised definition. However, no respondents provided technical justifications for changing these values. Furthermore, the scope of this project deals mainly with responding to FERC Orders 743 and 743a which clearly stated that the intent of the order was to maintain the status quo and to only address those urgent issues identified in the Orders. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Issues such as what is necessary for the reliable operation of the BES, whether the BES needs to be contiguous, possible interconnection differences, who are users of the BES, and correlation of the definition of BES and the ERO Statement of Compliance Registry Criteria will be addressed with this new SAR. The proposed SAR has been posted for information purposes only concurrent with the second posting of this project. A formal comment period will follow.

The following minority opinions did not result in changes to the definition:

- The SDT retained the inclusion for Blackstart Resources although some commenters thought it should be deleted. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which include situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES Elements.
- The SDT considered commenters' suggestions regarding allowance of some power flow out of the local network, and concluded that strict limits precluding out-flow are appropriate, particularly given that the local network comprises facilities that are electrically parallel to the BES.

In addition, in response to comments received, the SDT has clarified the effective date in the Implementation Plan.

The SDT proposes to move this project to the 45-day parallel comment and initial ballot stage.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 609-452-8060 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

[1] The appeals process is in the Reliability Standards Development Procedures: http://www.nerc.com/standards/newstandardsprocess.html.

Index to Questions, Comments, and Responses

1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 22

2. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 69

3. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 90

4. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 135

5. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 160

6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 183

7. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 206

8. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 242

9. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 268

10. The SDT is discussing an exclusion from the Bulk Electric System (BES) for small utilities based on statements in Order No. 743 that FERC does not believe its suggested approach to the BES definition and exemption process will have a significant economic impact on a substantial number of small entities and that small entities will not adversely impact the reliability of the Bulk Electric System. The SDT has been made aware that organizations that are not presently required to be registered by the NERC Statement of Compliance Registry Criteria would meet the requirements to be registered as Transmission Owners given the current proposed BES definition. These small utilities could use the Rules of Procedure (ROP) exception process but this may be an issue that could be handled more appropriately through the BES definition. This would alleviate the paperwork burden for these small utilities and also avoid a possibly unnecessary and significant impact on the administration of the ROP exception process during the transition period to the revised BES definition. The proposed exclusion language is: Exclusion E4: Transmission Elements, from a single Transmission source connected at a voltage of 100 kV or greater, owned by a small utility whose connection to the BES is solely through this single Transmission source, and without interconnected generation as recognized in the BES Designation Inclusion Items I2, I3, I4, or I5. A small utility is recognized as an entity that performs a Distribution Provider or Load Serving Entity function but is not required to register as a Distribution Provider or Load Serving Entity by the ERO. Do you agree with this approach and the proposed language? If not, please be specific in your response with a technical reason for your disagreement and, if appropriate, suggested language for such an exclusion if you agree in general but feel that alternative language would be more appropriate. 340

11. In Order No. 743, the Commission addressed the need to differentiate between Transmission and distribution in the revised definition of the Bulk Electric System (BES). Specifically, the Commission stated that local distribution facilities are to be excluded from the BES. The SDT believes that it has excluded local distribution facilities through the revised bright-line core definition and specific inclusions and exclusions. Do you agree with this position? If not, please provide specific comments and suggestions on what else needs to be addressed or added. 357

12. Are you aware of any conflicts between the proposed definition and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? If so, please identify them here and provide suggested language changes that may clarify the issue. 390

13. Are there any other concerns with this definition that haven't been covered in previous questions and comments? 410

The Industry Segments are:

1 — Transmission Owners
2 — RTOs, ISOs
3 — Load-serving Entities
4 — Transmission-dependent Utilities
5 — Electric Generators
6 — Electricity Brokers, Aggregators, and Marketers
7 — Large Electricity End Users
8 — Small Electricity End Users
9 — Federal, State, Provincial Regulatory or other Government Entities
10 — Regional Reliability Organizations, Regional Entities

	Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Mikhail Falkovich	Public Service Enterprise Group LLC	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Clint Bogan		NPCC	5, 6
2.	Ken Brown		RFC	1
3.	Jeffrey Mueller		RFC	3
4.	Peter Dolan		RFC	6

2.	Group	Guy Zito	Northeast Power Coordinating Council	X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC	3
2.	Gregory Campoli	New York Independent System Operator	NPCC	2
3.	Kurtis Chong	Independent Electricity System Operator	NPCC	2
4.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1
5.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC	1
6.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10
7.	Mike Garton	Dominion Resources Services, Inc.	NPCC	5

Group/Individual	Commenter	Organization		Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
8.	Brian L. Gooder	Ontario Power Generation Incorporated	NPCC	5									
9.	Kathleen Goodman	ISO - New England	NPCC	2									
10.	Chantel Haswell	FPL Group, Inc.	NPCC	5									
11.	David Kiguel	Hydro One Networks Inc.	NPCC	1									
12.	Michael Lombardi	Northeast Utilities	NPCC	1									
13.	Randy MacDonald	New Brunswick Power Transmission	NPCC	1									
14.	Bruce Metruck	New York Power Authority	NPCC	6									
15.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10									
16.	Robert Pellegrini	The United Illuminating Company	NPCC	1									
17.	Si Truc Phan	Hydro-Quebec TransEnergie	NPCC	1									
18.	Saurabh Saksena	National Grid	NPCC	1									
19.	Michael Schiavone	National Grid	NPCC	1									
20.	Wayne Sipperly	New York Power Authority	NPCC	5									
21.	Donald Weaver	New Brunswick System Operator	NPCC	1									
22.	Ben Wu	Orange and Rockland Utilities	NPCC	1									
3.	Group	Bill Middaugh	Tri-State Generation and Transmission Association, Inc.	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Michael Houglum	Tri-State Generation and Transmission Association, Inc.	WECC	6, 1, 3, 5
2.	Rick Ashton	Tri-State Generation and Transmission Association, Inc.	WECC	6, 1, 3, 5
3.	Mark Graham	Tri-State Generation and Transmission Association, Inc.	WECC	6, 1, 3, 5
4.	Chris Pink	Tri-State Generation and Transmission Association, Inc.	WECC	6, 1, 3, 5
5.	Marlene Marquez	Tri-State Generation and Transmission Association, Inc.	WECC	6, 1, 3, 5
6.	Mark Conner	Tri-State Generation and Transmission Association, Inc.	WECC	6, 1, 3, 5
7.	Keith Carman	Tri-State Generation and Transmission Association, Inc.	WECC	6, 1, 3, 5
4.	Group	Kevin Koloini	American Municipal Power and Members			X	X	X					

Additional Member	Additional Organization	Region	Segment Selection

	Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Steve Harmath	City of Orrville	RFC 4										
5.	Group	Scott Berry	Small Entity Working Group (SEWG)	X			X	X					

	Additional Member	Additional Organization	Region	Segment Selection
1.	Kevin Koloini	American Municipal Power, Inc.	RFC	4
2.	Mark Ringhausen	Old Dominion Electric Cooperative	RFC	4
3.	Gary Wright	Allegheny Electric Cooperative	RFC	4
4.	Mike Tracy	Hoosier Energy REC, Inc	RFC	1
5.	Bob Thomas	Illinois Municipal Power Agency	RFC	4
6.	Tom Connell	Indiana Municipal Power Agency	RFC	4

6.	Group	Sammy Alcaraz	Imperial Irrigation District	X		X	X		X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Jose Landeros	IID BES Working Gp	WECC	
2.	Epifano Martinez	IID BES Working Gp	WECC	
3.	David Barajas	IID BES Working Gp	WECC	
4.	Chris Reyes	IID BES Working Gp	WECC	
5.	Fernando Gutierrez	IID BES Working Gp	WECC	
6.	Chris Riven	IID BES Working Gp	WECC	
7.	Joel Fugett	IID BES Working Gp	WECC	
8.	Al Minor	IID BES Working Gp	WECC	
9.	Juan Carlos Sandoval	IID BES Working Gp	WECC	

7.	Group	Frank Gaffney	Florida Municipal Power Agency	X		X	X	X	X	X			

	Additional Member	Additional Organization	Region	Segment Selection
1.	Timothy Beyrle	City of New Smyrna Beach	FRCC	4
2.	Greg Woessner	Kissimmee Utility Authority	FRCC	3
3.	Jim Howard	Lakeland Electric	FRCC	3
4.	Lynne Mila	City of Clewiston	FRCC	3
5.	Joe Stonecipher	Beaches Energy Services	FRCC	1

	Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
6.	Cairo Vanegas	Fort Pierce Utility Authority	FRCC 4										
7.	Randy Hahn	Ocala Electric Utility	FRCC 3										
8.	Group	Terry L. Blackwell	Santee Cooper	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	S. T. Abrams	Santee Cooper	SERC	1
2.	Rene Free	Santee Cooper	SERC	1
3.	Vicky Budreau	Santee Cooper	SERC	1
4.	Jim Peterson	Santee Cooper	SERC	1

9.	Group	David Taylor	NERC Staff Technical Review										
10.	Group	Mark Byrd	NERC Transmission Issues Subcommittee (TIS)	X	X							X	X

	Additional Member	Additional Organization	Region	Segment Selection
1.	See TIS Roster			

11.	Group	Louis Slade	Dominion	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Michael Gildea	Electric Market Policy	SERC	1, 3, 5, 6
2.	Connie Lowe	Electric Market Policy	RFC	5, 6
3.	Mike Garton	Electric Market Policy	MRO	5, 6
4.	Matt Woodzell	F&H	SERC	5
5.	Chip Humphrey	F&H	RFC	5
6.	Jeff Bailey	Nuclear	NPCC	5
7.	Mike Crowley	Electric Transmission	SERC	1, 3

12.	Group	Robert Rhodes	SPP Standards Review Group		X								

	Additional Member	Additional Organization	Region	Segment Selection

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
1. John Allen	City Utilities of Springfiled	SPP	1, 4									
2. Matt Bordelon	CLECO	SPP	1, 3, 5, 6									
3. Michelle Corley	CLECO	SPP	1, 3, 5, 6									
4. Louis Guidry	CLECO	SPP	1, 3, 5, 6									
5. Jonathan Hayes	SPP	SPP	2									
6. Tom Hestermann	Sunflower Electric	SPP	1, 5									
7. Valerie Pinamonti	AEP	SPP	1, 3, 5									
8. Mike Richardson	AEP	SPP	1, 3, 5									
13. Group	Carol Gerou	MRO's NERC Standards Review Forum										X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Mahmood Safi	Omaha Public Utility District	MRO	1, 3, 5, 6
2.	Chuck Lawrence	American Transmission Company	MRO	1
3.	Tom Webb	Wisconsin Public Service Corporation	MRO	3, 4, 5, 6
4.	Jodi Jenson	Western Area Power Administration	MRO	1, 6
5.	Ken Goldsmith	Alliant Energy	MRO	4
6.	Alice Ireland	Xcel Energy	MRO	1, 3, 5, 6
7.	Dave Rudolph	Basin Electric Power Cooperative	MRO	1, 3, 5, 6
8.	Eric Ruskamp	Lincoln Electric System	MRO	1, 3, 5, 6
9.	Joe DePoorter	Madison Gas & Electric	MRO	3, 4, 5, 6
10.	Scott Nickels	Rochester Public Utilties	MRO	4
11.	Terry Harbour	MidAmerican Energy Company	MRO	1, 3, 5, 6
12.	Marie Knox	Midwest ISO Inc.	MRO	2
13.	Lee Kittelson	Otter Tail Power Company	MRO	1, 3, 4, 5
14.	Scott Bos	Muscatine Power and Water	MRO	1, 3, 5, 6
15.	Tony Eddleman	Nebraska Public Power District	MRO	1, 3, 5
16.	Mike Brytowski	Great River Energy	MRO	1, 3, 5, 6
17.	Richard Burt	Minnkota Power Cooperative, Inc.	MRO	1, 3, 5, 6

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
14. Group	Charles W. Long	SERC Planning Standards Subcommittee	X									X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Pat Huntley	SERC Reliability Corporation	SERC	10
2.	John Sullivan	Ameren Services Co.	SERC	1
3.	Charles Long	Entergy Services, Inc.	SERC	1
4.	Philip Kleckley	South Carolina Electric & Gas Co	SERC	1
5.	Bob Jones	Southern Company Services	SERC	1
6.	Darrin Church	Tennessee Valley Authority	SERC	1

15. Group	Don Mazuchowski	Michigan Public Service Commission(MPSC)									X	

	Additional Member	Additional Organization	Region	Segment Selection
1.	Angie Butcher	MPSC	RFC	9

16. Group	Jason Marshall	ACES Power Participating Members	X		X	X	X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Chris Lang	Golden Spread Electric Cooperative	ERCOT	3, 4, 6
2.	Chris Bradley	Big Rivers Electric Cooperative	SERC	1, 3, 5, 6
3.	James Jones	Southwest Transmission Company	WECC	1
4.	Liz Hayden	Arizona Electric Power Cooperative	WECC	3, 5, 6

17. Group	Jim Case	SERC OC Standards Review Group	X		X							

	Additional Member	Additional Organization	Region	Segment Selection
1.	Gerald Beckerle	Ameren		1, 3
2.	Scott Brame	Ameren		1, 3
3.	Mike Hirst	Cogentrix		5, 6
4.	Dan Roethemeyer	Dynegy		5, 6
5.	Tim Hattaway	PowerSouth		1, 3, 5, 9
6.	Randy Castello	Alabama Power		1, 3, 5
7.	Danny Dees	MEAG		1, 3, 5, 9

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
8. Robert Thomasson	BREC	1, 3, 5, 9										
9. Bob Dalrymple	TVA	1, 3, 5, 9										
10. Andy Burch	EEI	1, 5										
11. David Trego	Fayetteville PWC	1, 3, 4, 9										
12. Reggie Wallace	Fayetteville PWC	1, 3, 4, 9										
13. Patrick Woods	EKPC	1, 3, 5, 9										
14. Darrin Adams	EKPC	1, 3, 5, 9										
15. George Carruba	EKPC	1, 3, 5, 9										
16. Alvis Lanton	SIPC	1, 3, 5										
17. Brad Young	LGE/KU	1, 3, 5										
18. Melinda Montgomery	Entergy	1, 3										
19. Steve McElhaney	SMEPA	1, 3, 5, 9										
20. Marc Butts	Southern	1, 3, 5										
21. John Troha	SERC	10										
18. Group	David Curtis	Hydro One Networks Inc	X		X						X	

	Additional Member	Additional Organization	Region	Segment Selection
1.	Bing Young	Transmission Development	NPCC	1
2.	David Kiguel	Hydro One Distribution	NPCC	3
3.	Oded hubert	Regulatory Affairs	NPCC	9

19. Group	Barry Lawson	National Rural Electric Cooperative Association (NRECA)	X		X	X	X					
1. Patti Metro												
20. Group	Barbara Hindin	Edison Electric Institute	X									
1. See EEI member list at www.eei.org												
21. Individual	Richard Malloy	Idaho Falls Power										

	Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
22.	Individual	Jim Lauth	City of Santa Clara, California, dba Silicon Valley Power			X						X	
23.	Individual	Randall Ozaki	Overton Power District No. 5	X		X							
24.	Individual	Richard Dearman	Tennessee Valley Authority	X		X		X	X				
25.	Individual	Janet Smith	Arizona Public Service Company	X		X		X	X				
26.	Individual	Brent Ingebrigtson	LG&E and KU Energy LLC	X		X		X	X				
27.	Individual	John Free	Alabama Public Service Commission									X	
28.	Individual	Michelle MIzumori	Western Electricity Coordinating Council										X
29.	Individual	William Drummond	Western Montana Electric Generating and Transmission Cooperative	X		X	X						
30.	Individual	Jim Uhrin	ReliabilityFirst										X
31.	Individual	Don Brookhyser	Cogeneration Association of California and Energy Producers & Users Coalition					X		X			
32.	Individual	Eddy Reece	Rayburn Country Electric Cooperative, Inc.	X		X							
33.	Individual	Roger Clayton	New York State Reliability Council										X
34.	Individual	Cynthia S. Bogorad	Transmission Access Policy Study Group	X		X	X	X					
35.	Individual	Randy D. Crissman	New York Power Authority	X		X		X	X				

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
36. Individual	Antonio Grayson	Southern Company	X		X						X	
37. Individual	Dennis Hogan	Luminant Energy					X					
38. Individual	Darren D. GIll	Pennsylvania Public Utility Commission									X	
39. Individual	Katie Coleman	Texas Industrial Energy Consumers (TIEC)							X			
40. Individual	John P. Hughes	Electricity Consumers Resource Council (ELCON)			X		X	X	X			
41. Individual	Brian Conroy	Central Maine Power Company	X									
42. Individual	John Allen	New York State Electric & Gas and Rochester Gas & Electric	X									
43. Individual	Brandy A. Dunn	Western Area Power Administration	X									
44. Individual	Robin Lunt	National Association of Regulatory Utility Commissioners									X	
45. Individual	Scott Tomashefsky	Northern California Power Agency				X	X					
46. Individual	Sandra Shaffer	PacifiCorp	X		X		X	X				
47. Individual	Kevin Conway	Intellibind								X		
48. Individual	Si Truc PHAN	Hydro-Quebec TransEnergie	X									
49. Individual	Martin Bauer	US Bureau of Reclamation					X					

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
50. Individual	Jerome Murray	Oregon Public Utility Commission Staff									X	
51. Individual	Eric Lee Christensen	Public Utility District No. 1 of Snohomish County, Washington	X		X	X	X					
52. Individual	Nicholas Winsemius	Grand Haven Board of Light and Power			X							
53. Individual	Josh Dellinger	Glacier Electric Cooperative										
54. Individual	Russ Schneider	FHEC			X							
55. Individual	Kim Moulton	Vermont Transco	X									
56. Individual	Richard McLeon	South Texas Electric Cooperative, Inc.	X									
57. Individual	Angela Gaines	Portland General Electric Company	X		X		X	X				
58. Individual	Richard McLeon	South Texas Electric Cooperative, Inc.	X									
59. Individual	Michael Albosta	Sweeny Cogeneration LP					X					
60. Individual	Michael Jones	National Grid	X		X							
61. Individual	Bud Tracy	Blachly Lane Electric Cooperative			X							
62. Individual	Paul Titus	Northern Wasco County PUD	X		X							
63. Individual	Bill Dearing	PUD No. 2 of Grant County, Washington	X		X	X	X					
64. Individual	Dave Markham	Central Electric Cooperative			X							
65. Individual	Dave Hagen	Clearwater Power Company			X							

	Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
66.	Individual	Roman Gillen	Consumers Power Inc.	X		X							
67.	Individual	Roger Meader	Coos-Curry Electric Cooperative			X							
68.	Individual	Dave Sabala	Douglas Electric Cooperative			X							
69.	Individual	Bryan Case	Fall River Electric Cooperative			X							
70.	Individual	Rick Crinklaw	Lane Electric Cooperative			X							
71.	Individual	Ray Ellis	Lincoln Electric Cooperative			X							
72.	Individual	Richard Reynolds	Lost River Electric Cooperative			X							
73.	Individual	Annie Terracciano	Northern Lights Inc.			X							
74.	Individual	Doug Adams	Okanogan Electric Cooperative			X							
75.	Individual	Rick Paschall	PNGC Power			X	X				X		
76.	Individual	Heber Carpenter	Raft River Rural Electric Cooperative			X							
77.	Individual	Ken Dizes	Salmon River Electric Cooperative	X		X							
78.	Individual	Steve Eldrige	Umatilla Electric Cooperative	X		X							
79.	Individual	Marc Farmer	West Oregon Electric Cooperative			X							
80.	Individual	Kerry Robinson	Wells Rural Electric Company			X							
81.	Individual	Hertzel Shamash	Dayton Power and Light Company	X		X		X					

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
82. Individual	David Proebstel	Clallam County PUD No.1			X							
83. Individual	Matt Morais	Electric Reliability Council of Texas, Inc.		X								
84. Individual	Martin Kaufman	ExxonMobil Research and Engineering	X				X					
85. Individual	Laura Lee	Duke Energy	X		X		X	X				
86. Individual	Curtis Klashinsky	FortisBC										
87. Individual	Mark Thompson	Alberta Electric System Operator		X								
88. Individual	RoLynda Shumpert	South Carolina Electric and Gas	X		X		X	X				
89. Individual	Reggie Wallace	Fayetteville Public Works Commission	X		X							
90. Individual	Gary Kruempel	MidAmerican Energy Company	X		X		X	X				
91. Individual	Dennis Minton	Florida Keys Electric Cooperative	X									
92. Individual	Thad Ness	American Electric Power	X		X		X	X				
93. Individual	Rick Drury	East Kentucky Power Cooperative, Inc.	X		X		X					
94. Individual	Andrew Z. Pusztai	American Transmission Company, LLC	X									
95. Individual	Linda Jacobson	Farmington Electric Utility System			X							
96. Individual	Rich Salgo	Sierra Pacific Power Co d/b/a NV Energy	X		X		X	X				
97. Individual	Jennifer Eckels	Colorado Springs Utilities	X		X		X	X				

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
98. Individual	Jianmei Chai	Consumers Energy Company			X	X	X					
99. Individual	Chad Bowman	Chelan PUD - CHPD	X		X		X	X				
100. Individual	Michelle R D'Antuono	Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)			X		X		X	X		
101. Individual	Kenneth A. Goldsmith	Alliant Energy				X						
102. Individual	Deborah J Chance	Chevron Global Power, a division of Chevron U.S.A. Inc.					X		X	X		
103. Individual	Scott Bos	Muscatine Power and Water	X		X		X	X				
104. Individual	Bill Keagle	BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	X									
105. Individual	John Bee	Exelon	X		X		X					
106. Individual	David C. Kahly	Kootenai Electric Cooperative			X	X						
107. Individual	Tracy Richardson	Springfield Utility Board			X							
108. Individual	Joe Tarantino	Sacramento Municipal Utility District (SMUD)	X		X	X	X	X				
109. Individual	Rick Hansen	City of St. George			X		X				X	
110. Individual	John Brockhan	CenterPoint Energy	X									

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
111. Individual	Sunitha Kothapalli	Puget Sound Energy	X		X		X					
112. Individual	Linda Esparza	Public Utility District No. 1 of Franklin County			X							
113. Individual	Patrick Farrell	Southern California Edison Company	X		X		X	X				
114. Individual	Thomas Weller	Midstate Electric Cooperative			X							
115. Individual	Jason Snodgrass	GTC	X									
116. Individual	Diane Barney	New York State Dept of Public Service									X	
117. Individual	Bob Thomas	Illinois Municipal Electric Agency				X						
118. Individual	Kim Wissman	Public Utilities Commission of Ohio									X	
119. Individual	Jeff Nelson	Springfield Utility Board			X							
120. Individual	David Angell	Idaho Power	X				X					
121. Individual	Robert Ganley	Long Island Power Authority	X									
122. Individual	Mike Hirst	Cogentrix Energy, LLC					X					
123. Individual	Jack Stamper	Clark Public Utilities	X									
124. Individual	John A. Gray	The Dow Chemical Company					X		X			
125. Individual	David Thorne	Pepco Holdings Inc	X		X							
126. Individual	Gary Ferris	Vigilante Electric Cooperative			X							

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
127. Individual	Steve Alexanderson	Central Lincoln			X	X					X	
128. Individual	Neil Phinney	Georgia System Operations			X	X						
129. Individual	Bill Harm	PJM		X								
130. Individual	Heather Hunt	New England States Committee on Electricity									X	
131. Individual	Darryl Curtis	Oncor Electric Delivery Company LLC	X									
132. Individual	Charles Yeung	Southwest Power Pool		X								
133. Individual	Geoff Carr	Northwest Requirements Utilities										
134. Individual	Jonathan Appelbaum	United Illuminating	X									
135. Individual	John Cummings	PPL Energy Plus and PPL Generation					X	X				
136. Individual	Joe Petaski	Manitoba Hydro	X		X		X	X				
137. Individual	Kathleen Goodman	ISO New England, Inc.		X								
138. Individual	Manny Robledo	City of Anaheim			X							
139. Individual	Chris de Graffenried	Consolidated Edison Co. of NY, Inc.	X		X		X	X				
140. Individual	Scott Miller	MEAG Power	X		X		X					
141. Individual	Alice Ireland	Xcel Energy	X		X		X	X				

	Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
142.	Individual	Michael Falvo	Independent Electricity System Operator		X								
143.	Individual	Randy MacDonald	NB Power Transmission	X									
144.	Individual	Glen Sutton	ATCO Electric	X									
145.	Individual	David Burke	Orange and Rockland Utilities, Inc.	X		X							
146.	Individual	Shane McMinn	Golden Spread Electric Cooperative, Inc.			X	X	X					
147.	Individual	Rick Spyker	AltaLink	X									
148.	Individual	Benjamin A Friederichs	Big Bend Electric Cooperative, Inc.			X							
149.	Individual	J. McFeely, PE	Modern Electric Water Company										
150.	Individual	Gary Carlson	Michgan Public Power Agency					X					
151.	Individual	Peter Mackin	Utility System Efficiencies, Inc.										
152.	Individual	Keith Morisette	Tacoma Power	X		X	X	X	X				
153.	Individual	Russell A. Noble	Cowlitz County PUD			X	X	X					
154.	Individual	Mihai Cosman	California Public Utilities Commission									X	

1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: Based on stakeholder comments, the SDT has made additional clarifying revisions to the draft BES definition. The BES Draft Definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. In response to comments, the SDT added an additional inclusion to clarify the inclusion of Reactive Resources and an additional exclusion to clarify that Reactive Resources that are owned by retail customers for their own use are not to be included. Finally, the SDT elected to retain the 100 kV bright-line criteria. This is the bright-line voltage level that is included in the existing approved definition of the Bulk Electric System in the NERC Glossary of Terms. While a number of stakeholders suggested alternate voltage levels, no technical justification was provided that would lead the SDT to make a change. One goal of this project is to add clarity to the definition without significantly changing the population of BES Elements.

Changes made to the definition as a result of comments on this question are:

Bulk Electric System (BES): Unless modified by the lists shown below, ~~A~~a~~ll~~ Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources~~ as described below, and Reactive Power resources~~ connected at 100 kV or higher~~ unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.

I1 - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.

I5 –Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): **A** ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system.

E4 – Reactive Power devices owned and operated by the retail customer solely for its own use.

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

Organization	Yes or No	Question 1 Comment
Public Service Enterprise Group LLC	No	There is still room for misinterpretation of the BES boundaries. The BES definition has ramifications affecting many standards. NERC should provide examples of what specifically is in and what is out of BES boundaries.

Organization	Yes or No	Question 1 Comment
		Example one line diagrams showing "Generation Resources" included or excluded and types of radial feeds exempted should be shown. Identify what element is in BES / what is out. Suggest showing typical interconnection facilities. Addressing typical interconnection facility configurations will assist in developing a clear and concise definition that provides a precise line of demarcation between elements of the BES.
Response: Based on the stakeholder comments, the SDT has made additional revisions to the three parts of the BES Definition (Core Definition, Inclusion List, and Exclusion List) in order to improve clarity.		
Northeast Power Coordinating Council	No	The core definition should be revised to read: Bulk Electric System (BES): All Transmission Elements operated at 100 KV or higher, unless such designation is modified by the list shown below. The resulting modified BES shall comprise all Elements deemed necessary for operating an interconnected electric energy transmission network, but shall exclude any Elements used in the local distribution of electric energy. The inclusion and exclusion requirements are restrictive. For example, radial characteristics should not be limited by the amount of installed generation or single transmission source and/or require an interrupting device. Instead, one or more transmission sources could feed the radial load to provide redundancy as long as there is adequate protection and isolation for improved customer-supply continuity and reliability. This would be considered radial as long as the loss of any transmission source would not affect, and is not necessary for the operation of the interconnected transmission network. This retains the incentive to build transmission. The revised definition will have a direct impact on entities across North America and may conflict with regulatory requirements, Codes, and Licenses. FERC in its Order 743 and 743A has directed NERC to address these concerns. Include provisions in both the NERC exception criteria and exception process for federal, state and provincial jurisdictions. These provisions should provide clear guidance so that, if and when there are deviations from the exception criteria, they are properly identified with technical and regulatory justifications ensuring there is no adverse impact on the interconnected transmission network. This burden of proof should be left to the entity seeking exception because it may be difficult to define the exception criteria. Further, if such an explicit criteria could be defined, it could become another bright-line BES.
Hydro-Quebec TransEnergie	No	The bright line revised definition could expand significantly what is considered to be BES in the case of HQT, with no discernible impact on the reliable operation of the interconnected system, because of the nature of the Quebec interconnection. Furthermore, it should be stated that there appears to be a conflict between the proposed definition and the regulatory framework applicable in Quebec or at least there are some important differences between both. The non-FERC juridiction was acknowledged by FERC Order 743 in paragraph 95. As an example, the

Organization	Yes or No	Question 1 Comment
		Quebec regulatory framework considers that there are several levels of application for standards, not only one. A single BES definition cannot apply to all standards.The definition must include more latitude for non-FERC jurisdictions, as long as the reliability objective is achieved.
Hydro One Networks Inc	Yes	We agree with the concept of a bright-line definition and commend the SDT for developing a concept of explicit inclusions and exclusions as part of the definition. This will reduce the number of exception applications for some of the BES elements. However, the inclusion and exclusion requirements are extremely restrictive. For example, radial characteristics should not be limited by the amount of installed generation or single transmission source and/or require an interrupting device. Instead we believe that one or more transmission sources could feed the radial load to provide redundancy as long as there is adequate protection and isolation for improved customer-supply continuity and reliability. This should be considered radial as long as the loss of any transmission source does not affect, and is not necessary for, the operation of the interconnected transmission network. Further, it is imperative to understand that the NERC's revised definition will have a direct impact on entities across North America and will conflict with regulatory requirements, Codes, and Licenses. FERC in its Order 743 and 743A has directed NERC to address these concerns.We suggest the SDT and RoP teams should: o Carefully craft the exception criteria and procedure to be flexible and technically sound, to allow entities to adequately present their case to the ERO for inclusions or exclusions outside of the definition. This burden of proof should be left to the entity seeking exception because it may be difficult if not impossible to define the exception criteria. If such a criteria could be defined, it will in fact become another bright-line BES. o Include provisions in both the NERC exception criteria and exception procedure for federal, state and provincial jurisdictions. These provisions should provide clear guidance so that, if and when there are deviations from the exception criteria, they are properly identified with technical and regulatory justifications ensuring there is no adverse impact on the interconnected transmission network.
Response: Based on the stakeholder comments, the SDT has made additional revisions to the three parts of the BES Definition (Core Definition, Inclusion List, and Exclusion List) in order to improve clarity. See the responses to comments as well as a discussion of the latest revisions regarding the Radial Exclusion in Question 7 and the responses to comments regarding the Regulatory Requirements in Question 12 below.		
Tri-State Generation and Transmission Association, Inc.	No	The Northeast Power Coordinating Council stated that "Step-down transformers with the low-side terminals serving non-BES facilities, which are serving a distribution function, should not be part of the definition of BES." The drafting team stated that it agrees with the comment, but the implementation uses the term local distribution network, which is different than a step-down transformer. Transformers are addressed in the

Organization	Yes or No	Question 1 Comment
		answer to the NPCC comment 2, but uses the ambiguous “single Transmission source” phrase as a requirement to determine BES status.Other specific comments are below.
Response: The SDT has made revisions to the draft definition to clarify that only transformers with primary and secondary terminals operated at 100 kV or higher unless excluded under Exclusions E1 or E3 would be included in the BES under Inclusion I1. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
NERC Staff Technical Review	No	The core definition lacks a clear bright-line designation for generating resources. For such resources, the core definition only references “Real Power resources as described below” which in and of itself is not a bright-line designation. A bright-line designation for generating resources needs to be included in the core definition. A bright-line can be established in the core definition by including generating units based on the MVA ratings as found in current Inclusions I2, I3, and I5. Additional generating unit specifications could be included in the core definition or as Inclusions such as the existing Inclusion I4 for black start generating units. >>>>>>>>>>> The core definition also lacks clarity with respect to the facilities included under “Reactive Power resources” and may unintentionally omit Reactive Power resources necessary for reliable operation of the BES. The definition as proposed excludes devices such as shunt reactors connected to the tertiary terminals of a BES transformer and synchronous condensers connected through a transformer, and is unclear whether a static var compensator (SVC) with thyristor switched capacitors and thyristor switched or controlled reactors operated below 100 kV, but connected to the BES through a transformer (similar to a generator connected to the BES through a generator step-up transformer) is included in the BES definition. The qualifications on Reactive Power resources recommended below will include the necessary transmission resources noted above, without unintentionally including distribution capacitors connected on the low voltage side of a distribution transformer. >>>>>>>>>>> These concerns can be addressed by revising the core definition as follows:>>>>>>>>>>> “Bulk Electric System (BES): All Transmission Elements operated at 100 kV or higher;Real Power resources including, * Individual Generating Units greater than 20 MVA (gross nameplate rating), * Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross nameplate rating) connected through a common point of interconnection, * Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection, and * Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator’s restoration plan regardless of voltage; andReactive Power devices (capacitive or inductive, static

Organization	Yes or No	Question 1 Comment
		or actively controlled) greater than 20 Mvar that are directly connected at 100 kV or higher, or connected through a transformer at 100 kV or higher at the site of transformation;unless such designations are modified by the list of Inclusions and Exclusions shown below." >>>>>>>>>>> (Note that the rationale for excluding the 100 kV interconnection threshold on the first three bullets is provided in our responses to Questions 3, 4, and 6.) >>>>>>>>>>> In conjunction with the alternative language for the core definition proposed above, NERC staff proposes the following definition of Generating Unit be added to the NERC Glossary of Terms used in Reliability Standards: >>>>>>>>>>> Generating Unit - A device, whether spinning or static and whether connected synchronously, asynchronously, or electronically coupled, that produces electrical energy from another source of energy, either directly from the other energy source (such as a combustion turbine from natural gas or light distillate oil, a wind turbine from wind, or a solar array from the sun) or through a storage medium (such as pumped storage hydro, a flywheel, compressed air, or battery).
NERC Transmission Issues Subcommittee (TIS)	No	Although the wording can work as it is, the TIS believes clearer wording would be: "All Transmission Elements operated at 100 kV or higher, Real Power and Reactive Power resources as described below, connected at 100 kV or higher unless such designation is modified by the list shown below."
Response: The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. In response to comments, the SDT added an additional item to clarify the inclusion of Reactive Resources and an additional exclusion to clarify that Reactive Resources that are owned by retail customers for their own use are not to be included. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy. **I5** –Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1. **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.		
Dominion	No	Dominion believes the core BES definition should include any non-radial Element or Facility operated at 100 Kv or higher and should exclude any radial Element or Facility (regardless of operating voltage) as well as non-radial Element or Facility operated below 100 kV. The core definition should also include defined criteria that are applied to an Element or Facility to determine

Organization	Yes or No	Question 1 Comment
		whether or not it meets the intent of the Section 215 of Federal Power which defines the bulk power system as (1) facilities and control systems necessary for operating an interconnected electric energy transmission network; and (2) electric energy from generation facilities needed to maintain transmission system reliability. (3) However, Section 215 excludes facilities used in the local distribution of electric energy From the definition of the bulk power system . An Element or Facility should be included where the Element or Facility is necessary for operating an interconnected electric energy transmission network or is needed to maintain transmission system reliability. Likewise an Element or Facility should be excluded where the Element or Facility is not necessary for operating an interconnected electric energy transmission network or is needed to maintain transmission system reliability. Dominion agrees that the BES definition should exclude local distribution facilities under state jurisdiction. In specific instances (including UFLS programs and transmission protection systems that are implemented on distribution elements or radial transmission) local distribution facilities can be included in approved NERC reliability standards following under explicit standards dedicated to their explicit mission without their automatic inclusion in a definition of BES that could infringe on state jurisdiction. Dominion is also concerned at how complicated these lists of inclusions and exclusions has become! Dominion had implemented the 100 kV threshold, as displayed in prior drafts of this bright line test (without all these distractions provided in this BES definition version). With the complexity of inclusion and exclusion criteria now provided in this draft, Dominion is not sure it can replicate the list of facilities that are now qualified for inclusion in the BES as seen through the eyes of different auditors and this will expose Dominion to undesirable disputes down the road on what should have been included or excluded.
National Grid	No	The core definition should be revised to read: Bulk Electric System (BES): All Transmission Elements operated at 100 KV or higher, unless such designation is modified by the list shown below. The resulting modified BES shall comprise all Elements deemed necessary for operating an interconnected electric energy transmission network, but shall exclude any Elements used in the local distribution of electric energy.

Response: The SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists.

See the responses to comments regarding Local Distribution Facilities in Question 11 below.

Bulk Electric System (BES): Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list~~

Organization	Yes or No	Question 1 Comment
~~shown below~~. This does not include facilities used in the local distribution of electric energy. **I5** –Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1. **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.		
SPP Standards Review Group	No	A reference needs to be made to the ROP changes which also provide a mechanism whereby Elements may be excluded/included in the BES. Without that reference the proposed definition does not completely include all means for exceptions/inclusions. We would suggest the definition be expanded to say '...modified by the list shown below or as provided by Appendix 5C of the NERC Rules of Procedure.'
ISO New England, Inc.	Yes	This definition does not indicate that there may be other "inclusions" and "exclusions" for which an entity has to seek ERO/RRO approval. Therefore our recommendation is that this definition be modified to resolve this concern.This questionnaire contains information as part of the definition description that is different from the draft Implementation Plan and definition of Bulk Electric System document, specifically the entirety of E4 is included in the questionnaire but in neither of the other two documents; this may lead to confusion by commenters.
Response: In the first posting, a reference to the Rules of Procedure exception process was inadvertently omitted from the posting. It has been added back in to this posting. Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.		
Michigan Public Service Commission(MPSC)	No	MPSC Staff Comments: The BES definition proposed by the SDT should not use the term "transmission", if that term is defined as facilities that are at 100 kV or above. Not all facilities at 100 kV or above are properly considered transmission facilities. Use of "transmission" is causing unnecessary uncertainty and much debate among NERC stakeholders in the standards development and outreach processes over potential effects on jurisdiction, ownership, and possible new NERC registration requirements. This is especially true in states such as Michigan where Michigan Public Service Commission-regulated utilities sold their transmission facilities to independent transmission companies. Using FERC's Order 888 seven-factor technical-functional test as the basis for technical studies presented and evaluated in individual state dockets, the Michigan Public Service Commission approved, and subsequently FERC deferred to, those transmission and distribution classifications. Using "transmission" in the BES definition could cause unintended consequences. Entities already registered with NERC as Distribution Providers, Load Serving Entities, or Generation Owners, etc. which own facilities previously classified as distribution by state regulatory agencies, may also now be required to register with NERC as Transmission Planners, Owners, or Operators. A system element defined as BES should not determine jurisdiction, ownership, or require duplicative or additional

Organization	Yes or No	Question 1 Comment
		NERC registration. Much compliance with reliability standards is already being done by RTOs and entities already registered with NERC. Unnecessary and costly duplication of standards work should be avoided. We support that "All Transmission Elements ..." be replaced with "All network System Elements ..." in the BES definition.
Consumers Energy Company	No	The generic inclusion within the definition of BES, of the NERC-defined term, "Transmission", has the potential to cause confusion and controversy. Small entities that own facilities that have been approved by FERC as being classified as "distribution" according to the FERC Order 888 seven-factor test, could be viewed as owning "Transmission." Therefore, Regional Entities might require these small entities to register as Transmission Owners, Transmission Operators, and/or Transmission Planners. However, these facilities may not form a contiguous system, as expressed in the defined term, "Transmission" and being "An interconnected group of lines and associated equipment". Alternatively, such facilities, because they do not form such a contiguous system (and thus are not, and should not be, classified as Transmission) may inappropriately be excluded from the BES. Therefore, even though "Transmission Facilities" represent a subset of the BES, we urge that NERC avoid the use of the term, "Transmission" within the definition of BES. NERC should more explicitly describe, in a functional manner independent of the term, "Transmission", what is intended to be included within the core definition. For NERC to fail to do so is to invite challenges to the final definition as well as establish inappropriate reliability gaps. We agree with GO/TO Interface Project 2010-07 method of resolving reliability gaps by expanding requirements to the Distribution Provider function as necessary.We propose that "All Transmission Elements ..." be replaced with "All network System Elements ..."
Response: The SDT elected to retain the use of the word "Transmission" as it is an approved term in the NERC Glossary of Terms. As defined, Transmission is "An interconnected group of lines and associated equipment for the movement or transfer of electric energy between points of supply and points at which it is transformed for delivery to customers or is delivered to other electric systems." The SDT considers this an appropriate use of the term. No change made.		
Idaho Falls Power	No	We believe that inclusions or exclusions tied to brightline registration criteria (such as the 20MVA single generation source or 75 MVA facility) does not fulfill the effort the NERC BES definition project was tasked to undertake. The current draft's language will draw in many small municipal and other like entities with small generation assets, which have no material impact upon the BES. Further, should these generation assets not be excluded, this draft implies that all assets downstream to the point of interconnection are BES as well regardless of point of connection. We believe it was the original intent of this definition project to remove such immaterial assets and the undue burden placed upon such entities and subsequently their rate payers, who have no impact to the BES.

Organization	Yes or No	Question 1 Comment
Southern Company	No	Inclusion of individual units less than 75MVA was established when these smaller units were significant to the reliability of the BES and is outdated.
Intellibind	No	I agree in principle with the changes; however the definition and direct effect on certain small entities has not been improved. Primarily there are many entities that will be included that are marginal at best. Such entities will include intermittent generation such as wind, which may, or may not fit into the designation of aggregation of up to 75 MVA. It is becoming a practice to size a farm, or phase of a farm, to under 75MVA to get around the rules. A site is not defined and could be defined very narrowly. I do not agree with the 20MVA threshold for single generators when the generators net output cannot reach the 20MVA output. Trash burning facilities have heavy station service loads and by nameplate are included when in reality they operate below the arbitrary cut off. FERC has asked for technically justified standards, and the proposed BES definition still applies an arbitrary threshold not supported by technical argument. This issue is further aggravated by location of these resources. Many of these resources are remotely located specifically so that they have no, or minimize impact on the BES. Many times they are on long lines that are over 100KV simply because of efficiency in electrical transmission.
Fayetteville Public Works Commission	No	The changes made by the SDT with respect to Real Power resources in Inclusion I2 do not ensure a consistent determination by independent entities of whether a generator should be included within the BES. The ambiguity in Inclusion I2 has implications on other Inclusions and Exclusions. See the comments on Question 3 for additional detail.
Response: See the responses to comments as well as a discussion of the latest revisions regarding Generation Inclusions in Questions 3 and 4 below.		
Overton Power District No. 5	No	The term does not include facilities used in the local distribution of electric energy.
Response: The SDT has made additional clarifying revisions to the draft BES definition to address your concern. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Western Montana Electric Generating and Transmission Cooperative	No	As a general matter, Western Montana Electric Generating and Transmission Cooperative (WMG&T) supports the approach the Standards Development Team (“SDT”) has taken to defining the Bulk Electric System (“BES”). The changes made in the revised core definition are helpful and represent significant

Organization	Yes or No	Question 1 Comment
Northern Wasco County PUD Chelan PUD – CHPD Kootenai Electric Cooperative Public Utility District No. 1 of Franklin County Midstate Electric Cooperative Big Bend Electric Cooperative, Inc Northwest Requirements Utilities Cowlitz County PUD		progress toward an acceptable definition. With an effective and efficient exclusion process, the draft will better define the BES as a whole.We urge the SDT to bear in mind the restrictions contained in Section 215 of the Federal Power Act ("FPA") The "bulk-power system" (As per FERC, we treat the statutory term "bulk-power system" as equivalent to the term ordinarily used in the industry, "Bulk Electric System") definition imposes a clear limit on the reach of the mandatory reliability regime. The BES is made up of only those "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" and "electric energy from generation facilities needed to maintain transmission system reliability." Congress reinforced that limit in Section 215(i), where it emphasized that the FPA authorizes the imposition of reliability standards "for only the bulk-power system." WMG&T is concerned that the SDT's proposed definition is overly-broad, and that it will sweep in many Elements that have little or no material impact on the reliable operation of the interconnected bulk transmission grid. For example, the definition uses the arbitrary 20 MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators. Accordingly, for the BES definition to conform to the requirements of the statute, the SDT must adopt an effective mechanism to exempt facilities like these that are improperly swept in by the SDT's brightline approach to inclusions and exclusions. For this reason, the Exception process to accompany the SDT's definition is of critical concern. If the SDT incorporates this statutory language as its core definition, it will have addressed FERC's primary concern with a minimum of disruption to the current NERC system of definitions. The definition could then be further elaborated to show specific points of demarcation for each inclusion and exclusion similar to that Proposal 6 from the WECC Bulk Electric System Definition Task Force ("BESDTF") team to further delineate BES and non-BES facilities.
Response: See the responses to comments regarding the Regulatory Requirements in Question 12 below. See the responses to comments as well as a discussion of the latest revisions regarding Generation Inclusions in Questions 3 and 4 below. The SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
ReliabilityFirst	No	We feel the intent of the FERC Order was to simplify and not complicate the definition and the inclusion/exclusion process. This definition is now even more complex. we also feel that as a result of several defined terms such as the LDN teh proposed definition will in most

Organization	Yes or No	Question 1 Comment
		cases exclude portions of networks in locations such as Washington DC, New York and other Metro Areas, many Munis and citiies that are currently registered. If the intent is to remove entities from the registry this will in most likely do it.
Response: The SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. See the responses to comments as well as a discussion of the latest revisions regarding local networks in Question 9 below. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
New York State Reliability Council	No	HVDC and VFT technologies are not addressed specifically. Consideration should be given to expanding the core BES definition to clarify that it includes all AC and DC system Element(s).
Response: The SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. The SDT discussed your comment and feels that HVDC and VFT technologies are already included in the draft core definition since they are Transmission Elements. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Grand Haven Board of Light and Power	No	The Grand Haven Board of Light and Power (GHBLP) does not agree that the core definition for the BES use a “bright line” definition of 100kV and above. Currently, we have a 138kV/69kV transformer that connects to the BES and serves a radial, load serving system. This transformer is presently protected by a “ground switch” relay scheme. We have a project in process that is replacing this “ground switch” relay scheme with a circuit switcher. The circuit switcher, unlike the ground switch, would not affect the BES if it were to operate. By this “bright line” definition this single asset would be defined as a part of the BES. The cost that our organization would incur from being forced to register as a Transmission Owner and Transmission Operator (TO/TOP) would be extreme, and would significantly impact our budget and our customer’s rates. We should

Organization	Yes or No	Question 1 Comment
		not have to depend on an "exclusion" process to remove this asset from being defines as a part of the BES, and this should be addressed in the core definition.
Response: The SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. The SDT has made revisions to the draft definition to further clarify that radial systems at 100 kV or higher serving only Load would be excluded under Exclusion E1. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Glacier Electric Cooperative	No	I still feel that a bright-line of 200 kV would be more appropriate, with language stating that certian significant elements operated below 200 kV would be included. However, I believe the exlusion process is definitely a step in the right direction.
Response: The SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. The SDT elected to retain the 100 kV bright line criteria. This is the bright-line voltage level that is included in the existing approved definition of the Bulk Electric System in the NERC Glossary of Terms. While a number of stakeholders suggested alternate voltage levels, no technical justification was provided that would lead the SDT to make a change. One goal of this project is to add clarity to the definition without significantly changing the population of BES elements. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Company Consumers Power Inc.	No	First, thank you for the opportunity to comment on the draft Proposed Continent-wide Definition of the Bulk Electric System (BES). We appreciate the work that the Standards Development Team (SDT) has put into a new definition so far and believe the draft is a step in the right direction. We also understand the relatively short timeframe that NERC is working under in order to create a new BES definition to submit to FERC for approval before the imposed deadline. That said, we believe that the draft definition needs significant revision before NERC files it with FERC for approval. In response to question #1, we recommend that NERC revise the draft BES definition so that the first paragraph reads as follows:"Bulk Electric System (BES): Includes

Organization	Yes or No	Question 1 Comment
Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Inc Okanogan Electric Cooperative PNGC Power Raft River Rural Electric Salmon River Electric Cooperative Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative		anything that meets each of the following three (3) criteria:(1) (a) Is a facility or control system necessary for operating an interconnected electric energy transmission network (or any portion thereof), or(b) Is electric energy from generation facilities needed to maintain transmission system reliability; AND(2) Is not a facility used in the local distribution of electric energy as determined by the Seven Factor Test set out in FERC Order 888; AND(3) (a) Unless included or excluded in subpart (b), isi. A Transmission Element operated at 100kV or higher; orii. A Real Power Resource identified in subpart (b); oriii. A Reactive Power resource connected at 100kV or higher;(b) [the list of inclusions of exclusions in the draft, as modified by our comments below]" Criteria (1) and (2) of these revisions would capture the limitations on what may be included in the BES due to the jurisdictional limits that Congress placed on FERC, NERC, and the Regional Entities in developing and enforcing mandatory reliability standards. Specifically, Section 215(i) of the Federal Power Act provides that the Electric Reliability Organization (ERO) "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." Section 215(b)(1) of the FPA, 16 U.S.C. Â§ 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. With this language, Congress expressly limited FERC, NERC, and the Regional Entities' jurisdiction with regard to local distribution facilities as well as those facilities not necessary for operating a transmission network. Given that these facilities are statutorily excluded from the definition of the BPS, reliability standards may not be developed or enforced for facilities used in local distribution, and therefore the definition of the BES may not include such facilities. In Order No. 672, FERC adopted the statutory definition of the BPS. See Order No. 672, FERC Stats. & Regs. Â¶ 31,204 (2006). In Order No. 743-A, issued earlier this year, the Commission acknowledged that "Congress has specifically exempted 'facilities used in the local distribution of electric energy'" from the BPS definition. See Order 743-A, 134 FERC Â¶ 61,210 at P. 25 (2011). FERC also held that to the extent any facility is a facility used in the local distribution of electric energy, it is exempted from the requirements of Section 215. Id. at P.54. In Order No. 743-A, FERC delegated to NERC the task of proposing for FERC approval criteria and a process to identify the facilities used in local distribution that will be excluded from NERC and FERC regulation. Id. at P 76. The critical first step in this process is for NERC to propose criteria for approval by FERC to determine which facilities are not BPS facilities and therefore not BES facilities. Accordingly, it is critical that NERC create a definition of the BES that first excludes facilities used in local distribution. In Order No. 743-A, the Commission confirmed this, stating: "once a facility is classified as local distribution, the facility will be excluded from the [BES] unless changes to the system warrant a review of the determination." Order No. 743-A, at P 71 (emphasis added).We believe that the Seven Factor is the appropriate means to determine whether a facility is used in the local distribution of electricity and therefore should be referenced in the definition of the BES. This is the test that applies elsewhere to determine whether facilities qualify as local distribution, and therefore there is strong and clear precedent for using it in the BES definition. See 334 F.3d 48. In fact, the statutory language in Section 201 of

Organization	Yes or No	Question 1 Comment
		the FPA that led to the Seven Factor Test for other purposes is identical to the statutory language in Section 215 of the FPA at issue here. Well established rules of statutory construction call for interpreting identical language to produce similar meanings, therefore applying the Seven Factor Test under both sections of the statute is appropriate. And, without the Seven Factor Test as a means of determining what qualifies as local distribution facilities, there could be significant uncertainty and confusion as to whether certain facilities are part of the BES. Further, the Commission stated in Order 743-A that, "the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes, while also allowing NERC flexibility in applying the test or developing an alternative approach as it deems necessary." Id. at P 69. The Seven Factor Test includes the following factors: 1) Local distribution facilities are normally in close proximity to retail customers; 2) local distribution facilities are primarily radial in character; 3) power flows into local distribution systems, it rarely, if ever, flows out; 4) when power enters a local distribution system, it is not re-consigned or transported on to some other market; 5) power entering a local distribution system is consumed in a comparatively restricted geographical area; 6) meters are based at the transmission/local distribution interface to measure flows into the local distribution system; and 7) local distribution systems will be of reduced voltage. Order No. 888 at 31,771. FERC precedent indicates that a utility does not have to meet every factor of the seven-factor test in order for their facilities to qualify as local distribution. California Pacific Edison Co., Order Granting in Part and Denying in Part Petition for Declaratory Order, 133 FERC Â¶ 61,018, 61,075 (Oct. 7, 2010). NERC must also limit the BES to facilities or control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) or electric energy from generation facilities needed to maintain transmission system reliability, as directed by the FPA. Similar to the local distribution exclusion, facilities not falling into either of these categories are not part of the BPS and therefore must be expressly excluded from the BES.In order to establish a process that is consistent with the FPA and NERC's delegated authority from FERC, the proper sequence of steps must be applied in the correct order to determine which facilities are subject to NERC and FERC jurisdiction in the first instance, and only then, from among the jurisdictional facilities, to determine which facilities and control systems must comply with the electric reliability standards. Our revisions to the BES definition would create such a process within the definition of the BES. It would ensure that entities would begin any analysis of whether a particular item qualifies as BES by asking, first, whether that facility is "necessary for operating an interconnected electric energy transmission network (or any portion thereof)" or is "electric energy from generation facilities needed to maintain transmission system reliability," and second, whether that facility is "used in the local distribution of electric energy." Only after addressing these questions might further analysis be appropriate. We understand, but disagree with, the argument that, because the FPA clearly excludes local distribution facilities and facilities necessary for operating an interconnected electric transmission network from FERC, NERC, and Regional Entity jurisdiction, it is not necessary to expressly exclude these facilities again in the definition of the BES. This approach might be legally accurate, but could lead to significant confusion for entities attempting to implement the new BES definition. There are numerous examples of Regional Entities,

Organization	Yes or No	Question 1 Comment
		particularly WECC, attempting to include such facilities in the BES under the current BES definition, and regulated entities are not certain as to which facilities they should consider part of the BES. Clarifying FERC, NERC, and Regional Entity in the BES definition, even if such clarification is already provided in the FPA, would avoid such problems under the new definition. Criterion (3) of these revisions is necessary to resolve the ambiguity in the proposed definition as to whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause ("Reactive Power resources connected at 100 kV or higher") or the entire definition.Rearranging the definition in this way should make clear that the list of inclusions and exclusionsthat would be inserted as Subpart (b) modifies each provision ofSubpart (a). Thus, for example, even if a Transmission Element is otherwiseincluded by virtue of operating at 100 kV or higher, it is nonetheless excluded ifspecifically addressed in the list of exclusions that would be incorporated assubpart (b) of the definition (if, for example, the Element qualifies as a LocalDistribution Network). The rearrangement of the language eliminates anyargument that the phrase "unless such designation is modified by the list shownbelow" does not modify "all Transmission Elements operated at 100 kV or higher"because of its placement at the end of the independent clause "Reactive Powerresources connected at 100 kV or higher."Further, we support the use of the phrase "Transmission Elements" as the startingpoint for the base definition because both "Transmission" and "Elements" arealready defined in the NERC Glossary of Terms Used, and the use of the term"Transmission" makes clear that the Bulk Electric System includes only Elementsused in Transmission and therefore excludes Elements used in local distribution ofelectric power. As discussed above, the definition must exclude facilities used inlocal distribution in order to comply with the limits placed on NERC authority byCongress in Section 215 of the FPA. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."
Response: The SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. See the responses to comments regarding Local Distribution Facilities in Question 11 and the responses to comments regarding the Regulatory Requirements in		

Organization	Yes or No	Question 1 Comment
Question 12 below. The SDT has made revisions to the draft definition to clarify that the BES does not include Facilities used in the local distribution of electric energy. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Electric Reliability Council of Texas, Inc.	No	ERCOT ISO suggests a different approach. In order 743, to remedy its concerns, FERC suggested eliminating RE discretion in defining the BES, and instead basing it upon a bright-line 100kV threshold, provided that elements above and below 100kV could be excluded and included, respectively, based on specific procedures. Consistent with that approach, ERCOT ISO suggests that the BES definition itself establish a bright line standard, with inclusions and exclusions managed through the exception process (the exception process allows for both exclusions and inclusions of relevant facilities/equipment).With respect to exclusions (and inclusions), FERC contemplated a process involving stages that established "exclusion" criteria in the first instance. If equipment met such criteria, the process ended there and it was excluded or included, as appropriate. If the equipment did not meet the bright-line criteria, then it moved to the "exception" analysis, which contemplated additional critical analysis to determine if exemption was warranted.ERCOT ISO believes that structuring the revised definition in accordance with this approach is more consistent with FERC's intent of having an inclusive definition in the first instance, with modifications occurring subsequently pursuant to critical analysis in a well defined exception process.Revising the BES definition consistent with the above principles would counsel in favor of revisions to the current definition that removed RE discretion and provided for inclusion or exclusion on a case by case basis. ERCOT ISO also believes that the BES definition should provide for a general exclusion of distribution facilities. In Orders 743 and 743-A, FERC made clear that, consistent with the terms of EPAct 2005, distribution systems were excluded from the BES. However, FERC also made clear that it reserved the right to judge whether something was distribution or transmission, and, therefore, subject to its jurisdiction. Consistent with FERC's findings in this regard, ERCOT ISO believes that the definition should provide the general exclusion, with specific exclusions being performed as part of the exception process. This will meet the goal of respecting Congress' exclusion of distribution facilities, while ensuring the distribution/transmission distinction is subject to clear, objective standards the application of which can be critically reviewed by FERC to provide the appropriate procedural and substantive checks FERC envisions to ensure its jurisdiction is applied in all relevant cases to facilitate enhanced system reliability. In addition, ERCOT ISO supports memorializing the generation registration criteria in the BES definition. However, consistent with the approach described above, the BES definition should not be characterized in terms of inclusions or exclusions, but rather as general thresholds, with modifications occurring solely

Organization	Yes or No	Question 1 Comment
		pursuant to the exemption process. Finally, with respect to generation, ERCOT ISO questions the 75 MVA threshold applied to collector system type generation. As indicated by the SDT, this was intended to capture renewable resources (e.g. wind), and ERCOT ISO agrees with this clarification, but questions whether the 20 MVA threshold should apply. These systems can include multiple wind turbines on the collector system, but when they are interconnected at a single point, they are viewed as a single resource and, as such, should be subject to the same 20 MVA threshold as other single units.Applying the approach described above, the BES definition would reflect general thresholds. Specific circumstances warranting exception would occur via a separate process - ERCOT ISO is not disagreeing with any of the SDT's inclusions or exclusions, it is merely suggesting that they be addressed in that separate process. Consistent with this approach, ERCOT ISO offers the following language:The Bulk Electric System shall include: A) all Transmission Elements operated at voltages100 kV or higher; B) all generation resources that: 1) are individual units greater than 20 MVA; 2) multiple units at a single facility that are equal to or greater than 75 MVA in the aggregate, provided that all units have a common point of interconnection; and 3) multiple units connected to a collector system that are equal to or greater than 20 MVA in the aggregate; 4) all Blackstart Resources; and C) Reactive Power resources connected at 100 kV or higher. The BES shall not include distribution facilities, and radial transmission facilities serving only load with one transmission source are generally not included in this definition. The foregoing notwithstanding, any relevant element (e.g. transmission, generation, etc.) may be included or excluded in the BES pursuant to the relevant exception processes criteria and analyses as provided for in the NERC Rules of Procedure.

Response: The SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists.

In the first posting, a reference to the Rules of Procedure exception process was inadvertently omitted from the posting. It has been added back in to this posting.

The SDT has also made revisions to the draft definition to clarify that the BES does not include Facilities used in the local distribution of electric energy.

The SDT feels this threshold is consistent with the existing limits in the ERO Statement of Compliance Registry Criteria. No stakeholder provided sufficient technical analysis to support a change.

Also, see the responses to comments as well as a discussion of the latest revisions regarding Generation Inclusions in Questions 3 and 4 below.

> **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list~~

Organization	Yes or No	Question 1 Comment
~~shown below~~. This does not include facilities used in the local distribution of electric energy. Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.		
ExxonMobil Research and Engineering	No	The SDT's attempt to create a structure that clarifies what types of facilities should be included / excluded from the bulk electric system is a positive step; however, the utilization of an automatic fault interrupting device as the end point criteria for bulk electric and start point for local distribution is inappropriate. The Federal Power Act specifically excludes all "facilities used in the local distribution of electric energy" from the bulk power system without mention of how these facilities are isolated from the transmission system.
Response: See the responses to comments as well as a discussion of the latest revisions regarding the Radial Exclusion in Question 7 and the responses to comments regarding Local Distribution Facilities in Question 11 below. No change made.		
American Electric Power	No	Rather than a 75 MVA threshold as designated in I3, we suggest a threshold of 100 MVA which we believe to be more appropriate. It is difficult to provide comments regarding the BES definition, given the parallel nature of the other related deliverables currently out for review. For example, there needs to be a defined relationship between an approved definition of BES, the technical principles for demonstrating BES exception, and the exception process itself. When closely related projects such as these are done simultaneously, no individual deliverable can rely on the completed work of another. As a result, we risk having conflicting decision making across these projects.
Response: The SDT discussed and has retained the 75 MVA threshold for generating resource(s) located at a single site. The SDT feels this threshold is consistent with the existing limits in the Registry Criteria. No stakeholder provided sufficient technical analysis to support a change. Also, see the responses to comments as well as a discussion of the latest revisions regarding Generation Inclusions in Questions 3 and 4 below. No change made. The teams working on the various documents needed to address the revision to the definition of BES are coordinating their work and did provide some overlap in the posting periods to provide stakeholders with an opportunity to see the various draft products at one time. Unfortunately, the schedule for delivery doesn't allow the products to be developed serially.		
Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)	No	Please see discussion in response to Questions 2, 7, 9, 10, 11, 12 and 13.
Response: Please see response to Questions 2, 7, 9, 10, 11, 12, and 13.		

Organization	Yes or No	Question 1 Comment
Springfield Utility Board	No	SUB appreciates the effort put forward in this process and is indicating “no” primarily because Springfield Utility Board (SUB) has observed that the statutory term “Bulk Power System” is being applied in some cases as being equivalent and interchangeable with “Bulk Electric System”. SUB is concerned that the SDT’s proposed BES definition is broad and that it will sweep in many elements that have little or no material impact on the reliable operation of the interconnected bulk transmission grid. Springfield Utility Board requests that NERC create a distinction between the terms BPS and BES. Are the two to be used interchangeably, or will BPS no longer be used? SUB suggests NERC consider adopting the statutory definition of the Bulk Power System as the core definition of the Bulk Electric System.
Springfield Utility Board	No	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
Response: See the responses to comments as well as a discussion of the latest revisions regarding Generation Exclusions for units serving retail customer load in Question 8 below. See the responses to comments regarding the Regulatory Requirements in Question 12 below. Note that in Reliability Standards, the term “Bulk Electric System” (a formally defined term) is used; however in other NERC corporate documents the term, “bulk power system” (not capitalized) is used.		
Southern California Edison Company	No	The current approach seems to be based on the assumption that the presence of particular equipment is more important than the manner in which the equipment is used. Before SCE can support the BES Definition, the definition should be revised to include “All Transmission and Generation Elements and Facilities operated at voltages 100 kV or higher, Real Power resources as described below, and Reactive Power resources

Organization	Yes or No	Question 1 Comment
		connected at 100 kV or higher that operate in parallel with the integrated networked transmission system and are necessary for operating the interconnected transmission network, unless such designation is modified by the list shown below." This modification will provide the clarification needed to better ascertain what facilities should be identified as part of the BES and lessen the need to trigger the Rules Of Procedure exceptions process. If "Inclusions" and "Exclusions" continue to be a part of the BES definition, they will need additional clarification to ensure the exclusion of radial and distribution facilities which (1) do not have interconnected operations risk and (2) are not used for inter-utility transfers on the BES and, therefore, are not necessary for operating the interconnected transmission network. They also need to be modified to work in tandem with the "Technical Principles for Demonstrating BES Exceptions", so that these types of facilities don't continually have to be validated by the ROP exceptions process. Example: The exclusion of facilities which are radial or distribution in nature and that have connecting generation of 20MVA or higher for the purpose of serving local load and that are not used to transfer power between "systems" to the BES should be automatic under the BES Definition.
Response: Based on the stakeholder comments as shown below, the SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. The Rules of Procedure exception process will only be used for those facilities that entities feel should also be excluded or that regions feel should also be included. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
New York State Dept of Public Service	No	1) We do not agree with the core definition. The core definition starts with the premise that the definition must be drafted based on a 100 kV brightline designation. FERC's Order 743 and 743-A clearly state that is just one approach and would entertain other approaches that demonstrate the same level of reliable operation and is responsive to FERC's reliable operation concerns. As the EPAct 2005 recognizes, the industry technical expertise is preserved in the NERC and does not reside at FERC. Therefore, FERC's jurisdiction is expressly limited by Section 215 of the Federal Power Act. Moreover, FERC cannot, under the guise of "policy" concerns, exceed the limits of its statutory authority. FERC's orders recognize this, and repeatedly acknowledge that FERC must exclude facilities used in local distribution from the definition of BES. FERC's orders, at most, assert that "some" 115/138 kV facilities are needed to reliably operate the bulk system.

Organization	Yes or No	Question 1 Comment
		FERC has made no showing that all facilities of 100kV or greater are necessary for reliable operation of the grid. Without a record based finding that all such facilities are necessary for reliable operation of the grid, FERC cannot include all such facilities within its definition of BES. FERC has even explicitly acknowledged within a New York transmission tariff rate case that a 115 kV loop around a significant size city should not be included in the transmission account as it existed solely to serve load in that city. Given the technical expertise to devise a definition more refined lies with the industry, FERC wisely deferred to NERC processes the ability to employ a different approach other than a brightline. Therefore, NERC should apply its expertise to fashion a definition of "bulk electric system" that comports with the statutory jurisdictional limitations Congress imposed upon FERC in FPA Section 215. NERC's efforts should be checked at every step that they are not exceeding the originating authority contained in FPA Section 215. Overall, the definition must be guided by, and limited to, the FPA definition of reliable operation which is explicitly defined as limited to protection of the bulk system by "operating the elements of the bulk-power system ... so that instability limits, uncontrolled separation, or cascading failures of such systems will not occur....", and expressly excludes facilities used in local distribution. 2) NERC fails to make any technical demonstration that using the existing definition as a starting point is valid. Moreover, NERC has resisted pursuing alternative avenues. The NPCC study submitted to FERC in the combined NERC-NPCC compliance filing in September 2009, clearly demonstrated the movement from the NPCC regional criteria to a 100 kV brightline provided little, if any, increased levels of reliable operation. Through extrapolation, a study of other areas is likely to indicate that reliable operation levels throughout the rest of the country could be assured by a more refined selection of which facilities under 200 kV should be included as part of the bulk system. Note that FERC did not reject use of material impact assessmensts; they only objected to the fact that the NPCC test did not include some regional interconnection facilities, some nuclear interconnections and a particular load area.NERC's failure to evaluate other approaches than a brightline 100 kV standard is a failure to ensure adequate levels of reliable operation at a sustainable level consistent with provisions of the FPA.All remaining comments on the definition, as presented by NERC, are based on our belief that the proposed definition is overreaching in its basic premise of starting with a brightline 100 kV as its core definition of the bulk system. 3) It is not clear why the core definition has dropped "generation" interconnected at the specified voltage level. The following inclusions/exclusions included generation facilities and it appears inconsistent to not include generation in the core definition.
Public Utilities Commission of Ohio	No	FERC jurisdiction is limited by the Federal Power Act, Section 215. To make a bright line designation as the starting point, without a demonstration that ALL facilities at 100 kV and greater affect the reliability of the bulk power system is a step beyond FERC jurisdictional boundaries. The Federal Power Act explicitly excludes facilities used in local distribution from the bulk power system. NERC should give serious consideration to

Organization	Yes or No	Question 1 Comment
		other (non bright-line) approaches to ensure bulk system reliability.
City of Redding	Yes	In general Redding supports the work of the SDT team in revising the core definition of the Bulk Power System as ordered by FERC. The core definition, as written, is a good step at removing the ambiguities of the current definition and is acceptable as long as it is coupled with a fair and objective Exception Process that, as FERC directed in Order 743, "*excludes facilities the ERO determines are not necessary for operating the interconnected transmission network*". (P 30). It is Redding's opinion that using a voltage threshold is a convenient method to make an initial dividing line however it does not provide adequate proof that elements, over or under this voltage threshold, are "necessary" for the operation of the Bulk Electric System (BES). It is also noted that while the 100 kV threshold is intended to capture the majority of the power system elements that are potentially BES, on a continent wide basis, a 200 kV threshold would serve the Western Interconnect better as a starting brightline. In the Western Interconnect the majority of 100 kV elements are used as Distribution facilities. Therefore, this will burden NERC and the Regional Entity in the West with a larger number of Exception Process applications. Redding supports the use of exclusion and inclusion lists in the Definition; however Redding believes the SDT needs to take a more literal approach to FERC's Orders and define the term "*necessary for operating the interconnected transmission network"* and clearly *"establish whether a particular facility is local distribution or transmission".* Without a clear distinction of these two foundational principles it is difficult to have a significant discussion about the validity of the proposed inclusions and exclusions and the thresholds involved. As an alternative to the proposed definition, Redding would support using a simple approach to meet FERC's orders (as long as is coupled with an "exception process that includes clear, objective, transparent, and uniformly applicable criteria of facilities that are not necessary for operating the grid"). (Order 743A P73). If the above criteria is developed to accomplish the above then the existing definition could be modified to read: *"Electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, operated at voltages of 100 kV or higher."*
Response: The SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. The SDT elected to retain the 100 kV bright line criteria. This is the bright-line voltage level that is included in the existing approved definition of the Bulk Electric System in the NERC Glossary of Terms. While a number of stakeholders suggested alternate voltage levels, no technical justification was provided that would		

Organization	Yes or No	Question 1 Comment
lead the SDT to make a change. One goal of this project is to add clarity to the definition without significantly changing the population of BES elements. Finally, the SDT has made revisions to the draft definition to clarify that the BES does not include Facilities used in the local distribution of electric energy as established by applicable regulatory authorities. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Cogentrix Energy, LLC	No	I would like to see a definition for clarity of an "Individual Generating Unit"Example:Solar farm with 300 photovoltaic units. Each is a stand-alone unit with its own inverter, but all come together at a common tie breaker to connect to the BES. Questions:1. Would each one be considered directly tied to the BES through one common tie breaker? 2. Would each photovoltaic unit be considered an individual generating unit? 3. Would the combined total of 300 units be considered an individual generating unit or would they be considered a facility?
Response: The SDT is not in position to provide an answer without first making sure that all relevant data is in hand.		
The Dow Chemical Company	No	See Dow's specific comments on some of the following questions.
Response: See specific responses in following questions.		
Clark Public Utilities	No	Clark is concerned that the core definition is overly-broad and sweeps facilities into the BES that are required by the statute to be excluded, even considering the list of inclusions and exclusions. Clark urges the SDT to bear in mind the specific restrictions on the definition of “bulk-power system” contained in Section 215 of the Federal Power Act (“FPA”). In Section 215(a)(1), Congress defined “bulk-power system” to mean “facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)” and “electric energy from generation facilities needed to maintain transmission system reliability.” 16 U.S.C. Â§ 824 o(a)(1). Congress unequivocally excluded from this definition “facilities used in the local distribution of electric energy.” The “bulk-power system” definition thus imposes a clear limit on the reach of the mandatory reliability regime. Congress reinforced that limit in Section 215(i), where it emphasized that the FPA authorizes the imposition of reliability standards “for only the bulk-power system.” 16 U.S.C. Â§ 824 o(i)(1). Clark believes it is clear that Congress intended the “bulk-power system” to be defined narrowly so

Organization	Yes or No	Question 1 Comment
		that it would incorporate only high-voltage, interstate facilities used to transmit power over long distances, whose failure threatens drastic reliability events such as system instability, uncontrolled separation, or cascading outages.In addition, the Federal Energy Regulatory Commission clearly stated that Order No. 743 did not mandate or direct NERC to adopt a 100 kV bright-line threshold (Order No. 743-A, 134 FERC Â¶ 61,210 at P 20. The Commission goes on to state that the 100 kV bright-line threshold is only one way to address the Commission's concerns. The Commission only requires that NERC use the Commission's recommendation or propose a different solution that is as effective as, or superior to, the Commission's proposed approach. The Commission also acknowledges that Congress has specifically exempted facilities used in the local distribution of electric energy.The definition developed by the SDT should therefore focus on that portion of the interconnected bulk transmission grid for which thermal, voltage, and stability limits must be observed in order to prevent instability, uncontrolled separation, or cascading outages. Further, in order to honor the specific limits placed on the definition by Congress, the SDT's definition must exclude facilities used in the local distribution of electric power and it must exclude facilities whose operation or mis-operation affects only the level of service and does not threaten cascading outages or other widespread events on the bulk interconnected system. Clark asserts that the adoption of a bright-line threshold of 100 kV is arbitrary and not based on any investigation of the potential for facilities at this voltage level to cause instability, uncontrolled separation, or cascading outages or for the general need of these facilities for the operation of an interconnected electric energy transmission network. The threshold excludes transmission facilities below 100 kV without any determination on a general basis of whether these facilities affect interconnected system operation. It goes without saying that these low voltage transmission facilities should be subject to an inclusion process in the event that regional reliability entities believe they do have an impact on reliability but on a case-by-case basis. Clark agrees with this concept and does not believe bringing low voltage transmission facilities into the BES through an inclusion process causes any BES reliability issues. Similarly, Clark believes that the majority of facilities between 100 kV and 200 kV can be shown to have no impacts on interconnected system operation and do not threaten instability, uncontrolled separation, or cascading outages. Clark also points out that the vegetation outage standard (FAC-003) uses this approach. The standard applies to facilities operated at 200 kV or above and "lower voltage lines designated by the RRO as critical to the reliability of the electric system in the region." Clark believes the use of 100 kV as the bright-line threshold will result in a large number of facilities being brought into the definition of the BES that are either 1) part of a Local Distribution Network, 2) are radial serving only load from one transmission source, or 3) that can be shown to have no affect on interconnected system operation or cannot cause instability, uncontrolled separation, or cascading outages. This unnecessary inclusion will cause a large amount of effort on the part of the owners of these facilities and on the part of the Regional Reliability Organizations that will have to review the many exclusion filings that will result. Utilizing a 200 kV threshold with a low voltage inclusion process will eliminate much of the

Organization	Yes or No	Question 1 Comment
		unnecessary paperwork since very few owners of 200 kV or above facilities will seek exclusions. This will free up regional reliability entities to focus on low voltage transmission facilities that truly have an impact on interconnected system operations.Clark believes that the SDT and the NERC should consider adopting a bright-line threshold higher than 100 kV with low voltage inclusion and develop the arguments necessary to demonstrate to the Commission that this solution is as effective as, or superior to, the Commission's proposed approach. These arguments should include the following: o Eventually, a 200 kV bright-line threshold with a low voltage inclusion process will incorporate into the BES the same facilities that a 100 kV bright-line threshold with an exclusion process. This means that these two concepts both have the same effect on the reliability and the operability of the BES. o Utilizing a 200 kV bright-line will reduce the amount of initial effort by transmission owners and Regional Reliability Organizations and allow these entities to concentrate on low voltage facilities that truly have an impact on the BES. Clark is similarly concerned that the SDT's proposed definition is overly-broad in including all generating units greater than 20 MVA capacity connected to transmission at 100 kV or above. Clark believes that there are many small to medium sized generators that individually have no affect on interconnected system operations and do not threaten the BES with instability, uncontrolled separation, or cascading outages. Many of these generators are connected to Local Distribution Networks with minimum loads that exceed maximum generation. While the generators do support system reliability collectively, it is questionable whether many of these generators individually represent a facility necessary for interconnected system operations. The adoption by the SDT of a 200 kV bright-line threshold would eliminate many of these smaller generating units. Again, the RROs must have an inclusion process for smaller generating units it believes support interconnected system operations. Clark believes that eventually both thresholds (with appropriate inclusion and exclusion processes) will result in the same 100 kV to 200 kV connected generators being included in the BES so there will be no difference in the reliability of the BES. Adopting the higher of the two thresholds and adopting a generating capacity threshold higher than 20 MVA will allow generator owners and Regional Reliability Organizations to devote resources to small generating units that truly have an impact on interconnected system operations.
Response: The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. The SDT elected to retain the 100 kV bright-line criteria. This is the bright-line voltage level that is included in the existing approved definition of the Bulk Electric System in the NERC Glossary of Terms. While a number of stakeholders suggested alternate voltage levels, no technical justification was provided that would lead the SDT to make a change. One goal of this project is to add clarity to the definition without significantly changing the population of BES elements. See the responses to comments as well as a discussion of the latest revisions regarding Generation Inclusions in Questions 3 and 4 below.		

Organization	Yes or No	Question 1 Comment
Bulk Electric System (BES): Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Central Lincoln	No	We support the PNGC comments suggesting beginning with the statutory definition of BPS that excludes local distribution. The definition should also be further elaborated to show specific points of demarcation for each inclusion and exclusion by the use of diagrams similar to those included with Proposal 6 from the WECC Bulk Electric System Definition Task Force. We also note that per the flowchart at http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf, any >100 kV element that does not meet an inclusion or an exclusion ends up being included. We don't think that was the SDT's intent. For example a 5 kW solar project connected at 115 kV does not meet any inclusions so proceed to the exclusion box. It is not radial load, behind a retail meter, or part of an LDN so it is BES by application of the definition. We realize this flowchart was drafted by another team. It therefore becomes imperative that the definition team clearly specifies exactly what becomes of an element that does not meet an inclusion.
Response: See the responses to comments regarding Local Distribution Facilities in Question 11 below. The SDT has revised the wording of the generation inclusions to reference the ERO Statement of Compliance Registry Criteria for consistency. Therefore, there should be no change in registration due to the revised definition.		
Southwest Power Pool	No	SPP generally agrees with the substance of the SDT's changes, but suggests a different approach. In order 743, to remedy its concerns, FERC suggested eliminating RE discretion in defining the BES, and instead basing it upon a bright-line 100kV threshold, provided that elements above and below 100kV could be excluded and included, respectively, based on specific procedures. Consistent with that approach, SPP suggests that the BES definition itself establish a bright line standard, with inclusions and exclusions managed through the exemption process.With respect to exclusions (and inclusions), FERC contemplated a process involving stages that established "exclusion" criteria in the first instance. If equipment met such criteria, the process ended there and it was exempt. If the equipment did not meet the bright-line criteria, then it moved to the "exemption" analysis, which contemplated additional critical analysis to determine if exemption was warranted.SPP believes that structuring the revised definition in accordance with this approach is more consistent with FERC's intent of having an inclusive definition in the first instance, with modifications occurring subsequently pursuant to critical analysis in a well defined exemption process.Revising the BES definition consistent with the above principles would counsel in favor of revisions to the current definition that removed

Organization	Yes or No	Question 1 Comment
		RE discretion and provided for inclusion or exclusion on a case by case basis. SPP also believes that the BES definition should provide for a general exclusion of distribution facilities. In Orders 743 and 743-A, FERC made clear that, consistent with the terms of EPAct 2005, distribution systems were excluded from the BES. However, FERC also made clear that it reserved the right to judge whether something was distribution or transmission, and, therefore, subject to its jurisdiction. Consistent with FERC's findings in this regard, the SRC believes that the definition should provide the general exclusion, with specific exclusions being performed as part of the exception process. This will meet the goal of respecting Congress' exclusion of distribution facilities, while ensuring the distribution/transmission distinction is subject to clear, objective standards the application of which can be critically reviewed by FERC to provide the appropriate procedural and substantive checks FERC envisions to ensure its jurisdiction is applied in all relevant cases to facilitate enhanced system reliability. However, consistent with the approach described above, the BES definition should not be characterized in terms of inclusions or exclusions, but rather as general thresholds, with modifications occurring solely pursuant to the exemption process. Applying the approach described above, the BES definition would reflect general thresholds. Specific circumstances warranting exclusion/exception/inclusion would occur via a separate process -SPP is not disagreeing with any of the SDT's inclusions or exclusions, it is merely suggesting that they be addressed in that separate process. Consistent with this approach, SPP offers the following language:The Bulk Electric System shall include: A) all Transmission Elements operated at voltages 100 kV or higher; B) all generation resources that: 1) are individual units greater than 20 MVA; 2) multiple units at a single facility that are equal to or greater than 75 MVA in the aggregate, provided that all units have a common point of interconnection; and 3) multiple units connected to a collector system that are equal to or greater than 75 MVA in the aggregate; 4) all Blackstart Resources regardless of size; and C) Reactive Power resources connected at 100 kV or higher. The BES shall not include distribution facilities, and Radial transmission facilities serving only load with one transmission source are generally not included in this definition. The foregoing notwithstanding, any relevant element (e.g. transmission, generation, etc.) may be identified as an exception and excluded or included in the BES pursuant to the process delineated in the NERC Rules of Procedure and subject to the exclusion or inclusion criteria.All equipment specific issues that affect exclusions/exceptions/inclusions would then be addressed via the Rules of Procedure processes and the exclusion and inclusion criteria.
Response: The SDT has made additional clarifying revisions to the draft BES definition. The BES draft definition includes all three sections – core definition, list of inclusions, and list of exclusions. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. In the first posting, a reference to the Rules of Procedure exception process was inadvertently omitted from the posting. It has been added back in to this		

Organization	Yes or No	Question 1 Comment
posting. The SDT has also made revisions to the draft definition to clarify that the BES does not include facilities used in the local distribution of electric energy. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy. Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.		
PPL Energy Plus and PPL Generation	No	See the response to Question 13
Response: See response to Question 13.		
Independent Electricity System Operator	No	We agree with the BES definition principles in general, the concept of Inclusions and Exclusions, as well as the proposal for an Exception Process. However, since the Exception Process and the Technical Principles and Criteria (TPC) for justifying BES Exceptions are being developed and will be approved independently, albeit concurrently with the BES definition, there is a risk that the revised definition may be approved while the TPC and Exception Process may not come to fruition in the form anticipated during development of the BES definition. In short, our support for any revised BES definition would be conditional to the establishment of the associated TPC. As such we advocate developing the revised BES definition and TPC as a "single package".Thus, we do not agree with the blanket inclusion of generation units and Facilities meeting the thresholds of 20 MVA and 75 MVA respectively. We also do not agree with using these same thresholds in determining when Exclusions are applicable. Instead, we believe the impact on BES reliability of all generation units and Facilities meeting these capacity thresholds, should be assessed against the TPC and if found to be impactive, these units and Facilities should be included as part of the BES after going through the Exception Process.We believe this change in the approach to defining the BES will take into account the evolving reality of distributed generation, particularly in the context of radial systems and local distribution networks (LDNs), where generation units are installed in lieu of transmission reinforcements. We offer our further comments on the Definition and its Inclusions and Exclusions against the backdrop of this general philosophy. The BES definition refers to Reactive Power resources "connected at" 100 kV or higher as opposed to "operated at" 100 kV or higher. Is the intent of this wording to include in the BES a reactive resource (capacitor, reactor, etc.) operating at a voltage below 100 kV and connected to the BES via a step-up transformer?

Organization	Yes or No	Question 1 Comment
		If yes, would the transformer be excluded from the BES to be consistent with Inclusion I1?
Response: The SDT is tasked with creating a bright-line continent-wide definition for the BES. One of the goals of this effort is to ensure that similarly situated elements in different regions are included or excluded on a consistent basis. The Rules of Procedure Exception process will only be used for those facilities that entities feel should also be excluded or that regions feel should also be included. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. In response to comments, the SDT added an additional item to clarify the inclusion of Reactive Resources and an additional exclusion to clarify that Reactive Resources that are owned by retail customers for their own use are not to be included. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Dayton Power and Light Company	No	
Response: Without any specific comments, the SDT is unable to respond.		
BPA	No	BES Definition First Paragraph - Change first sentence to "Unless otherwise excluded below, all Transmission Elements operated at 100 kV or higher and those facilities included in the list below, Real Power resources included below, and Reactive Power resources connected at 100 kV or higher."
Tacoma Power		Tacoma Power generally supports clarifying changes to the BES definition by the SDT and the goal of including only those facilities that materially impact the reliable operation of the interconnected bulk transmission system. We propose one change to help guide the industry as the definition is applied. Currently, the definition includes the clause 'unless such designation is modified by the list shown below,' positioned after the reactive resources clause. Due to the position of the clause, it can be misinterpreted to apply only to reactive resources. To eliminate this ambiguity, we suggest that the proposed definition be reordered to read as follows:"Bulk Electric System (BES) definition: (A) Unless included or excluded in Section B below, the BES consists of: (1) All Transmission Elements operated at 100 kV or higher; (2) Real Power resources identified in Section B below; and (3) Reactive Power resources connected at 100 kV or higher.(B) [BES designation criteria, list of inclusions and exclusions]." Additionally, the BES definition should not require the inclusion of contiguous elements as the definition is further developed.Lastly, the proposed BES definition for comments is not clear on the state of the system

Organization	Yes or No	Question 1 Comment
		conditions (normal or emergency) that should be assumed when applying the definition. The definition should apply to only normal operating conditions.
Orange and Rockland Utilities, Inc.		In the core definition, "the list shown below" is still not clearly defined and causes some confusion.
American Transmission Company, LLC	Yes	However, to clarify the core definition, ATC proposes to change the text for Real and Reactive Power resources from "connected" to "operated or connected".
Response: The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Consolidated Edison Co. of NY, Inc.		Guidance Document - The SDT should develop a BES Definition Guidance Document which includes a fairly comprehensive list of Elements considered to be potentially necessary for operating an interconnected electric energy transmission network. This list would include references to Real Power and Reactive Power resources.
PUD No. 2 of Grant County, Washington	Yes	Grant supports the approach the Standards Development Team ("SDT") has taken to defining the Bulk Electric System ("BES"). The changes made in the revised core definition are helpful and represent significant progress toward an acceptable definition. With an effective and efficient exclusion process, the draft will better define the BES as a whole. The definition could then be further elaborated to show specific points of demarcation for each inclusion and exclusion similar to that Proposal 6 from the WECC Bulk Electric System Definition Task Force ("BESDTF") team to further delineate BES and non-BES facilities.
Response: The SDT will consider drafting a Guidance Document as a part of this project in order to provide the specific guidance you suggest.		
United Illuminating		The definition should incorporate the language in Energy Policy Act of 2005 that defines bulk power system. UI agrees in general that facilities operated at 100 kV and above are part of bulk power system. Without the clarification in the definition the possibility of facilities that are not necessary for the operation of the interconnected transmission will be pulled into scope.
Response: This suggestion would be outside of the scope of the approved BES Definition project. The SDT is tasked with creating a bright-line continent-wide		

Organization	Yes or No	Question 1 Comment
definition for the BES. The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Portland General Electric Company		The bright-line definition of 100kV should specify that this is a three-phaseline-to-line voltage.
Response: The currently approved definition of the BES in the Glossary of Terms does not include this clarification. The SDT discussed your comment and decided that this clarification was not necessary. Furthermore, all ac and dc facilities with a line-ground or line-line voltage greater than 100 kV would be included in the BES except as modified by the lists of exclusions or inclusions. No change made.		
Sweeny Cogeneration LP		The specific identification of global inclusions and exclusions is a very good way to approach this complex issue. We believe there are further items to be added to the list related to generator interconnections, a task that was passed to this project from Project 2010-07. Just as is the case with complex distribution systems, there are a variety of generator-transmission interconnection architectures which are driving the Regions to inappropriately register Generator Owner/Operators as Transmission Owners.
Response: See the responses to comments as well as a discussion of the latest revisions regarding generation inclusions in Questions 3, 4, and 6 below. For clarification, no tasks were passed from Project 2010-07 to the Project 2010-17. The BES Definition and the associated Exception Process are separate and distinct from the ERO Statement of Compliance Registry Criteria.		
American Municipal Power and Members Florida Municipal Power Agency Transmission Access Policy Study Group	Yes	AMP and its members appreciate the opportunity to comment on the draft BES definition. We generally support the direction taken by the SDT, with some minor changes.We agree with some other entities' comments and suggest a few clarifying edits to the core definition. First, the definition should refer to "non-generator Reactive Power resources," to make clear that although all generators provide some reactive power, those that do not meet the criteria of I2-I5 are not included in the BES. There is ambiguity concerning whether a transformer stepping down from >100 kV to <100 kV is included or not, though we believe that the SDT intends to exclude such transformers. It is clear that transformers with

Organization	Yes or No	Question 1 Comment
		two windings >100 kV are included and GSUs for registered generators are included, but it is somewhat unclear in the current draft whether a 138 kV to 69 kV transformer is included or excluded. We suggests making it clear that the intent of the SDT is to include (a) GSUs associated with BES generators and (b) transformers with 2 or more windingwindings >100 kV, and that other transformers are excluded. We also believe the drafting team intended to exclude all elements that are not included either under the BES definition and designations or through the exception process. For the sake of clarity, we suggest that a sentence to that effect be added to the core definition. Finally, we note that the definition does not currently refer to the existence of the exception process. We suggest that such a reference be added either to the core definition or to the lists of Inclusions and Exclusions. The following is the core definition incorporating the changes:All Transmission Elements (except transformers) operated at 100 kV or higher, transformers as described below, Real Power resources as described below, and non-generator Reactive Power resources connected at 100 kV or higher unless such designation is modified by the list shown below. The NERC Rules of Procedure provide an Exception Process through which Elements not included in the BES under this definition and designations may be included in the BES, and Elements included in the BES under this definition and designations may be excluded from the BES. Elements not included in the BES either by application of this definition and designations, or through the BES exception process, are not BES Elements.
Northern California Power Agency	Yes	NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.

Response: The SDT added an additional item to clarify the inclusion of Reactive Resources and an additional exclusion to clarify that Reactive Resources that are owned by retail customers for their own use are not to be included.

See the responses to comments as well as a discussion of the latest revisions regarding the Transformer Inclusion in Question 2.

In the first posting, a reference to the Rules of Procedure exception process was inadvertently omitted from the posting. It has been added back in to this posting.

> **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.
>
> Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

Organization	Yes or No	Question 1 Comment
Small Entity Working Group (SEWG)	Yes	The Small Entity Working Group (SEWG) appreciates the opportunity to comment on the draft BES definition. The group generally supports the direction taken by the SDT, with some minor changes.The BES definition should refer to "non-generator Reactive Power resources," to clarify that although all generators provide some reactive power, the generators that do not meet the criteria of I2 through I5 are not included in the BES. The BES definition should include a reference to the existence of the exception process.
MRO's NERC Standards Review Forum	Yes	Please quantify that Reactive Resources within the BES definition are meant to be generator resources and not static resources.
Muscatine Power and Water	Yes	Would like to ask the SDT to please affirm that Reactive Resources within the BES definition are intended to be generator resources and not static resources.
Illinois Municipal Electric Agency	Yes	With the following clarifying edits. The BES definition should refer to "non-generator Reactive Power resources," to clarify that although all generators provide some reactive power, the generators that do not meet the criteria of I2 through I5 are not included in the BES.
Pepco Holdings Inc	Yes	Do reactive power resources include reactors?
Response: In response to comments, the SDT added an additional item to clarify the inclusion of Reactive Resources and an additional exclusion to clarify that Reactive Resources that are owned by retail customers for their own use are not to be included. **I5** –Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1. **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.		
Santee Cooper	Yes	We agree with the changes of adding the inclusions and exclusions. We recommend that I3 be 100 MVA or higher. Was there a rationale for using 75 MVA?
Response: See the responses to comments as well as a discussion of the latest revisions regarding Generation Inclusions in Questions 3 and 4 below.		
SERC OC Standards Review Group	Yes	The SERC Standards Review Group (SRG) still believes that 200KV is the correct bright line for the BES definition
Response: The SDT elected to retain the 100 kV bright-line criteria. This is the bright-line voltage level that is included in the existing approved definition of the Bulk Electric System in the NERC Glossary of Terms. While a number of stakeholders suggested alternate voltage levels, no technical justification was provided		

Organization	Yes or No	Question 1 Comment
that would lead the SDT to make a change. One goal of this project is to add clarity to the definition without significantly changing the population of BES elements.		
National Rural Electric Cooperative Association (NRECA)	Yes	NRECA believes the definition should explicitly state that facilities used in local distribution are excluded from the BES.
Response: See the responses to comments regarding Local Distribution Facilities in Question 11 below.		
New York Power Authority MEAG Power	Yes	The New York Power Authority (NYPA) supports the Standards Drafting Team's development of a revised Bulk Electric System (BES) definition in response to FERC Order 743 that is directly linked to an exception process for inclusions and exclusions. The definition must be closely coupled to the exception process and the two must be integrated in the standard that is ultimately adopted. This will ensure that the regulatory requirements apply to only those facilities that materially affect the reliability of the BES.In general, NYPA agrees with the proposed definition and the objectives the Standards Drafting Team has established. NYPA recommends that the team make additional clarifications to provide industry with a better understanding of the inclusions and exclusions, as well as the impact of the inclusions/exclusions on the BES. The definition should exclude generator leads for generating units that do not materially affect the reliability of the BES regardless of the BES designation of the generating unit. In addition, the definition should not require the inclusion of contiguous elements. Generating units that are designated BES are currently required to comply with a subset of NERC Reliability Standards, but may not be material to the reliable operation of the interconnected BES. This portion of the definition should not require that both BES and non-BES generating units have their generator leads defined as BES transmission elements. A length-based criterion for generator leads ought to be considered. For example, the definition should exclude generator leads that are one mile or less between BES elements. The Standards Drafting Team should engage and coordinate with the Standards Drafting Team for Project 2010-07 (the GO/TO task force). This coordination is needed to determine the impacts of the new BES definition on Transmission Owner (TO) and Transmission Operator (TOP) registration. In addition, NYPA recommends that the Standards Drafting Team and the GO/TO Task Force consider, if they have not already done so, the impacts of ownership and operating agreements on registration. For example, clarification of registration impacts for BES elements that are jointly owned by two utilities (e. g. where one utility owns 5 of 20 towers and the other utility owns the remaining towers and the conductor of a transmission line) is required.

Organization	Yes or No	Question 1 Comment
		The definition does not provide clarity on the state of the system conditions (normal or emergency) that should be applied. The definition should apply to only normal operating conditions.
Response: See the responses to comments as well as a discussion of the latest revisions regarding Generation Inclusions in Questions 3, 4, and 6 below. One goal of this project is to add clarity to the definition without significantly changing the population of BES elements. The Registry Criteria is not being revised by this project. The leadership of the two SDTs, Project 2010-17 Definition of BES and Project 2010-07 GO/TO TF, have met and coordinated as necessary.		
Electricity Consumers Resource Council (ELCON)	Yes	We support the expanded structure of the core definition that provides for inclusions and exclusions. This clarification establishes a rebuttable presumption that excluded elements are not BES and appropriately shifts the burden of proof for any subsequent inclusion to Regional Entities or the ERO, thereby minimizing the regulatory burden on the industry, an outcome consistent with the Commission's stated assumption that revising the BES definition should have relatively minor impacts on registrations in non-NPCC regions.
Response: Thank you for your comments.		
Western Area Power Administration	Yes	As a Transmission Operator (TO) it helps us define and write O & M, and operating agreements for our Load Serving Entities (LSE/customers) that prefer to contract the responsibilities to the TO. The definition 'Bright Line Threshold' is a general statement, that needs more definition for the special circumstances in the southwestern U.S. where pump loads provide necessary irrigation. Based upon NERC's compliance registry criteria, small entities prefer to contract responsibilities to the TO in order to forego NERC registration, or the exception process for special circumstances.
Response: The ERO Statement of Compliance Registry Criteria is not being revised by this project.		
PacifiCorp	Yes	In general PacifiCorp agrees with the direction of the proposed BES definition. Specific exceptions are discussed in questions 2 - 13
Response: Thank you for your support. See specific responses to Questions 2 – 13.		
Public Utility District No. 1 of Snohomish County, Washington Clallam County PUD No.1	Yes	As a general matter, Snohomish County PUD supports the approach the Standards Development Team ("SDT") has taken to defining the Bulk Electric System ("BES"). In the comments we submit today, we identify several refinements we believe would improve the definition. We also discuss the legal framework the SDT must operate under as we understand it. But we support the SDT's conceptual approach and, if refined as we suggest, we will support the SDT's proposal so long as an acceptable process for defining exceptions

Organization	Yes or No	Question 1 Comment
		accompanies the definition. As to the core definition addressed in Question 1, Snohomish believes the changes made in the revised definition are helpful and represent significant progress toward an acceptable definition. Nonetheless, we are concerned that the core definition is overly-broad and sweeps facilities into the BES that are required by the statute to be excluded, even considering the list of inclusions and exclusions. We therefore suggest two different approaches below that may achieve the SDT's aims more effectively than the proposed core definition. At a minimum, as we explain below, additional clarifications to the core definition are necessary and an acceptable exemption process is required to ensure that facilities that by statute must be excluded are excluded from the BES as defined by the SDT.At the outset, we urge the SDT to bear in mind the specific restrictions on the definition of "bulk-power system" contained in Section 215 of the Federal Power Act ("FPA") (Following FERC's guidance on the question, we treat the statutory term "bulk-power system" as equivalent to the term ordinarily used in the industry, "Bulk Electric System"). In Section 215(a)(1), Congress defined "bulk-power system" to mean "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" and "electric energy from generation facilities needed to maintain transmission system reliability." 16 U.S.C. Â§ 824o(a)(1). Congress unequivocally excluded from this definition "facilities used in the local distribution of electric energy." Id. The "bulk-power system" definition thus imposes a clear limit on the reach of the mandatory reliability regime. Congress reinforced that limit in Section 215(i), where it emphasized that the FPA authorizes the imposition of reliability standards "for only the bulk-power system." 16 U.S.C. Â§ 824o(i)(1) (emph. added).Further, the SDT must bear in mind "the cardinal rule that a statute is to be read as a whole since the meaning of statutory language, plain or not, depends on context." City of Mesa v. FERC, 993 F.2d 888, 893 (D.C. Cir. 1993) (citation omitted). In considering how Congress used the term "bulk-power system" in the statute, as well as the limits on the reliability regime imposed in the surrounding statutory language, it is clear that Congress intended the "bulk-power system" to be defined narrowly so that it would incorporate only high-voltage, interstate facilities used to transmit power over long distances, whose failure threatens drastic reliability events such as cascading outages. These limitations are plain from, for example, the statutory definition of "reliability standard," which provides that reliability standards are to encompass only requirements to "provide for reliable operation of the bulk-power system." 16 U.S.C. Â§ 824o(a)(3) (emph. added). Congress further refined the scope of reliability authority by specifically defining "reliable operation" to mean "operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance. . . or unanticipated failure of system elements." 16 U.S.C. Â§ 824o(a)(4). Congress's intent to focus the national reliability regime on broad-scale threats to the interconnected, interstate high-voltage system like cascading outages is made clear, as well, by Congress's specific direction that the mandatory reliability system is prohibited from enforcing standards for adequacy of service, which were left to state and local authorities. 16 U.S.C. Â§ 824o(i)(2).When read in the context of the statute as a whole, the definition developed by the SDT should therefore focus on that portion of the interconnected bulk

Organization	Yes or No	Question 1 Comment
		transmission grid for which thermal, voltage, and stability limits must be observed in order to prevent instability, separation events, and cascading outages. Further, in order to honor the specific limits placed on the definition by Congress, the SDT's definition must exclude facilities used in the local distribution of electric power and it must exclude facilities whose operation or mis-operation affects only the level of service and does not threaten cascading outages or other widespread events on the bulk interconnected system. Snohomish is concerned that the SDT's proposed definition is overly-broad, and that it will sweep in many Elements that have little or no material impact on the reliable operation of the interconnected bulk transmission grid. For example, the definition would sweep in all generators with 20 MVA capacity even though generators this small rarely create impacts on the interconnected bulk transmission system that would threaten to violate the thermal, voltage or stability limits of the bulk transmission system and therefore do not threaten instability, separation, or cascading outages on the interconnected transmission system. Accordingly, for the BES definition to conform to the requirements of the statute, the SDT must adopt an effective mechanism to exempt facilities like these that are improperly swept in by the SDT's brightline approach to inclusions and exclusions. For this reason, the Exception process to accompany the SDT's definition is of critical concern. It constitutes the last line of defense against a SDT definition that sweeps in facilities excluded by the statutory definition.Snohomish believes the SDT can achieve the goals of FERC's Orders No. 743 and 743-A while honoring these statutory limits by taking one of two alternative approaches to the core definition. First, perhaps the simplest way the SDT could achieve the goals of FERC Order No. 743 while avoiding overbreadth that violates statutory limits is to simply adopt the statutory definition of "bulk-power system" as the core definition. This approach is commonly used by regulatory agencies in defining key jurisdictional terms to ensure that the agency does not cross statutory boundaries when carrying out the duties assigned to it by Congress. Under this approach, the core definition would simply echo the statutory definition, substituting "Bulk Electric System" for its statutory equivalent, "bulk-power system":The term 'Bulk Electric System' means: (A) Facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and,(B) Electric energy from generation facilities needed to maintain transmission system reliability.The term does not include facilities used in the local distribution of electric energy.See 16 U.S.C. Â§ 824o(a)(1). The inclusions and exclusions developed by the SDT, with the refinements we discuss below, would then be added to provide guidance in the application of this definition to specific classes of electric system facilities and Elements. A second alternative approach is to make the smallest possible adjustment to the current BES definition that suffices to address the central concern expressed by FERC in Orders No. 743 and 743-A. Those orders emphasized that FERC's concerns are with the initial phrase in the current NERC BES definition, which provides that the "Bulk Electric System" is: As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher.In Order No. 743, FERC made clear that it views the initial phrase ("As defined by the Regional Reliability Organization") as creating unreviewable discretion for Regional Entities to define the BES in their region, and that this unreviewable discretion, rather

Organization	Yes or No	Question 1 Comment
		than lack of uniformity per se, is the problem Order No. 743 is designed to remedy. See, e.g., Order No. 743, 133 FERC Â¶ 61,150 at P 16 (2010) (FERC believes the "best way to address these concerns is to eliminate the Regional Entities' discretion to define 'bulk electric system' without ERO or Commission review"; id. at 30 (same). In Order No. 743-A, FERC clarified that the primary aim of its rulemaking was to eliminate this unreviewed regional discretion, and it was not, as FERC had originally proposed, to create a uniform national definition that does not allow for any regional variation. Order No. 743-A, 134 FERC Â¶ 61,210 at P 11 ("We clarify that the specific issue the Commission directed the ERO to rectify is the discretion the Regional Entities have under the current bulk electric system definition to define the parameters of the bulk electric system in their regions without any oversight from the Commission or NERC."); id. at P 39 ("The Commission's suggested solution simply would eliminate regional discretion that is not subject to review by [NERC] or the Commission").Accordingly, the SDT could achieve the primary aim of Order No. 743 by simply rewriting the current definition to read:Unless a different definition has been developed by the Regional Reliability Organization and approved by NERC and FERC, the Bulk Electric System is defined as the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher.If the SDT uses this suggested language as its core definition, it will have addressed FERC's primary concern with a minimum of disruption to the current NERC system of definitions. The definition could then be further elaborated with the list of specific inclusions and exclusions of Elements and systems (modified as discussed below), to provide more specific guidance to the industry. In this connection, we note that a 200 kV threshold would be more appropriate for WECC than a 100-kV threshold. This is because generation in the West is generally located far from load, and power is generally transmitted from these generation sources to distant load centers on extremely high-voltage lines, usually operating in the range of 230-kV to 500-kV. Further, because loads are often dispersed across relatively broad geographic areas, especially in the rural West, 115-kV lines are frequently used in local distribution systems. See WECC Bulk Electric System Definition Task Force, Initial Proposal and Discussion, at pp. 11-16 (posted May 15, 2009) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx) (technical discussion showing that most transmission in the Western Interconnection operates at voltages greater than 200 kV). Accordingly, a 200-kV threshold with an "inclusion" mechanism to sweep in the relatively limited number of 115-kV lines in the West that perform a transmission function would be better suited to the typical topology of systems in the West than a 100-kV threshold with exceptions for facilities that operate as local distribution. That being said, we recognize that 200-kV may not be an appropriate threshold for other parts of the country and we are willing to support the SDT's approach as long as discretion is preserved for the WECC to develop a definition better suited to the conditions in the Western Interconnection. If the STD elects not to adopt one of the above suggestions, the core definition proposed on April 28 requires clarification. Specifically, as drafted, the proposed definition is ambiguous in that it is not clear whether the clause "unless such designation is modified by the list shown below" modifies only the preceding clause

Organization	Yes or No	Question 1 Comment
		("Reactive Power resources connected at 100 kV or higher") or the entire definition. To eliminate this ambiguity, we suggest that the proposed definition be reordered to read as follows:Bulk Electric System (BES): (A) Unless included or excluded in subpart B, the Bulk Electric System consists of: (1) all Transmission Elements operated at 100 kV or higher; (2) Real Power resources identified in subpart B; and, (3) Reactive Power resources connected at 100 kV or higher.(B) [the list of inclusions and exclusions, modified as discussed in our responses to questions 2 through 9]. Rearranging the definition in this way should make clear that the list of inclusions and exclusions that would be inserted as Subpart B modifies each provision of Subpart A. Thus, for example, even if a Transmission Element is otherwise included by virtue of operating at 100 kV or higher, it is nonetheless excluded if specifically addressed in the list of exclusions that would be incorporated as subpart B of the definition (if, for example, the Element qualifies as a Local Distribution Network). The rearrangement of the language eliminates any argument that the phrase "unless such designation is modified by the list shown below" does not modify "all Transmission Elements operated at 100 kV or higher" because of its placement at the end of the independent clause "Reactive Power resources connected at 100 kV or higher." Snohomish supports the use of the phrase "Transmission Elements" as the starting point for the base definition because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the use of the term "Transmission" makes clear that the Bulk Electric System includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. As discussed above, the definition must exclude facilities used in local distribution in order to comply with the limits placed on NERC authority by Congress in Section 215 of the Federal Power Act ("FPA"), 16 U.S.C. Â§ 824o. For similar reasons, we believe the SDT has improved the proposed definition from its initial proposal by eliminating the use of terms such as "Generation" that are not specifically defined in the NERC Glossary of Terms and by eliminating terms such as "Facility" that include "Bulk Electric System" as part of their definition. Eliminating the use of such terms helps sharpen the core definition. If a key term is undefined, incorporating it into the definition only begs the question of how the incorporated term is defined. If a currently-defined term uses the phrase "Bulk Electric System" as part of its definition, incorporating that term into the BES definition creates a confusing circularity. We therefore support the SDT's use of defined terms such as "Element," "Real Power," and "Reactive Power."
Response: The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. The SDT elected to retain the 100 kV bright-line criteria. This is the bright line voltage level that is included in the existing approved definition of the Bulk Electric System in the NERC Glossary of Terms. While a number of stakeholders suggested alternate voltage levels, no technical justification was provided that would lead the SDT to make a change. One goal of this project is to add clarity to the definition without significantly changing the population of BES elements.		

Organization	Yes or No	Question 1 Comment
See the responses to comments regarding the Regulatory Requirements in Question 12 below. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
FHEC	Yes	Generally agree, but think E1 should be changed slightly to:From: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: To:E1 - Any radial system which is described as connected from a Transmission source originating with a single automatic interruption device and:
Response: See the responses to comments as well as a discussion of the latest revisions regarding the Radial Exclusion in Question 7 below.		
Vermont Transco	Yes	It appears that the SDT has made progress in addressing comments made to date. Concerned that facilities below 100 kV will fall into the current definition of BES. If changes in the wording better identified key areas the new definition would be easier to interpret, apply, and it would better align with the concerns of the members
Response: The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists. The SDT elected to retain the 100 kV bright-line criteria. One goal of this project is to add clarity to the definition without significantly changing the population of BES elements. See the responses to comments regarding Local Distribution Facilities in Question 11 below. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
South Texas Electric Cooperative, Inc.	Yes	There is general confusion as to whether or not the “BES” is synonymous with the “BPS”. If this is so, then it should be expressly stated as such. If not, clarification should be provided to industry.
Response: The BES and BPS are not synonymous. The BES is a subset of the BPS. This has been stated in numerous documents, including Orders No. 693 (P76) and 743 (P36). No change made.		
FortisBC	Yes	We agree with the concept of a bright-line definition and commend the SDT for developing a concept of explicit inclusions and exclusions as part of the definition. This will reduce the number of exception

Organization	Yes or No	Question 1 Comment
		applications for some of the BES elements. However, the inclusion and exclusion requirements are extremely restrictive. For example, radial characteristics should not be limited by the amount of installed generation or single transmission source and/or require an interrupting device. Instead we believe that one or more transmission sources could feed the radial load to provide redundancy as long as there is adequate protection and isolation for improved customer-supply continuity and reliability. This should be considered radial as long as the loss of any transmission source does not affect, and is not necessary for, the operation of the interconnected transmission network. Further, it is imperative to understand that the NERC's revised definition will have a direct impact on entities across North America and will conflict with regulatory requirements, Codes, and Licenses. FERC in its Order 743 and 743A has directed NERC to address these concerns.We suggest the SDT and RoP teams should: o Carefully craft the exception criteria and procedure to be flexible and technically sound, to allow entities to adequately present their case to the ERO for inclusions or exclusions outside of the definition. o Include provisions in both the NERC exception criteria and exception process for federal, state and provincial jurisdictions. These provisions should provide clear guidance so that, if and when there are deviations from the exception criteria, they are properly identified with technical and regulatory justifications ensuring there is no adverse impact on the interconnected transmission network. This burden of proof should be left to the entity seeking exception because it may be difficult if not impossible to define the exception criteria. Further, if such an explicit criteria could be defined, it will in fact become another bright-line BES.
Response: See the responses to comments as well as a discussion of the latest revisions regarding the Radial Exclusion in Question 7 and the responses to comments regarding Regulatory Requirements in Question 12 below.		
Puget Sound Energy	Yes	E3. Local distribution networks (LDNs): In this exclsion criteria, it was unclear about the size of the LDN that could be excluded from BES. There was a limit on connected generation but not connected load. If there is any mention of total aggregate load served by this LDN then that would clarify the definition better. We would like to suggest using a limit say lesser than or equal to 300 MW of total aggregate load served by LDN could be excluded from BES definition in addition to all the 5 (a-e) characteristics mentioned.
Response: After extensive communication, the SDT has made changes to the draft Local Network definition to provide additional clarity. The draft definition now includes an upper voltage limit of 300 kV. The draft definition does not contain a limit on connected Load as no technical basis has yet been provided regarding this issue that would lead the SDT to make this change. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): **A** ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to		

Organization	Yes or No	Question 1 Comment
accommodate bulk power transfer across the interconnected system.		
Manitoba Hydro	Yes	We recommend that the definition be prefaced with the statement 'except where provided otherwise by applicable law...'
Response: The SDT has made revisions to the draft definition to clarify that the BES does not include facilities used in the local distribution of electric energy. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
City of Anaheim	Yes	I1: Change the "and" to an "or" at the end of the sentence, i.e. Exclusions E1 or E3. E3 (b): Use the same language in E1 (b), i.e. Only including generation resources not identified in Inclusions I2, I3, I4, and I5.
Response: The SDT has accepted your proposed change for Inclusion I1. The SDT has adopted the suggestion. Note that former Inclusions I2 and I3 have been combined into a new Inclusion I2. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
AltaLink	Yes	We agree with the concept of a bright-line definition and commend the SDT for developing a concept of explicit inclusions and exclusions as part of the definition. This will reduce the number of exception applications for some of the BES elements. However, the inclusion and exclusion requirements are extremely restrictive. For example, radial characteristics should not be limited by the amount of installed generation or single transmission source and/or require an interrupting device. Instead we believe that one or more transmission sources could feed the radial load to provide redundancy as long as there is adequate protection and isolation for improved customer-supply continuity and reliability. This should be considered radial as long as the loss of any transmission source does not affect, and is not necessary for, the operation of the interconnected transmission network. We suggest the SDT and RoP teams should: o Carefully craft the exception criteria and procedure to be flexible and technically sound, to allow entities to adequately present their case to the ERO for inclusions or exclusions outside of the definition. o Include provisions in both the NERC exception criteria and exception process for federal, state and

Organization	Yes or No	Question 1 Comment
		provincial jurisdictions. These provisions should provide clear guidance so that, if and when there are deviations from the exception criteria, they are properly identified with technical and regulatory justifications ensuring there is no adverse impact on the interconnected transmission network. This burden of proof should be left to the entity seeking exception because it may be difficult if not impossible to define the exception criteria. Further, if such an explicit criteria could be defined, it will in fact become another bright-line BES.
Response: See the responses to comments as well as a discussion of the latest revisions regarding the Radial Exclusion in Question 7. The SDT appreciates your comments and suggestions for the Rules of Procedure exception process and will consider them in its deliberations.		
Modern Electric Water Company	Yes	Taken by itself, the proposed core definition directly accomplishes the following: i) it re-affirms the 100kV bright-line and ii) it removes Regional discretion to define the BES. However, the language continues to inject ambiguity in that it introduces the use of the separately-defined capitalized term "Transmission". In NERC's Glossary of Terms (May 24, 2011), "Transmission" is defined in terms of function rather than voltage. Strictly interpreted, the core definition implies that only Elements used for the transfer of energy to points where it transformed for delivery to customers as well as certain resources are considered to be included in the BES. Under this viewpoint, there exists a two-stage qualifier for non-resource Elements - namely that it must first be used for Transmission and not for "Distribution", and secondly, that it be operated above 100kV. Rather, the BES cannot contain Elements used for "Distribution" (a term not explicitly defined, but extrapolated from other NERC glossary terms to mean the "wires" between the transmission system and the end-use customer, and NOT defined by voltage). If this is the case, the SDT has established that an Element's function is equally important to its voltage, and has simultaneously excluded all Transmission Elements under 100kV - even if used for bulk transfers. While the Exclusions detail characteristics of specific distribution-like Elements, we suggest that the core BES definition contain language explicitly excluding Distribution (there are Elements that are neither qualifying radials as defined in E1 nor local distribution networks as defined in E3).
Michgan Public Power Agency	Yes	My concern centers on the intent of FERC Order 743 language "we certify that this Final Rule will not have a significant economic impact on a substantial number of small entities" still falls short from being met by this definition change. This is a good start but additional work remains to be done. As pointed out in FERC Order 743A the 100 KV bright-line was not required but NERC can provide an alternative which can be supported technically. Also I have concerns for the FERC Order 743A language "facilities used in the local distribution of energy should be excluded from the revised bulk electric system definition" also needs additional work remains to be done.
Response: The SDT has revised the bright-line core definition to clarify that all Transmission Elements at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher are to be included in the BES unless there is a modification for a particular Element in the Inclusion or Exclusion lists.		

Organization	Yes or No	Question 1 Comment
The SDT elected to retain the 100 kV bright-line criteria. One goal of this project is to add clarity to the definition without significantly changing the population of BES elements. See the responses to comments regarding Local Distribution Facilities in Question 11 below. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
California Public Utilities Commission	Yes	The CPUC supports the changes, especially the exclusions and the flexibility given to facilities to prove that they are not part of the BES. However, the CPUC is concerned about the automatic imposition of deterministic standards that are arbitrary rather than technically-based: (1) the 100kV "bright line" test for transmission facilities, and the (2) 20 MVA threshold for generating units.In general, the current BES definition is largely deterministic rather than based on economics or probabilities. An arbitrary number such as a "bright line" test should not be the singular gauge for inclusion in the BES. A robust BES definition should consider the actual impact on the system and the cost. The courts have spoken on the issue, Illinois Commerce Commission v. Federal Energy Regulatory Commission, 576 F.3d 476, and instructed FERC to approve projects, "pricing scheme", only if the benefits outweigh the cost. Further, the 20 MVA threshold for generating facilities is coincident with the NERC threshold for registered entities. While a logical threshold to require generators to register with NERC, the required reliability assessments, and subsequent reliability upgrades may be prohibitively expensive for small generating units.
Response: The SDT elected to retain the 100 kV bright-line criteria. One goal of this project is to add clarity to the definition without significantly changing the population of BES elements. This is the bright-line voltage level that is included in the existing approved definition of the Bulk Electric System in the NERC Glossary of Terms. While a number of stakeholders suggested alternate voltage levels, no technical justification was provided that would lead the SDT to make a change. See the responses to comments as well as a discussion of the latest revisions regarding Generation Inclusions in Questions 3 and 4 below. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Sierra Pacific Power Co d/b/a	Yes	The revised core definition serves to address the directives of the Commission Order in 743 and 743A,

Organization	Yes or No	Question 1 Comment
NV Energy		particularly the elimination of regional discretion, and it also eliminates the ambiguity of the word “generally”.
City of St. George	Yes	The definition is okay as long as proper inclusions and exclusions are included in the definition.
Imperial Irrigation District	Yes	
SERC Planning Standards Subcommittee	Yes	
ACES Power Participating Members	Yes	
Utility System Efficiencies, Inc.	Yes	
Tennessee Valley Authority	Yes	
Arizona Public Service Company	Yes	
Western Electricity Coordinating Council	Yes	
Rayburn Country Electric Cooperative, Inc.	Yes	
Luminant Energy	Yes	
Central Maine Power Company	Yes	
New York State Electric & Gas and Rochester Gas & Electric	Yes	No comments
US Bureau of Reclamation	Yes	
Duke Energy	Yes	

Organization	Yes or No	Question 1 Comment
Alberta Electric System Operator	Yes	
South Carolina Electric and Gas	Yes	
MidAmerican Energy Company	Yes	
Florida Keys Electric Cooperative	Yes	
East Kentucky Power Cooperative, Inc.	Yes	
Farmington Electric Utility System	Yes	
Colorado Springs Utilities	Yes	
Sacramento Municipal Utility District (SMUD)	Yes	
GTC	Yes	
Idaho Power	Yes	
Long Island Power Authority	Yes	
PJM	Yes	
Oncor Electric Delivery Company LLC	Yes	
Xcel Energy	Yes	
Golden Spread Electric	Yes	

Organization	Yes or No	Question 1 Comment
Cooperative, Inc.		
Exelon	Yes	
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	Yes	No comment.
Response: Thank you for your support. Many stakeholders suggested revisions to the definition – and the drafting team made modifications that were responsive to theses suggestions. Please see the revised definition.		

2. Q2. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: The SDT has made changes to Inclusion I1 of the BES definition based upon comments received from the industry. These changes in the revised definition include removing the Generator Step-Up and Phase Angle Regulating transformer language, changing the wording from "windings" to "terminals", and adding the terms "primary" and "secondary".

I1 - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.

Organization	Yes or No	Question 2 Comment
Tri-State Generation and Transmission Association, Inc.	No	We recommend changing I1 to the following: "Only transformers, including phase angle regulators, with two or more windings of 100 kV or higher that are connected through automatic fault-interrupting devices, unless excluded under Exclusions E1 and E3." "Only" is required to prevent a regional interpretation that includes distribution transformers since they are never specifically excluded. The phrase regarding GSUs is removed since they are covered in I2 and I3.
Response: The SDT has addressed the issue of transformers serving local networks in the revised Exclusion E3 for the Local Network portion of the revised version of the definition. A transformer serving a local network could be considered an "Element" that is part of the local network and would be excluded if so justified by the characteristics of the exclusion. No change made. The SDT agrees with your comment regarding GSUs and has made the appropriate revision in the revised version of the definition. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
NERC Staff Technical Review	No	Inclusion I1 is acceptable in general; however, there are two items that should be modified.>>>>>>>>>> The reference to "two windings" is technically incorrect because it would exclude autotransformers with two terminals at 100 kV or higher since the primary and secondary terminals are connected to the same winding. It would be better to replace the phrase "with two windings of 100 kV or higher" with the phrase "with two or more terminals connected at 100 kV or higher.">>>>>>>>>> The phrase "other than Generator Step-up (GSU) transformer" is unnecessary. The qualifier "with two or more terminals connected at 100 kV or higher" already will exclude GSU transformers. In unusual cases in which a generator is connected to the system through a transformer that does have two terminals connected at 100 kV or higher the transformer should be included by Inclusion I1.

Organization	Yes or No	Question 2 Comment
Response: The SDT has made appropriate changes in the revised version of the definition regarding both comments. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
NERC Transmission Issues Subcommittee (TIS)	No	It is not necessary to exclude generator step-up transformers because a GSU should be considered to be part of the generating Unit. >>>>>>>>>>> The reference to two windings is technically incorrect because it would exclude autotransformers which technically only have one winding. It would be better to say that both the high-side and the low side of the transformer connected at 100 kV or higher. >>>>>>>>>>> "I1 - Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings both the high-side and the low side of the transformer connected at 100 kV or higher unless excluded under Exclusions E1 and E3."
Response: The SDT has deleted the GSU language in the revised Inclusion I1. The SDT has changed the wording from "windings" to "terminals" in the revised version of the definition. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
Dominion	No	While Dominion appreciates the SDT's attempt to respond to initial comments, unfortunately the response does not squarely address Dominion's concerns. Rather, the SDT proposes that all transformers, whether for transmission or generation should be included. The SDT's response to SERC also seems to indicate that the facility associated with generators should be included in the BES. In order to provide clarity Dominion restates its comment. Dominion's position is that all transformers with two windings at 100 kV or higher should be included in the BES. Dominion does not agree that a transformer with two windings at 100 kV or higher should be excluded merely because it is a generator step up (GSU). And, while Dominion does not agree that a generation resource, Element or Facility should automatically be classified as part of the BES, if the SDT decides to do so, then it is Dominion's position that the GSU should also be included in the BES. It doesn't seem to make sense to include the generator itself, but exclude an associated element that is operated at 100 kV or above. If the SDT's intent was to 'carve out' GSUs in Inclusion -I1, but to include GSUs in Inclusion I2 and 3, then Dominion suggests revising the phrase "....including the generator terminals through the GSU...." to read "....including the generator terminals and the GSU."
Response: The SDT agrees with the inclusion of all generation and transmission transformers and has attempted to provide clarity in the revised version of the		

Organization	Yes or No	Question 2 Comment
definition. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
Overton Power District No. 5	No	clarification is needed to identify which transformers to include in the BES
Tennessee Valley Authority	No	We suggest I1 to read, “Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, having two windings of 100 kV or higher, unless excluded under Exclusions E1 or E3. Transformers having only one winding of 100 kV or higher are excluded.”
Central Maine Power Company New York State Electric & Gas and Rochester Gas & Electric	No	By definition above, a transformer with a 100 kV winding is already an “element operated at 100 kV or above.” This inclusion is actually intended to exclude transformers with only one winding operated at 100 kV or higher voltage. Therefore, Inclusion I1 should be deleted and a new Exclusion should be made: “Transformers with only one winding of 100 kV or higher, including phase angle regulators, unless included under Inclusions I2, I3, or I5.”
Hydro-Quebec TransEnergie	No	Since transformers are already part of "all transmission Elements operated at 100 kV and above" in the definition, and since inclusions I2 to I5 are commonly related to only generation, I1 should be removed and replace instead by the following Exclusion: Ex "Transformers not used as Generator Step-Up (GSU) transformers that have primary or secondary winding at less than 100 kV."
Consumers Energy Company	No	The facilities currently listed in Inclusion I1 are already arguably included in the core definition. Inclusion I1 should be reclassified as an Exclusion to cover transformers that do not meet the criteria in Inclusion I1 such as those transformers with a single winding of 100kV or higher. Following is our proposed language for the exclusion we are proposing. Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, that have less than two windings of 100 kV or higher.
Southern California Edison Company	No	Identifying specific equipment within the “Inclusions” or “Exclusions” component is too prescriptive, and itemizing them in this fashion misses the intent of this endeavor which should be to ultimately ensure the risks to region wide reliability are captured.Therefore, it is SCE’s position that the proposed BES Definition should not single out specific pieces of equipment, and that they should be included or excluded based on the criteria of the definition. To do otherwise could: (i) generate confusion due the many types and variations of equipment, and what should/should not be included In the BES; and(ii) include radial or distribution systems into scope that might not otherwise have been considered, and which pose no regional reliability risk. If the BES Definition continues to reference transformer types, it should clarify what specific attributes qualify for inclusion. This might best reside in companion documentation that would accompany the definition to ensure

Organization	Yes or No	Question 2 Comment
		consistency in application.
Clark Public Utilities	No	Transformers should only be part of the Bulk Electric System if they are transforming voltage from one BES element to another BES element. The current inclusion language would apply to all transformers with two windings operated at greater the 100 kV subject to the E1 and E3 exclusions. There is no indicated exclusion referring to the exception process. If a facility is excluded from the BES by the exception process, connected transformers should also be excluded. Clark believes if the inclusion language was changed slightly, the exclusion references to E1 and E3 would not be necessary. Without this change, it appears that a transformer with two winding connected to greater than 100 kV would be a BES asset even if both of the facilities these windings were connected to had been excluded (E1 or E3) or excepted (BES Exception Process). I1 should be rewritten to state: Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings of 100 kV or higher connected to Transmission Elements determined to be part of the Bulk Electric System.
Independent Electricity System Operator	No	We agree with the concept of Inclusion I1. We suggest that since transformers with at least two windings greater than 100 kV are already part of "all transmission Elements operated at 100 kV and above" in the definition, and since inclusions I2 to I5 are commonly related to only generation, Inclusion 1 should be removed and replace by the following Exclusion: E(x)"Transformers that have a primary or secondary winding at less than 100 kV except for those included by I2 and I3"
BPA	No	Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings of 100 kV or higher unless excluded under Exclusions E1 and E3.
American Municipal Power and Members Florida Municipal Power Agency	Yes	We support I2, but propose clarifying edits. To minimize possible confusion as to the category of transformers being addressed in I1, and the sufficiency of a single applicable Exclusion, we suggest the following rewording: "Transformers, including phase angle regulators, and not including generator step-up (GSU) transformers, with two windings of 100 kV or higher unless excluded under Exclusion E1 or E3."
Transmission Access Policy Study Group	Yes	To minimize possible confusion as to the category of transformers being addressed in I1, and the sufficiency of a single applicable Exclusion, TAPS suggests the following rewording: "Transformers, including phase angle regulators, and not including generator step-up (GSU) transformers, with two windings of 100 kV or higher unless excluded under Exclusion E1 or E3."
Northern California Power Agency	Yes	NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.

Organization	Yes or No	Question 2 Comment
Illinois Municipal Electric Agency	Yes	With the following clarifying edits. "Transformers, including phase angle regulators, and not including generator step-up (GSU) transformers, with two windings of 100 kV or higher unless excluded under Exclusion E1 or E3."
Idaho Power	Yes	I generally agree but the definition accidently excludes autotransformers. It should be restated as transformers with two terminal at or above 100 kV. Also, there should be clarification about any tertiary windings that a transformer might have. I would assume that the tertiary winding and any real or reactive load or generation connected to it to be excluded as the tertiary winding are typically of distribution class voltage. Finally, there is no need to exclude GSUs in this definition because they will be excluded unless the two terminals are at 100 kV or above. Additionally, the GSUs will be covered by other inclusion statements related to generators.
Xcel Energy	Yes	The drafting team should consider how components such as autotransformers would be considered under this aspect, and if additional language needs to be added to clearly include certain autotransformers.
Response: The SDT has revised Inclusion I1 to provide more clarity on specifically which transformers are included in the BES. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
Western Montana Electric Generating and Transmission Cooperative	No	In concept, we support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams noting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort. Also, the reference to "two windings of 100 kV or higher" may create some confusion because many three-phase transformer banks have 6 or 9 windings, depending on whether the transformer has a tertiary. We suggest clarifying this provision by changing the clause reference two windings to read: "the two highest voltage transformer windings of 100 kV per phase that are connected to the Bulk Electric System." We again urge the SDT to consider further delineation of points of demarcation similar to WECC BESDTF

Organization	Yes or No	Question 2 Comment
		Proposal 6.
Sierra Pacific Power Co d/b/a NV Energy	No	We agree with the concept; however there are two issues that must be resolved. First, the "two windings" language should be changed to "two terminals", as in the case of an auto-transformer, there is technically only one winding, and it would fail to be included in this inclusion designation as written. Second, a literal read could have an unintended interpretation that transformers with fewer than 2 windings at 100kV might still be included through the core definition. The SDT should consider whether this I1 inclusion item would be better applied in the converse as an exclusion designation.
Chelan PUD – CHPD Northwest Requirements Utilities Big Bend Electric Cooperative, Inc. Cowlitz County PUD	No	In concept, we support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams noting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort. Also, the reference to "two windings of 100 kV or higher" may create some confusion because many three-phase transformer banks have 6 or 9 windings, depending on whether the transformer has a tertiary. We suggest clarifying this provision by changing the clause reference two windings to read: "the two highest voltage transformer windings of 100 kV per phase that are connected to the Bulk Electric System."We again urge the SDT to consider further delineation of points of demarcation similar to WECC BESDTF Proposal 6.
Public Utility District No. 1 of Snohomish County, Washington Clallam County PUD No.1	Yes	In concept, we support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT

Organization	Yes or No	Question 2 Comment
		should be able to provide much useful guidance to the industry with relatively little additional effort. Also, the reference to "two windings of 100 kV or higher" may create some confusion because many three-phase transformer banks have 6 or 9 windings, depending on whether the transformer has a tertiary. We suggest clarifying this provision by changing the clause referencing two windings to read: "the two highest voltage transformer windings of 100 kV per phase that are connected to the Bulk Electric System."
Response: The SDT has changed the wording from "windings" to "terminals" in the revised version of the definition. The SDT has revised Inclusion I1 to provide more clarity on specifically which transformers are included in the BES. The SDT will consider the suggestions to incorporate the WECC work into its effort. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
PacifiCorp	No	Transformers with two or more windings greater than 100 kV exclusively serving local distribution networks should be excluded from the BES.
Response: The SDT has addressed the issue of transformers serving local networks in the revised Exclusion E3 for the local network portion of the revised version of the definition. A transformer serving a Local Network could be considered an "Element" that is part of the local network and would be excluded if so justified by the characteristics of the exclusion. No change made.		
Electric Reliability Council of Texas, Inc.	No	ERCOT ISO agrees that such equipment should be considered for inclusion, but suggests that these issues be addressed relative to the criteria for evaluation in the exception process. In other words, this inclusion doesn't need to be explicitly identified. It would simply be included under the general 100 kV threshold, and to the extent an owner believed the characteristics of its equipment don't warrant inclusion, it would seek an exception.
Response: The SDT believes the BES definition should be "bright-line" criteria and be able to include a very high percentage of the facilities by inspection. The exception criteria and process is meant to handle very few facilities. The BES definition and exemption process have been developed under this guiding concept. No change made.		
Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)	No	Inclusion I1 would be unlawful to the extent that it would include the transformers of retail customers that have self-provided "hard-tapped" facilities behind the retail delivery point. (For the purposes of these Comments, "hard-tapped" means connected without an automatic fault-interrupting device).
Response: The SDT believes that retail customer transformers could be excluded based upon Exclusions E1 or E3. No change made.		

Organization	Yes or No	Question 2 Comment
Kootenai Electric Cooperative Public Utility District No. 1 of Franklin County Midstate Electric Cooperative	No	In concept, Kootenai supports the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams noting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort. We again urge the SDT to consider further delineation of points of demarcation similar to WECC BESDTF Proposal 6.
Blachly Lane Electric Cooperative PUD No. 2 of Grant County, Washington Central Electric Cooperative Clearwater Power Company Consumers Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Inc. Okanogan Electric Cooperative PNGC Power Raft River Rural Electric Cooperative Salmon River Electric	Yes	We support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. We note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams denoting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. See WECC BES Definition Task Force Proposal 6, Appendix C (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). Similarly, the FRCC's BES Definition Clarification Project has devoted considerable effort to developing one-line diagrams of transmission and distribution Elements, and identifying the point of demarcation between BES and non-BES Elements. See FRCC BES Definition Clarification Project Version 4, Appendices A & B (available at: https://www.frcc.com/Standards/BESDef.aspx). Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort.

Organization	Yes or No	Question 2 Comment
Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative		
Northern Wasco County PUD	No	In concept, we support the SDT's attempt to provide a clear demarcation between the BES and non-BES elements. Inclusion I-1 is helpful because it at least implies that the BES ends where power is stepped down from transmission voltages to distribution voltages. We believe, however, that the SDT should undertake the effort to more clearly define the point where the BES ends and non-BES systems begin. In this regard, we note that the WECC Bulk Electric System Definition Task Force ("BESDTF") has devoted considerable effort to this question and has developed one-line diagrams noting the BES demarcation point for a number of different kinds of Elements that are common in the Western Interconnection. Using this work as a starting point, the SDT should be able to provide much useful guidance to the industry with relatively little additional effort. Also, the reference to "two windings of 100 kV or higher" may create some confusion because many three-phase transformer banks have 6 or 9 windings, depending on whether the transformer has a tertiary. We suggest clarifying this provision by changing the clause reference two windings to read: "the two highest voltage transformer windings of 100 kV per phase that are connected to the Bulk Electric System."We again urge the SDT to consider further delineation of points of demarcation similar to WECC BESDTF Proposal 6.
Response: The SDT will consider the suggestions to incorporate the WECC work and FRCC work into its effort.		
Public Utilities Commission of Ohio	No	FERC jurisdiction is limited by the Federal Power Act, Section 215. To make a bright line designation as the starting point, without a demonstration that ALL facilities at 100 kV and greater affect the reliability of the bulk power system is a step beyond FERC jurisdictional boundaries. The Federal Power Act explicitly excludes facilities used in local distribution from the bulk power system. NERC should give serious consideration to other (non bright-line) approaches to ensure bulk system reliability.
Response: The task of the SDT is to put forward a 100 kV bright-line for the BES definition. The SDT has modified the definition and distribution facilities are now specifically excluded from the BES. However, the SDT acknowledges that there may still be regulatory conflicts as many of the commenters have voiced. The definition is neither intended to nor can it supersede any regulatory orders and/or rulings by relevant Federal, State, or Provincial Authorities. Although the SDT can not resolve all regulatory conflicts, it believes that a) proposed revisions to the definition should address many of these concerns; and b) remaining issues may be effectively addressed by the Rules of Procedure exception procedure currently under development. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and		

Organization	Yes or No	Question 2 Comment
		Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.
The Dow Chemical Company	No	An additional exclusion for industrial distribution facilities needs to be added for the reasons expressed in Dow's comments on Exclusion E3. Dow's manufacturing sites have transformers, other than generator step up transformers, that have two windings of 100 kV or higher and that are between on-site generation and individual manufacturing plants at such sites. Such transformers should be excluded, because they are part of electricity distribution facilities. However, such transformers do not fall within proposed Exclusion E1 or E3.
Response: If a manufacturing site's facilities cannot meet the exclusion criteria, then those facilities must be part of the BES. There may be instances where customer facilities are part of the BES. See response to Question 9. No change made.		
Central Lincoln	No	We support the SDT's intent, but it is unclear from the language how single winding transformers (autotransformers) are handled. We suggest replacing "two windings..." with "two sets of terminals...." Please also indicate how transformers with only one set of terminals above 100 kV are treated, since we don't believe the flowchart at http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf properly expresses the SDT's intent to classify these transformers as non-BES.
United Illuminating	No	Inclusion I1 is an attempt to limit the scope of the core definition to only those transformers with a high and low side connection at or above 100 kV. However it is not clear that a transformer connected solely on the high side at 100 kV, that is a distribution transformer, is not included in the BES by the definition. This is because the core definition includes all transmission elements connected at 100 kV, this would include the distribution transformer. Then Inclusion I1 does not eliminate the distribution transformer explicitly. It is only implied that the core definition applies only to those transformers with a high and low side connection at or above 100 kV. UI would prefer a more explicit description. Such as: I1- Only those Transformers, including phase angle regulators, with two windings of 100 kV or higher unless excluded under Exclusions E1 and E3 are included in the definition of BES. Generator Step Up Transformers are included based on the generator. A similar comment can be made for the other inclusions. An alternative solution is to change word Inclusions to a sentence that explicitly states: for the category of element below only include the type of equipment specified. Also The use of the descriptor two windings implies auto transformers with one winding is excluded. UI understands that is not the intent of the team.
Response: The SDT has changed the wording from "windings" to "terminals" in the revised version of the definition. The SDT has revised Inclusion I1 to provide more clarity on specifically which transformers are included in the BES.		

Organization	Yes or No	Question 2 Comment
Transformers with only one set of terminals operated above 100 kV would not be included in the BES. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
Oncor Electric Delivery Company LLC	No	The reference to two windings is technically incorrect because it would exclude autotransformers which technically only have one winding. Recommend rephrasing this to say that both the high-side and the low side of the transformer connected at 100 kV or higher.I1 Suggested Language:"I1 - Transformers, including phase angle regulators, with both the high-side and the low side of the transformer connected at 100 kV or higher unless excluded under Exclusions E1 and E3."
Manitoba Hydro	No	Inclusion I1 requires clarification. The intention of I1 is to include transformers that have both their primary and secondary windings operated at 100kV and the wording in I1 should reflect this. Requiring that only 'two windings' must be connected at 100kV or greater for inclusion is not sufficient in the case of 3 separate single phase banks connected to form a delta-wye connection for example. As currently written, even if only the primary windings of this bank were connected at greater than 100kV, this transformer would be included in the BES regardless of the secondary voltage. -Suggested wording: "Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, that are connected at 100kV or above on their primary and secondary windings unless excluded under Exclusions E1 and E3.OR"Transformers, other than generator step-up (GSU) transformers, including phase angle regulators, with two windings of 100 kV or higher in the same phase unless excluded under Exclusions E1 and E3."
Tacoma Power		Tacoma Power agrees with Inclusion I1. However, we believe the reference to 'two windings' is ambiguous and propose changing it to read,"Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, with two or more connections to Elements at 100 kV or higher, unless excluded under Exclusions E1 and E3."
Western Electricity Coordinating Council	Yes	WECC agrees in concept and understands that the intent of the phrase "other than GSU transformers" was used to prevent duplication or conflict with I2. However, it has the unintended consequence of creating the appearance that GSU transformers are not included in the definition, which is more of a conflict. By removing this phrase, such transformers would be clearly included because, if both terminals are connected at greater than 100 kV, it will also be true that the high side is connected at greater than 100 kV, per I2. WECC suggests removing this phrase. Also, the final statement more appropriately should be "...unless excluded under Exclusions E1 or E3."

Organization	Yes or No	Question 2 Comment
		Finally, the term "two windings" may be technically incorrect because some transformers may only have one winding. This wording would exclude single-winding transformers at or above 100 kV. One option may be to change the language to "two terminals" instead of "two windings." It may also be useful to clarify that transformers with one terminal above and one terminal below 100 kV should be excluded.
Portland General Electric Company	Yes	The reference to "two windings" will cause confusion. Presumably theStandard Drafting Team means two three-phase windings, which would mean that boththe high sides and the low sides of a typical transformer bank would have to beoperating at 100kV and above in order to be part of the BES. In other words, a230kV/57kV transformer would not be included, despite the fact that all three windingsthat make up the high side are individually rated at over 100kV. The inclusion needs tomake clear that it's talking about two or more sets of windings, each set consisting ofthree phases.
Sacramento Municipal Utility District (SMUD)	Yes	Sacramento Municipal Utility District (SMUD) agrees with the concept of Inclusion 1. However, to ensure a clarity of the "Bright-Line" criteria, two items for the Drafting Team (DT) to consider are: 1) removal of the phrase other than GSU as it may lead to confusion. The GSUs typically have one winding below 100 kV that disqualify their inclusion. 2) Reference to the transformer terminals each above 100 kV would reduce confusion for single winding transformers and multiple winding transformers.
Long Island Power Authority	Yes	For clarification it is recommended that "windings" be replaced with "connection points".
Modern Electric Water Company	Yes	The use of "terminals" rather than "windings" might be more clear.
Response: The SDT has changed the wording from "windings" to "terminals" in the revised version of the definition. The SDT has revised Inclusion I1 to provide more clarity on specifically which transformers are included in the BES. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
Consolidated Edison Co. of NY, Inc.	No	Recommended changes to the wording used in Inclusion I#1, et al:Formatting - When referring to an Inclusion (or Exclusion), the SDT should use a number/pound sign ("#") between the "I" and number to avoid confusing "I" with the numerical value "1."
Response: The comment isn't related to the question and will be considered by the technical writers when the final draft is written. No change made.		

Organization	Yes or No	Question 2 Comment
ATCO Electric		While we agree generally with the inclusion, we have some questions based on specific examples: 1. A load substation has two 144/25kV transformers that connects to two separate 144kV transmission lines (i.e. two separate 144kV buses). However, the two transformers joins on one 25kV bus. Should these two 144/25kV transformers be part of BES? 2. A protection relay is on 72kV side of a 144/72 tie transformer and its purpose is to remove 72kV weak source (i.e. trip 72kV breakers) during 144kV bus fault. Should this protective relay be included in BES? 3. According to Inclusion I1, a 144/25kV transformer is not a BES element. The transformer's 144kV side has a Motor Operated Disconnecting Switch (MOD), and this MOD connects to one or two 144kV line breakers. The transformer's protections trip the 144kV line breakers. Should the transformer protection systems be part of BES?
Response: 1. The two transformers cited in the comment would not be part of the BES based upon Inclusion I1 of the definition. 2. This relay cited in the comment would not be part of the BES because it trips a less than 100 kV interrupting device. 3. The substation configuration would need to be reviewed before a determination could be made on whether the protection system cited in the comment is part of the BES. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
MRO's NERC Standards Review Forum	Yes	Please clarify that an exclusion would be a tertiary winding for example an auto transformer.
Response: The SDT has revised Inclusion I1 to provide more clarity on specifically which transformers are included in the BES. As an example, a 345/138 kV transformer with a 23 kV tertiary winding would be included in the BES. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
ACES Power Participating Members	Yes	We agree with limiting transformers to bulk power transformers and not including step-down or distribution transformers. Some regions have been enforcing standards on protection equipment that is on the low-side of these step-down or distribution transformers. Additional language further clarifying that this low-side protection equipment is not part of the BES should be added to for consistency across regions.Additionally, the drafting team might consider using the terms primary and secondary rather than windings. Otherwise,

Organization	Yes or No	Question 2 Comment
		autotransformers which have a sing
Response: The SDT has changed the wording from "windings" to "terminals" in the revised version of the definition. The SDT has revised I1 to provide more clarity on specifically which transformers are included in the BES. Associated protection system equipment will be handled separately via the PRC standards. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
Hydro One Networks Inc	Yes	We agree with the concept of Inclusion I1. However, we suggest that since transformers are already covered by the definition, "all transmission Elements operated at 100 kV and above", and since Inclusions I2 to I5 are commonly related to generation only, Inclusion I1 should be removed and replaced by the following Exclusion: E(x) "Transformers not used as Generator Step-Up (GSU) transformers that have primary or secondary winding at less than 100 kV." We also suggest the SDT to put forward a high-level exception criteria with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) mentioned in Inclusion I1, or any other inclusion(s). These inclusion(s) that are intended for exemption would be based on the entity's technical assessment, evidence and justification for its unique characteristics, configuration, and utilization.
Response: The SDT has revised Inclusion I1 to provide more clarity on specifically which transformers are included in the BES. The SDT believes the BES definition should be "bright line" criteria and be able to include a very high percentage of the facilities by inspection. The exemption criteria and process is meant to handle very few facilities. The BES definition and exemption process have been developed under this guiding concept. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
FHEC	Yes	Believe that the NERC Statement of Compliance Registry Criteria should be revised to reflect only thsese inclusions and exclusions. An entity with no assets that meet this definition should be allowed to de-register.
Response: Revision of registry criteria is not part of this project. No change made.		
Vermont Transco	Yes	This inclusion's wording allows an entity to easily identify which of its transformers will be included as BES and also adheres directly to the FERC identified 100kV or higher equipment. Question: if a transformer does not have two windings of 100 kV or higher but does have protection devices that could open the BES system, e.g. due to a low-voltage failed breaker scenario, would the protective devices be part of the BES even

Organization	Yes or No	Question 2 Comment
		though the transformer itself is not?
Response: Associated protection system equipment will be handled separately via the PRC standards. No change made.		
National Grid	Yes	We would like some clarification regarding three-winding transformers, for example a 345/115/23 kV transformer. Was the intention to include the 23kV in the new definition of BES? If so, it seems likely that other 23 kV components on the buswork could be pulled into the definition of BES if it is in the zone of protection of the transformer.
Response: The cited 345/115/23 kV transformer in the comment would be included in the BES since it has both primary and secondary terminals operated above 100 kV. The SDT has changed the wording from "windings" to "terminals" in the revised version of the definition. The SDT has revised Inclusion I1 to provide more clarity on specifically which transformers are included in the BES. The 23 kV facilities would not be included in the BES. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
City of Redding	Yes	Redding supports the concept of additional inclusions to the brightline if the objective is to further hone the generalness of the proposed definition. As we stated in question #1, we support the definition as long as an entity has the ability to seek an exception via a fair and objective Exception Process. If the SDT keeps inclusion 1, we believe it is overly broad and should have additional clarification added to address the various types of transformers such as auto transformers, three phase "Y" transformers, transformers with tertiary windings, etc. Additionally, the exclusion "other than generator step-up (GSU) transformers" could easily be interpreted to mean "all" GSU transformers regardless of voltage. Redding suggests that I1 be changed to read: "*Transformers, including phase angle regulators, with both high side and low side windings connected at 100 kV or higher unless excluded under E1 or E3 and generator step-up (GSU) transformers, serving generators in I2 and I3, with the high-side winding connected at 100 kV or higher.*"
FortisBC	Yes	We agree with the concept of Inclusion I1. However, we suggest that since transformers are already covered by the definition, "all transmission Elements operated at 100 kV and above", and since Inclusions I2 to I5 are commonly related to generation only, Inclusion I1 should be removed and replaced by the following Exclusion: E(x) "Transformers not used as Generator Step-Up (GSU) transformers that have primary or secondary winding at less than 100 kV." We also suggest the SDT to put forward a high-level exception criteria with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) mentioned in Inclusion I1, or any other inclusion(s). These inclusion(s) that are intended for exemption would be based on the entity's technical assessment, evidence and justification for its unique characteristics, configuration, and

Organization	Yes or No	Question 2 Comment
		utilization.
AltaLink	Yes	We agree with the concept of Inclusion I1. However, we suggest that since transformers are already covered by the definition, "all transmission Elements operated at 100 kV and above", and since Inclusions I2 to I5 are commonly related to generation only, Inclusion I1 should be removed and replaced by the following Exclusion: E(x) "Transformers not used as Generator Step-Up (GSU) transformers that have primary or secondary winding at less than 100 kV."We also suggest the SDT to put forward a high-level exception criteria with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) mentioned in Inclusion I1, or any other inclusion(s). These inclusion(s) that are intended for exemption would be based on the entity's technical assessment, evidence and justification for its unique characteristics, configuration, and utilization.
Response: The SDT believes the BES definition should be "bright-line" criteria and be able to include a very high percentage of the facilities by inspection. The exemption criteria and process is meant to handle very few facilities. The BES definition and exception process have been developed under this guiding concept. The SDT has revised Inclusion I1 to provide more clarity on specifically which transformers are included in the BES. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
Springfield Utility Board	Yes	In concept, SUB supports an attempt to provide a clear demarcation between BES and non-BES elements. The WECC Bulk Electric System Definition Task Force (BESDTF) has devoted considerable effort to this question and has developed one-line diagrams which note the BES demarcation point for a number of different kinds of elements that are common in the Western Interconnection.
Springfield Utility Board	Yes	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of

Organization	Yes or No	Question 2 Comment
		inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
Response: The SDT will consider the suggestions to incorporate the WECC work into its effort. See the answers to Questions 7, 8, and 9 related to generation.		
New England States Committee on Electricity	Yes	Inclusion I1 now appears to exclude transformers that connect the BES to the sub transmission networks (the sub transmission elements connected to one of the windings is less than 100 kV). This suggests that the intent of this language is to exclude such transformers and all sub transmission elements (unless included by the other Inclusion criteria) from the BES. With that understanding, NESCOE supports Inclusion I1.
Southwest Power Pool	Yes	SPP agrees that such equipment should be included, but suggests that these issues be addressed in the exception process. In other words, this inclusion doesn't need to be explicitly identified. It would simply be included under the general 100 kV threshold, and to the extent an owner believed the characteristics of its equipment don't warrant inclusion, it would seek an exception, which can be for either an exclusion or an inclusion.
City of Anaheim	Yes	Change the "and" to an "or" at the end of the sentence, i.e. Exclusions E1 or E3.This appears to be the intent.
Response: The SDT has revised Inclusion I1 to provide more clarity on specifically which transformers are included in the BES. Your understanding is correct. **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~ operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.		
Michgan Public Power Agency	Yes	
Sweeny Cogeneration LP	Yes	Transmission system transformers are not part of our existing or anticipated base of facilities.
Western Area Power Administration	Yes	Appreciate the bullet comments that help explain the reasoning for the inclusion.
Public Service Enterprise Group LLC	Yes	
Northeast Power Coordinating	Yes	

Organization	Yes or No	Question 2 Comment
Council		
Imperial Irrigation District	Yes	
Santee Cooper	Yes	
SPP Standards Review Group	Yes	
SERC Planning Standards Subcommittee	Yes	
SERC OC Standards Review Group	Yes	
National Rural Electric Cooperative Association (NRECA)	Yes	
Arizona Public Service Company	Yes	
ReliabilityFirst	Yes	
Rayburn Country Electric Cooperative, Inc.	Yes	
New York State Reliability Council	Yes	
New York Power Authority	Yes	
Southern Company	Yes	
Luminant Energy	Yes	
Intellibind	Yes	

Organization	Yes or No	Question 2 Comment
US Bureau of Reclamation	Yes	
Grand Haven Board of Light and Power	Yes	
Glacier Electric Cooperative	Yes	
South Texas Electric Cooperative, Inc.	Yes	
South Texas Electric Cooperative, Inc.	Yes	
Dayton Power and Light Company	Yes	
ExxonMobil Research and Engineering	Yes	
Duke Energy	Yes	
Alberta Electric System Operator	Yes	
South Carolina Electric and Gas	Yes	
Fayetteville Public Works Commission	Yes	
MidAmerican Energy Company	Yes	
Florida Keys Electric Cooperative	Yes	
American Electric Power	Yes	

Organization	Yes or No	Question 2 Comment
East Kentucky Power Cooperative, Inc.	Yes	
American Transmission Company, LLC	Yes	
Farmington Electric Utility System	Yes	
Colorado Springs Utilities	Yes	
Muscatine Power and Water	Yes	
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	Yes	No comment.
Exelon	Yes	
City of St. George	Yes	
Puget Sound Energy	Yes	
GTC	Yes	
Cogentrix Energy, LLC	Yes	
Pepco Holdings Inc	Yes	
PJM	Yes	
ISO New England, Inc.	Yes	

Organization	Yes or No	Question 2 Comment
MEAG Power	Yes	
Orange and Rockland Utilities, Inc.	Yes	
Golden Spread Electric Cooperative, Inc.	Yes	
Idaho Falls Power	Yes	It seems reasonable to conclude that such transformers would belong in a classification that comprises the BES.
Response: Thank you for your support. The SDT has made changes to Inclusion I1 of the BES definition based upon other stakeholder comments. These changes in the revised definition include removing the Generator Step-Up and Phase Angle Regulating transformer language, changing the wording from "windings" to "terminals", and adding the terms "primary" and "secondary". Please see the revised definition.		

3. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration:

After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.

Changes have been made to Inclusion I2 for clarity.

I~~3~~2 - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.

Organization	Yes or No	Question 3 Comment
Public Service Enterprise Group LLC	No	See comment 1 above.
Response: See response to Q1 above.		
Northeast Power Coordinating Council	No	I2 should pertain to individual generating units, but the entire path should not be labeled as BES. Oftentimes there are cases when neither the path nor a 20 MVA unit itself will have any impact on the reliability of the interconnected transmission network, nor is it necessary for its operation. The path to generating facilities does not need to be BES contiguous. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require a contiguous path unless the unit is identified essential for the operation of transmission network.

Organization	Yes or No	Question 3 Comment
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The definition for this inclusion only addresses BES contiguity from the generator leads through the generator step up transformer which is connected on the high side at a voltage of 100 kV or above. This establishes contiguity of the generation facility and provides for the highest level of reliable service (generation) to the BES. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
NERC Staff Technical Review	No	The interconnection voltage threshold should be removed. The contribution of a generator to system reliability is a function of its MVA rating rather than its interconnection voltage. All generating units greater than 20 MVA should be included in the BES definition because all such units provide similar contributions to system reliability. >>>>>>>>>> Also, the specific inclusion of the GSU transformer implies that all other components of a generating unit, such as its unit auxiliary transformer, start-up transformer, governor, exciter, power system stabilizer, etc., are excluded. The SDT should define "generating unit" or otherwise clarify which components of a generating unit are included in the BES definition.
Response: The SDT has changed the terminology in the definition to include "generating resources" for clarity. Balance of Plant equipment is not included in the contiguous path of the generator and therefore does not fall under the definition. The SDT carefully debated the generating threshold for inclusion in the definition. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
NERC Transmission	No	It is commonly understood that a generating unit includes the generator itself, and all of the

Organization	Yes or No	Question 3 Comment
Issues Subcommittee (TIS)		components that connect it to the grid, including the GSU. The specific inclusion of the GSU implies that other components of a generating unit, such as its auxiliary transformers and loads, the governors, exciters, etc., are not included. >>>>>>>>>>> The TIS suggests the following wording: >>>>>>>>>>>"I2 - Individual generating units greater than 20 MVA (gross nameplate rating) generator terminals through the GSU which has a high side connected at a voltage of 100 kV or above."
Response: The SDT has changed the terminology in the definition to include "generating resources" for clarity. Balance of Plant equipment is not included in the contiguous path of the generator and therefore does not fall under the definition. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Dominion	No	As stated in its response to Question 2 above, Dominion disagrees that a generation resource, Element or Facility should automatically be included in the BES. Dominion agrees that the Generator Owner and Generator Operator, as users of the bulk power system, should have to abide by applicable reliability standards, but do not agree that this should automatically require the inclusion of a generation resource, Element or Facility in the BES. Further, Dominion prefers that the SDT use the term "generation resources" as stated in the current BES definition contained in the Glossary of Terms instead of the proposed term "generating unit".
Response: The SDT has changed the terminology in the definition to include "generating resources" for clarity. The SDT carefully debated the generating threshold for inclusion in the definition. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		

Organization	Yes or No	Question 3 Comment
SPP Standards Review Group	No	With the inclusion of a voltage criteria in the definition an inconsistency is created between Elements that are not a part of the BES but are still required to be part of the NERC Compliance Registry. Does this create an issue? Did the SDT intend to create this inconsistency? A large generating unit or group of units that are connected to the interconnection via 69kV does not qualify as a part of the BES. Although the generation level could be substantial, it is still not a part of the BES. If said generation is 20 MVA or 75 MVA, respectively, it would have to be registered in the Compliance Registry. While an entity may be able to petition to include such a facility in the BES, what is the incentive to do so? This seems to detract from the 'bright line' definition.
Response: The SDT is drafting a definition for the Bulk Electric System and does not have involvement with the registration criteria. If reliability is a concern regarding specific generation that has been excluded from the definition, the Reliability Coordinator can always go through the NERC Rules of Procedure exception process to petition to bring generation into the BES. No change made.		
Michigan Public Service Commission(MPSC)	No	MPSC Staff Comments: This inclusion should be eliminated entirely for the reasons provided in E1 above. If the BES is required to be contiguous, this I2 threshold will result in many radial subtransmission lines losing their non-BES status and having to comply with NERC security and reliability requirements. Two different generation thresholds, one for I2 and one for I3, should not be used. The I3 inclusion (75MVA) threshold should be sufficient.
Tennessee Valley Authority	No	Other than the NERC Registry Criteria definition, what is the technical justification for the 20 MVA thresholds? The threshold level for inclusion should be technically based on the BES capacity and configuration at the location of the generating source's connection to the BES.
New York State Reliability Council	No	The use of a 20 MVA threshold based on NERC's Registry Criteria may be administratively convenient but is arbitrary when based upon BES reliability considerations. Suggest use of a 300 MW or other regionally and technically acceptable threshold such as NPCC's A-10 criterion.
Michgan Public Power Agency	Yes	Generally I would agree with I2 but question the technical justification for 20 MVA without also considering its capacity factor.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new		

Organization	Yes or No	Question 3 Comment
Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
SERC OC Standards Review Group	No	SERC proposes the following as an alternative to the Inclusion I2 wording in the draft BES definition: "Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through its GSU which has a high side voltage of 100 kV or above." The only difference in proposed text is that the word "the" preceding "GSU" has been changed to "its". The text in the draft clearly defines that the inclusion begins with the generator, continues through the terminals, and ends at a GSU. The wording in the draft text does not, however, explicitly limit the scope of equipment that should be evaluated for inclusion to the GSU which is directly connected to the generator terminals. Since GSU is not a defined term there is a strong potential for inconsistent interpretation of this boundary to include multiple transformers in series until ultimately a transformer which does operate at a voltage of greater than 100 kV is included in the flow path. To eliminate this potential for compliance re-interpretation, we also strongly suggest the term GSU be defined in the NERC Glossary of Terms. A suggested definition is: "Generator Step-up Transformer (GSU) should be defined as a transformer directly connected to a generator on the low side and to a bus on the high side."
Response: The SDT generally agrees with your clarification statement. Inclusion I2 has been eliminated and Inclusion I3 has been clarified to use the term step-up transformer rather than GSU. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Hydro One Networks Inc	No	We agree with the concept of Inclusion I2 with respect to individual generating units, but do not support having the entire path labeled as BES. In most cases, neither the path nor a 20 MVA unit itself will have any impact on the reliability of the interconnected transmission network nor is it necessary for the operation. Hence, we do not support the fact that there should be a blanket application of the BES definition to all individual generating units greater than 20 MVA and its connection to the system. It is also important to mention that moving into the future, with the Green Energy and Smart Grid plans advocated by both Canadian and US policy makers, the gross nameplate rating of 20 MVA acquired from NERC registration restricts the penetration of dispersed

Organization	Yes or No	Question 3 Comment
		generation in many parts of North America. We suggest the following: o Generation restriction (20 MVA or 75 MVA) should either be revised or the exception procedure should allow entities, with the support of technical evidence, to exclude element(s) from being labeled as part of the BES. o Entities should be able to use the exception process, with the help of technical evidence, to exclude generating units that do not impact the interconnected grid and the bulk transfer of power. o The path to generating facilities does not need to be BES contiguous. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require a contiguous path unless the unit is identified essential for the operation of transmission network.
Ida ho Falls Power	No	We feel the bright line criteria 20 MVA for generation is equally as arbitrary as the 100KV threshold for transmission, which was the impetus for the NERC BES definition effort. There should be more defining criteria to establish what generation resources should be included in the BES. Possible criteria to consider would be generation serving load other than local load connected to an LDN or generation that is dispatchable. Surely, just as not all 100 kV is is material to the BES, niether is all 20MVA or greater generation. If this draft's language is allowed to stand at the brightline of 20MVA, without additional defining criteria, will have the likely result of an inordinate number of entities having to resolve the issue of material impact through the Rules of Procedure exemption process. We urge NERC to take this opportunity now to more clearly define material generation assets beyond a simple brightline criteria. In addition to our concern of this draft following bright line registry criteria for generation assets, it is our concern that there is no distinction made as to where the generation is connected. Our belief is that generation on an LDN wherein the net flow of power is into the LDN should be exempt as the liklihood of that generation being material to the larger BES is exceedingly small.

Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.

Entities seeking exception from the core definition can utilize the NERC RoP exception process to present relevant evidence.

I~~3~~2 - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross

Organization	Yes or No	Question 3 Comment
aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Western Montana Electric Generating and Transmission Cooperative	No	WMG&T is concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Unfortunately, the SDT appears to have concluded that any interconnection facility operating above 100-kV should be classified as BES. The result will be to require Generation Owners to register as Transmission Owners/Operators, as well, producing substantial additional compliance costs for those Generation Owners but resulting in little or no improvement in the reliability of the BES. We recommend that the SDT, like the Project 2010-07 SDT (commonly referred to as the GO/TO Team), give careful consideration to the practical results of its recommendations rather than relying on abstract conclusions about whether a "contiguous" or "non-contiguous" BES is more desirable. We are concerned that the SDT's pursuit of a "contiguous" BES will result in a substantially over-inclusive BES definition. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. NERC's Standards Drafting Team for Project 2010-07, has already considered this question and, based on an in-depth review of potentially applicable reliability standards, has concluded that generation interconnection facilities, even if operated above 100-kV, need to comply only with a limited set of reliability standards in order to achieve the reliability goals. Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only

Organization	Yes or No	Question 3 Comment
		plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability.

Response: There has been no significant technical justification by which to base a departure from the 75 MVA threshold where connected at 100 kV and above. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.

The definition for this inclusion only addresses BES contiguity from the generator leads through the generator step up transformer which is connected on the high side at a voltage of 100 kV or above. This establishes contiguity of the generation facility and provides for the highest level of reliable service (generation) to the BES.

> **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.

Southern Company	No	The inclusion criterion I3 and I5 establish the level of generation that has been deemed to be the important threshold for the amount of generation at a facility. The individual generating unit size criteria should match that same aggregate size given in I3 and I5. It doesn't make sense to specify a 20 MVA level for a single unit compared to multiple smaller unit plants whose aggregate totals 75 MVA. To provide equivalent weight to each configuration of plant structure, the individual generating unit size should be 75 MVA rather than 20 MVA. The NERC Registry Criteria should also be changed from 20 MVA to 75 MVA for a single generator size. Further, a significant number of respondents to the first BES definition posting stated that the 20 MVA generator threshold is too low. Many Generator Owners and Operators do not understand the technical basis for including individual generators rated 75 MVA or less. The NERC Registry Criteria alone does not clearly define the technical basis for the 20 MVA threshold, and appears to use this as a conservative generator rating to cover some areas where units this size may have a material impact on the local area reliability. We do not believe this translates to material impact on BES reliability in terms of wide area blackouts and cascading outages. We believe that the technical basis for including any single generator of 75 MVA or less needs to be more clearly concisely established and documented to support Inclusion Criterion I2.
Electricity	No	Although the BES Standards Drafting Team has stated that it will not propose changing the 20-

Organization	Yes or No	Question 3 Comment
Consumers Resource Council (ELCON)		MVA/75-MVA thresholds, we think the thresholds should be set based on the BA/RC needs in each area and that a suggested range (perhaps by taking a survey of the operational entities) should be in the new BES Definition. Having an arbitrary and capricious number in the new BES Definition just because it is in the current Statement of Compliance Registry Criteria, and requiring significant technical justification for change, does not seem appropriate when so many expert industry commenters have indicated the existing thresholds are too low to be operationally significant.
Response: There has been no significant technical justification by which to base a departure from the 75 MVA threshold where connected at 100 kV and above. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The goal of this project is to clarify the BES definition and not to address issues related to registration criteria. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
National Association of Regulatory Utility Commissioners	No	The inclusion of individual generating units between 20 MVA and 75 MVA nameplate capacity is inconsistent with I3 that sets the aggregate threshold at 75 MVA. There is no technical justification for including a facility as low as 20 MVA and no rational basis for thinking that these generators could be the cause of instability, uncontrolled separation, or cascading events. We recommend removing this inclusion or raising the threshold to 75 MVA.
American Electric Power	No	The use of the word "including" within I2 seems to imply the inclusion of 20MVA (or greater) generating units beyond those which have a high side voltage of 100 kV or above. Was this intentional? If not, the following wording is preferable: "Individual generating units greater than 20 MVA (gross nameplate rating) having a GSU with a high side voltage of 100 kV or above. This includes equipment installed from the generator terminals through the high side of the GSU."
Springfield Utility Board	No	SUB raises the questions "Are multiple individual units considered one unit if they have a shared bus?" SUB is concerned that in the instance where individual units have a shared bus that some interpretations would be that these are individual and therefore not part of the BES while other interpretations would result in the units being considered part of the BES because of a shared bus. Given I3, SUB suggests that units connected to a shared bus be considered as if they were not

Organization	Yes or No	Question 3 Comment
		connected to a shared bus if they are individually separable by automatic fault-interrupting devices (e.g. two 15aMW units that have a shared bus would not be included as part of I2 if they each have automatic fault-interrupting devices). Continuing the example of the two 15aMW units, if a shared bus somehow combined the two individual units into one unit for purposes of I2, where does this distinction end? What if they share the same transmission line? Is this transmission line considered being a “bus” for purposes of combining the two units into one individual unit? Because this discussion could go on with multiple examples, SUB suggests that the distinction be the automatic fault-interrupting device. If the devices can be separated from each other and the local network then they should be considered individual. While Springfield Utility Board does not own any generating units, we do recognize the importance of the stability and restoration of the Grid, and the generation necessary for the Grid.
Springfield Utility Board	No	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
New York State Dept of Public Service	No	The inclusion of 20 MVA generation seems inconsistent with I3 that sets the aggregate threshold at 75 MVA. It is not rational that a 20 MVA facility could be the cause of instability, uncontrolled separation of the system or cascading events. This inclusion should be dropped.
Idaho Power	No	Generators at 20 MVA are not material to the BES. I would recommend combining I2, I3, and I5 with the limit at 75 MVA for plant nameplate capability regardless of the number of generators and

Organization	Yes or No	Question 3 Comment
		type of generators.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
PacifiCorp	No	Although certain areas of the country may have a need for generating units of this magnitude to be included in the BES for reliability, the 20 MVA minimum rating essentially discriminates against the owners of these generators. In I3 and I5 a 75 MVA limit has been established for different combinations of generation. This limit should also be used for a single generating unit. Those areas that require generator units less than 75 MVA for reliability should add them back to the BES via the inclusion/exclusion process to be proposed in NERC's Rules of Procedure ("ROP"). o The 20 MVA threshold was intended to mirror the existing NERC Compliance Registry Criteria. This registry value was adopted without the benefit of having been scrutinized through a NERC Reliability Standards Development Process, so the technical record justifying the 20 MVA threshold is non-existent. The BES Drafting Team will need to have technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different framework (i.e., for entity registration). Absent any technical justification, Inclusion I2 should be eliminated. This would leave the 75 MVA threshold in Inclusion I3 and Inclusion I5 as the minimum BES thresholds for generation. Also, please refer to additional comments in question 13 regarding a contiguous BES.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Comments regarding contiguous BES submitted under Q13 will be answered under Q13.		

Organization	Yes or No	Question 3 Comment
I~~3~~2 - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Intellibind	No	In the discussion the Drafting team stated they found no technical rational to change the 20 MVA rule, however there is no technical rational to support 20 MVA either. There are arguably cases where it will be appropriate to include these generators; however there are may instances where these generators should not be included. This should be driven by the interconnected transmission operators, not by an arbitrary threshold. In the WECC there are multiple examples of small/medium hydro, waste-to-energy, and other non-dispatchable generation that not only are located where they cannot add to the reliability of the BES, are not manned, and are bound by contractual relationships by a BA. These facilities have a tendency to have multiple forced outages, are affected by weather events, and are not considered reliable by the interconnected transmission operator for BES reliability purposes. Many of these facilities generate power as a secondary business, not primary. Wood burning, trash burning is waste disposal, irrigation projects are primarily focused on water delivery. Failure of power generation is not addressed as a primary importance during a failure, and none of these facilities were constructed to benefit the BES. In many cases the contract to construct these facilities was predicated on proving they do not impact the interconnected transmission operator or the BES.
Portland General Electric Company	No	The 20 MVA gross nameplate rating threshold for an individual unit is toolow and will result in the inclusion in the BES of generating units that have no potentialto impact the reliability of the BES. The 20 MVA threshold was taken from theregistration criteria, and no technical justification has been provided for its use. PGErecommends that this inclusion be removed entirely.
City of St. George	No	It is understood that this mirrors the Registry Criteria and this is a simple way to address the issue. The justification states there is no technical rationale to change the 20 MVA threshold, however the technical rationale for the 20 MVA criteria has not been provided to the industry either. Having a 20 MVA unit treated the same and subject to all of the same standard requirements as a unit with several hundred MVA of capacity doesn't make sense either. The requirements for an entity or facility should match the impact of that facility to the system.
City of Redding	Yes	In concept Redding is in agreement that the Brightline should specify generators at a certain level, however we believe the SDT has no technical basis to choose the 20 MVA threshold. If the SDT elects to retain I2 in its current form then Redding suggests changing the generation level from 20 MVA to 100 MVA. If the goal of the Brightline Definition is to create a starting point to identify power system elements that are "necessary" then the SDT should choose a larger generation threshold as

Organization	Yes or No	Question 3 Comment
		a starting point. The 100 MVA would serve a better purpose by casting the burden of proof (via the Exception Process) from the smaller units under 100 MVA to the Regional Entity. This would help the SDT to achieve an objective of reducing the burden on the "small entity" and "distribution" facilities due to the fact that most smaller generators of this size are installed to serve local loads. Additionally, The SDT has not provided justification that the "generator terminals through GSU" on smaller units are "needed to maintain transmission system reliability." The inclusion of the low voltage equipment from the GSU to the Generator on small generators is going beyond what is necessary to operate an interconnected transmission network. This portion of the inclusion should be removed or modified because the SDT has not demonstrated why the connection facilities are "necessary". The biggest argument for smaller units to be included as BES elements is that their operation/maintenance schedules and output visiablity are "necessary to operate an interconnected transmission network". If that is the case the Compliance Registry captures units above 20 MVA as users of the BES system; Standards can be written to address the support aspects of these types of units. As recommended, selecting a higher generator MVA threshold in the brightline definition does not exempt the lower MVA generation units from being classified as Users of the BES in the Compliance Registry. In fact Redding, suggests that the Registry be revised to have a more tiered approach allowing the Standards to be equably applied to Entities. Redding suggests that SDT recommend that the Generator Owner and Operator definitions be modified to have Large and Small generator owners and operators. In summary, Redding supports the concept that the brightline is an initial dividing line of elements that are necessary to operate the BES. Therefore, Redding suggests that the SDT change the language in I2: From: "Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above". To: "Individual generating units greater than 100 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above". OR To: "Individual generating units which have a contractual obligation to provide operational support necessary to operate the interconnected transmission system."
California Public Utilities Commission	Yes	The CPUC would like a technical justification/rational for the 20 MVA threshold. We understand and agree with the ability to show no impact through a technical impact assessment, but such an

Organization	Yes or No	Question 3 Comment
		assessment may be costly for a small 20-50 MW peaker plant that may operate for few hours during any given month. The cost imposed to small generating plants that operate a few hours a month may be too excessive given the probability of the generator causing an event and the cost associated with the event. The BES definition should be more than a deterministic standard and should properly assess every asset it proposes to include, especially given what the courts have ruled. We believe it would be preferable to include individual elements at power plants that can impact the BES (governors, system stabilizers, breakers,...) rather than to extend the definition of the BES to include all small power plants.
Response: There has been no significant technical justification by which to base a departure from the 75 MVA threshold where connected at 100 kV and above. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Hydro-Quebec TransEnergie	No	We believe that it is not necessary to include small generator of 20 MVA into the BES, neither the transmission path that connect them. However, a provision should be made so that some reliability standards related to generator shall apply (voltage regulation, etc.).
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Oregon Public Utility Commission Staff	No	The inclusion of individual generation units with a nameplate capacity between 20 MVA and 75 MVA is over-inclusive and unnecessary. Generation in this range generally has no impact to the reliability of the bulk transmission system. The 20 MVA threshold was pulled from the existing

Organization	Yes or No	Question 3 Comment
		NERC Statement of Compliance Registry. This Registry value was adopted without the benefit of having been scrutinized through a NERC Standards Development Process, so the technical record justifying the 20 MVA threshold is unavailable. The BES Drafting Team will need to have technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different framework. Absent any technical justification, Inclusion I2 should be eliminated. This would leave the 75 MVA threshold in Inclusion I3 and Inclusion I5 as the minimum BES thresholds for generation.The proposed BES Definition does not address the BES "demarcation points" and whether the BES must be "contiguous." NERC Staff has submitted written comments to this project stating that the BES "must be contiguous." Instituting a contiguous BES with Inclusion I2 would result in a over-inclusive BES definition. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of distribution elements that have nothing to do with improving or protecting the reliability of bulk transmission system.There is no compelling reason to adopt a "contiguous" BES down into local distribution systems. Section 215 of the FPA of 2005 gives FERC jurisdictional authority over "users" as well as "owners" and "operators" of the bulk power system. Consequently, FERC has the jurisdictional authority to require generation entities in the Compliance Registry to comply with applicable NERC requirements. Hence, even where an entity does not own or operate BES assets, it could still be required, for example, to provide necessary information to the applicable Reliability Coordinator or Planning Coordinator and to participate in programs to prevent instability, uncontrolled separation or cascading outages to the bulk transmission system. This approach would fully achieve the goals of bulk transmission system reliability without imposing the full BES regulatory compliance burden on local distribution elements.
Response: There has been no significant technical justification by which to base a departure from the 75 MVA threshold where connected at 100 kV and above. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The SDT proposal does not address BES contiguity beyond the connection to 100 kV or greater (the high side of the GSU). **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Public Utility District	No	Snohomish is concerned that the inclusion of individual generation units with a nameplate capacity

Organization	Yes or No	Question 3 Comment
No. 1 of Snohomish County, Washington		as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the “bulk-power system” unless they produce “electric energy” that is “needed to maintain transmission system reliability.” 16 U.S.C. Â§ 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is “needed to maintain transmission system reliability.” Hence, the inclusion as drafted improperly expands the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because “there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria.” Consideration of Comments on Definition of Bulk Electric System - Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are “needed to maintain transmission system reliability,” the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. Â§ 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry.In the same comments, the SDT also states that it has considered “the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable.” Id. The SDT’s reasons for reaching this conclusion are not well-explained, but apparently the concern is that a “non-contiguous” BES could create “reliability gaps.” But this conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. In fact, we believe that if the SDT insists on a “contiguous” BES, an over-inclusive definition will result.We base these conclusions on the findings of NERC’s Standards Drafting Team for Project 2010-07 and its predecessor, the “GO-TO Task Force.” The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as “Transmission” and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management,

Organization	Yes or No	Question 3 Comment
		reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Developoment Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity - the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those

Organization	Yes or No	Question 3 Comment
		devices as a precondition for their use of transmission on the bulk system. The other alternative is to draft standards that apply to a specific type of equipment - again UFLS relays is a good example - rather than to BES facilities categorically. Either approach will fully achieve the goals of bulk system reliability without imposing an undue regulatory compliance burden on local distribution systems.For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application of particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a “contiguous” or “non-contiguous” BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Company Consumers Power Inc Clallam County PUD No.1	No	The inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the “bulk-power system” unless they produce “electric energy” that is “needed to maintain transmission system reliability.” 16 U.S.C. Â§ 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is “needed to maintain transmission system reliability.” Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because “there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria.” Consideration of Comments on Definition of Bulk Electric System - Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are “needed to maintain transmission system reliability,” the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. Â§

Organization	Yes or No	Question 3 Comment
		8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result.We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity - the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies

Organization	Yes or No	Question 3 Comment
		that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application fo particular reliability standards and whether the results are beneficial to reliability or simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.
Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric	No	Specific language change: Change 20 MVA to 100 MVAThe inclusion of individual generation units with a nameplate capacity as small as 20 MVA is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." 16 U.S.C. Â§ 824o(a)(1)(B). Smaller generators with a capacity of 20 MVA almost never produce electricity that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted would improperly expand the BES definition to include generators that the statute requires to be excluded. Further, the 20

Organization	Yes or No	Question 3 Comment
Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Inc Okanogan Electric Cooperative PNGC Power Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative		MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System - Project 2010-17, March 30, 2011, at 30. But this gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. Â§ 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry.In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Id. The SDT's reasons for reaching this conclusion are not well-explained, but apparently the concern is that a "non-contiguous" BES could create "reliability gaps." This conclusion cannot be supported as an abstract proposition, but can only be demonstrated by a careful examination how application of reliability standards will change depending on how the BES is defined. We believe that if the SDT insists on a "contiguous" BES, an over-inclusive definition will result.We base these conclusions on the findings of NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force." The Project 2010-07 Team was formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. After reviewing these questions in considerable depth, the Team concluded that dedicated high-voltage interconnection facilities need not be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. On the contrary, the team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the predecessor of the Project 2010-07 SDT). Much of the work of the Project 2010-07 SDT is

Organization	Yes or No	Question 3 Comment
		applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity - the generation equipment itself." Id. We believe the many of the questions considered by the Project 2010-07 Team are analogous to the questions under consideration by the SDT, and that, if the SDT insists upon a "contiguous" BES, the resulting definition will be substantially over-inclusive. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of facilities that have little or nothing to do with bulk system reliability, resulting in wasted regulatory expense and additional stress on the limited resources of reliability regulators. For example, a "contiguous" BES would require dedicated interconnection facilities that connect a BES generator to BES transmission facilities to be classified as BES. But, as the discussion above demonstrates, the classification of dedicated interconnection facilities as "BES" facilities would, based on the findings of the Project 2010-07 SDT, result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability. There is no good reason for the SDT to adopt a "contiguous" BES. On the contrary, because Section 215 allows reliability standards to be applied to "users" of the bulk system as well as "owners" and "operators," local distribution systems operating UFLS relays and other bulk system protection devices could be required to comply with standards governing those devices as a precondition for their use of transmission on the bulk system. For these reasons, we urge the SDT to follow the example of the Project 2010-07 Team and the GO-TO Task Force by giving careful consideration to the specific and practical results of how its definition will affect the application for particular reliability standards and whether the results are beneficial to reliability or

Organization	Yes or No	Question 3 Comment
		simply result in unnecessary regulatory burdens that do not benefit bulk system reliability. We believe there is considerable danger of error if the SDT bases its conclusions on metaphysical debates about whether a "contiguous" or "non-contiguous" BES is more desirable rather than engaging in a careful analysis of whether the proposed definition achieves reliability goals in the most efficient manner possible.
Northern Wasco County PUD Chelan PUD – CHPD Kootenai Electric Cooperative Public Utility District No. 1 of Franklin County Midstate Electric Cooperative Northwest Requirements Utilities Big Bend Electric Cooperative, Inc. Cowlitz County PUD	No	Northern Wasco County PUD is concerned that I2 inclusion criteria that includes the arbitrary 20 MVA threshold from the NERC Statement of Registry Criteria for inclusion of generators is over-inclusive. Under FPA Section 215, generation resources are excluded from the "bulk-power system" unless they produce "electric energy" that is "needed to maintain transmission system reliability." Hence, the inclusion as drafted improperly expands the BES definition to include generators that the statute requires to be excluded. In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Unfortunately, the SDT appears to have concluded that any interconnection facility operating above 100-kV should be classified as BES. The result will be to require Generation Owners to register as Transmission Owners/Operators, as well, producing substantial additional compliance costs for those Generation Owners but resulting in little or no improvement in the reliability of the BES. We recommend that the SDT, like the Project 2010-07 SDT (commonly referred to as the GO/TO Team), give careful consideration to the practical results of its recommendations rather than relying on abstract conclusions about whether a "contiguous" or "non-contiguous" BES is more desirable. We are concerned that the SDT's pursuit of a "contiguous" BES will result in a substantially over-inclusive BES definition. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. NERC's Standards Drafting Team for Project 2010-07, has already considered this question and, based on an in-depth review of potentially applicable reliability standards, has concluded that generation interconnection facilities, even if operated above 100-kV, need to comply only with a limited set of reliability standards in order to achieve the reliability goals. Much of the work of the Project 2010-07 SDT is applicable to the work of the BES Standards Development Team. For example, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." Similarly, a "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays,

Organization	Yes or No	Question 3 Comment
		must be classified as BES to make the BES "contiguous." Such a result is not only plainly contrary to the local distribution exclusion embedded in Section 215 of the FPA, but would, by improperly classifying local distribution lines as BES "Transmission" facilities, result in huge regulatory compliance burdens with little or no improvement in bulk system reliability.
Response: The SDT has carefully debated your comments. The SDT does not base its conclusions on "metaphysical debates" as you imply, but rather the practical nature of inclusions and exclusions in the definition and the reliability impacts associated with them based on technical debate and justification. There has been no significant technical justification by which to base a departure from the 75 MVA threshold where connected at 100 kV and above. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The definition for this inclusion only addresses BES contiguity from the generator leads through the generator step up transformer which is connected on the high side at a voltage of 100 kV or above. This establishes contiguity of the generation facility and provides for the highest level of reliable service (generation) to the BES. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Sweeny Cogeneration LP	No	The threshold for individual generation units is consistent with the NERC functional registry criterion. We believe that it is important to maintain this uniformity. However, we believe there are further items to be added to the list related to generator interconnections, a task that was passed to this project from Project 2010-07. Just as is the case with complex distribution systems, there are a variety of generator-transmission interconnection architectures which are driving the Regions to inappropriately register Generator Owner/Operators as Transmission Owners.
Response: The SDT cannot respond to this general comment as it lacks specific action.		
PUD No. 2 of Grant County, Washington	No	In the same comments, the SDT also states that it has considered "the inclusion of generator step-up (GSU) transformers and associated interconnection line leads and believes the BES must be contiguous at this level in order to be reliable." Unfortunately, the SDT appears to have concluded that any interconnection facility operating above 100-kV should be classified as BES. The result will be to require Generation Owners to register as Transmission Owners/Operators, as well, producing substantial additional compliance costs for those Generation Owners but resulting in

Organization	Yes or No	Question 3 Comment
		little or no improvement in the reliability of the BES. We recommend that the SDT, like the Project 2010-07 SDT (commonly referred to as the GO/TO Team), give careful consideration to the practical results of its recommendations rather than relying on abstract conclusions about whether a "contiguous" or "non-contiguous" BES is more desirable. We are concerned that the SDT's pursuit of a "contiguous" BES will result in a substantially over-inclusive BES definition. The "contiguous" BES concept implies that every Element arguably necessary for the reliable operation of the interconnected bulk system must be included in the BES definition, even if it is interconnected with Elements that have no bearing on the operation of the BES. A "contiguous" BES suggests that, because certain system protection facilities, such as UFLS relays, are ordinarily embedded in local distribution systems, the local distribution system, along with the UFLS relays, must be classified as BES to make the BES "contiguous." The improper classification of local distribution lines as BES "Transmission" facilities results in huge regulatory compliance burdens with little or no improvement in bulk system reliability.
FortisBC	No	We agree with the concept of Inclusion I2 with respect to individual generating units, but do not support having the entire path labeled as BES. In most cases, neither the path or a 20 MVA unit itself will have any impact on the reliability of the interconnected transmission network nor is it necessary for the operation. We also do not support the fact that there should be a blanket application of the BES definition to all individual generating units greater than 20 MVA. It is also important to mention that moving into the future, with the Green Energy and Smart Grid plans advocated by both Canadian and US policy makers, the gross nameplate rating of 20 MVA acquired from NERC registration restricts the penetration of dispersed generation in many parts of North America. We suggest the following: o Generation restriction (20 MVA or 75 MVA) should either be revised or the exception procedure should allow entities, with the support of technical evidence, to exclude element(s) from being labeled as part of the BES. o Entities should be able to use the exception process, with the help of technical evidence, to exclude generating units that do not impact the interconnected grid and the bulk transfer of power. o The path to generating facilities does not need to be BES contiguous. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require a contiguous path unless the unit is identified essential for the operation of transmission network. o Definition and/or exception process should provide clear acknowledgement and flexibility to

Organization	Yes or No	Question 3 Comment
		avoid any regulatory conflicts. - For example: NERC and SDT should consider introducing a concept of a new category of registration or BES Support (BESS) elements. These elements are NOT BES but support the reliable operation of the interconnected transmission network. A sub-set of relevant NERC Standards should still apply to BESS elements such as planning, design, and maintenance. However, they may not be subject to mandatory compliance.
Public Utilities Commission of Ohio	No	The inclusion of individual generating units between 20 MVA and 75 MVA nameplate capacity is inappropriate and over-reaching. Inclusion I3 sets the aggregate threshold at 75 MVA for multiple generating units. Technical justification for assuming a 20 MVA generating facility could cause instability, uncontrolled separation, or cascading events on the bulk system appears to be lacking. This appears to simply be based on that fact the NERC used it in a separate framework, which has no basis. Inclusion I2 should be removed.Regarding the contiguous standard - simply because an element is connected to the BES does not make it a part of the BES. By the very nature, a radial or distribution element should pose limited or no impact on the BES. They are easily isolated from the rest of the system. This contiguous measurement could impose standards unnecessarily on systems with no ultimate impact on the bulk system, thereby enabling far-reaching authority into the distribution system.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The SDT proposal does not address BES contiguity beyond the connection to 100 kV or greater (the high side of the GSU). The SDT believes that the definition must be contiguous at this level in order to ensure reliability of the BES. Aside from registration burdens, stakeholders have not provided technical justification or recommendations by which to base a departure from the contiguous nature of the definition. The goal of the SDT is to provide clarity to the definition of the BES and not to address registration criteria. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Electric Reliability Council of Texas, Inc.	No	See response to question 1. ERCOT ISO supports redefining generation covered under the BES to reflect the registration threshold, but, consistent with the comments to question 1, believes it should be included within the bright line criteria unless otherwise indicated by application of the inclusion and exclusion criteria of the exception process or analyses.

Organization	Yes or No	Question 3 Comment
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Fayetteville Public Works Commission	No	Inclusion I2 contains wording that is ambiguous and does not support a consistent determination by independent parties of whether or not a specific generator should be included in the BES. This definition will be a critical part of the guidance used by registered entities to validate their current registration status and by new entities to properly determine their initial registration status. It will also be used by regional reliability entities during compliance activities to verify proper registration. The ambiguous wording of Inclusion I2 could easily lead to re-interpretation issues between the owner/operator of the generator and regional entities in a compliance audit or other compliance setting. To be specific, the phrase "including the generator terminals through the GSU which has a high side voltage of 100 kV or above" is particularly troublesome. The phrase as written is intended to establish the boundary of the Real Power resource that will be included in the BES if the conditions of Inclusion I2 are met. The intent appears to be to include within the BES the generator, the cables connecting the generator terminals to the GSU, and the GSU, if the GSU has a high side voltage of 100 kV or above. If the GSU, however, does not have a high side voltage of 100 kV or above, then neither the generator, nor the connecting cables, nor the GSU would included within the BES.The crux of the problem lies in the interpretation of the term "GSU" and the phrase "through the GSU which". The term "GSU" or "generator step-up transformer" is commonly applied to a transformer with a generator directly connected to the low side and a bus directly connected to the high side. This is not, however, a defined term within the NERC Glossary and no standard for that interpretation is provided. The very structure of the phrase "through the GSU which" implies that there may be more than one GSU to be considered, some of which do not but at least one of which does have a high side voltage of 100 kV or above. This could be interpreted to include multiple transformers (GSUs) stepping up the generator voltage in series, the first stepping up the generator voltage to a bus, the second stepping up that bus voltge to another bus, and the third, and so on, and so on, until finally 'THE" transformer (GSU?) is encountered "WHICH" does have a high side voltage of 100 kV or higher.Thus, if the registering entity were to apply the commonly accepted definition of "GSU" to a generator, and the GSU directly connected to that generator has a high side of less than 100 kV, that entity would properly conclude that

Organization	Yes or No	Question 3 Comment
		neither the generator nor the leads nor the GSU should be included in the BES. If a regional compliance entity applies the interpretation that transformers in series must be considered until a generator is encountered which does have a high side of 100 kV or higher, then that compliance entity would properly conclude that the generator, all the transformers in series, and the buses connecting those transformers should be included in the BES. Clearly this potential for contradictory conclusions would be better cleared up during this comment period than repeatedly coming up during compliance processes.I offer two suggestions for eliminating this ambiguity. The first and preferred method would be to change the wording of Inclusion I2 to read s follows: "Individual generating units greater than 20 MVA (gross nameplate rating) directly connected to the low side of a GSU which has a high side voltage of 100 kV or higher. The generator, the leads directly connecting the generator terminals to the GSU, and the GSU are all included in the BES." The second method would be to define within the NERC Glossary the term GSU as follows: "A generator step-up transformer (GSU) is a transformer directly connected to the terminals of a generator on the low side and to a bus at a higher voltage on the high side."
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The SDT does not feel that the wording is confusing but is understood to mean that any generating resources, their generator terminals, connecting cabling up to and including their generator step up transformers that are connected at 100 kV or greater will be included in the definition of the BES. The SDT believes that the definition must be contiguous at this level in order to ensure reliability of the BES. Aside from registration burdens, stakeholders have not provided technical justification or recommendations by which to base a departure from the contiguous nature of the definition. Elements connected at below 100 kV that meet registration criteria will still be required to meet NERC Reliability Standards that apply to their registration. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Southern California Edison Company	No	Inclusions I2, I3, and I5 should either be modified or removed, because as currently written, these three Inclusion criteria force the definition to be arbitrarily demarcated by the size of generators connecting to the system, or the aggregate thereof, rather than focusing on the risk characteristics that should define the BES, as SCE identified in its response to Question No. 1. In the WECC, it can safely be said that the vast majority of 20MVA generators are located in local distribution systems and are used to off-set local load, rather than transfer power to the BES. In SCE's case,

Organization	Yes or No	Question 3 Comment
		our distribution system has a number of components which are marginally above the 100kV BES threshold, are radial in nature, and were previously exempted from the BES by the WECC. These radial systems have interconnecting generation units larger than 20 MVA and/ or aggregate generation exceeding 75 MVA. In many cases, the generation levels on those radial systems exceed the limits proposed in I2, I3, and I5, but the loading on those same systems is such that generation will rarely exceed the local load. Therefore, there is little to no power flow back to the BES from these radial systems.If the BES definition continues to heavily focus its inclusion criteria on generator/ generation size, SCE feels that the SDT also consider incorporating the concept of "potential exports to the BES" from these generating sources. An example being:"I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above and have no more than 5% net flows into the BES based on the past XXX calendar years."This "Net Flow" concept would negate the need for Section 1C of the "Technical Principles for Demonstrating BES Exceptions", or conversely, provide the framework for a more quantifiable criteria in Section 1C.
Response: The SDT has debated your comments and similar comments from stakeholders. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Individual situations can be evaluated on a case by case basis and utilities can use the NERC RoP exception process. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Cogentrix Energy, LLC	No	We also strongly suggest the term GSU be defined in the NERC Glossary of Terms to prevent potential compliance re-interpretation of this requirement. A suggested definition is: "Generator Stepup Transformer (GSU) should be defined as a transformer directly connected to a generator on the low side and to a bus on the high side."
Response: The SDT has made clarifying changes to the inclusion to address your concern. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		

Organization	Yes or No	Question 3 Comment
Clark Public Utilities	No	Generators should only be part of the Bulk Electric System if they are connected through a GSU to a Transmission Element determined to be part of the BES. The current inclusion language would apply to all generators connected to facilities greater the 100 kV with no exclusion or exception process. Without a change, it appears that a generator connected to a facility greater than 100 kV would be a BES asset even if the transmission assets could be excluded or excepted. I2 should be rewritten to state: Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side winding connected to a Transmission Element determined to be part of the Bulk Electric System. Additionally, as indicated by Clark in its comments on the core definition of the BES, Clark believes the 20 MVA threshold lacks an adequate technical justification and is a purely arbitrary quantity. The use of a capacity threshold in the definition of the BES should have technical reasons.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The SDT feels that the revised definition provides adequate clarifying measures. Individual situations can be addressed through the NERC RoP exception process. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
The Dow Chemical Company	No	It should be clarified that if something falls within an Inclusion and an Exclusion, then it is excluded. See ELCON comments.
Response: The SDT has made clarifying changes to the definition to address your concern.		
New England States Committee on Electricity	No	Inclusion Criteria I2 through I4 relate to generation connected with GSU High side voltages greater than 100 kV and refer to generators with MVA limits exceeding either 20 or 75 MVA aggregate depending on their configuration. It should be made clear that all generation connected to sub transmission are not BES as these units are adequately covered under other applicable NERC and/or regional reliability organization criteria. These units have no direct impact on the reliability of the BES. This includes black start units because they do not directly impact normal or contingency operation of the BES. These units

Organization	Yes or No	Question 3 Comment
		and their associated cranking paths are used only for restoration and not operation. Further, they are appropriately covered under regional restoration procedures and NERC standards (see for example, Emergency Operating Procedure EOP-005-2). Use of varying generator MVA thresholds as inclusion criteria under I2 and I3 could lead to inconsistent treatment of generation facilities. For example, a generation facility with a single 30 MVA generator would qualify as BES under I2. However, if an additional 30 MVA generator was added at the same site, the facility's status would change to non-BES under I3 even though the facility's capacity had doubled. NESCOE is also concerned that if the BES is required to be contiguous, the I2 threshold will result in many radial sub transmission lines becoming BES, resulting in substantial costs without significant justifying benefits. NESCOE suggests deleting Inclusion I2 or adopting a threshold that is consistent with I3, and which in no event should be lower than 75 MVA. Regarding facilities connected at 100 kV and above, some generation units in paper mills or other entities operating on the retail side of the meter may exceed the Inclusion Criteria. The Exception Process, which will be the subject of future comments, should provide some flexibility in this area. NESCOE further notes that in the case of radially connected generation, the contiguous connection paths should not be BES even if the operating voltage is greater than 100 kV. This is due to the fact that loss of a path has no greater impact than loss of the connected generator. This is simply a first contingency loss that has no significant impact on the BES. Inclusion I2 should be clarified to include only connections that impact the BES.

Response: The definition states that Real and Reactive Power resources connected at 100 kV or higher are considered BES. Sub-transmission referenced in your comments would generally be considered below 100 kV. Inclusions within the definition address resources connected at below 100 kV that are considered BES elements.

After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.

The definition for this inclusion only addresses BES contiguity from the generator leads through the generator step up transformer which is connected on the high side at a voltage of 100 kV or above. This establishes contiguity of the generation facility and provides for the highest level of reliable service (generation) to the BES.

Aside from registration burdens, stakeholders have not provided technical justification or recommendations by which to base a departure from the contiguous

Organization	Yes or No	Question 3 Comment
nature of the definition. Individual situations can be addressed through the NERC RoP exception process. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
PPL Energy Plus and PPL Generation	No	See comments in Question 13.
Illinois Municipal Electric Agency	Yes	Please see comments under Question 13.
Response: See response to Q13.		
Consolidated Edison Co. of NY, Inc.	No	The inclusion of generation to the BES should be subject to an impact test.â€¬
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Independent Electricity System Operator	No	We agree with the goal of inclusion of I2 but as stated earlier in our response to Q1, we do not support the blanket application of the BES definition to all individual generating units and Facilities meeting the respective capacity thresholds. Entities should be able to assess the impact of these units and Facilities against the TPC and use the Exception Process, with the help of technical evidence, to include generating units and Facilities that impact the interconnected grid and the bulk transfer of power.

Organization	Yes or No	Question 3 Comment
Orange and Rockland Utilities, Inc.	No	: XI2 should pertain to individual generating unit impact to the Bulk system, rather than the size unit only. Oftentimes there are cases when neither the path nor a 20 MVA unit itself will have any impact on the reliability of the interconnected transmission network, nor is it necessary for its operation.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Individual situations can be addressed through the NERC RoP exception process. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
AltaLink	No	We agree with the concept of Inclusion I2 with respect to individual generating units, but do not support having the entire path labeled as BES. In most cases, neither the path or a 20 MVA unit itself will have any impact on the reliability of the interconnected transmission network nor is it necessary for the operation. Generation restriction (20 MVA or 75 MVA) should either be revised or the exception procedure should allow entities, with the support of technical evidence, to exclude element(s) from being labeled as part of the BES. The path to generating facilities does not need to be BES contiguous. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require a contiguous path unless the unit is identified essential for the operation of transmission network.Definition and/or exception process should provide clear acknowledgement and flexibility to avoid any regulatory conflicts.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The definition for this inclusion only addresses BES contiguity from the generator leads through the generator step up transformer which is connected on the high side at a voltage of 100 kV or above. This establishes contiguity of the generation facility and provides for the highest level of reliable service (generation) to the BES. Aside from registration burdens, stakeholders have not provided technical justification or recommendations by which to base a departure from the		

Organization	Yes or No	Question 3 Comment
contiguous nature of the definition. Individual situations can be addressed through the NERC RoP exception process. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Utility System Efficiencies, Inc.	No	The 20 MVA threshold appears to have been drawn without explanation from the existing NERC Statement of Compliance Registry. Given that the purpose of the Compliance Registry is to sweep in all generators that might be material to the operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the operation of the BES, the STD has acted arbitrarily and without adequate technical justification in adopting the 20 MVA threshold. In responding to comments on its initial proposal, the SDT states that it adopted the 20 MVA threshold because "there is no technical basis to change the values contained in the Statement of Compliance Registry Criteria." Consideration of Comments on Definition of Bulk Electric System - Project 2010-17, March 30, 2011, at 30. But this response gets the equation backwards. The SDT must have some technical justification for adopting the 20 MVA threshold beyond the fact that it was previously adopted by NERC in a different context. Without a technical justification demonstrating that facilities operating at capacities as low as 20 MVA are "needed to maintain transmission system reliability," the proposed definition is overly broad and fails to comply with the restrictions imposed by Congress in FPA Section 215(a)(1), 16 U.S.C. Â§ 8240(a)(1). Further, the Statement of Compliance Registry was adopted without the benefit of having been vetted through the NERC Standards Development Process, so the technical record underlying the choice of that threshold is unavailable for review by the industry.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The goal of the SDT is to provide clarity to the definition of the BES and not to address registration criteria. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		

Organization	Yes or No	Question 3 Comment
BPA	No	Change to "Individual generating units greater than 20 MVA (gross nameplate rating), including the generator terminals through the GSU, where the GSU has a high side voltage of 100 kV or above." The 100 kV high side voltage is important for determining whether the generation is included, not whether the terminals are included.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Clarifying language has been included in the definition which addresses your concern. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
ATCO Electric		If a generator connects to 2 back to back transformers (25kV/72kV and 72kV/144kV), which transformer is GSU? 25/72kV transformer only or both transformers.
Response: There is not enough information included in your comment to determine inclusions or exclusions.		
Tacoma Power		Tacoma Power generally supports Inclusion I2. However, the term 'gross nameplate rating' is not defined and should be replaced with a specific definition. Additionally, no justification for the 20 MVA level has been provided and therefore it appears arbitrary. Since this measurement will define Elements for absolute inclusion in the BES, the threshold for generation units should be based on a need to maintain transmission reliability. Generation units located within a Local Distribution Network (LDN), which do not exit the LDN, should not be included. We propose changing Inclusion I2 to read,"Individual generating units greater than 20 MVA (ratings based on the Code of Federal Regulation, CFR 18, Part 11.1 definition "Authorized Installed Capacity") including the generator terminals through the GSU which has a high side voltage of 100 kV or above, except generating units that are within a Local Distribution Network (LDN) and do not have a net export out of the LDN."
Response: The SDT feels that the term "gross nameplate rating" is a widely used term within industry and does not require additional definition. No change made.		

Organization	Yes or No	Question 3 Comment
After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Please refer to stakeholder comments and responses to Question 9 for the local distribution network. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Pepco Holdings Inc		Clarification needed: If a generator greater than 20mva connected to a bus less than 100kv, but the bus is connected through a transformer (high side greater then 100kv) to the BES, are the generator, GSU or transformer considered BES?
Response: The generator and its contiguous path including the bus or interconnecting cable through the GSU high side bushing would all fall under the BES definition.		
Georgia System Operations		It is unclear to us what the phrase "including the generator terminals through the GSU..." means. Is the GSU itself included (it apparently would not be under I-1)? We understand terminals to be in essence points, and therefore don't see how they go "through" a GSU. Is the intention perhaps to mean "including the generator terminals at the GSU" or even "including the generator terminals at the GSU and the GSU itself"?
Response: The SDT has included clarifying language to address your concern. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Central Lincoln	Yes	But please indicate how generators below 20 MVA are treated, since we don't believe the flowchart at http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf properly expresses the SDT's intent to classify these small units as non-BES.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus		

Organization	Yes or No	Question 3 Comment
of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The RoP flowchart that was originally posted was incorrect and a corrected version is now available. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
American Municipal Power and Members	Yes	We support I2 but propose clarifying edits. We understand that the intent is to define the BES component of qualifying generators as that equipment from the generator terminals through the GSU. To convey clearly this point, as well as that only generators that are both over 20 MVA and connected through a GSU with a high side voltage of at least 100 kV are included in the BES, I2 should be reworded as follows: "Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals, connected through a GSU that has a high-side voltage of 100 kV or above. A BES generator includes the equipment from the generator terminals through the GSU."
Small Entity Working Group (SEWG)	Yes	Yes, with a minor clarification. Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side connection voltage of 100 kV or above. This should help state that only generators that are both over 20 MVA and connected through a GSU with a high side voltage of at least 100kV are included in the BES.
Florida Municipal Power Agency	Yes	FMPA understands that the intent is to define the BES component of qualifying generators as that equipment from the generator terminals through the GSU. To convey clearly this point, as well as that only generators that are both over 20 MVA and connected through a GSU with a high side voltage of at least 100 kV are included in the BES, I2 should be reworded as follows: "Individual generating units greater than 20 MVA (gross nameplate rating), connected through a GSU with a high-side voltage of 100 kV or above. A BES generator includes the equipment from the generator terminals through the GSU."
Western Electricity Coordinating Council	Yes	WECC agrees in concept, but the language could be clarified on the GSU transformer. Suggested language "Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals up to and including the GSU transformer, which has a high-side voltage of 100 kV or above."

Organization	Yes or No	Question 3 Comment
Transmission Access Policy Study Group	Yes	TAPS understands that the intent is to define the BES component of qualifying generators as that equipment from the generator terminals through the GSU. To convey clearly this point, as well as that only generators that are both over 20 MVA and connected through a GSU with a high side voltage of at least 100 kV are included in the BES, I2 should be reworded as follows: "Individual generating units greater than 20 MVA (gross nameplate rating), connected through a GSU with a high-side voltage of 100 kV or above. A BES generator includes the equipment from the generator terminals through the GSU."
Northern California Power Agency	Yes	NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.
Sacramento Municipal Utility District (SMUD)	Yes	SMUD agrees with the concept of Inclusion 2. To ensure the clarity of the "Bright-Line" criteria the GSU when connected to a voltage 100 kV and above as indicated in the proposal should clearly state that the GSU is included as BES.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Clarifying edits have been made to the definition to address your comments. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Santee Cooper	Yes	The inclusion for generating units needs to be consistent with regional entities exclusion criteria for MODO24.
Response: The SDT has been asked to provide a definition that provides clarity and less ambiguity on a continent-wide basis. The SDT does not agree that there should be regional interpretation and criteria associated with this definition. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards		

Organization	Yes or No	Question 3 Comment
Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
New York Power Authority	Yes	The definition should exclude generator leads for generating units that do not materially affect the reliability of the BES regardless of the BES designation of the generating unit. In addition, the definition should not require the inclusion of contiguous elements. Generating units that are designated BES are currently required to comply with a subset of NERC Reliability Standards, but may not be material to the reliable operation of the interconnected BES. This portion of the definition should not require that both BES and non-BES generating units have their generator leads defined as BES transmission elements. A length-based criterion for generator leads ought to be considered. For example, the definition should exclude generator leads that are one mile or less between BES elements.This comment has been raised in Question number 1 as well.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The definition for this inclusion only addresses BES contiguity from the generator leads through the generator step up transformer which is connected on the high side at a voltage of 100 kV or above. This establishes contiguity of the generation facility and provides for the highest level of reliable service (generation) to the BES. Aside from registration burdens, stakeholders have not provided technical justification or recommendations by which to base a departure from the contiguous nature of the definition. Radial exclusions are discussed under Question 7. Please see responses to comments under question 1 for further discussion. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Central Maine	Yes	Please note that this departs from NERC's Registry Criteria in that the unit of measurement is

Organization	Yes or No	Question 3 Comment
Power Company		MVA instead of MW.
New York State Electric & Gas and Rochester Gas & Electric	Yes	Please note that this departs from NERC's Registry Criteria in that the unit of measurement is MVA instead of MW.
Response: ERO registration criteria utilize MVA as a measurement unit. No change made.		
Vermont Transco	Yes	How will generating owners currently registered as a GO/GOP and have units tied to the BES system through a radial transmission line, that they own, and connects them to the grid be affected by the new definition? Will they need to become TO and TOP registered also? Should a GO/GOP have to adhere to all TO/TOP standards and requirements or only a sub-set of requirements?
Response: The SDT cannot address individual registration questions. Discussion of radial connections can be found under Question 7.		
ExxonMobil Research and Engineering	Yes	Support is contingent on the continued exclusion of generation based on its net capacity provided to the BES.
Response: See response to question 4 in this regard.		
Alberta Electric System Operator	Yes	Consider adding the word "transformer" after "GSU".
Response: Clarifying edits have been made to the definition to address your comments. I~~3~~2 - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
MEAG Power	Yes	The definition should exclude generator leads for generating units that do not materially affect the reliability of the BES regardless of the BES designation of the generating unit. In addition, the definition should not require the inclusion of contiguous elements. Generating units that are designated BES are currently required to comply with a subset of NERC Reliability Standards, but

Organization	Yes or No	Question 3 Comment
		may not be material to the reliable operation of the interconnected BES.This portion of the definition should not require that both BES and non-BES generating units have their generator leads defined as BES transmission elements. A length-based criterion for generator leads ought to be considered. For example, the definition should exclude generator leads that are one mile or less between BES elements.This comment has been raised in Question number 1 as well.
Response: The SDT proposal does not address BES contiguity beyond the connection to 100 kV or greater (the high side of the GSU). **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Xcel Energy	Yes	Xcel Energy thanks the SDT for their work and appreciates the clarification that BES extends from the generator out and does not include the prime mover and balance of plant equipment.
Southwest Power Pool	Yes	Please refer to SPP's response to question 1. but, consistent with the comments to question 1, believes it should be reflected as part of the general definition, as opposed to inclusions/exclusions, which should all be addressed pursuant to the separate processes.
Consumers Energy Company	Yes	We are supportive of Inclusion I2. Generators 20MVA and greater with terminals through a GSU connected at 100kV and above are treated as Bulk Electric System at this time along with their radial connections to the Transmission system. We agree with the SDT that no technical rationale for changing this condition exists.
Sierra Pacific Power Co d/b/a NV Energy	Yes	While 20MVA has no technical basis for the threshold above which a generator should be considered to be necessary for the reliable operation of an interconnected transmission network, the industry has not provided any technical data to support a value other than this which has been established in the NERC Statement of Compliance Registry Criteria.
Western Area Power Administration	Yes	the bullet comments that define a specific point for demarcation.
Tri-State Generation and Transmission Association, Inc.	Yes	

Organization	Yes or No	Question 3 Comment
Imperial Irrigation District	Yes	
MRO's NERC Standards Review Forum	Yes	
SERC Planning Standards Subcommittee	Yes	
ACES Power Participating Members	Yes	
National Rural Electric Cooperative Association (NRECA)	Yes	
Overton Power District No. 5	Yes	
Arizona Public Service Company	Yes	
ReliabilityFirst	Yes	
Rayburn Country Electric Cooperative, Inc.	Yes	
Luminant Energy	Yes	
US Bureau of	Yes	

Organization	Yes or No	Question 3 Comment
Reclamation		
Grand Haven Board of Light and Power	Yes	
Glacier Electric Cooperative	Yes	
FHEC	Yes	
South Texas Electric Cooperative, Inc.	Yes	
National Grid	Yes	
Dayton Power and Light Company	Yes	
Duke Energy	Yes	
South Carolina Electric and Gas	Yes	
MidAmerican Energy Company	Yes	
Florida Keys Electric Cooperative	Yes	
East Kentucky Power Cooperative, Inc.	Yes	
American	Yes	

Organization	Yes or No	Question 3 Comment
Transmission Company, LLC		
Farmington Electric Utility System	Yes	
Colorado Springs Utilities	Yes	
Muscatine Power and Water	Yes	
Exelon	Yes	
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	Yes	No comment.
Puget Sound Energy	Yes	
GTC	Yes	
Long Island Power Authority	Yes	
PJM	Yes	
Oncor Electric Delivery Company	Yes	

Organization	Yes or No	Question 3 Comment
LLC		
Manitoba Hydro	Yes	
ISO New England, Inc.	Yes	
City of Anaheim	Yes	
Golden Spread Electric Cooperative, Inc.	Yes	
Response: Thank you for your support. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Please see the revised definition.		

4. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: While many commenters did agree with the proposal, about half of the commenters who responded to this question disagreed with some aspect of the proposal.

The SDT believes that generation plants larger than 75 MVA connected at 100 kV or higher need to be included within the Bulk Electric System (BES) definition. This threshold is based on the generation plant threshold values found in the NERC Statement of Compliance Registry Criteria. Also, two Regional Entities (FRCC and RFC) specifically use this criterion in each of their current BES definitions. The 75 MVA plant is a low enough level to capture most generating plants that would have an effect on the reliability of the interconnected Transmission network.

After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.

Commenters have suggested other thresholds (anywhere from 0 to 300 MVA) for generation plants to be included in the BES definition. However, as of this date, commenters have not submitted technical justification upon which to base a departure from the generation MVA thresholds included in the ERO Statement of Compliance Registry Criteria. The SDT recommends that entities use the NERC Rules of Procedure (RoP) exception process for obtaining exceptions to the BES Definition.

Some other issues raised include the following:

- Some commenters expressed that "single site" should be defined. "Single site" basically means "generating plant/facility" as used in the ERO Statement of Compliance Registry Criteria (SCRC). Because this SCRC criteria understanding has not been problematic to date, the SDT does not believe that "single site" needs to be further clarified.
- Concerns were raised about the interpretation of the term "through a common bus". The SDT eliminated this term, which should improve the clarity of the definition.
- Some commenters brought up concerns related to the "contiguous" nature of the BES. For purposes of this inclusion, the SDT is proposing BES contiguity from the generator leads through the step up transformer(s). The SDT proposal for this inclusion does not address BES contiguity beyond the connection to 100 kV or greater (the high side of the step-up transformer).
- Two commenters expressed concerns that Exclusion E2 (using net capacity) and the new Inclusion I2 (using gross aggregate nameplate capacity) are inconsistent. ~~The SDT agrees that Exclusion E2 should over-ride this Inclusion.~~ Exclusion E2 is dedicated to the situations faced by behind-the-meter (retail customer owned) generation that are PURPA qualifying facilities in the US and similarly situated

generators in Canada. While the criteria in Inclusions I2 and I3 were based on gross nameplate ratings in MVA, the first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. The "net capacity provided to the BES" is the behind-the-meter generation that exceeds the Load directly served by the generator. The revised language in Exclusion E2 should address these concerns.

Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows:

I~~3~~2 - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.

Organization	Yes or No	Question 4 Comment
Northeast Power Coordinating Council	No	I3 should pertain to multiple generating units located at a single site, but the entire contiguous path should not be labeled as BES. Oftentimes there are cases when neither the path of a 75 MVA plant or aggregated generation will have any impact on the reliability of the interconnected transmission network nor be necessary for its operation. As stated earlier, under various green energy, smart grid and dispersed renewable energy plans advocated by both Canadian and US policy makers, the gross nameplate rating of 75 MVA may undermine and deter the future potential of integrating Distributed Generations (DG's) that will be implemented to ensure the reliable operation of the interconnected transmission network BES, and, at the same time, providing the most effective and economical solutions for rate payers. Local generation can cost-effectively enhance the reliability of load pocket by avoiding transmission, but such restrictions would deter the adoption of good planning decisions.Path to generating facilities need not be BES contiguous. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require contiguous BES paths.

Response: The SDT carefully debated the generating threshold for this inclusion in the definition. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.

The definition for this inclusion only addresses BES contiguity from the generator leads through the step up transformer(s) connected on the high side at a voltage of 100 kV or above. This establishes contiguity of the generation facility and provides for the highest level of reliable service (generation) to the BES.

Organization	Yes or No	Question 4 Comment
Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Santee Cooper	No	We recommend that it say "Single generating units located at a single site with a capacity of greater than or equal to 100 MVA". The use of aggregate capacity greater than 75 MVA pulls in some very small units.
Idaho Falls Power	No	Again, following our statement in question 3, we feel an arbitrary brightline threshold requires additional defining criteria for inclusion.Adopting the registry's brightline criteria is to us skirting the purpose of the BES definition effort, and lends no more clarity to what is in fact the BES.
Tennessee Valley Authority	No	Other than the NERC Registry Criteria definition, what is the technical justification for the 75 MVA threshold? The threshold level for inclusion should be technically based on the BES capacity and configuration at the location of the generating sources' connection to the BES.
Western Montana Electric Generating and Transmission Cooperative	No	WMG&T is concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition.
New York State Reliability Council	No	The use of a 75 MVA threshold based on NERC's Registry Criteria may be administratively convenient but is arbitrary when based upon BES reliability considerations. Suggest use of a 300 MW or other regionally and technically acceptable threshold such as NPCC's A-10 criterion.
Intellibind	No	Though as previously stated I do not think that the 20 MVA threshold has technical merit, I do not believe that the 75MVA limit has technical merit either. Further the impact should be measured at the buss bar not at the nameplate. The aggregate rating should be the same as the individual unit rating on a single plant, unless the plant can prove that there is not a common failure mode to lose more than 20MVA.
Public Utility District No. 1 of	No	Snohomish is concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from

Organization	Yes or No	Question 4 Comment
Snohomish County, Washington		the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy “needed to maintain transmission system reliability” and are therefore properly included in the BES definition.
Blachly Lane Electric Cooperative Northern Wasco County PUD Central Electric Cooperative Clearwater Power Company Consumers Power Inc. Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Northern Lights Inc Okanogan Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Clallam County PUD No.1 Chelan PUD – CHPD Public Utility District No. 1 of Franklin County Midstate Electric Cooperative Northwest Requirements Utilities	No	We are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy “needed to maintain transmission system reliability” and are therefore properly included in the BES definition. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

Organization	Yes or No	Question 4 Comment
Big Bend Electric Cooperative, Inc. Cowlitz County PUD Utility System Efficiencies, Inc		
Coos-Curry Electric Cooperative Lost River Electric Cooperative PNGC Power Raft River Rural Electric Cooperative	No	Specific language change: Change 75 MVA to 100 MVAWe are concerned that the 75 MVA threshold has been chosen arbitrarily by the SDT. Like the 20 MVA threshold discussed in our response to question 3, the 75 MVA threshold appears to have been drawn from the NERC Statement of Compliance Registry without appreciation for the function of the threshold in that document and without adequate technical justification demonstrating the generators with an aggregate capacity of 75 MVA produce electric energy "needed to maintain transmission system reliability" and are therefore properly included in the BES definition. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.
City of St. George	No	It is understood that this mirrors the Registry Criteria and this is a simple way to address the issue. The justification states there is no technical rationale to change the 75 MVA threshold, however the technical rationale for the 75 MVA criteria has not been provided either. Having a 75 MVA plant treated the same as a plant with a rating of several hundred or several thousand MVA doesn't make sense either. The requirements for an entity or facility should match the impact of that facility to the system.
Clark Public Utilities	No	Generators should only be part of the Bulk Electric System if they are connected through a GSU to a Transmission Element determined to be part of the BES. The current inclusion language would apply to all generators connected to facilities greater the 100 kV with no exclusion or exception process. Without a change, it appears that a generator connected to a facility greater than 100 kV would be a BES asset even if the transmission assets could be excluded or excepted. I3 should be rewritten to state: Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus to a Transmission Element determined to be part of the Bulk Electric System. Additionally, as indicated by Clark in its comments on the core definition of the BES, Clark believes the 75 MVA threshold lacks an adequate technical justification and is a purely arbitrary quantity. The use of a capacity threshold in the definition of the BES should have technical reasons.
New England States Committee on Electricity	No	Please refer to comments under 3 above. Additionally, regardless of the connection voltage, the 75 MVA limit may unintentionally impose unnecessary added costs to renewable generation, thus inhibiting the development of these resources. This is of particular concern to New England, which has aggressive

Organization	Yes or No	Question 4 Comment
		renewable energy objectives and is working to develop resources in and around the region to meet them in the most cost-effective way. Looking forward, the exception process should provide criteria allowing flexibility as to the aggregate MVA rating as related to the specific connection and impact on a region. This will be discussed further in comments on the Exception Process as appropriate.
Consolidated Edison Co. of NY, Inc.	No	The inclusion of generation to the BES should be subject to an impact test.â€¬
Orange and Rockland Utilities, Inc.	No	XI3 should pertain to multiple generating units impact to the Bulk system, rather than the size unit only. Oftentimes there are cases when neither the path nor a 75 MVA unit itself will have any impact on the reliability of the interconnected transmission network, nor is it necessary for its operation.
City of Redding	Yes	As stated in question #3 above, in concept Redding is in agreement that the Brightline should specify generation facilities at a certain level, however we believe the SDT has no technical basis to choose the 75 MVA threshold. If the SDT elects to retain I3 in its current form then Redding suggests changing the generation level from 75 MVA to 200 MVA. If the goal of the Brightline Definition is to create a starting point to identify power system elements that are "necessary" then the SDT should choose a larger generation threshold as a starting point. The 200 MVA would serve a better purpose by casting the burden of proof (via the Exception Process) from the smaller facilities under 200 MVA to the Regional Entity. This would help the SDT to achieve an objective of reducing the burden on the "small entity" and "distribution" facilities due that fact that most generator facilities of this size are installed to serve local loads. In summary, Redding supports the concept that the brightline as an initial dividing line of elements to be labeled as BES. Therefore, Redding suggests that the SDT change the language in I3: From: "Multiple generating units located at a single site with aggregated capacity greater than 75 MVA (gross nameplate rating) including the generator terminals through the GSUs, connected through a common buss operated at a voltage of 100 kV or above". To: Multiple generating units located at a single site with aggregated capacity greater than 200 MVA (gross nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above".

Response: The SDT has not received sufficient technical justification upon which to base a departure from the generation threshold included in the ERO's Statement of Compliance Registry Criteria.

> **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the

Organization	Yes or No	Question 4 Comment
high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above. The SDT recommends that entities use the NERC Rules of Procedure process for obtaining exceptions to the BES Definition as needed. No change made.		
NERC Staff Technical Review	No	>>>The interconnection voltage threshold should be removed. The contribution of a multiple generating units at a single site to system reliability is a function of the aggregate MVA rating rather than the interconnection voltage. All locations with multiple generating units with aggregate capacity greater than 75 MVA should be included in the BES definition because all such units provide similar contributions to system reliability. >>>>>>>>>> As noted in the comment on Question 3 of this comment request, the specific inclusion of the GSU transformer implies that all other components of a generating unit, such as its unit auxiliary transformer, start-up transformer, governor, exciter, power system stabilizer, etc., are excluded. The SDT should define "generating unit" or otherwise clarify which components of a generating unit are included in the BES definition. >>>>>>>>>> The use of the term "common bus" introduces ambiguity into the definition. It would be better to replace the phrase "connected through a common bus" with the phrase "connected through a common point of interconnection" which also provides consistency with the description of Inclusion I5.
Response: NERC Staff has not provided technical justification for requiring the inclusion of all generating resources greater than 75MVA no matter the interconnecting voltage. The SDT believes that "generating unit" (now expressed as "generating resources") does not need further clarification. The SDT believes that specific requirements for generation support equipment and functions should be addressed by specific NERC standards. The goal of the SDT is to provide clarity to the BES Definition and not to address reliability standards applicability. The SDT agrees that using the "common bus" term is problematic. The revised definition should resolve this concern. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
NERC Transmission Issues Subcommittee (TIS)	No	The use of the term "common bus" technically has a very specific meaning and would openly exclude most modes of connection. There is no "common bus" in a ring-bus or a breaker-and-one-half configuration. Also, it is not necessary to include the GSU (s), as commented in 3 above. >>>>>>>>>> The TIS suggests using wording similar to that contained in I5: >>>>>>>>>>"I3 - Multiple generating units

Organization	Yes or No	Question 4 Comment
		located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common bus operated at a common point of interconnection to a system Element at a voltage of 100 kV or above."
Response: The SDT has eliminated term "common bus". The SDT believes that the revised proposed definition is an improvement. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Dominion	No	As stated in its response to Question 2 above, Dominion disagrees that a generation resource, Element or Facility should automatically be included in the BES. Dominion agrees that the Generator Owner and Generator Operator, as users of the bulk power system, should have to abide by applicable reliability standards, but do not agree that this should automatically require the inclusion of a generation resource, Element or Facility in the BES. Further, Dominion prefers that the SDT use the term "generation resources" as stated in the current BES definition contained in the Glossary of Terms, instead of the proposed term "generation unit"
Response: The SDT agrees and has proposed the term "generating resources" for clarity. The SDT scope was determined by the language contained in Order Nos. 743 & 743a in which the Commission provided guidance to the ERO to clarify the definition for continent-wide application. The Commission did not propose significant changes to the current application of the existing definition over the majority of the continent. Therefore the SDT has developed a draft core definition, together with BES designations (Inclusions and Exclusions) that provide the specificity necessary to identify the vast majority of BES Elements by utilizing the existing definition and criteria previously approved for this purpose. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		

Organization	Yes or No	Question 4 Comment
MRO's NERC Standards Review Forum	No	The wording "connected through a common bus" is drawn from the NERC Compliance Registry Criteria. NSRF agrees with the language if the intent is to let entities classify the applicable multiple generating units as part of the BES only when it is connected to one (common) bus. However, if the intent is for entities to also classify multiple generation as part of the BES when it is connected through two or more GSUs to different bus sections of a set of (common) buses that are interconnected through bus-tie breakers [which may be done to provide improved reliability and maintenance flexibility], then wording like "connected through a common bus or set of interconnected buses" would be more appropriate. It is the NSRF's understanding that entities do not have to classify applicable multiple generating units as part of the BES when the aggregate MVA is connected to different buses at different voltage levels and no more than 75 MVA is connected to any one bus (or set of interconnected buses) at a single voltage level of 100 kV or more. Is this a correct interpretation?
American Transmission Company, LLC	No	ATC offers the following alternative language: o The wording "connected through a common bus" is drawn from the NERC Compliance Registry Criteria. ATC agrees with the language if the intent is to let entities classify the applicable multiple generating units as part of the BES only when it is connected to one (common) bus. However, if the intent is for entities to also classify multiple generation as part of the BES when it is connected through two or more GSUs to different bus sections of a set of (common) buses that are interconnected through bus-tie breakers [which may be done to provide improved reliability and maintenance flexibility], then wording like "connected through a common bus or set of interconnected buses" would be more appropriate. o It is also ATC's understanding that entities do not have to classify applicable multiple generating units as part of the BES when the aggregate MVA is connected to different buses at different voltage levels and no more than 75 MVA is connected to any one bus (or set of interconnected buses) at a single voltage level of 100 kV or more. Is this a correct interpretation?

Response: The SDT has eliminated the term "through a common bus". The SDT believes that the revised proposal should be an improvement. The SDT also believes that this inclusion is in conformance with the generation plant 75 MVA threshold in the NERC Statement of Compliance Registry Criteria, which has not needed clarification to date.

The SDT cannot address each and every unique situation related to the connection of generation resources. More information would be needed before this question could be answered. For individual situations, entities may seek exception by using the NERC Rules of Procedure (RoP) exception process to present relevant evidence.

Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows:

I~~3~~2 - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross

Organization	Yes or No	Question 4 Comment
aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
SERC OC Standards Review Group	No	"Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above." GSUs need to be defined - see response to question 3 above.
Response: This inclusion has been clarified using the term step up transformer(s) rather than GSU. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Hydro One Networks Inc FortisBC	No	We agree with the concept of Inclusion I3 with respect to multiple generating units located at a single site, but do not support that the entire contiguous path has to be BES. The path of a 75 MVA plant or aggregated generation will rarely have any impact on the reliability of the interconnected transmission network nor is it necessary for its operation. We also do not support the fact that there should be a blanket application of this inclusion.As stated earlier, under various green energy, smart grid and dispersed renewable energy plans advocated by both Canadian and US policy makers, the gross nameplate rating of 75 MVA may undermine and deter the future potential of integrating Distributed Generations (DG's) that will be implemented to ensure the reliable operation of the interconnected transmission network BES, and, at the same time, providing the most effective and economical solutions for the rate payers in North America. Local generation can cost-effectively enhance the reliability of load pocket by avoiding transmission, but such restrictions would deter the adoption of good planning decisions.Upcoming load displacement projects would result in the installation of new self-generation facilities at customer sites, with the electricity generated being used on-site by the customer, with a resultant decrease in the consumption of electricity purchased via large scale generation. These projects can be large, and displace a substantial portion of the customer's (or local distribution company's) existing load, even to the extent of total self-sufficiency and the availability of surplus generation. The aggregated surplus generation capacity may very well exceed 75 MVA and would consequently force the facility owners to register as both Generation Owners (GO) and Transmission Owners (TO), which may be in conflict with regulatory rules in many jurisdictions. We suggest the following: o Generation restriction (75 MVA) should either be revised or the exception procedure should allow entities,

Organization	Yes or No	Question 4 Comment
		with the support of technical evidence, to exclude element(s) being labeled as part of BES. o Path to generating facilities need not be BES contiguous unless the unit is identified essential for the operation of transmission network. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require contiguous paths. o Entities should be able to use the exception process, with the help of technical evidence, to exclude generating units that do not impact the interconnected grid and the bulk transfer of power. o From a regulatory perspective such an inclusion could also be in conflict with the current regulatory requirements. Definition and/or exception process should provide acknowledgement and flexibility to avoid any regulatory conflicts. For example, as stated earlier (Q3 response) NERC and SDT should consider introducing a concept of a new category of registration or BES Support elements. These elements are NOT necessarily BES but support the reliable operation of the interconnected transmission network.
Response: The definition for this inclusion only addresses BES contiguity from the generator leads through the step up transformer(s). The SDT has not received sufficient technical justification upon which to base a departure from the generation plant 75 MVA threshold included in the ERO's Statement of Compliance Registry Criteria. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The SDT recommends that entities use the NERC Rules of Procedure exception process for obtaining exceptions to the BES Definition. With respect to the regulatory issue raised, the revised definition should resolve this concern. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Electricity Consumers Resource Council (ELCON)	No	Same response as item 3 above.
Response: See response to Q3.		

Organization	Yes or No	Question 4 Comment
Electric Reliability Council of Texas, Inc.	No	See response to question 3 - ERCOT ISO agrees with substance, but not the approach.
Fayetteville Public Works Commission	No	The same comment made in Question 3 and applicable to Inclusion I2 is also applicable to Inclusion I3.
American Electric Power	No	Please see response to question 3.
Southern California Edison Company	No	Please refer to SCE's answer for Question No. 3 above.
SPP Standards Review Group	No	The comment provided for Question 3 above applies here also.
Pepco Holdings Inc		Clarification needed: Same situation as described in #3 above.
Southwest Power Pool	Yes	Please see SPP's response to question 3 - SPP agrees with substance, but not the approach.
Michgan Public Power Agency	Yes	See comments to question 3
Response: See response to Q3.		
Hydro-Quebec TransEnergie	No	We believe that automatic inclusion of 75 MVA generation and the path to connect them to the BES should not be automatically included in the BES. However, a provision should be made so that some reliability standards related to generator shall apply (voltage regulation, etc.).
Response: The definition for this inclusion only addresses BES contiguity from the generator leads through the step up transformer(s) which is connected on the high side at a voltage of 100 kV or above. This establishes contiguity of the generation facility and provides for the highest level of reliable service (generation) to the BES. The SDT believes that NERC Reliability Standards may be applied to specific generator support elements (e.g., voltage regulation) that are necessary to operate the interconnected transmission network. The goal of the SDT is to provide clarity to the BES Definition and not to address Reliability Standards applicability. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: I~~3~~2 - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross		

Organization	Yes or No	Question 4 Comment
aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Vermont Transco	No	What is the definition of "common bus"? Would this only apply to generating facilities with a direct GSU tie to the 100 kV, and up, system? Or would it apply to those units tied to the low side of a transformer at a voltage below 100 kV that has a step up high side voltage greater than 100 KV? Example: units are tied through to a single 46 kV substation (GSU high side connected to this substation) with a tie from this substation to the BES through a step up transformer.
Response: The SDT has eliminated the term "common bus". The SDT cannot address each and every unique situation related to the connection of generation resources. More information would be needed before this question could be answered. For individual situations, entities may seek exception by using the NERC Rules of Procedure (RoP) exception process to present relevant evidence. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Sweeny Cogeneration LP	No	The threshold for multiple generation units aggregated at a single location is consistent with the NERC functional registry criterion. We believes that it is important to maintain this uniformity. However, we believe there are further items to be added to the list related to generator interconnections, a task that was passed to this project from Project 2010-07. Just as is the case with complex distribution systems, there are a variety of generator-transmission interconnection architectures which are driving the Regions to inappropriately register Generator Owner/Operators as Transmission Owners.
Response: More information would be needed before the concern can be answered. No change made.		
Muscatine Power and Water	No	The phrase "connected through a common bus" is taken from the NERC Compliance Registry Criteria. MP&W would agree with this language if the intent is to let entities categorize the applicable multiple generating units as part of the BES only when it is connected to one (common) bus. However, if the intent is for entities to also classify multiple generation as part of the BES when it is connected through two or more GSUs to different bus sections of a set of (common) buses that are interconnected through bus-tie breakers

Organization	Yes or No	Question 4 Comment
		(which may be done to provide improved reliability and maintenance flexibility), then using language like "connected through a common bus or set of interconnected buses" would be more appropriate.
Response: The SDT believes the term "through a common bus" is problematic and the revised proposal should resolve this concern. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Springfield Utility Board	No	While Springfield Utility Board does not own any generating units, we do recognize the importance of the restoration of the Grid, and the generation necessary for the Grid. SUB would recommend that NERC clearly define "location" and "single site". Does single site mean interstate service area location (adding up generation over multiple geographically separate areas), same City?, same common bus?, etc... SUB suggests that for purposes of I3 (and other inclusions and exclusions that reference "same site", "same location", or similar language) that the term "collectively share a common bus" be used.
Springfield Utility Board	No	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
Response: The SDT believes that "single site" is in agreement with the ERO Statement of Compliance Registry Criteria (SCRC) threshold for including greater than 75 MVA generating plants/plants. Because this SCRC criterion has not been problematic to date, the SDT does not believe that "single site" needs to be further clarified.		

Organization	Yes or No	Question 4 Comment
The SDT has not received sufficient technical justification to exclude load modifying or backup generation plants as described from the BES Definition. No changes made.		
Public Utilities Commission of Ohio	No	This should be expanded to also refer to individual generation capacity, as well as aggregate, at 75 MVA and above.
New York State Dept of Public Service		I3 should be revised to read all generation - individually or aggregate - 75 MVA and above.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Cogentrix Energy, LLC	No	GSUs need to be defined - see response to question 3 above
Response: This inclusion has been clarified to use the term step up transformer(s) rather than GSU. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
The Dow Chemical Company	No	It should be clarified that Exclusion E2 over-rides this Inclusion. See ELCON comments.
ExxonMobil Research and Engineering	Yes	Support is contingent on the continued exclusion of generation based on its net capacity provided to the BES.
Response: The SDT agrees that Exclusion E2 should over-ride this inclusion. The revised language in Exclusion E2 should address these concerns.		

Organization	Yes or No	Question 4 Comment
PJM	No	As written I3 implies a contiguous system from the unit to a "common bus operated at a voltage above 100 kV" there is no technical justification for a contiguous system. The requirement should read "Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSU"
Response: The SDT's revised proposal should address this concern. The definition for this inclusion only addresses BES contiguity from the generator leads through the step up transformer(s). Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Oncor Electric Delivery Company LLC	No	The ERCOT Region already considers load in any combination equal to and over 20 MVA through a single Point of Interconnect as part of the BES
Response: The definition does not preclude more restrictive local requirements.		
PPL Energy Plus and PPL Generation	No	See comments in Question 13
Illinois Municipal Electric Agency	Yes	Please see comments under Question 13.
Response: See response to Q13.		
Manitoba Hydro	No	It is not clear if this inclusion only applies if the generators at a single site have an aggregate capacity greater than 75 MVA AND are connected through a common bus operated at 100kV or if the inclusion applies if the generators at a single site have an aggregate capacity of over 75MVA regardless of whether or not they are connected through a common bus operated at 100kV or above. For example, would this inclusion apply if a utility has over 75MVA at single generating site but only a small portion of the generating capacity is connected through the GSU to a common bus at 100kV or above and the rest is connected through a common bus operating at less than 100kV? Suggested wording: "Multiple generating units located at a single site connected to a common bus operated at a voltage of 100kV or above with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs.

Organization	Yes or No	Question 4 Comment
Response: The SDT's revised proposal should be understood to mean that all applicable generating resources at a single site, their generator terminals, connecting cabling up to and including their step up transformer(s) that are connected at 100kV or greater will be included in the definition of the BES. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Independent Electricity System Operator	No	See our responses to Q1 and Q3.
Response: See responses to Q1 & Q3.		
AltaLink	No	We agree with the concept of Inclusion I3 with respect to multiple generating units located at a single site, but do not support that the entire contiguous path has to be BES. The path of a 75 MVA plant or aggregated generation will rarely have any impact on the reliability of the interconnected transmission network nor is it necessary for its operation. Generation restriction (75 MVA) should either be revised or the exception procedure should allow entities, with the support of technical evidence, to exclude element(s) being labeled as part of BES. Path to generating facilities need not be BES contiguous. Generating units can be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not require contiguous paths.
Response: The definition for this inclusion only addresses BES contiguity from the generator leads through the step up transformer(s) connected on the high side at a voltage of 100 kV or above. This establishes contiguity of the generation facility and provides for the highest level of reliable service (generation) to the BES. The SDT has not received sufficient technical justification upon which to base a departure from the generation plant threshold included in the ERO's Statement of Compliance Registry Criteria. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The SDT recommends that entities use the NERC Rules of Procedure exception process for obtaining exceptions to the BES Definition.		

Organization	Yes or No	Question 4 Comment
Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
BPA	No	BPA suggest defining "single site." BPA is assuming that a "single site is a single substation with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above. BPA would also like this to be consistent with Inclusion #2 and state: a high side voltage of 100 kV or above.
Response: The SDT believes that "single site" is in agreement with the ERO Statement of Compliance Registry Criteria (SCRC) threshold. Because this SCRC criterion has not been problematic to date, the SDT does not believe that "single site" needs to be defined. No change made.		
Portland General Electric Company		The 75 MVA aggregate capacity rating threshold could result in the inclusionin the BES of generating units that have no potential to impact the reliability of the BES.The 75 MVA threshold was taken from the registration criteria, and no technicaljustification has been provided for its use. In addition, the meaning of the phrase"located at a single site" is unclear and subject to multiple interpretations. The phrase"connected through a common bus" accomplishes the same goal, and therefore thephrase "located at a single site" hould be removed.
Response: The SDT has not received sufficient technical justification upon which to base a departure from the generation plant threshold included in the ERO's Statement of Compliance Registry Criteria. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The SDT believes that the term "single site" is agreement with the ERO Statement of Compliance Registry Criteria (SCRC) threshold. Because this SCRC criterion has not been problematic to date, the SDT does not believe that "single site" needs further clarification. No changes made.		
Tacoma Power		Tacoma Power generally supports Inclusion I3. However, the term 'gross aggregate nameplate rating' is not defined and should be replaced with a specific definition. Additionally, no justification for the 75 MVA level has been provided and therefore it appears arbitrary. Since this measurement will define Elements for absolute inclusion in the BES, the threshold for multiple generation

Organization	Yes or No	Question 4 Comment
		units located at a single site should be based on a need to maintain transmission reliability. Such single sites located within a Local Distribution Network (LDN), which do not exit the LDN, should not be included. We propose changing Inclusion I3 to read, "Multiple generating units located at a single site with an aggregate capacity greater than 75 MVA (aggregate capacity based on the Code of Federal Regulation, CFR 18, Part 287.1, "Determination of powerplant design capacity") including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above, except multiple generating units located at a single site that are within a Local Distribution Network (LDN) and do not have a net export out of the LDN."
Response: The SDT feels that the term "gross nameplate rating" is a widely used term within the industry and does not require additional defining. The SDT has not received sufficient technical justification upon which to base a departure from the generation plant threshold included in the ERO's Statement of Compliance Registry Criteria. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.		
American Municipal Power and Members Florida Municipal Power Agency	Yes	I3 contains language similar to I2, and should be similarly reworded, as follows: "Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating), connected through a common bus operated at a voltage of 100 kV or above. A BES generating plant includes the equipment from the generator terminals through the respective GSUs."
Transmission Access Policy Study Group	Yes	I3 contains language similar to I2, and should be similarly reworded, as follows: "Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating), connected through a common bus operated at a voltage of 100 kV or above. A BES generating plant includes the equipment from the generator terminals through the respective GSUs."
Northern California Power Agency	Yes	NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.
Response: The SDT agrees that BES contiguity for this inclusion is limited to the generator leads through the step up transformer(s). However, the SDT believes the last sentence in the comment is not needed for clarification.		

Organization	Yes or No	Question 4 Comment
Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Western Electricity Coordinating Council	Yes	WECC agrees in concept, but suggests that the phrase "connected through a common bus" may be unclear. For example, if there is also load connected through that common bus, does that net, does it negate the inclusion, or does it not matter? Perhaps a phrase such as "regardless of the amount of load also connected through that common bus" would help. The GSU comment from I2 also applies. Suggested language "...including the generator terminals up to and including the GSU transformer, which has a high-side voltage of 100 kV or above."
Response: The SDT eliminated the term "common bus". Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Central Maine Power Company New York State Electric & Gas and Rochester Gas & Electric	Yes	Please note that this departs from NERC's Registry Criteria in that the unit of measurement is MVA instead of MW.
Response: The ERO Statement of Compliance Registry Criteria uses MVA units (not MW units) for both generator unit and generation plant capacities. No change made.		
PacifiCorp	Yes	PacifiCorp understands the SDT is looking for technical reasons for something other than 75 MVA. PacifiCorp believes it is not feasible to determine a value that is consistent across the continent. Although PacifiCorp believes 75 MVA is too low, it is an acceptable number for any configuration of generation (see comment on question 3). Those above 75 MVA believed to be exempt from the BES definition can be processed through the proposed ROP inclusion/exclusion process.PacifiCorp submits the following suggested wording for I3: "Multiple generating units with an aggregate capacity greater than 75 MVA or a single generating unit with a generating capacity greater than 75 MVA....."
Response: Stakeholder comments have not provided technical justification by which to base a departure from the 75 MVA threshold where connected at 100		

Organization	Yes or No	Question 4 Comment
kV and above. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Alberta Electric System Operator	Yes	Consider adding the word "transformer" after "GSU".
Response: The SDT agrees and has replaced GSU with the term "step-up transformer(s)". Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Idaho Power	Yes	Generally agreed but please revise to inlcude I2, I3 and I5 at 75 MVA, see Question 3 and 6 comments.
Long Island Power Authority	Yes	We recommend clarifying that I3 only covers units under 20 MVA and that the aggregation similarly just applies to those units that are under 20MVA. Example: a 100 MVA generating unit and a 15 MVA generating unit at a single site only the 100 MVA generating unit would be BES per Inclusion I2 but Inclusion I3 would not apply.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Inclusion I2 was eliminated and rolled into the old Inclusion I3, which will be referenced as Inclusion I2 moving forward. This inclusion was reworded as follows: **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross		

Organization	Yes or No	Question 4 Comment
aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Central Lincoln	Yes	Please indicate how aggregate generation below 75 MVA is to be treated, since we don't believe the flowchart at http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf properly expresses the SDT's intent to classify these small plants as non-BES.
Response: The BES Rule of Procedure team has been made aware of this.		
Sacramento Municipal Utility District (SMUD)	Yes	SMUD also agrees with the Inclusion 3 concept.
Sierra Pacific Power Co d/b/a NV Energy	Yes	While 75MVA has no technical basis for the threshold above which an aggregate generation plant should be considered to be necessary for the reliable operation of an interconnected transmission network, the industry has not provided any technical data to support a value other than this which has been established in the NERC Statement of Compliance Registry Criteria.
PUD No. 2 of Grant County, Washington	Yes	Grant supports this proposed inclusion.
Public Service Enterprise Group LLC	Yes	
Tri-State Generation and Transmission Association, Inc.	Yes	
Imperial Irrigation District	Yes	
SERC Planning Standards Subcommittee	Yes	
ACES Power Participating Members	Yes	
National Rural Electric Cooperative Association	Yes	

Organization	Yes or No	Question 4 Comment
(NRECA)		
Overton Power District No. 5	Yes	
Arizona Public Service Company	Yes	
ReliabilityFirst	Yes	
Rayburn Country Electric Cooperative, Inc.	Yes	
New York Power Authority	Yes	
Southern Company	Yes	
Luminant Energy	Yes	
Western Area Power Administration	Yes	
US Bureau of Reclamation	Yes	
Grand Haven Board of Light and Power	Yes	
Glacier Electric Cooperative	Yes	
FHEC	Yes	
South Texas Electric Cooperative, Inc.	Yes	
National Grid	Yes	
Dayton Power and Light	Yes	

Organization	Yes or No	Question 4 Comment
Company		
Duke Energy	Yes	
South Carolina Electric and Gas	Yes	
MidAmerican Energy Company	Yes	
Florida Keys Electric Cooperative	Yes	
East Kentucky Power Cooperative, Inc.	Yes	
Farmington Electric Utility System	Yes	
Colorado Springs Utilities	Yes	
Consumers Energy Company	Yes	
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	Yes	No comment.
Exelon	Yes	
Puget Sound Energy	Yes	
GTC	Yes	
ISO New England, Inc.	Yes	
City of Anaheim	Yes	

Organization	Yes or No	Question 4 Comment
MEAG Power	Yes	
Xcel Energy	Yes	
Golden Spread Electric Cooperative, Inc.	Yes	
Response: Thank you for your support. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Please see the revised definition.		

5. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: The SDT agrees that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system elements. In addition, the Transmission Operator's actual restoration may make use of paths that were not identified as Cranking Paths in the restoration plan due to the particular system configuration on the day in question. Therefore, the SDT has removed the inclusion for Cranking Paths.

However, the SDT disagrees that Blackstart Resources should not be included in the BES definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which include situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES Elements.

If a situation arises where an entity believes that a specific Cranking Path must be part of the BES, that entity can always make use of the Rules of Procedure exception process to request including it in the BES.

Inclusion I4 has been re-numbered as Inclusion I3 and revised as follows:

I~~4~~3 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.

Organization	Yes or No	Question 5 Comment
Public Service Enterprise Group LLC	No	Black start resources and the cranking path should not be included in the BES definition unless connected at 100kV and above. There are many other existing standards that impact black start units. Routine testing and redundancy is part of them. Adding in black start units < 100kV and the associated cranking path to the BES definition may discourage entities from providing black start capability due to cost associated with cumulative testing and record keeping criteria. This may result in withdrawing the offer to provide that service and/or potentially drive up the cost of that service significantly without any related increase in BES reliability.
ACES Power Participating	No	Blackstart resources are rarely used. For many reasons, restoration almost always starts with synchronizing

Organization	Yes or No	Question 5 Comment
Members		to other systems (the Interconnection) that are already intact. Because Blackstart Resources can actually be on the distribution system, the distribution system can then become subject to the enforceable standards. This results in significant increased costs in tracking compliance for these distribution systems without a commensurate increase in reliability. Because a Blackstart Resource must be included in the Transmission Operator's restoration plan, this creates a perverse incentive to un-designate the Blackstart Resource that is on a distribution system to avoid the distribution system becoming part of the Bulk Electric.
Western Montana Electric Generating and Transmission Cooperative Public Utility District No. 1 of Snohomish County, Washington Northern Wasco County PUD Clallam County PUD No.1 Chelan PUD – CHPD Public Utility District No. 1 of Franklin County Midstate Electric Cooperative Northwest Requirements Utilities Big Bend Electric Cooperative, Inc. Cowlitz County PUD	Yes	Including "all" blackstart and blackstart cranking paths in the BES may ultimately provide an incentive to the electric industry to reduce the number of resources with blackstart capability. We therefore suggest that essential blackstart resources identified by the Regional Entity should be included in the Bulk Electric System, but non-essential blackstart resources need not be.
Response: The SDT agrees that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system elements. In addition, the Transmission Operator's actual restoration may make use of paths that were not identified as Cranking Paths in the restoration plan due to the particular system configuration on the day in question. Therefore, the SDT has removed the inclusion for Cranking Paths. However, the SDT disagrees that Blackstart Resources should not be included in the BES definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which include situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system		

Organization	Yes or No	Question 5 Comment
that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES Elements. If a situation arises where an entity believes that a specific Cranking Path must be part of the BES, that entity can always make use of the Rules of Procedure exception process to request including it in the BES. Transmission Operators are responsible for maintaining a viable, reliable restoration plan, regardless of the BES definition; the SDT does not agree that adding Blackstart Resources to the BES definition alone would "discourage entities from providing Blackstart capability." I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
Northeast Power Coordinating Council	No	Blackstart resources and transmission facilities on the cranking path should not be classified as BES regardless of size and voltage level. From a regulatory perspective, such an inclusion would be in conflict with the current regulatory requirements in many jurisdictions. More importantly, designating these facilities as BES Elements or Facilities beyond the 100 kV bright line, the 20 MVA/unit or 75 MVA/plant criteria, without a regard to their impact on the BES (under conditions other than system restoration) will impose unnecessary requirements for these facilities, which do not contribute to reliability under interconnected operation conditions. For a restoration condition, this inclusion is extraneous. There is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability.The BES definition should cover those facilities that are needed for operation under both normal and emergency conditions, which includes situations related to blackstart and system restoration. The directives should not specifically ask for inclusion of blackstart resources and facilities on the cranking path in the BES definition. The requirements in EOP-005-2 suffice to address the SDT's interpretation and concern regarding recognition of the reliability impacts and requirements for blackstart resources and facilities used for system restoration.Generating units of any size and transmission facilities of any voltage level may be used for black start and restoration. Conceivably, a generator of 10 MW and transmission or distribution facilities of 44 kV or 69 kV may be a part of the cranking path. A BES inclusion will then subject these generators and facilities, which are essentially "local" facilities but called upon to begin restoring its bulk interconnected counterparts, to comply with the reliability standards intended for maintaining BES reliability. Included in the BES definition will thus discourage smaller generators from providing black start capability, and the transmission facilities from being a part of the cranking path. This may also discourage Transmission Owners and Operators from identifying multiple black start resources and cranking paths to provide restoration flexibility. Such an inclusion will ultimately undermine reliability.If indeed any of these facilities are deemed necessary to support bulk power system reliability at times other than system restoration, they would/should have been identified

Organization	Yes or No	Question 5 Comment
		through the basic BES definition and inclusion list or can be addressed through the exception procedure. I4 should be removed based upon: o The availability and performance expectations of blackstart resources and facilities on the cranking path are already specifically addressed in an existing standard; and o Unless they meet the BES definition and the other inclusion criteria, they do not have any perceived reliability impact on everyday operation of the BES. o I4 may include very small generators and distribution facilities as it is written. Is it necessary from a reliability point of view to include “cranking paths” below 100kV?
American Municipal Power and Members	No	We recommend that the SDT exclude Blackstart Units under 20MW and Blackstart Units that are connected via their GSU to Non-BES Facilities (under 100kV). We believe this would be a minimal impact on the existing Restoration Plans while increasing the reliability and viability of these Restoration Plans since the industry would be forced to use only BES facilities as defined by NERC BES definition. This would force all Blackstart Units to be compliance with all Reliability Standards if this change is implemented.
Hydro One Networks Inc	No	We do not agree with Inclusion I4. Blackstart resources and transmission facilities on the cranking path should not be classified as BES regardless of size and voltage level. From a regulatory perspective, such an inclusion would be in conflict with the current regulatory requirements in many of the jurisdictions. More importantly, designating these facilities as BES Elements or Facilities beyond the 100 kV bright line, the 20 MVA/unit or 75 MVA/plant criteria, without a regard to their impact on the BES (under conditions other than system restoration) will impose unnecessary requirements for these facilities, which do not contribute to reliability under interconnected operation conditions. For restoration condition, this inclusion is extraneous given there is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability.While we do not disagree with the SDT’s interpretation of the FERC directives, the BES definition should cover those facilities that are needed for operation under both normal and emergency conditions, which includes situations related to black-start and system restoration. We do not agree that the directives specifically ask for inclusion of blackstart resources and facilities on the crank path in the BES definition. We believe the requirements in EOP-005-2 suffice to address the SDT’s interpretation and concern regarding recognition of the reliability impacts and requirements for blackstart resources and facilities used for system restoration.Generating units of any size and transmission facilities of any voltage level may be used for blackstart and restoration. Conceivably, a generator of 10 MW and transmission facilities of 44 kV or 69 kV may be a part of the cranking path. A BES inclusion will then subject these generators and facilities, which are essentially “local” facilities but called upon to begin restoring its bulk interconnected counterpart, to comply with the reliability standards intended for maintaining BES reliability.

Organization	Yes or No	Question 5 Comment
		Included in the BES definition will thus discourage smaller generators from providing blackstart capability, and the transmission facilities from being a part of the cranking path. This may also discourage Transmission Owners and Operators from identifying multiple blackstart resources and cranking paths to provide restoration flexibility. Such an inclusion will ultimately undermine reliability.If indeed any of these facilities are deemed necessary to support bulk power system reliability at times other than system restoration, they would/should have been identified through the basic BES definition and inclusion list or can be addressed through the exception procedure. We suggest and urge the SDT to remove I4 on the basis that: o The availability and performance expectations of blackstart resources and facilities on the cranking path are already specifically addressed in an existing standard; and o Unless they meet the BES definition and the other inclusion criteria, they do not have any perceived reliability impact on everyday operation of the BES.
Southern Company	No	Inclusion I4 should be removed from this definition. There is an existing standard, EOP-005-2 (System Restoration from Blackstart Resources), which specifically addresses Blackstart Resources and the designated Blackstart Cranking Paths "regardless of voltage". Also, use of "regardless of voltage" in Inclusion I4 as part of the BES definition will expand the applicability of some NERC Reliability Standards, which pertains to the BES, to connected facilities at voltage levels below 100Kv.
Hydro-Quebec TransEnergie	No	When we have to use Blackstart Resources, there is no more system. Therefore, reliability is not a system planning issue, the need is no more for reliability since we lost the System or part of it. It becomes a need for restoration of the system as fast as possible. The restoration plan is necessary, but the Blackstart Resources and do not contribute to the reliability of the System, which just failed, but to limit the time of loss of service. There is no obligation to apply the same Reliability Standards on the paths and it should not be automatically included in the BES.
National Grid	No	We do not feel that blackstart resources and cranking paths should be classified as BES. In several instances, cranking paths direct the operator to pick up distribution load before moving on to the next step for stability purposes. These are non-jurisdictional distribution facilities and should not be considered BES, since they are not necessary to support the reliability of the bulk power system during normal conditions. The BES definition should cover those facilities that are within FERC's jurisdiction and that are needed for operation under both normal and emergency conditions, which may include some facilities related to black-start and system restoration, but not all. The directives should not broadly include blackstart resources and facilities on the cranking path in the BES definition. This is over inclusive. The requirements in NERC standard EOP-005-2 address the SDT's interpretation and concern regarding recognition of the reliability impacts and requirements for blackstart resources and facilities used for system restoration.For example, there could also be small generators (less than 20 MVA/unit or 75 MVA/plant) or transmission and distribution facilities of 69 kV or less, which are considered "local", that are used for system restoration in the cranking path. A BES inclusion will then subject these generators and facilities, which are "local", non-jurisdictional facilities that

Organization	Yes or No	Question 5 Comment
		may be called upon to begin restoring its bulk interconnected counterparts, to comply with the reliability standards intended for maintaining BES reliability. Including these facilities in the BES definition will thus discourage smaller generators from providing blackstart capability, and the transmission facilities from being a part of the cranking path. This may also discourage Transmission Owners and Operators from identifying multiple blackstart resources and cranking paths to provide restoration flexibility. This will ultimately undermine reliability. Also, including these types of facilities in the BES definitions could lead to jurisdictional challenges that could cause uncertainty and delay the implementation of the new BES definition and divert important industry and regulatory resources. Because of these reasons, I4 should be removed from the inclusions list.
Dayton Power and Light Company	No	Black start resources should not be included in this new proposal, which is being developed in response to FERC Orders 743 and 743A. These orders do not mention the inclusion of black start resources or cranking paths. These resources are undeniably important and we believe the existing CIP and other NERC standards applicable to them provide sufficient and appropriate safeguards. Their inclusion as BES elements would significantly increase the requirements for both distribution and 69kV cranking paths - which would be classed as BES elements and fall under all those requirements. Entities currently include multiple cranking paths for their restoration plans to improve the flexibility of their resources. However, if cranking paths are considered BES and must meet those requirements, they will default to a single cranking path which would potentially decrease their flexibility. The purpose of the bulk electric system is to accommodate the bulk movement of electricity through the interconnected system. In a black start situation, entities would NOT be interconnected and not moving bulk power. In light of the above, there is no sound basis for inclusion of these elements as part of the BES.
Cogentrix Energy, LLC	No	The SERC SRG is concerned that this provision may have the effect of incenting transmission operators to limit the available generator options to the minimum necessary for a reliable option as opposed to every possible option that might be utilized in a pinch. We recommend the following adjusted language: “Essential Blackstart Resources and the designated essential blackstart Cranking Paths identified in the Transmission Operator’s restoration plan regardless of voltage”
New England States Committee on Electricity	No	Please refer to comments under 3 above. Black start units should be excluded from BES. These units and their associated cranking paths are used only for restoration and not operation. Such units are appropriately covered under regional restoration procedures and applicable NERC standards (see for example, Emergency Operating Procedure EOP-005-2). NESCOE is still exploring the impact and necessity of this proposed inclusion.

Organization	Yes or No	Question 5 Comment
Manitoba Hydro	No	Inclusion I4 should be modified so that only the Blackstart Resources and designated Cranking Paths required for compliance with the NERC Emergency Preparedness and Operations Standards are included in the BES Definition.
ISO New England, Inc.	No	The SDT states that "One of the basic tenets that the SDT is following is to avoid changes to registration due to the revised definition if such changes are not technically required for the definition to be complete." However, adding every black start generator and the designated cranking path to the definition of the BES is at odds with the Statement of Compliance Registry Criteria which states: III.c.3 Any generator, regardless of size, that is a blackstart unit material to and designated as part of a transmission operator entity's restoration plan, or; The SDT should use the registry language in order to not expand the BES to every cranking path on the distribution system from a small generator entered into the black start program. Furthermore, the SDT cannot simply disregard voltage level, because: (a) FERC Order 743 expresses preference for a bright line definition, and (b) Section 215 of the Federal Power Act defines the "bulk-power system" as, in part, "electric energy from generation facilities needed to maintain transmission reliability". As the NERC Compliance Registry has long recognized, not every generator that is a blackstart unit is "material" - i.e., may not be necessary - to the restoration plan or, therefore, to bulk-power system reliability.
Independent Electricity System Operator	No	This inclusion is extraneous given there is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. We therefore suggest removing Inclusion I4.
AltaLink	No	We do not agree with Inclusion I4. Blackstart resources and transmission facilities on the cranking path should not be classified as BES regardless of size and voltage level. From a regulatory perspective, such an inclusion would be in conflict with the current regulatory requirements in many of the jurisdictions. More importantly, designating these facilities as BES Elements or Facilities beyond the 100 kV bright line, the 20 MVA/unit or 75 MVA/plant criteria, without a regard to their impact on the BES (under conditions other than system restoration) will impose unnecessary requirements for these facilities, which do not contribute to reliability under interconnected operation conditions. For restoration condition, this inclusion is extraneous given there is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability.While we do not disagree with the SDT's interpretation of the

Organization	Yes or No	Question 5 Comment
		FERC directives, the BES definition should cover those facilities that are needed for operation under both normal and emergency conditions, which includes situations related to black-start and system restoration. We do not agree that the directives specifically ask for inclusion of blackstart resources and facilities on the crank path in the BES definition. We believe the requirements in EOP-005-2 suffice to address the SDT's interpretation and concern regarding recognition of the reliability impacts and requirements for blackstart resources and facilities used for system restoration.Generating units of any size and transmission facilities of any voltage level may be used for blackstart and restoration. Conceivably, a generator of 10 MW and transmission facilities of 44 kV or 69 kV may be a part of the cranking path. A BES inclusion will then subject these generators and facilities, which are essentially "local" facilities but called upon to begin restoring its bulk interconnected counterpart, to comply with the reliability standards intended for maintaining BES reliability. Included in the BES definition will thus discourage smaller generators from providing blackstart capability, and the transmission facilities from being a part of the cranking path. This may also discourage Transmission Owners and Operators from identifying multiple blackstart resources and cranking paths to provide restoration flexibility. Such an inclusion will ultimately undermine reliability.If indeed any of these facilities are deemed necessary to support bulk power system reliability at times other than system restoration, they would/should have been identified through the basic BES definition and inclusion list or can be addressed through the exception procedure. We suggest and urge the SDT to drop I4 on the basis that: o The availability and performance expectations of blackstart resources and facilities on the cranking path are already specifically addressed in an existing standard; and o Unless they meet the BES definition and the other inclusion criteria, they do not have any perceived reliability impact on everyday operation of the BES.
Response: The SDT agrees that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system elements. In addition, the Transmission Operator's actual restoration may make use of paths that were not identified as Cranking Paths in the restoration plan due to the particular system configuration on the day in question. Therefore, the SDT has removed the inclusion for Cranking Paths. However, the SDT disagrees that Blackstart Resources should not be included in the BES definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which include situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES Elements.		

Organization	Yes or No	Question 5 Comment
If a situation arises where an entity believes that a specific Cranking Path must be part of the BES, that entity can always make use of the Rules of Procedure exception process to request including it in the BES. I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
Small Entity Working Group (SEWG)	No	The SEWG proposes a minor change to Inclusion I4. The SEWG recommends that the SDT exclude Blackstart Units under 20MW and Blackstart Units that are connected via their GSU to Non-BES Facilities (under 100kV). We believe this would be a minimal impact on the existing Restoration Plans while increasing the reliability and viability of these Restoration Plans since the industry would be forced to use only BES facilities as defined by NERC BES definition. In addition, a clarification is needed under the first bullet under I4 in the posted word comment form for this BES draft (posted in the first column under Implementation Plan for Definition). It should be changed to read "Blackstart units that have been included in the Transmission Operator's restoration plan and their respective cranking paths..." We do not believe it was the intent of the SDT to include all blackstart units in the BES definition regardless if they are not part of a Transmission Operator's restoration plan.
Dominion	No	Dominion continues to disagree that a generation resource, Element or Facility should automatically be included in the BES. Dominion agrees that the Generator Owner and Generator Operator, as users of the bulk power system, should have to abide by applicable reliability standards, but do not agree that this should automatically require the inclusion of a generation resource, Element or Facility in the BES.
SPP Standards Review Group	No	While we understand the necessity of including the Cranking Path in the BES, we are equally concerned about the broad usage of the term BES throughout the NERC Reliability Standards and the ramifications of extending the requirements associated with those standards to parts of the distribution system that do not have a logical association with the BES. For example, some of the TPL standards require studies of the BES. Does this then mean those studies would apply to those Cranking Paths on the distribution system? We think Cranking Paths that include portions of the distribution system should be excluded from the BES definition. Could the SDT please provide us with an explanation of why these Elements would be included in the BES and what would be gained if they were included? We'd also like to ask the SDT to identify the standards and requirements that would be applied to the distribution system Cranking Paths. Is there any way that the significance of the distribution Cranking Paths could be maintained without going as far as including them in the BES? Also, if a Distribution Provider has a portion of his distribution system designated an Element of the BES, as in the Cranking Path scenario, does that then require the DP to register as a TO or TOP?
Michgan Public Power Agency	No	I would agree to this for Blackstart Resources only designated Blackstart Cranking Paths in the Transmission

Organization	Yes or No	Question 5 Comment
		Operator's restoration plan regardless of voltage.
Tacoma Power		Tacoma Power generally supports Inclusion I4. We believe additional consideration should be given to identifying only the Blackstart Resource`s that support a regional recovery. Based on that criteria, we propose changing Inclusion I4 to read,"Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan, regardless of voltage, and included in a regional restoration plan."
Response: The SDT agrees that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system elements. In addition, the Transmission Operator's actual restoration may make use of paths that were not identified as Cranking Paths in the restoration plan due to the particular system configuration on the day in question. Therefore, the SDT has removed the inclusion for Cranking Paths. However, the SDT disagrees that Blackstart Resources should not be included in the BES definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which include situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES Elements. If a situation arises where an entity believes that a specific Cranking Path must be part of the BES, that entity can always make use of the Rules of Procedure exception process to request including it in the BES. I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
SERC OC Standards Review Group	No	"Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage." The SERC SRG is concerned that this provision may have the effect of incenting transmission operators to limit the available generator options to the minimum necessary for a reliable option as opposed to every possible option that might be utilized in a pinch. We recommend the following adjusted language: "Essential Blackstart Resources and the designated essential blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage"
Vermont Transco	No	: The phrase "regardless of voltage" is a concern. The goal of the FERC order is to provide a more reliable "bulk power system". Many blackstart resources are at voltages well below the 100 kV voltage and are not material to the restoration of the bulk electric system during a blackout. The wording of this inclusion would require many units that are used only for local area support to now be listed as a BES facility. The wording of

Organization	Yes or No	Question 5 Comment
		this inclusion should be something to the order of "Blackstart Resources and the designated blackstart cranking paths identified in the transmission operators restoration plan that are necessary to restore the BES system", this should not include cranking paths on distribution feeds that are used primarily for local area support. The purpose of this inclusion should be to make certain all units necessary to energize the BES grid after a blackout are maintained and operated appropriately
Consumers Energy Company	No	We recommend that the word, primary, be added, and that the phrase, "regardless of voltage" be removed: "Blackstart Resources and the designated primary blackstart Cranking Paths identified in the Transmission Operator's restoration plan." NERC's May 19, 2011 webinar described this as applying only to the path directly from the blackstart unit to the Transmission System. Is this correct? If so, please clarify within the definition.
Exelon	No	Exelon believes that the entire designated cranking path should not be included in the BES definition if there are facilities less than 100kV on the path. Doing so may inappropriately include a number of facilities that are local distribution facilities under jurisdiction of the states, i.e, the inclusion of the entire cranking path occurs without an inquiry as to whether or not the facilities are "facilities used in local distribution of electric energy" even though such facilities are by explicit language in the Federal Power Act not included in the definition of Bulk Power System. In Orders 743 and 743-A, FERC reiterated several times that "facilities that are determined to be local distribution will be excluded from the bulk electric system." (Order No. 743-A, P.22). Furthermore, by including these facilities the Drafting Team has gone beyond the boundaries of Section 215 of the Federal Power Act and Orders 743 and 743-A. It should be noted that there is no reference to black start Cranking Paths in either Order. Practically, it is unclear that including lower voltage facilities on a Cranking Path will have any positive impact on reliability without potential entity registration changes or NERC Reliability Standards changes. For example, NERC Reliability Standards FAC-008 and FAC-009 do not currently apply to Distribution Providers.
Response: The SDT agrees that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system Elements. In addition, the Transmission Operator's actual restoration may make use of paths that were not identified as Cranking paths in the restoration plan die to the particular system configuration on the day in question. Therefore, the SDT has removed the inclusion for Cranking Paths. Accordingly, as suggested, the phrase "regardless of voltage" has been also removed. If a situation arises where an entity believes that a specific Cranking Path must be part of the BES, that entity can always make use of the Rules of Procedure exception process to request including it in the BES. I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
National Rural Electric	No	This is the only part of the BES definition and inclusions/exclusions that specifically states "regardless of

Organization	Yes or No	Question 5 Comment
Cooperative Association (NRECA)		voltage." NRECA does not believe it is appropriate for the BES definition to include such a statement. This issue needs to be addressed in standard applicability language, not in the definition of BES.
Response: As suggested, the phrase "regardless of voltage" has been also removed. I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
Edison Electric Institute	No	EEI believes that the entire designated cranking path should not be included in the BES definition if it would include facilities that are less than 100 kV on the path. Including such facilities may inappropriately include some facilities that are local distribution facilities, which are under state jurisdiction. These facilities might be swept into the definition of BES without an inquiry as to whether or not the facilities are "facilities used in local distribution of electric energy," which is an explicit exclusion under the Federal Power Act definition of "Bulk-Power System." This issue is more fully discussed in EEI's response to Question 13.
Response: The SDT agrees that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system elements. In addition, the Transmission Operator's actual restoration may make use of paths that were not identified as Cranking Paths in the restoration plan due to the particular system configuration on the day in question. Therefore, the SDT has removed the inclusion for Cranking Paths. However, the SDT disagrees that Blackstart Resources should not be included in the BES definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which include situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES Elements. If a situation arises where an entity believes that a specific Cranking Path must be part of the BES, that entity can always make use of the Rules of Procedure exception process to request including it in the BES. See response to Q13. I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
New York Power Authority	No	The Standards Drafting Team needs to clarify whether this inclusion is intended to apply to local transmission operator restoration plans or only to the Balancing Authority's restoration plans. This inclusion should be stated as follows: Blackstart Resources and the designated cranking paths identified in the Balancing

Organization	Yes or No	Question 5 Comment
		Authority's Restoration Plan regardless of voltage."Local restoration plans may not be material to the restoration and operation of the BES, but black start resources for the Balancing Authority's restoration plan are material to the reliable restoration of the BES.
Response: The SDT reaffirms that the reference is to the Blackstart Resources identified in the Transmission Operator's restoration plan.		
Central Maine Power Company New York State Electric & Gas and Rochester Gas & Electric	No	Inclusion I4 should be stricken for several reasons: 1. The SDT states that "One of the basic tenets that the SDT is following is to avoid changes to registration due to the revised definition if such changes are not technically required for the definition to be complete." Adding every black start generator and the designated cranking path is not technically required. All significant black start generation is already included in I2 and I3 and I5. 2. The NERC Compliance Registry notes that not every generator that is a blackstart unit is "material" - it may not be necessary to the restoration plan or to bulk power system reliability. 3. There is already an existing standard to ensure reliability of blackstart performance. NERC Reliability Standard EOP-005-2 ensures that the facilities critical to system restoration are functional when needed. 4. In CMP's case, there are two generator locations which are part of the Black Start capability, and they are small hydroelectric stations connected to our 34.5 kV transmission system. Under this inclusion, these small hydroelectric stations and 34.5 kV paths would inappropriately be classified as BES. Other, critical blackstart facilities are already included in the BES definition without I4.
Response: The SDT agrees that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system elements. In addition, the Transmission Operator's actual restoration may make use of paths that were not identified as Cranking Paths in the restoration plan due to the particular system configuration on the day in question. Therefore, the SDT has removed the inclusion for Cranking Paths. However, the SDT disagrees that Blackstart Resources should not be included in the BES definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which include situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES Elements. If a situation arises where an entity believes that a specific Cranking Path must be part of the BES, that entity can always make use of the Rules of Procedure		

Organization	Yes or No	Question 5 Comment
exception process to request including it in the BES. Accordingly, as suggested, the phrase "regardless of voltage" has been also removed. I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
PacifiCorp	No	PacifiCorp supports the concept of unique or singular blackstart paths being included in the BES. However, once the uniqueness of the path disappears PacifiCorp believes the multiple non-unique blackstart paths should be excluded by definition from the BES. This approach could be equated to pending version 4 of the CIP Reliability Standards, in which the Critical Asset Criteria of CIP-002-4 set forth the facilities comprising the Cranking Paths that are considered Critical Assets, up to the point on the path where two or more path options exist.
Farmington Electric Utility System	No	The drafting team should consider adopting language similar to CIP-002-4 for Cranking Paths. Cranking Paths up to the the point on the Cranking Path where two or more path options exist.
New York State Dept of Public Service	No	This inclusion is problematic at a couple levels. First, blackstart resources can be facilities smaller than the previous thresholds located deep within the local distribution system. Second, given you do not know ahead of time how the system might come apart, often there are multiple cranking paths specified. To avoid incurring the costs of upgrading facilities all along multiple paths, there will be an inclination to designate only one path involving the fewest impacted facilities. The result could be reduced reliable operation - not more.
Pepco Holdings Inc	No	1)In many cases the cranking path or portions of it may consist of facilities less than 100kv. Many of these facilities are local distribution facilities and should not be included in the BES. 2) If there is an identified cranking path that is transmission designated, but the path is not contiguous with the BES, must the elements in-between be included as BES?
PJM	No	Black start units are used to start other units to when the BES is compromised. There is no technical justification to include all elements in the "cranking path" as BES facilities.
ReliabilityFirst	Yes	but needs to state if this is ALL paths or just a single path, there may be many.
American Electric Power	Yes	While AEP supports the concept of including designated Blackstart Cranking paths as part of the BES, there is concern that doing so without respect to voltage would unnecessarily include elements which should not be included as part of the BES. More clarity is needed to explicitly describe the scope of the inclusion. Is it limited to Transmission facilities or more broad to include Distribution facilities or even sub-Distribution auxiliary systems? If so, this would unnecessarily bring those sub-systems under the purview of PRC-005, for

Organization	Yes or No	Question 5 Comment
		example.
Response: The SDT agrees that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system Elements. In addition, the Transmission Operator's actual restoration may make use of paths that were not identified as Cranking paths in the restoration plan die to the particular system configuration on the day in question. Therefore, the SDT has removed the inclusion for Cranking Paths. If a situation arises where an entity believes that a specific Cranking Path must be part of the BES, that entity can always make use of the Rules of Procedure exception process to request including it in the BES. I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
Electric Reliability Council of Texas, Inc.	No	See response to question 3 - ERCOT ISO agrees with the substance, but not the approach.
Southwest Power Pool	No	Please see SPP's response to question 3 - SPP agrees with the substance, but not the approach.
Response: See response to Q3.		
FortisBC	No	We do not agree with Inclusion I4. Blackstart resources and transmission facilities on the cranking path should not be classified as BES regardless of size and voltage level. From a regulatory perspective, such an inclusion would be in conflict with the current regulatory requirements in many of the jurisdictions. More importantly, designating these facilities as BES Elements or Facilities beyond the 100 kV bright line, the 20 MVA/unit or 75 MVA/plant criteria, without a regard to their impact on the BES (under conditions other than system restoration) will impose unnecessary requirements for these facilities, which do not contribute to reliability under interconnected operation conditions. For restoration condition, this inclusion is extraneous given there is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability.While we do not disagree with the SDT's interpretation of the FERC directives, the BES definition should cover those facilities that are needed for operation under both normal and emergency conditions, which includes situations related to black-start and system restoration. We do not agree that the directives specifically ask for inclusion of blackstart resources and facilities on the crank path in the BES definition. We believe the requirements in EOP-005-2 suffice to address the SDT's interpretation and concern regarding recognition of the reliability impacts and requirements for blackstart resources and facilities used for system restoration.Generating units of any size and transmission facilities of any voltage level may be used for blackstart and restoration. Conceivably, a generator of 10 MW and

Organization	Yes or No	Question 5 Comment
		transmission facilities of 44 kV or 69 kV may be a part of the cranking path. A BES inclusion will then subject these generators and facilities, which are essentially "local" facilities but called upon to begin restoring its bulk interconnected counterpart, to comply with the reliability standards intended for maintaining BES reliability. Included in the BES definition will thus discourage smaller generators from providing blackstart capability, and the transmission facilities from being a part of the cranking path. This may also discourage Transmission Owners and Operators from identifying multiple blackstart resources and cranking paths to provide restoration flexibility. Such an inclusion will ultimately undermine reliability.If indeed any of these facilities are deemed necessary to support bulk power system reliability at times other than system restoration, they would/should have been identified through the basic BES definition and inclusion list or can be addressed through the exception procedure. We suggest and urge the SDT to drop I4 on the basis that: o The availability and performance expectations of blackstart resources and facilities on the cranking path are already specifically addressed in an existing standard; and o Unless they meet the BES definition and the other inclusion criteria, they do not have any perceived reliability impact on everyday operation of the BES.

Response: The SDT agrees that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system elements. In addition, the Transmission Operator's actual restoration may make use of paths that were not identified as Cranking Paths in the restoration plan due to the particular system configuration on the day in question. Therefore, the SDT has removed the inclusion for Cranking Paths.

However, the SDT disagrees that Blackstart Resources should not be included in the BES definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which include situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES Elements.

If a situation arises where an entity believes that a specific Cranking Path must be part of the BES, that entity can always make use of the Rules of Procedure exception process to request including it in the BES.

The SDT does not agree that adding Blackstart Resources to the BES definition alone would "discourage" entities from providing blackstart capability.

I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.

Organization	Yes or No	Question 5 Comment
Public Utilities Commission of Ohio	No	this should be determined by an impact analysis, not inclusive of all Blackstart Resources, regardless of location on the system.
Response: The SDT disagrees that Blackstart Resources should not be included in the BES definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which include situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the system or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES Elements. No change made.		
Intellibind	Yes	There continues to be confusion in the industry of blackstart by Generator Owners and Operators (especially small to medium generation), and the drafting team should clearly define what is meant by blackstart. Many small generators have the capability to blackstart their resource, but are not part of the Transmission Operator's blackstart plan on restoring the BES. In most cases they are asked to blackstart if possible and wait until lines are energized and close in as directed by Transmission Operator. This is significantly different than owning a blackstart resource designated to provide power during a blackout.
American Transmission Company, LLC	Yes	For clarification, ATC understands that only blackstart resources that are part of a Transmission Operator's Blackstart Restoration plan are included in I4 (Ref. EOP-005) and should be consistent with the upcoming CIP-002 version 4 standard. ATC also recommends that the SDT consider adding Blackstart Resources as a defined term in the NERC Glossary.
Response: Only Blackstart Resources indentified in the Transmission Operator's restoration plan are included in the BES. The term "Blackstart Resource" is a defined term in the NERC Glossary. No change made.		
PUD No. 2 of Grant County, Washington	Yes	Grant supports this proposed inclusion with the caveat that the BES should be allowed to be non-contiguous, especially in this case, if the unit is low voltage.
Response: The SDT proposed BES definition allows for non-contiguous elements.		
Illinois Municipal Electric Agency	Yes	Please see comments under Question 13.

Organization	Yes or No	Question 5 Comment
Response: See response to Q13.		
Springfield Utility Board	Yes	While Springfield Utility Board does not own any Blackstart Resources, we do recognize the importance of the restoration of the Grid, and the generation necessary for the Grid should have identified paths that are critical, regardless of voltage level.
Springfield Utility Board	Yes	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
Central Lincoln	Yes	But please indicate how blackstart resources (regardless of voltage) not in the TO's restoration plan are treated, since we don't believe the flowchart at http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf properly expresses the SDT's intent to classify these resources (when also below the 20 or 75 MVA thresholds) as non-BES.
City of Redding	Yes	Redding suggests that only the primary black start resource in the TO or BA's black start plan fall under this inclusion otherwise the secondary and or backup black start units may not be identified in the main plans to avoid excessive regulation of the equipment.
Response: Only Blackstart Resources indentified in the Transmission Operator's restoration plan are included as BES Elements. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated		

Organization	Yes or No	Question 5 Comment
resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. No change made.		
Long Island Power Authority	Yes	Need to define Cranking Paths.
Response: "Cranking Path" is a defined NERC Glossary term but is no longer used in the revised inclusion. I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
MEAG Power	Yes	The Standards Drafting Team needs to clarify whether this inclusion is intended to apply to local transmission operator restoration plans or only to the Balancing Authority's restoration plans. This inclusion should be stated as follows: Blackstart Resources and the designated cranking paths identified in the Balancing Authority's Restoration Plan regardless of voltage."Local restoration plans may not be material to the restoration and operation of the BES, but black start resources for the Balancing Authority's restoration plan are material to the reliable restoration of the BES.
Response: Only Blackstart Resources indentified in the Transmission Operator's restoration plan are included as BES Elements. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and Emergency conditions, which includes situations related to blackstarts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's system restoration plan. The SDT agrees that Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system Elements. In addition, the Transmission Operator's actual restoration may make use of paths that were not identified as Cranking paths in the restoration plan die to the particular system configuration on the day in question. Therefore, the SDT has removed the inclusion for Cranking Paths. If a situation arises where an entity believes that a specific Cranking Path must be part of the BES, that entity can always make use of the Rules of Procedure exception process to request including it in the BES. I43 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
Muscatine Power and Water	Yes	This Inclusion I4 provides a defense in depth with CIP-002-4.
New York State Reliability Council	Yes	BS facilities and their cranking paths are critical to the maintenance of system reliability under system restoration conditions. However, they are a special case and should not be construed as a precedent for inclusion of all BES contiguous elements.

Organization	Yes or No	Question 5 Comment
Idaho Falls Power	Yes	It is reasonable to conclude that Blackstart generation resources are material to the BES.
MRO's NERC Standards Review Forum	Yes	It does provide a defense in depth with CIP-002-4.
BPA	Yes	
Duke Energy	Yes	
ExxonMobil Research and Engineering	Yes	
Alberta Electric System Operator	Yes	
South Carolina Electric and Gas	Yes	
Fayetteville Public Works Commission	Yes	
MidAmerican Energy Company	Yes	
Florida Keys Electric Cooperative	Yes	
Sierra Pacific Power Co d/b/a NV Energy	Yes	
Colorado Springs Utilities	Yes	
East Kentucky Power Cooperative, Inc.	Yes	
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and	Yes	No comment.

Organization	Yes or No	Question 5 Comment
Dispatch		
Sacramento Municipal Utility District (SMUD)	Yes	SMUD agrees with the inclusion of blackstart resources and their cranking paths.
City of St. George	Yes	
Puget Sound Energy	Yes	
Southern California Edison Company	Yes	
GTC	Yes	
Idaho Power	Yes	
Clark Public Utilities	Yes	
The Dow Chemical Company	Yes	
Oncor Electric Delivery Company LLC	Yes	
City of Anaheim	Yes	
Xcel Energy	Yes	
Golden Spread Electric Cooperative, Inc.	Yes	
Utility System Efficiencies, Inc.	Yes	
Tri-State Generation and Transmission Association, Inc.	Yes	

Organization	Yes or No	Question 5 Comment
Imperial Irrigation District	Yes	
Florida Municipal Power Agency	Yes	
Santee Cooper	Yes	
NERC Staff Technical Review	Yes	
SERC Planning Standards Subcommittee	Yes	
Overton Power District No. 5	No	
Tennessee Valley Authority	Yes	
Arizona Public Service Company	Yes	
Western Electricity Coordinating Council	Yes	
Rayburn Country Electric Cooperative, Inc.	Yes	
Luminant Energy	Yes	
Electricity Consumers Resource Council (ELCON)	Yes	
Western Area Power Administration	Yes	
US Bureau of Reclamation	Yes	
Grand Haven Board of Light and	Yes	

Organization	Yes or No	Question 5 Comment
Power		
Glacier Electric Cooperative	Yes	
FHEC	Yes	
South Texas Electric Cooperative, Inc.	Yes	
Portland General Electric Company	Yes	
South Texas Electric Cooperative, Inc.	Yes	
Response: Thank you for your response. Several stakeholders identified that Cranking Paths usually involve distribution elements, and the SDT has removed the inclusion for Cranking Paths. Please see the revised definition.		

6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: Industry comments included the following issues:

- Concern over the assumed contiguous nature of the BES definition. The SDT did not mandate a contiguous BES and has clarified the language of the inclusions to make this clear.
- Confusion over the term 'collector system.' The SDT has deleted this terminology.
- Concern that the definition could ensnare distributed generation or small generators in a distribution system. The SDT has clarified the wording of the inclusion to emphasize that the inclusion is 'designed primarily for aggregating capacity.'
- While several commenters asked about the technical justification of the generation thresholds, the SDT was not presented with any technical rationale for moving away from this existing limit. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.

Inclusion I5 has been re-numbered as Inclusion I4.

I~~5~~4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system -~~, connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.

Organization	Yes or No	Question 6 Comment
Northeast Power Coordinating Council	No	The entire contiguous path does not have to be BES. The path or aggregate generation will rarely have any impact on the reliability on the interconnected transmission network, nor is it necessary for its operation. These are generally referred to as connection facilities.
MRO's NERC Standards Review Forum	No	We propose the following questions for your consideration:Which components of the dispersed power resources would be classified as BES? Are the individual small wind generator units and terminals through the GSUs to a higher voltage (e.g. 34.5 kV) collector bus classified as BES Elements? Are the higher voltage bus, the associated elements (e.g. protection system, cap bank, SVC, etc.), and step up transformer to a system Element of 100 kV or above to be classified as BES Elements?With these questions, the NSRF is

Organization	Yes or No	Question 6 Comment
		confused on what the SDT is trying to formulate as an Inclusion. If a dispersed power systems meets the threshold of 75MVA and connected at 100kV or higher, does this make the entire dispersed system considered to be part of the BES? We recommended that one solution is that I5 to be revised as follows "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system from the point where the aggregated rating exceeds 75 MVA through a common point of interconnection to a system Element at a voltage of 100 kV or above. "
Hydro One Networks Inc	No	We agree with the concept of Inclusion I5 but do not support that the entire contiguous path has to be BES. The path or aggregate generation will rarely have any impact on the reliability on the interconnected transmission network nor is it necessary for its operation. These are generally referred to as connection facilities. In addition, renewable generation units are intermittent and the planning and operational standards and practices make sure that their unavailability or unexpected (sudden) loss of generation won't jeopardize reliability of the network; therefore, they should not be BES. As stated earlier, with the Green Energy and Smart Grid plans and dispersed renewable energy advocated by both Canadian and US policy makers, the gross nameplate rating of 75 MVA may undermine and deter the future potential of integrating DG's that will be implemented to ensure the reliable operation of the interconnected transmission network BES, and, at the same time, provides the most effective and economical solutions for the rate payers in North America. Local generation can cost-effectively enhance the reliability of load pocket, by avoiding transmission, but such restrictions would deter the adoption of good planning decisions.(Refer to Q4 comments).
Hydro-Quebec TransEnergie	No	We believe that automatic inclusion of dispersed generation greater than 75 MVA and the path to connect them to the BES should not be automatically included in the BES. However, a provision should be made so that some reliability standards related to generator shall apply (voltage regulation, etc.).
New York State Reliability Council	No	Distributed resources are comprised of multiple small units that cycle on and off depending upon local ambient conditions. They have multiple feeders collecting at the point of interconnection. It is not credible that simultaneous loss of multiple units and/or collector system feeders could occur and they should be excluded from the BES based upon reliability considerations. It is noted that system Element(s) beyond the point of interconnection are subject to BES inclusion per the core definition.
FortisBC	No	We agree with the concept of Inclusion I5 but do not support that the entire contiguous path has to be BES. The path or aggregate generation will rarely have any impact on the reliability on the interconnected transmission network nor is it necessary for its operation. These are generally referred to as connection facilities.As stated earlier, with the Green Energy and Smart Grid plans and dispersed renewable energy advocated by both Canadian and US policy makers, the gross nameplate rating of 75 MVA may undermine and deter the future potential of integrating DG's that will be implemented to ensure the reliable operation of the interconnected transmission network BES, and, at the same time, provides the most effective and

Organization	Yes or No	Question 6 Comment
		economical solutions for the rate payers in North America. Local generation can cost-effectively enhance the reliability of load pocket, by avoiding transmission, but such restrictions would deter the adoption of good planning decisions.(Refer to Q4 comments).
PJM	No	As written I5 implies a contiguous system from the unit to a “point a system element at a voltage above 100 kV” there is no technical justification for a contiguous system. The requirement should read “- Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection."
Xcel Energy	No	For dispersed power producing resources, such as wind farms, we do not see the value in making each individual 1-2 MW wind turbine a BES element. The BES applicability should be focused on the point when the collective becomes large enough to impact the grid. So, we recommend that I5 apply from the point of aggregation of 75 MW or more to a system element operated at 100 kV or more. Specifically, we feel it should be limited to the feeder bus and aggregating transformer.
Independent Electricity System Operator	No	We agree with the goal of Inclusion I5 but have the same concerns expressed in our responses to Q1 and Q3. For the dispersed power resources referred to in Inclusion I5, we do not see the benefit of including the collector system, switchgear, associated medium voltage equipment and step-up transformer(s) in the BES. As before, these Facilities should be subject to assessment and included if found to impact BES reliability after going through the Exception Process. To reinforcing what was stated during the NERC BES webinar, we do not believe that the entire contiguous path has to be BES.
AltaLink	No	We agree with the concept of Inclusion I5 but do not support that the entire contiguous path has to be BES. The path or aggregate generation will rarely have any impact on the reliability on the interconnected transmission network nor is it necessary for its operation. These are generally referred to as connection facilities.
American Transmission Company, LLC	Yes	ATC poses the following questions to the SDT for consideration:Which components of the dispersed power resources would be classified as BES? Are the small wind generator units and terminals through the GSUs to a higher voltage (e.g. 34.5 kV) collector bus classified as BES Elements? Are the higher voltage bus, the associated elements (e.g. protection system, cap bank, SVC, etc.), and step up transformer to a system Element of 100 kV or above to be classified as BES Elements?
Exelon	Yes	Exelon agrees with this inclusion as long as it’s clear that distribution voltage collector systems are not to be included in the BES. Exelon suggests that a clarifying statement be added to the inclusion item, such as “Collector system facilities that are <100kV are excluded from the BES.”

Organization	Yes or No	Question 6 Comment
Central Lincoln	Yes	But please indicate how dispersed aggregate generation below 75 MVA is to be treated, since we don't believe the flowchart at http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf properly expresses the SDT's intent to classify these resources as non-BES.
Response: There is no contiguous path requirement and the SDT has revised the wording for clarity. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system~~ , connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
American Municipal Power and Members	No	There is concern over inadvertently including small distribution that has behind-the-meter generation on a 69 kV loop. We somewhat agree with the concept of Inclusion I5 but suggest a language change to clarify what we understand to be the drafting team's intent, that the inclusion is intended to apply to dispersed wind and solar generating plants, and not, for example, to a radially-connected city with an aggregate of 75 MW of small generators behind-the-meter. This distinction is appropriate because such a city cannot have the same impact on the grid as a 75 MW wind farm; loss of the radial connecting the city to the grid would result in loss of its load as well as its generation, so that the supply-demand mismatch would be far less significant. We suggest that I5 be revised.
Response: The SDT clarified the language to address this point. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system~~ , connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
Imperial Irrigation District	No	In reference to I5 If the collector system is in the distribution system and after a series of elements and (sub transmission system) is connected to a common point of interconnection to a system element at a voltage of 100 kV and above, is there a criteria of after how many elements before it connects to a system element at a voltage of 100 kV and above is I5 still applicable?IID prefers the following language: Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) after the collector system to the first system Element at a voltage of 100 kV or above.
Response: The SDT clarified the language to address this point.		

Organization	Yes or No	Question 6 Comment
Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system~~ , connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
NERC Staff Technical Review	No	We agree that Inclusion I5 is an effective method for including dispersed resources; however, the interconnection voltage threshold should be removed. The contribution of dispersed power producing resources to system reliability is a function of the aggregate MVA rating rather than the interconnection voltage. All dispersed resources with aggregate capacity greater than 75 MVA should be included in the BES definition because all such units provide similar contributions to system reliability.
Response: The SDT appreciates the concern regarding the 100 kV threshold and the 75 MVA limit on connected generation; however, the SDT has been presented with no technical basis upon which to suggest a change from these values. No change made.		
Dominion	No	Dominion disagrees that an Element or Facility operated below 100 kV should be included automatically in the BES. Dominion agrees that users of the bulk power system should be required to abide by applicable reliability standards. Dominion questions why the SDT chose to use the phrase 'Dispersed power producing resources' As opposed to the phrase 'Dispersed generating resources'. Dominion asks that the SDT provide an explanation for its choice of phrases.
Response: The SDT used this term intentionally. Generation resources suggest a "generator". Using the term power producing resources includes devices now and in the future that could produce energy (like wind and solar). No change made.		
SPP Standards Review Group	No	Limiting this to 75 MVA does allow the opportunity for a significant amount of generation to 'slip under the fence' regarding inclusion in the BES. Was this the intent of the SDT? For example, in order to circumvent the BES issue a developer may decide to build 2-74 MVA sites rather than a single 148 MVA site. Regarding the similarity of the I3 and I5, what is the difference between a 'single site' and a 'common point of interconnection'? Shouldn't they be the same in the two inclusions?
Response: If a developer wants to build 2- 74 MVA sites solely to not be deemed part of the BES, they can do so, but the Regional Entity could still require them to register. No change made.		
Idaho Falls Power	No	This inclusion seems redundant to the registry criteria for GO/GOP of a facility generation of 75MVA or greater. We do not see how this definition adds or removes any assets already defined by the registry criteria.

Organization	Yes or No	Question 6 Comment
City of Redding	No	Redding believes that this could be handled in the Statement of Compliance Registration Registry by specifically addressing distributed generation. This could be part of a tiered approach where these type of facilities would be included as a User of the BES instead of an owner and operator of BES elements.
Response: The goal of the SDT is to provide clarity to the definition of the BES and not to address registration criteria. No change made.		
Tennessee Valley Authority	No	Other than the NERC Registry Criteria definition, what is the technical justification for the 75 MVA threshold? The threshold level for inclusion should be technically based on the BES capacity and configuration at the location of the generating sources' connection to the BES.
Western Montana Electric Generating and Transmission Cooperative	No	WMG&T agrees that it is important to address wind generation facilities and similar generation facilities in which a large number of generating units, each with a relatively small capacity, are clustered and fed into the grid at a single interconnection point. That being said, WMG&T is concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.
Public Utility District No. 1 of Snohomish County, Washington	No	Snohomish agrees that it is important to address wind generation facilities and similar generation facilities in which a large number of generating units, each with a relatively small capacity, are clustered and fed into the grid at a single interconnection point. That being said, Snohomish is concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Company Consumers Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative	No	We are concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.

Organization	Yes or No	Question 6 Comment
Northern Lights Inc Okanogan Electric Cooperative PNGC Power Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative		
Northern Wasco County PUD Clallam County PUD No.1 Chelan PUD – CHPD Public Utility District No. 1 of Franklin County Northwest Requirements Utilities Big Bend Electric Cooperative, Inc. Utility System Efficiencies, Inc Cowlitz County PUD	No	Northern Wasco County PUD agrees that it is important to address wind generation facilities and similar generation facilities in which a large number of generating units, each with a relatively small capacity, are clustered and fed into the grid at a single interconnection point. That being said, Northern Wasco County PUD is concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4.
Clark Public Utilities	No	Generators should only be part of the Bulk Electric System if they are connected through a GSU to a Transmission Element determined to be part of the BES. The current inclusion language would apply to all generators connected to facilities greater the 100 kV with no exclusion or exception process. Without a change, it appears that a generator connected to a facility greater than 100 kV would be a BES asset even if the transmission assets could be excluded or excepted. I5 should be rewritten to state: Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a Transmission Element determined to be part of the Bulk Electric System.Additionally, as indicated by Clark in its comments on the core definition

Organization	Yes or No	Question 6 Comment
		of the BES, Clark believes the 75 MVA threshold lacks an adequate technical justification and is a purely arbitrary quantity. The use of a capacity threshold in the definition of the BES should have technical reasons.
Santee Cooper	Yes	What is the rationale for 75 MVA.
Response: The SDT appreciates the concern regarding the lack of technical justification for a 75 MVA threshold; however, the SDT has not been presented with a technical basis upon which to suggest a change from this value. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.		
Intellibind	No	Though the intent is understood through the discussion, the language presented is not clear enough. The drafting team should be cautioned on how Standards are read through many different entities and audiences. The team should also understand if the issue is not clearly defined, there will continue to be ambiguity through the registration and compliance processes.As previously stated on an earlier question, I do not think that the 20 MVA threshold has technical merit, I do not believe that the 75MVA limit has technical merit either. Further the impact should be measured at the buss bar not at the nameplate. The aggregate rating should be the same as the individual unit rating on a single plant, unless the plant can prove that there is not a common failure mode to lose more than 20MVA.
Response: The SDT appreciates the concern regarding the lack of technical justification for a 20/75 MVA threshold; however, the SDT has not been presented with a technical basis upon which to suggest a change from this value. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.		
Electric Reliability Council of Texas, Inc.	No	See response to question 3 - ERCOT ISO agrees with the substance but not the approach.
Southwest Power Pool	No	Please see SPP's response to question 3 - SPP agrees with the substance but not the approach.

Organization	Yes or No	Question 6 Comment
Response: See response to Q3.		
Duke Energy	No	I5 is not defined clearly enough. It appears that distributed generators connected to a 44 kV load pocket that is fed radially from a 100 kV source would be included, but it's not clear that this was the intent. Adding generator before collector system would provide greater precision.
Response: The SDT believes the re-wording of Inclusion I5 (now Inclusion I4) should address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ,~~ connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
Fayetteville Public Works Commission	No	Because no differentiation has been defined between "power producing resources" in Inclusion I5 and "generating units" from Inclusions I2 and I3, this Inclusion has the potential to conflict with other Inclusions. It should be modified to read "Dispersed power producing resources with individual capacity of 20 MVA or less (gross nameplate rating) but with aggregate capacity greater than 75 MVA. . ."
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.		
MidAmerican Energy Company	No	It is suggested that the inclusion be modified to include a more definitive description of the portion of the facility that would be considered to be in the BES. It is suggested that the phrase "from the point where the aggregated rating exceeds 75 MVA" be added after collector system in I5. The revised inclusion would then read as follows: Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system from the point where the aggregated rating exceeds 75 MVA through a common point of interconnection to a system Element at a voltage of 100 kV or above.
Muscatine Power and Water	No	MP&W recommends to have Inclusion 5 be revised as follows "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system from the point where the aggregated rating exceeds 75 MVA through a common point of interconnection to a system Element at a voltage of 100 kV or above."

Organization	Yes or No	Question 6 Comment
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
Springfield Utility Board	No	What is a collector system? Does this include a Local Distribution Network? A Local Distribution Network (E3) may have multiple generating units within its service area that serve all or part of retail load (E2). Would the aggregate nameplate rating of these units be included even though they would otherwise be excluded by application of E2? For example, there may be multiple end users with 500 kW photovoltaic systems whose total nameplate capacity is 100 MVA. All or most of the power used is consumed by the retail consumers.SUB suggests that the language be restated to say “Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) that are not excluded under E2 utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above” Or”Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a cCollector sSystem through a common point of interconnection to a system Element at a voltage of 100 kV or above. For purposes of this inclusion, a Collector System is any infrastructure not connected to load - where parasitic load associated with a generation unit or units is not considered load.” While Springfield Utility Board does not own any power producing resources, we do recognize the importance of the restoration of the Grid, and the generation necessary for the Grid, regardless of voltage level.
Springfield Utility Board	No	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of

Organization	Yes or No	Question 6 Comment
		inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
Response: The SDT believes that the re-wording of the inclusion should address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. I~~5~~4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
City of St. George	No	See comments to questions 3 & 4 above. The requirements for an entity or facility should match the impact of that facility to the system.
Response: The SDT carefully debated the generating threshold for the inclusion. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Inclusion I5 has been re-numbered as Inclusion I4. I~~5~~4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
Southern California Edison Company	No	Please refer to SCE's answer for Question No. 3 above.If the SDT goes forward and includes I5 into either the proposed BES definition or the Technical Principles for Demonstrating BES Exceptions, the following additional clarification should be made:(i) Clarify the terms "Dispersed power producing resources" and "collector system"; (ii) When referencing "collector system," does it include the lines connecting the generation?; (iii) Why the 75 MVA threshold? This seems to be a somewhat arbitrary number which does not correlate with specific operational risks, operational limits, or network capability. This is highlighted when taking SCE's system into consideration, as we carry operational spinning reserves that are 10 to 20 times greater than the 75 MVA threshold identified in the proposed BES Definition. If SCE were to lose 75 MVA in an event, there would be no reliability risk or perceptible frequency deviation that would attend the event. The proportionality

Organization	Yes or No	Question 6 Comment
		of risk and benefit does not seem to fit within the application and philosophy behind the mandatory limit. Setting the BES Definition in this manner in order to bring in the smallest utilities is not appropriate for application to the larger utilities.; and (iv) As written, I5 could unintentionally bring into scope sub-trans/distribution systems with enough generation as these radial systems could be categorized as "collector systems". Specifically, there are radially-connected distribution systems in the Desert Southwest designed to enable the interconnection of multiple renewable resources which could be viewed as grouping this collective generation at the point of interconnection with the transmission system. In many cases, the sum total of this generation could be greater than 75 MVA.
Response: 1. The SDT re-worded the definition to address these concerns. 2. There is no contiguous path requirement and the SDT has revised the wording for clarity. 3. The SDT appreciates the concern regarding the lack of technical justification for a 75 MVA threshold; however, the SDT has been presented with no technical basis upon which to suggest a change from this value. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. 4. The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. I~~5~~4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
The Dow Chemical Company	No	The language is not clear enough to understand what is covered.
Response: Please consider the revised language. Inclusion I5 has been re-numbered as Inclusion I4. I~~5~~4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or		

Organization	Yes or No	Question 6 Comment
above.		
New England States Committee on Electricity	No	As noted in comment under 4 above, the 75 MVA threshold may unintentionally impose unnecessary added costs that may ultimately be paid by New England ratepayers. The exception process should provide flexibility as to total MVA rating. In addition, NESCOE believes this language should be clarified to exclude collector systems and include only elements that actually impact the BES.
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. I~~5~~4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
Oncor Electric Delivery Company LLC	No	The ERCOT Region already considers load in any combination equal to and over 20 MVA through a single Point of Interconnect as part of the BES
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Inclusion I5 has been re-numbered as Inclusion I4. I~~5~~4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
Consolidated Edison Co. of NY, Inc.	No	Please define the terms "collector system" and "common point."
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. I~~5~~4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed		

Organization	Yes or No	Question 6 Comment
primarily for aggregating capacity~~collector system~~ , connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
Orange and Rockland Utilities, Inc.	No	See comments from question 4.
Response: See response to Q4.		
BPA	No	Does the interconnection point have to be the only interconnection point for all of the resources? Additionally BPA would like to see a definition of :dispersed power."
Response: The SDT has revised Inclusion I5 to clarify the interconnection point as a 'common point' where the aggregated capacity of the dispersed power producing resource is connected to the BES. The SDT is responsible for the revision of the BES definition. In fulfilling this responsibility the SDT is developing a definition that properly classifies facilities as BES or non-BES Elements. Defining 'dispersed power' is not within the scope of Project 2010-17, however the term is used in the definition to capture resources such as wind farms, solar arrays, etc. that utilize installations over a larger area than would typically be seen at a conventional generation facility. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system~~ , connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
Tacoma Power		Tacoma Power generally supports Inclusion I5. However, the term 'gross aggregate nameplate rating' is not defined and should be replaced with a specific definition. Additionally, no justification for the 75 MVA level has been provided and therefore it appears arbitrary. Since this measurement will define Elements for absolute inclusion in the BES, the threshold for dispersed power producing resources should be based on a need to maintain transmission reliability. Further, there is no traceable definition for 'collector system.' Rather than defining it, it can be replaced with a 'common interconnection point.' Lastly, such dispersed resources located within a Local Distribution Network (LDN), which do not exit the LDN, should not be included. We propose changing Inclusion I5 to read,"The common interconnection point for dispersed power producing resources with aggregate capacity greater than 75 MVA (aggregate capacity based on the Code of Federal Regulation, CFR 18, Part 287.1, "Determination of powerplant design capacity") connected to an Element that is part of the BES, except for common interconnection points that are within a Local Distribution Network (LDN) and do not have a net export out of the LDN."

Organization	Yes or No	Question 6 Comment
Response: The goal of the SDT is to provide clarity to the definition of the BES and not to address registration criteria. The SDT feels that the term "gross aggregate nameplate rating" is a widely understood term within the industry and does not require additional definition. No changes made. I5 (now I4) was revised and no longer uses the term, 'collector system.' **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system -~~ , connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
Portland General Electric Company		It is not clear what the SDT is attempting to capture with this inclusion thatis not already captured in I3. In addition, the term "collector system" needs to bedefined.
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system -~~ , connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
Midstate Electric Cooperative		MSEC agrees that it is important to address wind generation facilities and similar generation facilities in which a large number of generating units, each with a relatively small capacity, are clustered and fed into the grid at a single interconnection point. That being said, MSEC is concerned that the 75 MVA threshold has been chosen arbitrarily for the reasons stated in our comments on Question 4. This would lump together many IPP's that are spread out over a large distribution network that happen to be tied into a single point of interconnection.
Response: The SDT re-worded the definition to better clarify these concerns. The SDT appreciates the concern regarding the lack of technical justification for a 75 MVA threshold; however, the SDT has been presented with no technical basis upon which to suggest a change from this value. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that		

Organization	Yes or No	Question 6 Comment
have arisen from SDT deliberations. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system -~~, connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
Florida Municipal Power Agency	Yes	FMPA agrees with the concept of Inclusion I5 but suggests a language change to clarify what we understand to be the drafting team's intent, that the inclusion is intended to apply to dispersed wind and solar generating plants, and not, for example, to a radially-connected city with an aggregate of 75 MW of small generators behind-the-meter. This distinction is appropriate because such a city cannot have the same impact on the grid as a 75 MW wind farm; loss of the radial connecting the city to the grid would result in loss of its load as well as its generation, so that the supply-demand mismatch would be far less significant. FMPA thus suggests that I5 be revised to read:I5 Wind farm or solar power installation with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system -~~, connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
Western Electricity Coordinating Council	Yes	WECC agrees in concept, but it is unclear why there is the new term "power producing resources." Is this meant to include both Real Power Resources and Reactive Power Resources (terms used in the base definition)? This should be clarified. In addition, it appears from comments of the drafting team that the intent of this inclusion was primarily for wind and solar farms, but the language would also pull in traditional generation that happens to be connected at a single point. The language should be clarified so that it only captures the intended generation.
Response: The SDT used this term intentionally. Generation resources suggest a "generator". Using the term power producing resources is to include devices now and in the future that could produce energy (like wind and solar). No change made.		
Edison Electric Institute	Yes	EEI suggests that the following language more clearly expresses the intent of the SDT:Dispersed power producing resources with aggregate capacity greater than 75 MVA gross aggregate nameplate rating) utilizing

Organization	Yes or No	Question 6 Comment
		a collector system from the point where the aggregate rating exceeds 75 MVA through a common point of interconnection to a system Element at a voltage o 100 kV or above.
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ,~~ connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
ReliabilityFirst	Yes	but the term "Dispersed Power Producing Resuorces" needs to be defined.
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ,~~ connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.		
Transmission Access Policy Study Group	Yes	TAPS agrees with the concept of Inclusion I5 but suggests a language change to clarify what we understand to be the drafting team's intent, that the inclusion is intended to apply to dispersed wind and solar generating plants, and not, for example, to a radially-connected city with an aggregate of 75 MW of small generators behind-the-meter. This distinction is appropriate because such a city cannot have the same impact on the grid as a 75 MW wind farm; loss of the radial connecting the city to the grid would result in loss of its load as well as its generation, so that the supply-demand mismatch would be far less significant. TAPS thus suggests that I5 be revised to read:I5 Wind farm or solar power installation with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.
Northern California Power Agency	Yes	NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed		

Organization	Yes or No	Question 6 Comment
primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
New York Power Authority	Yes	This inclusion should be specific to the type of generation that the team envisioned it to capture (e.g. wind and solar). Since the term "dispersed power producing resources" can be interpreted to include generation resources from a few KW up to 50 MW, this inclusion can be misinterpreted to include "peaker GT's", fuel cells and microturbines, etc.
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
Central Maine Power Company New York State Electric & Gas and Rochester Gas & Electric	Yes	Please note that this departs from NERC's Registry Criteria in that the unit of measurement is MVA instead of MW.
Response: The SDT believes that MVA is the correct way to measure this. No change made.		
PacifiCorp	Yes	PacifiCorp understands the SDT is looking for technical reasons for something other than 75 MVA. PacifiCorp believes it is not feasible to determine a value that is consistent across the continent. Although PacifiCorp believes 75 MVA is too low, it is an acceptable number for any configuration of generation. Those above 75 MVA believed to be exempt from the BES definition can be processed through the proposed ROP inclusion/exclusion process.
Response: The SDT agrees that the exception process will be the proper venue to sort out differences.		
Sacramento Municipal Utility District (SMUD)	Yes	SMUD agrees with the Inclusion 5 concept. However, there are a few terms that require clarification to support the "Bright-Line" application. It is unclear what is meant to be captured by the term "Dispersed power producing resources". As reflected in the intent statement it would be preferred to indicate the applicability of the wind and solar resources or the term intermittent in the Inclusion 5 language. The term "collector system through a common point" is rather vague that lends to varied interpretations that perhaps a defined level of MW through a single element bottleneck would help quantify BES impacts.

Organization	Yes or No	Question 6 Comment
		In addition, the BES delineation should be the single "bottleneck" element for aggregate connection of 75 MVA as it is that element's interruption is what would impact the BES. Additional concerns of I-5 suggests that the wind and solar resources would be BES components where their singular contribution has no appreciable impact to the BES. Including the bottleneck option seems to identify an aggregate BES impact for a loss of a 75 MW block that could have an impact on the BES.
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
Illinois Municipal Electric Agency	Yes	Please see comments under Question 13.
Response: See response to Q13.		
Idaho Power	Yes	Generally agreed but please revise to one Inclusion for I2, I3 and I5 at 75 MVA, see Question 3 and 4 comments.
Response: The SDT believes that Inclusion I4 (formerly Inclusion I5) is sufficiently distinct from Inclusion I2 that it needs to be retained. No change made.		
MEAG Power	Yes	This inclusion should be specific to the type of generation that the team envisioned it to capture (e.g. wind and solar). Since the term "dispersed power producing resources" can be interpreted to include generation resources from a few KW up to 50 MW, this inclusion can be misinterpreted to include "peaker GT's", fuel cells and microturbines, etc.
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) _utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
Michgan Public Power Agency	Yes	I would suggest I5 be revised to say Wind farm or solar power installation with aggregate capacity greater

Organization	Yes or No	Question 6 Comment
		than 75 MVA (gross aggregate nameplate rating) utilizing a collector system
Response: The SDT re-worded the definition to address these concerns. Inclusion I5 has been re-numbered as Inclusion I4. I~~5~~4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system ~~, connected ~~through~~at a common point ~~of interconnection to a system Element ~~at a voltage of 100 kV or above.		
Sierra Pacific Power Co d/b/a NV Energy	Yes	Similar to the response to Q4, the 75MVA has no technical basis as being a threshold for determining necessity in the reliable operation of the interconnected transmission system; however, no technical data supports an alternate value.
Sweeny Cogeneration LP	Yes	The threshold for widely distributed and aggregated generation units (wind farms) is consistent with the NERC functional registry criterion.
Public Service Enterprise Group LLC	Yes	
Tri-State Generation and Transmission Association, Inc.	Yes	
SERC Planning Standards Subcommittee	Yes	
ACES Power Participating Members	Yes	
SERC OC Standards Review Group	Yes	
National Rural Electric Cooperative Association (NRECA)	Yes	

Organization	Yes or No	Question 6 Comment
Overton Power District No. 5	No	
Arizona Public Service Company	Yes	
Rayburn Country Electric Cooperative, Inc.	Yes	
Southern Company	Yes	
Luminant Energy	Yes	
Western Area Power Administration	Yes	
US Bureau of Reclamation	Yes	
Grand Haven Board of Light and Power	Yes	
Glacier Electric Cooperative	Yes	
FHEC	Yes	
South Texas Electric Cooperative, Inc.	Yes	
National Grid	Yes	
Dayton Power and Light Company	Yes	
ExxonMobil Research and Engineering	Yes	

Organization	Yes or No	Question 6 Comment
Alberta Electric System Operator	Yes	
South Carolina Electric and Gas	Yes	
Florida Keys Electric Cooperative	Yes	
American Electric Power	Yes	
East Kentucky Power Cooperative, Inc.	Yes	
Farmington Electric Utility System	Yes	
Colorado Springs Utilities	Yes	
Consumers Energy Company	Yes	
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	Yes	No comment.
Puget Sound Energy	Yes	
GTC	Yes	
Long Island Power Authority	Yes	
Cogentrix Energy, LLC	Yes	
Manitoba Hydro	Yes	
ISO New England, Inc.	Yes	

Organization	Yes or No	Question 6 Comment
City of Anaheim	Yes	
Golden Spread Electric Cooperative, Inc.	Yes	
Response: Thank you for your support. Based on stakeholder comments, the SDT made some modifications to the inclusion. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Please see the revised definition.		

7. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system.

In addition, the SDT wishes to point out that the definition also includes Exclusion E3 that can be used for multiple connections serving local networks.

The SDT realizes that a bright-line definition may require entities to seek exceptions through the Rules of Procedure exception process.

This BES definition does not address protection or control systems. Standards and requirements can be written against components that are not BES Elements.

The SDT does not specify the type of normally open switch that will be used to separate the systems described in Exclusion E1 but understands that any such switch needs to be operated in such a fashion that insures safety, utilizes the best operating practices, and maintains reliability.

Changes due to industry comments are as follows:

Bulk Electric System (BES): Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.

E1 - ~~Any r~~Radial systems: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

a) Only ~~servingserves~~ Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or,
b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,
c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

Organization	Yes or No	Question 7 Comment
Public Service Enterprise Group LLC	No	Again, in similar comments to item 1 above, where is the BES line of demarcation between BES elements (the interrupting device itself) connecting the non-BES radial system? The term "Generation resource" is not defined and open for interpretation.
Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system. The SDT believes that generation resource is a widely used and understood term and therefore, a definition is not required. **E1** - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating). Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.		
Northeast Power Coordinating Council	No	The concept is consistent with the statements in the FERC Order. However, it is imperative to understand that the limitations of E1 will have a direct impact on many entities (big and small) along with distribution companies across North America. The exclusion requirements are restrictive and these restrictions mayhave an adverse affect on future transmission investment, for example the addition of a second line removing the radial status exclusion. Consideration should be given to allowing entities to build additional transmission and not automatically compromise the exclusion status of any given facilities. For example, a redundant double circuit designed to supply the load with adequate protection and isolation beyond the radial tap could be

Organization	Yes or No	Question 7 Comment
		significantly better for load supply-continuity and reliability. If more than one transmission source feed radial load to ensure customer supply continuity and reliability, then this should be either part of the bright-line definition E1 exclusion as long as there is adequate protection and, the loss of any single transmission source does not affect the interconnected transmission network. The SDT should: o Carefully craft the exception criteria and procedure that is flexible and technically sound to adequately allow entities to present their case to the ERO for exclusion o Exception criteria should be at a high-level with items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) mentioned in exclusions or inclusions based on technical assessment, evidence and justification for its unique characteristics, configuration, and utilization o Acknowledge and provide provisions in both NERC exception criteria and exception process for federal, state and provincial jurisdictions.
Tri-State Generation and Transmission Association, Inc.	No	A “single Transmission source” is unclear and may be interpreted differently by different Regional Entities. A circuit switcher-protected transformer serving only distribution load may be tapped to a single transmission line but the transmission line has two or more sources. Is the system then connected to a single Transmission source, thus making it radial and being excluded? Or will the Regional Entity declare that, since the transmission line has two sources that the radial system also has two sources? We suggest changing the opening sentence of Exclusion E1 to “Any radial system that is connected to a Transmission source through an automatic interrupting device or devices and:”
American Municipal Power and Members	No	The words “described as” should be deleted from the exclusion to avoid confusion. What matters is how the system is actually connected, not how someone describes it. In addition, “a single Transmission source” could be defined, and should be generic enough to encompass the various bus configurations. It is not the case, for example, that each individual breaker position in a ring bus is a separate Transmission source; in that case, a bus at one voltage level at one substation should be considered “a single transmission source.” Some examples of configurations that should be considered a single transmission source for this purpose are at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf, Examples 1-6. The phrase “automatic interrupting device” should be replaced with the phrase “switching device”.” Many radials are connected to ring buses or breaker-and-a-half schemes where the breakers (automatic interrupting devices) are within the bus arrangement where the appropriate division between BES and non-BES is at the disconnect switch as the radial “takes off” from the bus arrangement.

Organization	Yes or No	Question 7 Comment
Central Maine Power Company New York State Electric & Gas and Rochester Gas & Electric	No	The definition of radial needs to be clear and comply with Order 743. We do not know what a radial "system" is. Also, "automatic interruption device" is not defined. This exclusion includes "radial" "systems" with more than one supply from a single "source" - including normally-open switches, even those which are intended to be normally closed before further switching takes place ("make-before-break"). This seems to be a problem, per Order page 32. We suggest a compliant and straightforward "radial" exclusion, and recommend that E1 be replaced with, "Those Transmission Elements interconnected to only one other substation through only one transmission line; except those elements included in I2, I3, and I5." It is clear and it can be applied in a "bright-line", consistent fashion.
Intellibind	No	Small radial systems that have two interconnection points at the same location or very close to the same location, but are not used for Transmission flow through should also be excluded. There are numerous examples of two interconnection points that are paralleled by much higher voltage systems and do not flow power through the system, but are redundant to increase distribution reliability. This should be left to the Transmission Operator/Transmission Owner to determine if there is flow through and impact to the BES before designating these as BES assets based on interconnection points. Radial should be defined as power flowing one direction only, not based on how it is interconnected to 100KV or higher lines.
Hydro-Quebec TransEnergie	No	It is too much restrictive to refuse exclusion of radial system when they have generator greater than 20 MVA, or multiple generating units of aggregate capacity greater than 75 MVA, especially when a system is able to function reliably with the loss of generation much higher than this amount. The fact that no Reliability Standards apply to generators excluded from BES is problematic. Generators should be allowed to be excluded but reliability standards should apply to them in specific. Also, the connection through only a single Transmission source is again too restrictive. Other Transmission source could be used for load continuity of service and the restriction should be limited to radial transmission paths where the power flow is greater than the first contingency lost.
National Grid	No	We feel that there might be some confusion between I1 and E1 because while I1 only includes transformers with 2 windings greater than 100kV, E1 specifically says a tap must have an automatic interruption device to be excluded.So, we are concerned that radial tapped lines with a transformer whose low-side voltage is less than 100kV, but do not have an automatic interruption device are not excluded. We would like to see some additional clarity in this exclusion to address this situation Does automatic interruption device only include breakers/circuit switchers? Would a device such as a motorized loadbreak be considered an automatic interruption device? If motorized loadbreaks are also

Organization	Yes or No	Question 7 Comment
		considered as an automatic interruption device, then there would be less confusion between E1 and I1. We also request that this issue be addressed by adding clarity to the exclusion. Another concern is that this exclusion requirement is restrictive and may have an adverse affect on future transmission investment for redundant radial supply to improve local load service, for example the addition of a second line removing the radial status exclusion. Consideration should be given to allowing entities to build additional transmission without automatically compromising the exclusion status of any given facilities.
CenterPoint Energy	No	CenterPoint Energy believes that some radial systems described in Exclusion E1 are similar to the local distribution networks (LDNs) described in Exclusion E3. A radial system may be connected to more than one automatic interrupting device in certain substation designs, such as a ring bus configuration. CenterPoint Energy believes similar wording should be used for Exclusion E1 and Exclusion E3. Utilizing wording from Exclusion E3, CenterPoint Energy recommends changing the beginning of Exclusion E1 to "Any radial system which is described as separable by automatic fault interrupting devices: Wherever connected to the BES, the radial system must be connected through automatic fault-interrupting devices; and:".
ISO New England, Inc.	No	The definition of radial needs clarification; we suggest "fed from a single transmission source, i.e. fed from a single substation at a single voltage". It is clear and it can be applied in a "bright-line", consistent fashion. As currently drafted, if the interruption device is not automatic, E1 would not exclude tapped "radial - i.e. single fed" equipment. Does the SDT mean to imply that even transformers which do not have an automatic interruption device on the high side, but have low voltage side at lower than 100 kV, will be considered part of the BES? If so, is the BES considered to extend to where the circuit has an automatic interruption device? Would the bus conductor and leads to the high side of the transformer be BES? This would not be acceptable if the answer is yes. It is important to keep in mind that the in the instance of a radial line served via a tap, the system needs to be designed for loss of the line in any event and requiring an automatic switching device is not necessary.In short, the term radial should be better defined and the requirement for an automatic interruption device should be eliminated.

Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system.

In addition, the SDT wishes to point out that the definition also includes Exclusion E3 that can be used for multiple connections serving local networks. The SDT realizes that a bright-line definition may require entities to seek exceptions through the Rules of Procedure exception process.

E1 - ~~Any r~~Radial systems: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

Organization	Yes or No	Question 7 Comment
a) Only ~~servingserves~~ Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~includingincludes~~ generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating). Note – A normally open switching device between radial systems does not affect this exclusion.		
NERC Staff Technical Review	No	Exclusion E1 would be acceptable if (i) switching the radial system to connect it to the BES at a second point of interconnection is modified to require that when a make-before-break connection is used, it occurs at a voltage below 100 kV and (ii) the automatic interrupting device is not excluded as part of the radial system. >>>>>>>>>>> The allowance for make-before-break connections of radial facilities at voltages 100 kV or higher will result in operating conditions with the potential to degrade system reliability if the subject Elements are not planned, designed, maintained, and operated in accordance with NERC Reliability Standards. The risk is most pronounced when the make-before-break connection is automated, increasing the likelihood of adverse reliability impacts occurring as a result of placing the system into an unplanned operating condition. If the make-before-break connection is made at a voltage below 100 kV the impedance in the parallel connection will mitigate the reliability impact. When the radial system is connected to the BES at a second point of interconnection 100 kV or higher, the radial system should not be excluded unless a break-before-make connection is used because system protection during the momentary parallel network operation is critical to overall BES reliability. >>>>>>>>>> The reason for requiring an automatic interrupting device between the BES and the excluded radial system is to prevent faults and other abnormal conditions on the radial system from negatively impacting reliability of the BES. Given the reliance on the interrupting device to support BES reliability, it is appropriate to include the interrupting device in the BES so that it is planned, designed, maintained, and operated in accordance with NERC Reliability Standards the same as other BES Elements. Thus, when excluding a radial system operated at 100 kV or higher, the BES line of demarcation should be on the load side of the automatic interrupting device. >>>>>>>>>> The main clause and part (a) of the exclusion should be changed to read; >>>>>>>>>> Exclusion E1 - Any radial system which is described as connected from a single Transmission source originating on the load side of an automatic interruption device and:a) Only serving Load. A normally open switching device between

Organization	Yes or No	Question 7 Comment
		radial systems may operate in a 'break-before-make' fashion at 100 kV or higher or a 'make-before-break' fashion below 100 kV to allow for reliable system reconfiguration to maintain continuity of electrical service. Or, etc. ...
Small Entity Working Group (SEWG)	Yes	Yes, with some minor changes. Delete the words "described as" in the sentence: Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and. How the radial system is actually connected is important not the description. The SEWG believes that "a single Transmission source" should be defined in such a way to ensure all the various bus configurations are captured. The SEWG recommends modifying the language in E1 to allow for the use of a "switching device" rather than an "automatic reclosing device" for two specifics situations as follows: 1) When a radial transmission line is feed from a ring bus, but only serve load and/or non-registered generation: 2) When a radial transmission line is feed from a breaker and half bus and it only serves load and/or non-registered generation. In both cases, faults on the radial transmission line will not interrupt network transmission flows and therefore has minimal impact on the BES. For direct connection of radial transmission lines to a networked transmission line, the SEWG agrees that an automatic interrupting device is required to protect the BES.

Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by most of the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system.

E1 - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or,

b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,

c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

Organization	Yes or No	Question 7 Comment
Dominion	No	Dominion can agree with Exclusion E1 only if the exclusion is applied to any radial Facility, regardless of whether it is used to connect load or generation to the bulk power system.
SPP Standards Review Group	No	We could concur with this exception providing the 'automatic interruption device' is not considered a part of the BES. Additionally, what are the implications for a radial element connected in a ring bus via two breakers or a radial element connected via a breaker and a half scheme?
Edison Electric Institute	No	EEI suggests the following change to E1:Any radial system which is described as connected from a single Transmission source [Delete "originating with an automatic interruption device"] and:
Idaho Falls Power	No	This exclusion speaks to radial systems with generation resouces not identified in I2, I3, I4, or, I5, thus seemingly only to apply to generation resouces smaller than 20MVA. We wonder why this exclusion then exists as these resources are already excluded by not being large enough to fall under the registry criteria, and thus need not comply with the reliability standards.
Tennessee Valley Authority	No	We suggest the first statement in E1 to read, "Any radial system connected to a single BES transmission source, operating with an automatic interruption device, including the facilities between the connection to the transmission source and the automatic interruption device which are within the transmission source's zone of protection, and:"
New York State Reliability Council	No	E1 too prescriptive. Suggest developing a general, flexible definition of radial system in NERC Glossary such as "A system connected from a single Transmission source originating with an automatic interruption device".
New York Power Authority	No	The definition of Exclusion E1 does not cover radial systems that are connected to a single transmission source by more than one automatic interruption device, such as occurs with a "breaker-and-a-half" arrangement. The definition should be modified as follows:"Any radial system which is described as connected from a single Transmission source originating with one or more automatic interruption devices and: ...."This exclusion uses many terms that are not defined under NERC's standard definitions: "radial load", "automatic interruption device" and "make-before-break". If these terms are used to define an exclusion and can be understood or interpreted differently by different people, then the terms should be formally defined.
Electricity Consumers Resource Council (ELCON)	No	The existing language in the NERC Statement of Compliance Registry for radial exclusions should be maintained since the change proposed by the SDT could result in a significant increase in entities and/or facilities that would have to be registered or included (because of the addition of the automatic interruption

Organization	Yes or No	Question 7 Comment
		device). The burden for proving the need for such significant changes should be placed on the ERO and the Regional Entities through the BES Exception Process, not on the users of the BES. In particular, it could force retail load (customers) to register as transmission owners, or engage in other maneuvers to avoid registration, when this is clearly a transmission owner/customer issue (as to whether to install automatic interruption devices). These lines are non-jurisdictional and are obvious under the purview of the state commissions.
The Dow Chemical Company	No	The existing language in the NERC Statement of Compliance Registry for radial exclusions should be maintained since the change proposed by the SDT could result in a significant increase in entities and/or facilities that would have to be registered or included (because of the addition of the automatic interruption device). See ELCON comments for additional details.
Grand Haven Board of Light and Power	No	Exclusion E1 addresses a radial, load serving system, but it does not address whether the automatic interrupting device should be defined as a part of the BES or not. In our case, the ONE automatic interrupting device that we own would force us to register as a TO/TOP, and as a result incur significant costs. This does not comply with FERC Order No. 743 (and No. 743a) and should be addressed in this exclusion if not in the core definition.
FHEC	No	Suggest the word single be moved later in the sentence, see below-From: E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and: To:E1 - Any radial system which is described as connected from a Transmission source originating with a single automatic interruption device and:
ExxonMobil Research and Engineering	No	The inclusion or exclusion of radial lines serving load should not be contingent on whether the radial line is isolated by a single automatic fault interrupting device. Many of the radial lines impacted by the requirement for the presence of an automatic fault interrupting device are industrial companies that are fed via 138 kV and 230 kV systems that are hard-tapped or fed from breaker and a half or ring buss transmission substations. The requirement for the installation of an automatic fault interrupting device on the radial line is predicated on the assumption that an event on a hard-tapped line serving load will produce a negative impact on the interconnected transmission network. Accepting this assumption as a true fact, the SDT is following the logic that they should expand the scope of the interconnected transmission network to include the hard-tapped line (used to locally distribute power) due to the fact that the transmission owner has neglected to properly protect their facilities from the impact of an event on the hard-tapped line. In effect, the SDT is allowing the transmission planner to take credit for protective devices installed on the distribution network when they conduct their contingency studies as part of NERC Reliability Standards TPL-002 and TPL-003; thus shifting the responsibility of protecting the interconnected transmission network from the owners of the transmission network to the customers and their local distribution facilities. The SDT should revisit their assertion that

Organization	Yes or No	Question 7 Comment
		facilities should be included based on the presence of an automatic fault interrupting device based on the fact that if a contingency study indicates that an automatic fault interrupting device should be present in order to preserve system stability or prevent a cascading outage during an N-1 or N-2 contingency, the transmission planner should be recommending such a device is installed on the interconnected transmission system and not a customer owned facility or any facility used to locally distribute electric power. It is inappropriate to let transmission owners take credit for customer owned and local distribution facilities in their reliability studies and require customer's and local distribution facilities to protect the interconnected transmission network when those facilities are explicitly excluded from the bulk power system in Section 215 of the Federal Power Act and the interconnected transmission system is owned and operated by entities that the customers and local distribution facility owners pay to provide them with reliable transmission service.
MidAmerican Energy Company	No	The statement "originating with an automatic interruption device" seems to go beyond differentiating what is radial. If that were removed, the rest of the draft exclusion seems to capture what is radial.
Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)	No	(Note: Inserted language provided in brackets; deleted language denoted by empty brackets: [ ].) Exclusion E1 contradicts the plain language of Section 215 of the Federal Power Act ("FPA"), which denies FERC jurisdiction over facilities used in the local distribution of electric energy (16 U.S.C. Â§ 824o(a)(1) (stating the Bulk Power System "does not include facilities used in the local distribution of electric energy")). For example, Exclusion E1 would impermissibly include within the definition of the Bulk Electric System ("BES") a retail customer's self-provided "hard-tapped" radial line that is located behind the retail delivery point. The Standard Drafting Team ("SDT") stated in commentary to Exclusion E1 that it has clarified the existing exclusion for radial systems by specifying that protection for the BES is a required element, and that it believes that faults on radial lines without protection devices could negatively impact the BES. Even if faults on radial lines could negatively impact the BES, however, radial lines that are used in local distribution of electric energy are outside of FERC's jurisdiction. Congress did not place any qualifications on the exclusion of facilities used in the distribution of electric energy, and certainly did not make the exclusion contingent on whether the facility is "originating with an automatic interruption device." Exclusion E1 would rewrite Section 215 of the FPA to exclude from the definition of the BES only "facilities [with an automatic interruption device] used in the local distribution of electric energy." Such an interpretation, as discussed further below in response to Questions 11 and 12, is unlawful as it is in direct contravention of Congress' intent. To make Exclusion E1 consistent with the jurisdictional requirements of Section 215 of the FPA, Exclusion E1 could be rewritten as follows:Any radial system which is described as connected from a single Transmission source [ ] and: a) Only serving Load. [ ] Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5. Please see further discussion in response to Questions 11, 12 and 13.

Organization	Yes or No	Question 7 Comment
Alliant Energy	No	We believe the first sentence should be revised to read “Any radial system which is described as connected from a single Transmission source at 100 kV or above originating with . . .” In this way it is clear that E1 covers radial transmission, not radial distribution systems.
Exelon	No	Exelon points out that this is another case where facilities used in local distribution of electric energy that are presently under state jurisdiction might be included in the BES. Depending on the location of the automatic interrupting device, the radial facilities in between the tap point at the transmission sources and the interrupting device would be included in the BES.
City of St. George	No	Radial systems should be excluded as outlined in E1a; however the generation level requirements of 20 MVA and 75 MVA (I2, I3, & I5) should be revisited. As long as the normal power flow is into the radial system, the amount of generation on a radial segment should not automatically trigger an inclusion to the BES.
Golden Spread Electric Cooperative, Inc.	No	We recommend modifying "Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and..." to read EITHER1. "Any radial system which is described as connected from a single Transmission source and... [remove originating with an automatic interruption device] OR2. "Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device or manual isolating switch..."
Michigan Public Service Commission(MPSC)		MPSC Staff Comments: The MPSC supports this exclusion with the exception that Inclusion I2 should be removed from the E1(c) provision. Keeping the I2 here will result in too many subtransmission load-serving elements losing their non-BES status.
Georgia System Operations		A. The phrase “which is described as” is unclear. If the intention is to mean “which is defined as,” the term “Radial System” should be capitalized and added to the glossary. Otherwise, consider deleting the phrase. B. It is not clear whether the automatic interruption device on the excluded system is itself in or out of the BES. Can the drafting team clarify this intent with respect to breakers protecting radial lines (perhaps compared to circuit switchers protecting load serving transformers)? Drawings could be very beneficial here. C. The second part of sub-bullet “a” (the sentence beginning “A normally open switching device...”) applies not only to “a” but to all the sub-bullets, and therefore should be moved to either the initial sentence or to be a closing item after the last sub-bullet. For example, if the sub-bullets are indented, and then this sentence returns to the original margin, that would show that it applies to any “radial system” and not just to a system falling under a single sub-bullet.

Organization	Yes or No	Question 7 Comment
United Illuminating		UI suggests the following change to E1 eliinating the automatic device:Any radial system which is described as connected from a single Transmission source.These taps are not necessary for the opeation of the interconnected system.
Florida Municipal Power Agency Florida Keys Electric Cooperative	Yes	FMPA agrees with the intent / concept, but has suggested wording changes to add clarity.The words "described as" should be deleted from the exclusion to avoid confusion. What matters is how the system is actually connected, not how someone describes it. In addition, "a single Transmission source" should be defined, and should be generic enough to encompass the various bus configurations. It is not the case, for example, that each individual breaker position in a ring bus is a separate Transmission source; in that case, a bus at one voltage level at one substation should be considered "a single transmission source." Some examples of configurations that should be considered a single transmission source for this purpose are at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf, Examples 1-6. The phrase "automatic interrupting device" should be replaced with the phrase "switching device." Many radials are connected to ring buses or breaker-and-a-half schemes where the breakers (automatic interrupting devices) are within the bus arrangement where the appropriate division between BES and non-BES is at the disconnect switch as the radial "takes off" from the bus arrangement.As written, E1 would eliminate most radials from automatic exclusion and force most of them into the Exception Procedure. For instance, see examples 2 of the FRCC draft BES definition Appendix A at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf).Switch "A" in example 2 is usually not automatic. Breaker D and E are automatic. Switch A is radial, Breakers D&E may not be. FMPA recommends replacing "automatic interrupting" with "switching" and allow manual switching devices to establish the boundary between BES and non-BES, otherwise we get into splitting up ring-buses or breaker-and-a-half schemes, or flooding the Exception Procedures with a lot of needless requests.Also, "device" is singular whereas the exclusion is for a "radial system". I presume that the SDT intends that if there are two lines originating at the same substation supply a load in a redundant nature, that the "radial system" would be excluded (see examples 1, 3 and 4 of the FRC draft BES Definition Attachment A), which would mean there would be more than one device.Also, the phrase "A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service." is misplaced in bullet a) and belongs in the non-bulleted section.FMPA recommends re-wording E1 to be:"Any radial system which is connected from a single Transmission source (such as a contiguous bus configuration like a ring bus or breaker-and-a-half scheme) originating with switching device(s) and meeting the criteria in bullets a, b or c below. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.a) Only serving Loadb) Only including generation

Organization	Yes or No	Question 7 Comment
		resources not identified in Inclusions I2, I3, I4 and I5c) A combination of (a) and (b)"
MRO's NERC Standards Review Forum	Yes	We recommend the phrase “originating with an automatic interruption device” be clarified as to the location of the interruption device. An entity may not have interruption devices at both ends of a radial fed line. If the interruption device is at the load end of the radial line, then the “up-stream” portion of the radial line is unprotected. Please clarify.Please add the Brightline Criteria that all facilities less than a 100kV are excluded unless those facilities meet the criteria of an Inclusion.
Hydro One Networks Inc	Yes	We agree with this concept as part of establishing a bright-line definition, as well as clarifying this exclusion as part of the revised BES definition. Although the concept is consistent with the statements in the FERC Order, it is imperative to understand that the limitations of E1 will have a direct impact on many entities (big and small) along with distribution companies across North America. The exclusion requirements are extremely restrictive with little or no technical basis and are limited to the fact that these parametric restrictions may not have any reliability impact in terms of location, configuration of element, and system characteristics. The radial characteristics and/or the reliability of the interconnected transmission network should not be determined by the amount of installed generation or a single transmission source or an interrupting device. For example, a redundant double circuit designed to supply the load with adequate protection and isolation beyond the radial tap could be significantly better for load supply-continuity and reliability. We suggest if more than one transmission source feed radial load to ensure customer supply continuity and reliability then this should be either part of the bright-line definition as long as there is adequate protection and, the loss of any single transmission source does not affect the interconnected transmission network. We suggest SDT to consider revising E1 as follows:Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device or can be isolated with adequate protection without affecting the BES and: a) Serves load, or, b) Includes generation resources not identified in Inclusions I2, I3, I4 and I5, unless excluded by E2, or, c) Has any combination of items (a) and (b). The radial system can have a normally open switching device for connecting it to a second Transmission source in a ‘make-before-break’ fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.
National Rural Electric Cooperative Association (NRECA)	Yes	NRECA requests that the drafting team state explicitly whether the automatic interruption device is included or excluded from the BES. Examples of automatic interruption devices should be included in a reference or FAQ document, and drawings/diagrams on typical configurations would be beneficial. Consistent language is needed in the Inclusions/Exclusions. E1 states “automatic interruption device” and E3(a) states “automatic fault interrupting devices.” NRECA recommends adding the word “fault” as in E3(a)

Organization	Yes or No	Question 7 Comment
		and also stating “device(s)” in E1 and E3(a) and wherever else the phrase may be used in the BES definition and inclusions/exclusions.Additional clarification is needed in explaining E1(c) to ensure industry understands the scenario.
ReliabilityFirst	Yes	teh term "Single Transmission Source" needs defined, and as well what elemnents are defined by "automatic interrupting devices" there is debate out in the industry.
Transmission Access Policy Study Group Michgan Public Power Agency	Yes	TAPS suggests some clarifying changes:The words “described as” should be deleted from the exclusion to avoid confusion. What matters is how the system is actually connected, not how someone describes it. In addition, “a single Transmission source” should be defined, and should be generic enough to encompass the various bus configurations. It is not the case, for example, that each individual breaker position in a ring bus is a separate Transmission source; in that case, a bus at one voltage level at one substation should be considered “a single transmission source.” Some examples of configurations that should be considered a single transmission source for this purpose are at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf, Examples 1-6. The phrase “automatic interrupting device” should be replaced with the phrase “switching device.” Many radials are connected to ring buses or breaker-and-a-half schemes where the breakers (automatic interrupting devices) are within the bus arrangement where the appropriate division between BES and non-BES is at the disconnect switch as the radial “takes off” from the bus arrangement.
Northern California Power Agency	Yes	NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.
Texas Industrial Energy Consumers (TIEC)	Yes	TIEC supports excluding radial loads serving only load or generation resources that do not trigger NERC registration requirements. This is consistent with the FERC’s intent and the existing BES definition. However, TIEC believes that this exclusion should not be contingent upon a radial system “originating with an automatic interruption device” as proposed by the SDT. Radial feeds serving a system that contains only load and generation that does not trigger registration requirements should be categorically excluded from the BES definition regardless of whether the radial lines originate with an automatic interruption device. It should be the responsibility of the transmission provider to ensure that its facilities and interconnection properly protect the grid from facilities that fall under this exclusion, just as the transmission providers do for other load and unregistered generation. The absence of automatic interruption device should not trigger inclusion as a part of the BES, but should trigger a requirement upon the transmission provider to install such a device on its side of the facilities or take other measures to insulate the grid from the activities of a radial network. Accordingly, TIEC would proposed to strike the phrase “originating with an automatic interruption device” from the

Organization	Yes or No	Question 7 Comment
		proposed exclusion language.
National Association of Regulatory Utility Commissioners	Yes	We agree with Exclusion E1. Radial systems are clearly local distribution and excluded from FERC and NERC jurisdiction. This is consistent with FERC Order 743 and 743a (see e.g. Order 743A P 1, 76 Fed. Reg. 16264 (March 23, 2011)). We suggest that I2 be removed from this exclusion (and from the standard as a whole) as discussed in response to question 3.
Oregon Public Utility Commission Staff	Yes	Exclusion I as currently proposed adequately defines radial systems; however, Inclusion I2 language should be removed per the rationale stated in the response to Question 3 above. To retain the Inclusion I2 language herein would sweep in an abundance of distribution elements that have no impact on the reliable operation of the interconnected bulk transmission system.
PUD No. 2 of Grant County, Washington	Yes	E1 specifically states “Any radial system which is described as connected from a single transmission source originating with an automatic disconnection device and...”. The example of concern is a radial tap to a single distribution power transformer that is connected to a ring bus or breaker and a half bus. In this case the transformer would have 2 automatic disconnection devices from what is essentially a single source. Typically ring bus and breaker and a half bus are used to improve reliability, limiting the exclusion to a single disconnecting device appears to bring a hypothetical radial tap fed from a ring bus or breaker and a half bus into the BES definition. Although the LDN exclusion might apply there is the potential for many situations where it might not.A possible remedy is to revise the exclusion as follows:”Any radial system which is described as connected from a single transmission source that originates with automatic disconnection device(s) and...” In addition, a definition for “a single transmission source” should be provided to clarify the intent. Suggestion:”A single transmission source would be any transmission source located within a single facility, yard or fenced area and electrically continuous at a single voltage level”.
FortisBC AltaLink	Yes	We agree with this concept as part of establishing a bright-line definition, as well as clarifying this exclusion as part of the revised BES definition. Although the concept is consistent with the statements in the FERC Order, it is imperative to understand that the limitations of E1 will have a direct impact on many entities (big and small) along with distribution companies across North America. The exclusion requirements are extremely restrictive with little or no technical basis and are limited to the fact that these parametric restrictions may not have any reliability impact in terms of location, configuration of element, and system characteristics. The radial characteristics and/or the reliability of the interconnected transmission network is determined by the amount of installed generation or a single transmission source or an interrupting device. For example, a redundant double circuit designed to supply the load with adequate protection and isolation beyond the radial tap could be significantly better for load supply-continuity and reliability. We suggest if more than one

Organization	Yes or No	Question 7 Comment
		transmission source feed radial load to ensure customer supply continuity and reliability then this should be either part of the bright-line definition as long as there is adequate protection and, the loss of any single transmission source does not affect the interconnected transmission network. Accordingly, it will be an understatement to suggest that the SDT: o Carefully craft the exception criteria and procedure that is flexible and technically sound to adequately allow entities to present their case to the ERO for exclusion o Exception criteria should be at a high-level with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) mentioned in exclusions or inclusions based on technical assessment, evidence and justification for its unique characteristics, configuration, and utilization o Acknowledge and provide provisions in both NERC exception criteria and exception process for federal, state and provincial jurisdictions.
American Electric Power	Yes	AEP supports the concept of the exclusion of radial systems, however further clarification is needed regarding whether or not the source equipment is included as part of the radial system (for example, ring bus or breaker and a half bus configurations). In addition, “automatic interruption device” should be defined to alleviate any ambiguity.
East Kentucky Power Cooperative, Inc.	Yes	EKPC has a concern with the wording of the definition for Exclusions:E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and:a) Only serving Load. A normally open switching device between radial systems may operate in a ‘make-before-break’ fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.”This wording leads EKPC to believe that a radial 138 kv line that steps down into a 69 kv looped system that have no facilities included in the BES would not be excluded as radial. This line cannot have any more impact on the BES than the 69 kv system it connects to that is excluded from the BES. Therefore I would add to exclusion E1a, “or only connecting to a transformer stepping down to a voltage below 100kv”.
American Transmission Company, LLC	Yes	ATC offers the following alternative language:ATC suggests replacing the wording of “connected from a single Transmission source” with “connected to the Bulk Electric System”. Furthermore, ATC believes that Exclusion E1 is appropriate and should be part of the definition of the BES. However, ATC believes that a registered entity should be given the option to not be required to follow the exclusions in the E1 criteria. Some registered entities for operational and business purposes may wish to continue to classify their radial system assets, which are operated above 100 kV, as BES components.

Organization	Yes or No	Question 7 Comment
Muscatine Power and Water	Yes	MP&W recommends to clarify the phrase "originating with an automatic interruption device" regarding the location of the interruption device. An entity may not have interruption devices at both ends of a radial fed line. If the interruption device is at the load end of the radial line, then the "up-stream" portion of the radial line is unprotected. Furthermore, please make it unambiguous that all facilities operated at less than a 100kV are excluded unless those facilities meet the criteria of an Inclusion.
Sacramento Municipal Utility District (SMUD)	Yes	SMUD support with the Exclusion 1 concept. However to maintain the clarity for a "Bright-line" the term "single Transmission source" needs to be expanded as it could be read to be a single line, common bus or a single entity, that will change the meaning of this exclusion.
GTC	Yes	Agree, but further clarification requested. E1 reads as if the originating automatic interrupting device is to be excluded with the radial system. Can the drafting team clarify this intent with respect to breakers protecting radial lines versus for example a breaker or circuit switcher protecting an excluded transformer which is not part of the BES? Drawings would be very beneficial here.
Illinois Municipal Electric Agency	Yes	With the following clarifying edits. Delete the words "described as" in the first sentence. Also, "a single Transmission source" should be defined to encompass various bus configurations. For example, an individual breaker position in a ring bus is not a single Transmission source, but a bus at one voltage level at one substation should be considered a single Transmission source. Also, the phrase "automatic interrupting device" should be replaced with the phrase "switching device". The current wording does not take into account that a radial system is often connected to a ring bus or a breaker-and-a-half scheme where the breaker/automatic interrupting device is within the bus arrangement. The appropriate division between BES and non-BES is at the disconnect switch where the radial line attaches to the bus arrangement.
Public Utilities Commission of Ohio	Yes	Exclusion E1 is appropriate. However, any inclusion that are inconsistent with this exclusion should be eliminated. Any facility that has an impact on the bulk system could be considered for inclusion under a case by case basis.
Long Island Power Authority	Yes	For clarification purposes, we understand "Transmission source" to be a substation and not a line. A substation connected to only one other substation "source" by two lines would still be considered radial and thus excluded.
Idaho Power	Yes	Generally agreed assuming that the make-before-break may be performed manually.

Organization	Yes or No	Question 7 Comment
New England States Committee on Electricity	Yes	NESCOE generally supports these exclusions. However, NESCOE also notes that subsections (b) and (c) could (depending on the final definition of Inclusions I2 through I5) sweep many sub-transmission load serving elements into the BES, at a cost that is not justified in terms of reliability benefits. Regarding sub transmission, Exclusion Criteria E1 and E2 are concerned with radial configurations while E3 relates to Local Distribution Networks (LDN's). None of these apply to sub transmission networks that may contain both looped and radial configurations. Also, sub transmission networks may have power flowing parallel to the BES and may have power flowing into the BES with no potential for adverse impact on the reliability of the BES. Sub transmission networks operated at voltages less than 100 kV, connected to the BES via non-GSU transformers, should be excluded from the BES regardless of their configuration. It should be clear that all generation facilities connected to sub transmission are not BES as these units are adequately covered under other applicable NERC and/or regional reliability criteria. These units have no direct impact on the reliability of the BES.Regarding facilities at operated at 100 kV and above, the switching configuration as defined is not clear and possibly overly restrictive. The definition should incorporate language related to avoiding "parallel paths" with diverse electrical nodes in the BES.
Big Bend Electric Cooperative, Inc.	Yes	Our only concern about this exclusion is the timeframe we'd have to get an appropriate automatic interruption device installed. Currently, we have a short radial that hasn't yet caused us to be registered as a TO or TOP. Having time to get a solution in place would be crucial for us, as a small utility, to avoid additional regulatory fees and requirements.
Modern Electric Water Company	Yes	Clear exclusionary language for radial systems is absolutely necessary for a usable BES definition, particularly since radial systems serving load are already excluded from the existing NERC definition, radial systems serving load can only be used for the local distribution of energy (and are thus excluded by Congress in Sec. 215 of the FPA), and radial systems serving load have been confirmed excluded from the BES by previous FERC Orders. However, the proposed language could be improved to be more explicit and further remove the opportunity for improper/unintended interpretation. The currently-drafted E1 language has several issues that need to be addressed. For instance: The use of "automatic interruption device" in E1 is not consistent with "automatic fault interruption device" in E3-a, and could lead to different interpretations. Another issue is the use of the un-clarified phrase "single Transmission source", and deserves additional attention. Presumably, this language exists to describe the commonly-used radial tap from a networked (two-station) line, as detailed in NERC Project 2009-17-Response to Request for an Interpretation of PRC-004-1 and PRC-005-1 for Y-W Electric and Tri-State G&T. In Project 2009-17, diagrams show a radial tap placed on a line between Station A and Station B, and could be interpreted to indicate that the tap connects to two sources. Unless "single Transmission source" is clarified, then a radial line originating from a Double-Bus-Double-Breaker or a Breaker-and-a-Half station would also connect to two sources.

Organization	Yes or No	Question 7 Comment
		The drafted language does not go far enough to consider how networked lines are operated - sometimes radially, sometimes with multiple protection and isolation schemes and equipment. As drafted, this exclusion cannot be utilized by many insignificant taps (some of such insignificant length that no automatic fault interrupting device was deemed necessary). This situation leaves those insignificant elements to apply the LDN exclusion whose characteristics are dissimilar to a simple, load-serving radial tap. We support the intent of the language of E1-a, "A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service....", but suggest that it be re-written as follows: "The existence and use of 'make-before-break' switching devices, which temporarily connect otherwise radial load-serving systems to alternate sources for purposes of service continuity, do not affect the BES status of the system before, during, or after their use." This clarification is needed to address a position held in the WECC region (WECC Compliance Bulletin #4, April 15, 2011) that make-before-break switches render systems part of the BES, and discourage distribution providers from "reliably" serving their customers.We do not intend to air grievances, but ambiguous radial exclusion language has led to an extreme misuse of resources in the WECC region. It is imperative that industry and the SDT get this exclusionary language correct and put into use as soon as possible.In an explanatory bullet below Exclusion E1-c (herein) the SDT states "The SDT believes that faults on radial lines without protection devices could negatively impact the BES." Where this reasoning errs is that it assumes that everything upstream of a radial element is already determined to be BES. Many radial taps connect to LDN lines without AFIDs. The language proposed does not allow for a radial exclusion directly, but forces the insignificant tap to apply the LDN exclusion E3 - E1's success at being complete depends on another exclusion. Additionally, this reasoning implies that the mere existence of a AFID is the cure-all to reliability or that technical analysis hasn't already established the proper balance of equipment to adequately serve and protect these elements. We suggest including additional isolation devices as the demarcation point of small radial systems wishing to apply this exclusion.
Utility System Efficiencies, Inc.	Yes	USE agrees in concept with this Exclusion. However, it is unclear what is required to demonstrate the "make-before-break" connection. Is this statement intended to mean that the normally-open switch is mechanically or electrically interlocked to ensure the "make-before-break" requirement is met? It would be a normal switching practice to close the normally-open switch to make the parallel before opening the normally-closed switch, but is the normal switching practice sufficient to make this claim? Also, it is unclear whether the automatic interruption device itself is a part of the BES.
Duke Energy	No	This needs further clarification as to what constitutes a "single Transmission source". Does having a double/multiple circuit line(s) from a single transmission station constitute a radial system?.
Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally		

Organization	Yes or No	Question 7 Comment
open switch to a note, and clarified the generation allowed within the system through changes. **E1** - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating). Note – A normally open switching device between radial systems does not affect this exclusion.		
SERC OC Standards Review Group	No	This exclusion is acceptable if the suggestions in Questions 3 and 4 are incorporated. We also suggest modifying Exclusion E1a as follows: a) Only serving Load or only connecting to a transformer stepping down to a voltage below 100kv. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or,
Response: See responses to Q3 & 4 The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system. **E1** - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and~~		

Organization	Yes or No	Question 7 Comment
		~~I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating). Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.
Luminant Energy	No	E1 a) Omit or clarify-Sentence beginning "A normally open switch..." Does not say what to do with it. Is it included or excluded. Suggested wording would be "An example would be a line with a normally open switching device between radial systems that may operate in a 'make -before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service." E1 b)-Clarify- Sentence beginning "Only including..."Are those resources that are included in the exclusions that are not included in the inclusions? Or are they resources that are included in the inclusions that are not included in the inclusions? This meaning of this sentence is not clear. It should not be necessary to say that resources are excluded that are not included. Suggested wording would be "Generation resources that are not specifically described in the Inclusions I2, I3, I4 and I5."
Response: a) The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the respondents. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system. **b)** The SDT believes these changes provide clarification to how the Exclusions and Inclusions are related. If a generation resource is included in the Inclusions then it can not be excluded by the Exclusions. In addition, the SDT wishes to point out that the definition also includes Exclusion E3 that can be used for multiple connections serving local networks. The SDT realizes that a bright-line definition may require entities to seek exceptions through the Rules of Procedure exception process. **E1** – ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).		

Organization	Yes or No	Question 7 Comment
Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.		
Vermont Transco	No	Does “a single transmission source” mean a single “substation” at 100 kV or above? The wording of this exclusion appears to allow distribution (<100 kV) level generating units to be excluded from the definition of BES. If so then this generation exclusion is appropriate to the FERC order. However, the definition of “automatic interruption device” should be defined fully. Specifically what types of equipment are considered an AID? If a transformer has a high side voltage of 115 kV and a low side voltage of 34.5 kV it would not be part of the BES definition, however depending on how one interprets the exclusion for a radial feed, if the transformers automatic interruption device were on the low side of this transformer, it appears that this transformer would then need to be “included” as BES. In addition, would the protection schemes associated with the breaker failure on the low side of a transformer (voltage <100 kV) designed to send a signal to the high side (which is greater than 100KV) for a breaker failure scenario fall into the “included” facilities even though the transformer would not be “included”?

Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the respondents. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system.

In addition, the SDT wishes to point out that the definition also includes Exclusion E3 that can be used for multiple connections serving local networks. The SDT realizes that a bright-line definition may require entities to seek exceptions through the Rules of Procedure exception process. This BES definition does not address protection or control systems. Standards and requirements can be written against components that are not BES Elements.

E1 - ~~Any r~~Radial system~~s~~: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make before break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or,

b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,

c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

Organization	Yes or No	Question 7 Comment
Electric Reliability Council of Texas, Inc. Southwest Power Pool	No	See response to question 1 - while ERCOT ISO does not necessarily disagree with the substance of the proposed exclusions, it believes all exceptions should occur pursuant to the separate processes and criteria being developed that will be established in the NERC ROP. The BES definition should be more general in nature, focusing on objective thresholds. All exclusions should be addressed in the separate proceeding being conducted in parallel with this proceeding to develop the exception process, and ERCOT ISO reserves its right to comment on the substance of such proposals in that proceeding.
Response: Please see response to Q1. The SDT has developed a draft core definition, together with BES designations (Inclusions and Exclusions) that provide the specificity necessary to identify the vast majority of BES Elements by utilizing the existing definition and criteria previously approved for this purpose. The remaining facilities will be candidates for the Exception Process (RoP) where the Technical Principles will be utilized to determine if the facility is necessary for the reliable operation of the interconnected transmission network.		
Fayetteville Public Works Commission	No	Exclusion E1 references Inclusions I2 and I3. Therefore the comments provided in Question 3 with respect to Inclusion I2 are pertinent here as well. The radial system cannot be excluded if it includes any generation resources that are included in Inclusion I2. The ambiguity that exists in Inclusion I2 could, therefore, also have consequences in determining if a radial system can be excluded. If the recommended changes are made in Inclusion I2 then Exclusion E1 is acceptable as is.
Response: The SDT believes these changes provide clarification to how the Exclusions and Inclusions are related. If a generation resource is included in the Inclusions then it can not be excluded by the Exclusions. In addition, the SDT wishes to point out that the definition also includes Exclusion E3 that can be used for multiple connections serving local networks. The SDT realizes that a bright-line definition may require entities to seek exceptions through the Rules of Procedure exception process.		
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	No	BGE generally agrees with the “radial” exclusion, but votes “NO” due to a lack of clarity. The definition does not make it clear if radial facilities operating above 100 kV with automatic interrupting devices (which would otherwise be classified as non-BES under exclusion E1, part a) and serving networks operating below 100 kV are classified as non-BES. We believe E1 should make it clear that such radial facilities are non-BES. BGE would like to note that under the current RFC BES definition, such facilities are not designated as BES.To illustrate and clarify the BGE questions, please see the BGE Diagram attached. The BES designations included on the diagram are BGE’s interpretation of BES facilities under the proposed definition. Questions regarding the BGE Diagram:1. If the 13.8 kV device TB is operated “normally closed” as shown, is it the SDT’s understanding that the two 115 kV lines classified as Non-BES in the diagram are no longer

Organization	Yes or No	Question 7 Comment
		considered "radial"? 2. If the SDT does not consider the two 115 kV lines described above as "radial" with device TB closed, would this configuration be excluded as BES under exclusion E3? Or would the Exception Process be required to classify such a configuration as non-BES? See diagram at end of report.
Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system. The SDT is not in a position to provide advice on specific cases. **E1** - ~~Any r~~Radial systems: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating). Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.		
Springfield Utility Board	No	SUB agrees with the exclusion for radial systems, but would like clarification regarding the definition of "radial". SUB appreciates NERC developing a more clear and consistent definition of "radial". For clarity, SUB suggests the following language:" o Exclusion E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and that is characterized by any of the following:a)Only serving Load. A normally open switching device between radial systems with the same or different transmission sources may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Systems with a normally open switching device(s) that would otherwise result in a system with more than one transmission source if the switching device(s) is closed are considered radial systems. Or,b)Only including generation resources not identified in

Organization	Yes or No	Question 7 Comment
		Inclusions I2, I3, I4 and I5. Or,c)Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5?" As a side note, some in the industry appear to place a demarcation based on whether there is a fuse separating two systems. SUB is concerned with interpretations that indicate that if there is a fuse, they are separate. This could result in "closed" systems being considered "open" because there are fuses installed within the network. For example, consider a 115 kV interconnection point stepped down to distribution level service with a fuse continues along the distribution network to another fuse that is interconnected to a 115kV system with another transmission source. Is this fused system closed or open? Is this an intended outcome? SUB is hopeful that E1 will provide clarity to this issue.
Springfield Utility Board	No	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.

Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system.

In addition, the SDT wishes to point out that the definition also includes Exclusion E3 that can be used for multiple connections serving local networks. The SDT realizes that a bright-line definition may require entities to seek exceptions through the Rules of Procedure exception process. This BES definition does not address protection or control systems. Standards and requirements can be written against components that are not BES Elements. The SDT does not specify the type of normally open switch that will be used to separate the systems described in Exclusion E1 but understands that any such switch needs to be operated in such a fashion that insures safety, utilizes the best operating practices, and maintains reliability. Fuses are not considered normally open switches.

E1 - ~~Any r~~Radial systems~~:~~ ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV

Organization	Yes or No	Question 7 Comment
		or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating). Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.
Southern California Edison Company	No	SCE cannot support this exclusion as it will only apply if generation on the radial system does not exceed the criteria identified in I2, I3 and I5. SCE has identified its concerns regarding these aforementioned items in its previous responses.If the SDT goes forward with E1 criteria, the criteria should be modified as follows: (i) Delete "originating with an automatic interrupting device." This statement does not change or describe the flow to or from a radial system; (ii) E1 should be modified to identify that generation interconnected to a radial system should not exceed a measureable threshold of electrical demand on the radial system - an example being "5% occurrence in the past XXX years". This would negate some of the concerns identified regarding I2, I3 and I5; and (iii) SCE also feels that if the core BES definition is to reference protection devices, it should not identify the particular type of protection device as it did in E1, by specifically calling out "make before break" switching, as there are other types of protection with similar functionality.
Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular, the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system. In particular, the SDT has changed the inclusions to further specify what generation resources are included in a radial (refer to Exclusion E1 and Inclusion I3). **E1** - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or,		

Organization	Yes or No	Question 7 Comment
b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating). Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.		
Cogentrix Energy, LLC	No	This exclusion is acceptable if the suggestions in Questions 3 and 4 are incorporated.
Response: Please see responses to Q3 & 4.		
PPL Energy Plus and PPL Generation	No	See comments in Question 13
Response: See response to Q13.		
Consolidated Edison Co. of NY, Inc.	No	We agree with the concept of a allowing a radial exclusion from the BES. However, we ask that the term "device" be modified to include the optional plural; "device(s)." Some radial systems may require isolation by more than one automatic interrupting device.
Response: The SDT has eliminated the automatic interrupting device qualification. **E1** - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).		

Organization	Yes or No	Question 7 Comment
Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.		
MEAG Power	No	The definition of Exclusion E1 does not cover radial systems that are connected to a single transmission source by more than one automatic interruption device, such as occurs with a "breaker-and-a-half" arrangement. The definition should be modified as follows:"Any radial system which is described as connected from a single Transmission source originating with one or more automatic interruption devices and: .... "This exclusion uses many terms that are not defined under NERC's standard definitions: "radial load", "automatic interruption device" and "make-before-break". If these terms are used to define an exclusion and can be understood or interpreted differently by different people, then the terms should be formally defined.
Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system. In addition, the SDT wishes to point out that the definition also includes Exclusion E3 that can be used for multiple connections serving local networks. The terms in question are no longer used. **E1** - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating). Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.		
Independent Electricity System Operator	No	Again, we agree with the goal of E1 but we repeat the same concerns expressed in our responses to Q1 and Q3 with respect to the generation capacity thresholds. A majority of the transmission elements excluded by E1 would already be excluded by E3 and, therefore, E1 may be redundant. The SDT may wish to consider combining Exclusion E1 with Exclusion E3, modified as proposed in our response to Q9.

Organization	Yes or No	Question 7 Comment
		In Exclusion E1, we suggest changing "automatic interruption device" to "automatic fault-interrupting device" for consistency with E3(a).

Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular, the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system.

In addition, the SDT wishes to point out that the definition also includes Exclusion E3 that can be used for multiple connections serving local networks and there are sufficient differences between radial systems to warrant Exclusions E1 and E3.

E1 - ~~Any r~~Radial system~~s:~~ ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or,

b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,

c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

BPA	No	Exclusions E1 and E3 use the similar yet different terms "automatic fault interruption device" and "automatic fault interrupting device" respectively to refer to the specific type of device that must be used to separate the excluded area from the BES. Neither "automatic interruption device" nor "automatic fault interrupting device" are specifically defined in the NERC Glossary; leaving them up to auditor interpretation. From a compliance perspective, the fact that different terms are used seems to lead to a conclusion that different types of devices are being referred to in each case. However, given the technical characteristics of these exclusions, we are not able to discern how these devices might differ when used to isolate a "radial system" or a "Local Distribution Network", from the BES, as defined in E1 and E3 respectively. BPA would like to see the definition of "automatic fault interruption device" and "automatic fault interrupting device" If the intention is to refer to the same set of devices as being acceptable for E1 exclusion of Radial Systems and E3 exclusion of Local Distribution Networks, then please modify the language to be identical in each case. If the intention is to refer to a difference in the types of devices acceptable for providing separation from the BES in each case, then

Organization	Yes or No	Question 7 Comment
		please modify the language as necessary to further clarify the specific intention in a manner that enables consistent interpretation and application by auditors from the full spectrum of backgrounds and perspectives. If necessary, we further recommend that the drafting team consider creating a specific defined term (or 2) to add to the NERC Glossary that provides specific clarification to a clear and consistent manner in which these exclusions are to be applied. BPA would also like to point out a possible way to make E1 more clear – "Any radial system which is connected to a single Transmission source which connection originates with an automatic interruption device and . . ." BPA seeks clarification on whether, if a normally open breaker is switched in-service, it can still be considered radial. BPA understands this to mean that if a normally open switch is closed to maintain load service until the original source is disconnected, the system may still be considered radial.
Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system. Your assumption is correct. The SDT does not specify the type of normally open switch that will be used to separate the systems described in Exclusion E1 but understands that any such switch needs to be operated in such a fashion that insures safety, utilizes the best operating practices, and maintains reliability. **E1** - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating). Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.		
Tacoma Power		Tacoma Power supports Exclusion E1.

Organization	Yes or No	Question 7 Comment
Response: Thank you for your support.		
Chevron Global Power, a division of Chevron U.S.A. Inc.		See response to question 13
PacifiCorp	Yes	: Please refer to additional comments in question 13 regarding a contiguous BES.
Response: See response to Q13.		
ATCO Electric		Is a load substation categorized as a "radial substation" if its 144kV bus connects to another 144kV bus at an adjacent substation via two 144kV parallel transmission lines?
Response: The SDT is not in position to respond to this question as more information may be required to make a proper determination.		
City of Redding	Yes	Redding supports this high level exclusion of Radial systems as a clarification to the Brightline definition as long as it is part of the SDT's overall plan to make a clear distinction between distribution and transmission facilities. Redding's support rests on the assumption that the SDT will adequately address the distribution and transmission facilities issue via the Exception Process. There needs to be a fair and equable method where radial elements that do not meet this criterion can be identified as distribution acilities. This will hinge on the ability of the SDT to adequately address the two major issues: clarify the term "*necessary for operating the interconnected transmission network" and to "establish whether a particular facility is local distribution or transmission".*
Response: The SDT has clarified the core definition in this regard. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Western Electricity Coordinating Council	Yes	WECC generally agrees in concept. However, it is unclear what is required to demonstrate the "make-before-break" connection. Is this intended to mean that the normally-open switch is mechanically or electrically interlocked to ensure the "make-before-break" requirement is met? It would be a normal switching practice to close the normally-open switch to make the parallel before opening the normally-closed switch, but is the normal switching practice sufficient to make this claim?

Organization	Yes or No	Question 7 Comment
		Also, it is unclear whether the automatic interruption device itself is a part of the BES.

Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenters. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system.

The SDT does not specify the type of normally open switch that will be used to separate the systems described in Exclusion E1 but understands that any such switch needs to be operated in such a fashion that insures safety, utilizes the best operating practices, and maintains reliability.

E1 - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or,

b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,

c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusions ~~-~~I2, I3, or I4 ~~and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

Cowlitz County PUD	Yes	FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained. Cowlitz believes the exclusion as drafted adequately defines radials. Further, we would point out that two transmission systems that are operated radial with a normal open between them can't be operated reliably with the normal open indefinitely closed. Such extended closures are not possible were transmission protection systems are not designed for networked systems.
New York State Dept of Public Service	Yes	We agree with exclusion E1. As described, the facilities are clearly local distribution. Requiring a "make-before-break" switching device, between the BES and the excluded radial system, as a condition-precedent for such exclusion is proper. Such switches are necessary to promote reliable operation by enabling removal of radial systems principally serving load for maintenance and other reliable system operations. If the "make-before-break" switching capability is not included as part of the exclusion, the specification would undermine reliable system operation.
Sierra Pacific Power Co d/b/a NV	Yes	Agree with this exception and emphasize that the make-before-break language is essential to be retained in

Organization	Yes or No	Question 7 Comment
Energy		this exclusion.
Sweeny Cogeneration LP	Yes	We agree that all radial connections serving a single load, small generator, or combination should be excluded
Western Montana Electric Generating and Transmission Cooperative Public Utility District No. 1 of Snohomish County, Washington Blachly Lane Electric Cooperative Northern Wasco County PUD Central Electric Cooperative Clearwater Power Company Consumers Power Inc. Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Inc. Okanogan Electric Cooperative PNGC Power Raft River Rural Electric Cooperative Salmon River Electric	Yes	FERC has made clear throughout the Order No. 743 process that the existing exclusion for radials be retained. We believe the exclusion as drafted adequately defines radials.

Organization	Yes or No	Question 7 Comment
Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Clallam County PUD No.1 Chelan PUD – CHPD Kootenai Electric Cooperative Public Utility District No. 1 of Franklin County Midstate Electric Cooperative Central Lincoln Northwest Requirements Utilities		
Imperial Irrigation District	Yes	
Santee Cooper	Yes	
SERC Planning Standards Subcommittee	Yes	
ACES Power Participating Members	Yes	
Overton Power District No. 5	Yes	
Arizona Public Service Company	Yes	
Rayburn Country Electric Cooperative, Inc.	Yes	
Southern Company	Yes	

Organization	Yes or No	Question 7 Comment
Western Area Power Administration	Yes	
US Bureau of Reclamation	Yes	
Glacier Electric Cooperative	Yes	
South Texas Electric Cooperative, Inc.	Yes	
Portland General Electric Company	Yes	
South Texas Electric Cooperative, Inc.	Yes	
Dayton Power and Light Company	Yes	
Alberta Electric System Operator	Yes	
South Carolina Electric and Gas	Yes	
Farmington Electric Utility System	Yes	
Colorado Springs Utilities	Yes	
Consumers Energy Company	Yes	
Puget Sound Energy	Yes	
Clark Public Utilities	Yes	
Pepco Holdings Inc	Yes	

Organization	Yes or No	Question 7 Comment
PJM	Yes	
Oncor Electric Delivery Company LLC	Yes	
Manitoba Hydro	Yes	
City of Anaheim	Yes	
Xcel Energy	Yes	
Orange and Rockland Utilities, Inc.	Yes	
Response: Thank you for your support. The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the respondents. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system.		

8. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: The SDT believes that Exclusion E2 should be dedicated to the situation faced by behind-the-meter (i.e., retail customer owned) generation that are PURPA qualifying facilities (in the US) (e.g., see 18 CFR Part 292 for the regulations that are applicable in the US).and similarly situated generators in Canada. Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying facilities. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. The references to Inclusions I2 and I3 in Exclusion E2 have been deleted. Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA. The SDT has also modified Exclusion E3 to make non-retail generation in a local network (LN) subject to a comparable exclusion designation as that for customer-owned generation in Exclusion E2.

Due to industry comments, some slight changes were made for clarity:

E1 - ~~Any r~~Radial system~~s~~: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or,
b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,
c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example does not affect this exclusion.

E2 - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~group~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Organization	Yes or No	Question 8 Comment
Tri-State Generation and Transmission Association, Inc.	No	This Exclusion should also include "wholesale" meters for the instance where an electric distribution cooperative has some small generation connected to its distribution system that meets the same criteria.
Response: The SDT believes that Exclusion E2 should be dedicated to the situations faced by behind-the-meter (i.e., retail customer owned) generation that are PURPA qualifying facilities (in the US) and similarly situated generators in Canada. For example, see 18 CFR Part 292 for the regulations that are applicable in the US. Exclusion E2 has also been clarified by replacing the reference to "retail Load" with "retail customer Load." **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
NERC Staff Technical Review	No	The second condition (ii) in E2 is confusing. While the condition is appropriate and has specific meaning, the meaning will not be readily understood by most users of the definition. This condition should be clarified.
SPP Standards Review Group	No	We think we may concur with E2, but we are uncertain as to what is included in (ii). Could you please clarify?
Response: Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying cogeneration and small power production		

Organization	Yes or No	Question 8 Comment
facilities. For example, see 18 CFR §292.101 and §292.305(b) for the requirements specific to the US. The SDT believes that the meaning of the definition will be understood in Balancing Authority Areas where it is applicable. No change made.		
SERC Planning Standards Subcommittee	No	While we agree with the first part of E2, but we do not see the rationale for section (ii) and suggest it be deleted.
Response: The SDT believes that condition (ii) in Exclusion E2, which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. No change made.		
SERC OC Standards Review Group	No	This exclusion is acceptable if the suggestions in Questions 3 and 4 are incorporated.
Cogentrix Energy, LLC	No	This exclusion is acceptable if the suggestions in Questions 3 and 4 are incorporated.
Response: See response to Q3 & 4.		
Idaho Falls Power	No	We do not agree with E2(i). If the generation assets listed in the inclusions of I2 and I3 are not permitted to be excluded in E2, then what is the point of E2? The generation assets would already be in or out based upon the registry's MVA nameplate capacity. We would support E2 if provision (i) were struck. If generation assets are behind the meter on a local distribution network (fitting the criteria E3 for exemption) then too the generation should be exempted regardless of MVA rating. Moreover, we do not agree that there is a brightline MVA threshold of materiality to the BES. We would hope that the drafting team could demonstrate how the 20MVA brightline is a valid threshold for generation while the 100kV for transmission is not.We are concerned that relatively small generation on a local distribution network wherein generation is always serving local retail load behind the meter will be labelled a BES asset. As such, then is the LDN to the point of interconnection a BES asset as well, and therefore subject to the suite of TO/TOP standards? We feel such an outcome is unreasonable. It seems to us, as is stated under section 215 of the FPA, that the term BES "does not include facilities used in the local distribution of electric energy." To a logical conclusion, the generation attached to local distribution was considered and is intended to be one of the "facilities" and should therefore be exempted form inclusion in the BES. However, should the drafting team deem that all generation above 20MVA are a BES assets, we would hope that the exclusion for Local Distribution Networks could still stand and that the generation on the LDN would be divorced and defined separately. Our opinion is the BES is not one large contiguous system, but is rather comprised of assets across the region, which due to their size or location are vital to a sound BES but are not necessarily connected to each other. This principle would allow the generation to be regulated yet remove the burden of

Organization	Yes or No	Question 8 Comment
		transmission standards from small entities.

Response: Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA. The SDT has also modified Exclusion E3 to make non-retail generation in an LN subject to a comparable exclusion designation as that for customer-owned generation in Exclusion E2.

> **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.
>
> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:
>
> ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~
>
> **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;
>
> **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and
>
> ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~
>
> c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

The SDT has changed Inclusion I2 to simply reference the ERO Statement of Compliance Registry Criteria.

Tennessee Valley Authority	No	We suggest adding a reference to "I5" in the (i) section as follows: "the net capacity provided to the BES does not exceed the criteria identified in the inclusions I2, I3, or I5."

Response: The SDT believes that situations where the resources captured in Inclusion I5 directly serve its own Load are extremely rare and therefore may be demonstrated in the Exception Process. No change made.

Organization	Yes or No	Question 8 Comment
Western Montana Electric Generating and Transmission Cooperative	No	As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold (through reference to Inclusion I2) lacks an adequate technical justification in this context. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit ("standby, back-up, and maintenance power...") should be eliminated.
Northern Wasco County PUD Chelan PUD – CHPD Public Utility District No. 1 of Franklin County Northwest Requirements Utilities Big Bend Electric Cooperative, Inc Midstate Electric Cooperative Cowlitz County PUD	No	As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold (through reference to Inclusion I2) lacks an adequate technical justification in this context. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit ("standby, back-up, and maintenance power...") should be eliminated.
Response: Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA. The SDT believes that condition (ii) in Exclusion E2, which requires that the generation serving the retail customer Load self provide reserves, is essential for the integrity of the exclusion. **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
Southern Company	No	Section (i) is confusing because it mixes MW with MVA. The net capacity in section (i) would be in MW while the values referenced in I2 and I3 would be in MVA. This will create confusion. Also, we do not see any need for section (ii). Section (i) is sufficient without section (ii). We recommend Exclusion E2 to be re-written as follows:Exclusion E2 - A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if the net capacity provided to the BES does not exceed 20 MW for a single generating unit or 75 MW

Organization	Yes or No	Question 8 Comment
		for multiple generating units located at a single site.
Response: The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. No change made. The SDT believes that condition (ii) in Exclusion E2, which requires that the generation serving the retail customer Load self provide reserves, is essential for the integrity of the exclusion. No change made. Exclusion E2 has been revised due to industry comments: **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
Central Maine Power Company New York State Electric & Gas and Rochester Gas & Electric	No	E2 refers to "net capacity provided to the BES" (which seems to be a flow on an interconnection, not generator capacity), yet I2 and I3 refer to generator MVA. These are not the same unit which leads to inconsistency.This Exclusion appears to add confusion or additional criteria to that of the Compliance Registry.We recommend that E2 be stricken.
Response: The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. No change made.		
Intellibind	No	This is very confusing. Understanding the Drafting Team's goal, it would better to adjust the I2 and I3 criteria to address NET generation and behind the meter generation. E2 appears to try and address the net generation versus nameplate issue, but not fully. Station service power is behind the meter and it is a commitment of the resource. Many small generators have multiple processes outside of power generation they must provide for, and these should be considered in the exceptions.
Response: The SDT believes that Exclusion E2 should be dedicated to the situations faced by behind-the-meter (retail customer owned) generation that are PURPA qualifying facilities (in the US) and similarly situated generators in Canada. Exclusion E3 has been modified to accommodate non-retail generation in the LN. Exclusion E2 has also been clarified by replacing the reference to "retail Load" with "retail customer Load." The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail		

Organization	Yes or No	Question 8 Comment
		meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
US Bureau of Reclamation	No	The term "retail load" is ambiguous and unnecessary. The term should be changed to "load". The change is justified by the conditions (i) and (ii) placed on the generators.
Springfield Utility Board	No	The proposed language for Exclusion E2 refers to the "customer's side of the retail meter". There may be multiple customers with different resources within the geographic area served by a Registered Entity. Because E2 also refers to "net capacity provided to the BES", SUB assumes that E2 is intended to address resources within the Registered Entity that are served to a single customer or multiple customers. A Registered Entity may have Elements that are separate and independent but that are connected to the BES. Individually, these elements may not have resources that serve customer load that meet I2 or I3, but collectively the sum or resources and elements served do meet I2 or I3. SUB believes that the issue of reliability comes down to both resources, load served, and what paths are shared (or not) between resources and loads. SUB suggests that isolated loads and resources that are functionally independent from a

Organization	Yes or No	Question 8 Comment
		Registered Entities overall system do not need to be added together. SUB suggests the following language: "A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity along shared Elements provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority. For purposes of this exclusion, if a Registered Entity is responsible for elements that serve loads and resources that are separate from other elements that the Registered Entity is responsible for, then each set of loads and resources that are connected to Elements the Registered Entity is responsible for shall be evaluated separately and resources will not be added together.While Springfield Utility Board does not own any generating units, we do recognize the importance of the restoration of the Grid, and the generation necessary for the Grid.
Springfield Utility Board	No	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.

Response: The SDT believes that Exclusion E2 should be dedicated to the situations faced by behind-the-meter (retail customer owned) generation that are PURPA qualifying facilities (in the US) and similarly situated generators in Canada. Exclusion E3 has been modified to accommodate non-retail generation in the LN. Exclusion E2 has also been clarified by replacing the reference to "retail Load" with "retail customer Load."

> **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided

Organization	Yes or No	Question 8 Comment
		pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Sweeny Cogeneration LP	No	Generators which serve local retail load (cogeneration) should be excluded if the net capacity available to the BES does not exceed 20 MW Single Unit/75 MW Multiple Units thresholds. We believe there are further items to be added to the list related to generator interconnections, a task that was passed to this project from Project 2010-07. Just as is the case with complex distribution systems, there are a variety of generator-transmission interconnection architectures which are driving the Regions to inappropriately register Generator Owner/Operators as Transmission Owners.
Response: The SDT is aware of Project 2010-07 ("Generator Requirements at the Transmission Interface") and believes that this SDT should not attempt to duplicate that effort. A primary objective of Project 2010-17 is to clarify the BES definition, make it more transparent, and eliminate regional discretion with respect to the definition. No change made.		
Electric Reliability Council of Texas, Inc.	No	See response to question 7.
Southwest Power Pool	No	See response to question 7.

Organization	Yes or No	Question 8 Comment
Response: See response to Q7.		
South Carolina Electric and Gas	No	We agree with the first part of E2, but we do not see the rationale for section (ii) and suggest it be deleted.
Central Lincoln	No	We support excluding behind the meter generation below the limits, but the string of "ands" and "ors" in this exclusion are far too confusing with numerous ways to parse them. Suggest eliminating bullet (ii) since the existence of obligations has no bearing on impact.
NERC Transmission Issues Subcommittee (TIS)		The last sub-bullet in E2 is terribly confusing. The TIS does not offer alternate wording because we are unsure of the meaning of the phrase: >>>>>>>>>> "...pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority."
PUD No. 2 of Grant County, Washington	Yes	Unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit ("standby, back-up, and maintenance power...") should be eliminated.
Response: Condition (ii) in Exclusion E2 is derived from FERC and provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR Part 292 for the regulations that are applicable in the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer Load self provide reserves, is essential for the integrity of the exclusion. No change made.		
Southern California Edison Company	No	SCE does not believe that the size of generator should dictate what system facilities, regardless of voltage, will or will not be included in the BES definition. More important, is the issue of whether or not the generation has net flow(s) out to the greater integrated networked transmission system. It is the "generation" and not the "generator" which has impacts on the BES.In addition, it would seem that if these are truly "behind-the-meter", non-export interconnected generation, then there is no scenario that would result in flow back onto the BES, no matter what the interconnection level. The focus should not be restricted to only "behind-the-meter" generation, but rather on the flow generation from the radial system.
City of Redding	Yes	Redding agrees that generators located in close proximity to the end user should be classified as distribution load modifier generators. Additionally, Redding believes small utilities that have distinct metered boundaries with installed generation intended to serve their customers (load displacement generators) should receive the same exclusion as generators behind retail meters. These generators installed on distribution facilities are almost identical to the generating units in Exclusion E2: "*a generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby,*

Organization	Yes or No	Question 8 Comment
		back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority." A local distribution network that is owned by a utility is directly serving load to the end user (retail customer), it has meters at the network boundaries where bulk power is transferred from the BES network to the distribution facilities, it has binding obligations with the BA or Reserve Sharing Group, to provide reserves (back up power), and meets the net capacity requirement. The distribution facilities are technically retail load to the BES network if owned by the retail user (example would be a Municipal, Public Utility District, Irrigation District, etc.). Redding has three suggestions to address our concerns: 1. The language in Exclusion E2 could be changed: From: "*electric energy on the customer's side of the retail meter*" To: "*electric energy on the customer's side of the retail, or distribution system, meter(s)".* This change will provide an equable exclusion for the small utility and for generation directly dedicated to local distribution load. OR 2. The LDN characteristic #b in Exclusion E3 could have the limits of generation removed and modified to read "*the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3" (identical to the language in E2).* 3. The SDT address this issue via the Exception Process by specifically creating an exception that addresses generation in a LDN used as a load modifier.

Response: The SDT believes that Exclusion E2 should be dedicated to the situations faced by behind-the-meter (i.e., retail customer owned) generation that are PURPA qualifying facilities in the US and similarly situated generators in Canada. Exclusion E3 has been modified to accommodate non-retail generation in the LN. The SDT has merged Inclusion I2 and Inclusion I3 and therefore Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed the criteria identified, which is greater than 75 MVA. The SDT has merged Inclusion I2 and Inclusion I3 and therefore Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed the criteria identified, which is greater than 75 MVA.

> **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable

Organization	Yes or No	Question 8 Comment
regulatory authority. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Clark Public Utilities	No	As indicated by Clark in its comments on the core definition of the BES, Clark believes the 20 MVA and the 75 MVA thresholds lack adequate technical justification and are a purely arbitrary quantities. The use of a capacity thresholds in the definition of the BES should have technical reasons.
Response: The MVA thresholds were adopted from the Statement of Compliance Registry Criteria. Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA. **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
The Dow Chemical Company	No	Clause (ii) should be revised as follows: "(ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or pursuant to a binding obligation with another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority."

Organization	Yes or No	Question 8 Comment
Manitoba Hydro	No	It is not clear what is meant by "retail Load". This is not a NERC defined term. Additional detail is required.
Florida Municipal Power Agency	Yes	We understand that E2 is intended to apply only to retail customers' generation. The exclusion should therefore be revised to make that limitation clear. Specifically, the first sentence should read: "A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the retail customer's side of the retail meter.
Transmission Access Policy Study Group	Yes	We understand that E2 is intended to apply only to retail customers' generation. The exclusion should therefore be revised to make that limitation clear. Specifically, the first sentence should read: "A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the retail customer's side of the retail meter."
Northern California Power Agency	Yes	NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.
Michgan Public Power Agency	Yes	I understand that E2 is intended to apply only to retail customers' generation. If that is the case then I would suggest the following changes be made to make that limitation clear. Specifically, the first sentence should read: "A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the retail customer's side of the retail meter."
Response: Exclusion E2 was modified to reflect your recommendation. **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
ISO New England, Inc.	No	E2 refers to net capacity and yet I2 and I3 refer to MVA. These are not the same unit which leads to inconsistency. This Exclusion appears to add additional criteria than that of the Compliance Registry; we suggest simply using the language from the Compliance Registry.
Response: The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to		

Organization	Yes or No	Question 8 Comment
the BES that does not exceed 75 MVA. Clarification of the original language adopted from the Statement of Compliance Registry Criteria (SCRC) was in response to industry comments. **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
Independent Electricity System Operator	No	Again, we echo the same comments stated in our responses to Q1 and Q3. We do not agree with the Exclusion E2 for the very same reasons specified in responses to questions 3, 4, and 6. Additionally, we are not clear of the intent for the restriction stated in Exclusion E2 (ii).
Response: See responses to Q1, Q3, Q4 and Q6. Condition (ii) in Exclusion E2 is derived from FERC and provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR Part 292 for the regulations applicable in the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer Load self provide reserves, is essential for the integrity of the exclusion. No change made.		
Utility System Efficiencies, Inc.	No	As noted in USE's response to Question 3, we believe the inclusion of the 20 MVA threshold (through reference to Inclusion I2) lacks an adequate technical justification in this context. In addition, whether or not there is provision of standby, back-up, and maintenance power services to the unit(s) or the load is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the item (ii) in this Exclusion should be eliminated.
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Company Consumers Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative		As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold lacks an adequate technical justification. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit should be eliminated.

Organization	Yes or No	Question 8 Comment
Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Inc Okanogan Electric Cooperative PNGC Power Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Clallam County PUD No.1		
Public Utility District No. 1 of Snohomish County, Washington	Yes	As noted in our response to Question 3, we believe the inclusion of the 20 MVA threshold (through reference to Inclusion I2) lacks an adequate technical justification in this context. Further, unless the generation unit is reliability-must-run or essential blackstart, the function of the unit is irrelevant to the reliable operation of the interconnected bulk transmission grid, and we therefore believe the reference to the function of the generation unit ("standby, back-up, and maintenance power...") should be eliminated.

Response: Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA.

Condition (ii) in Exclusion E2 is derived from FERC and provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR Part 292 for the regulations applicable to the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer Load self provide reserves, is essential for the integrity of the exclusion.

> **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.

Organization	Yes or No	Question 8 Comment
BPA	No	BPA seeks clarification on exactly what "net capacity provided to the BES" means. BPA would like to suggest a minor clarification in brackets below: A generating unit or multiple generating units located on, and that serve all or part of retail Load with electric energy on, the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3 or I5 and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.
Response: Exclusion E2 is dedicated to the situations faced by behind-the-meter (retail customer owned) generation that are PURPA qualifying facilities in the US and similarly situated generators in Canada. While the criteria in Inclusions I2 and I3 were based on gross nameplate ratings in MVA, the first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. The "net capacity provided to the BES" is the behind-the-meter generation that exceeds the Load directly served by the generator. The SDT believes that situations where the resources captured in Inclusion I5 directly serve its own load are extremely rare and should therefore be demonstrate in the Exception Process. No change made.		
Georgia System Operations		How is "net capacity provided to the BES" measured (e.g., by nameplate capacity minus peak load, by actual generated energy - rather than capacity - minus actual load at each moment or over some period of time, etc.)? It is possible that a larger than currently necessary generator may be installed in anticipation of future load growth, but that it is never used to generate significantly more than what is needed for load. Depending on how "net capacity" is calculated, such a generator might unnecessarily be pulled into the BES.
Response: The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. Regardless of the nameplate rating of the generator(s), the "net capacity" is the behind-the-meter generation that exceeds the Load. No change made.		
Tacoma Power		Tacoma Power generally supports Exclusion E2. However, no justification for the 20 MVA and 75 MVA levels in Inclusion I2 and Inclusion I3 have been provided and therefore they appear arbitrary. Since this measurement will define Elements for absolute inclusion in the BES, the thresholds should be based on a need to maintain transmission reliability. We strongly urge the SDT to accept our proposed changes to Inclusion I2 and Inclusion I3, listed above in items 3 and 4.
Response: Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA. See responses to Q3 and Q4.		

Organization	Yes or No	Question 8 Comment
E2 - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
Dominion	Yes	Dominion agrees with Exclusion E2 because we agree that specific criteria can be applied and will indicate the Element or Facility is not necessary for operating an interconnected electric energy transmission network or is needed to maintain transmission system reliability. . However Dominion suggests that the SDT add a defined interval of time for measurement of net capacity so that planners can be assured that the exclusion should really be applied at the location. Dominion suggests use of an hour as the time increment.
Response: The SDT believes that the context of "net capacity" is understood and no change is necessary.		
American Municipal Power and Members	Yes	We understand that E2 is intended to apply only to retail customers' generation. The exclusion should therefore be revised to make that limitation clear. Specifically, the first sentence should read: "A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the retail customer's side of the retail meter." In addition, the first condition of exclusion, (i), "the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3," as written is vague and could be subjectively applied. I2 limits capacity supplied to the BES to 20MVA while I3 limits that capacity to 75MVA. A better way to state the exclusion would be as follows: (i), "the net capacity provided to the BES does not exceed the retail customer's total nameplate generation, or 75MVA, whichever is greater,".
Response: The term "retail Load" had been replaced with "retail customer Load." Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA. **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
Hydro One Networks Inc	Yes	We agree with most of the changes in Exclusion E2. However, we feel there is a need for evidence or technical study in regards to the limits described in I2 & I3. The real net aggregated power seen by the bulk

Organization	Yes or No	Question 8 Comment
		power system at the interconnection, with the outlook of distributed generation systems, may be different than past experience. Hence it requires to be reassessed based on technical studies with respect to the future integration of DG's. (Please refer to comments in questions: 3 & 4). To establish a bright-line definition, Exclusion E2 may be acceptable if the SDT provides adequate provisions within the exception procedure. (See response to Q7)
Response: Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA. The I2 Inclusion was adopted from the ERO Statement of Compliance Registry Criteria. See response to question 7. **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
Western Electricity Coordinating Council	Yes	WECC agrees in concept, but it is unclear what happens if/when the "binding obligation" ends, as well as what constitutes a "binding obligation." E2(ii) should be clarified as to what constitutes "standby, back-up, and maintenance power services provided...pursuant to a binding obligation." This may cause administrative burden to monitor such binding commitments.
Cogeneration Association of California and Energy Producers & Users Coalition	Yes	To respond to WECC's concern, please consider that facilities procure standby service because it is needed for the facility's operation, not to escape registration or compliance. This is a long-term commitment, and the sufficiency of the service will be monitored by the state regulatory authority. "Standby service" is a term well-understood in the industry and generally not further defined in any utility tariff.
Response: Binding obligations are retail tariffs approved by state PUCs or applicable Canadian provincial authorities, or the FERC-approved market rules of RTOs/ISOs in cases where FERC has granted a waiver to local utilities from those service obligations because the RTO/ISO market provides comparable services. In the US, the services are defined in 18 CFR §292.101 and §292.305(b). No change made.		
ReliabilityFirst	Yes	as long as the resources when removed from service have a load component that accompanies it, otherwise there could be an impact to the BES.
Response: That is the purpose of condition (ii) in Exclusion E2. Back-up power, as defined in the US in 18 CFR §292.101, means electric energy or capacity supplied by an electric utility to replace energy ordinarily generated by a facility's own generation equipment during an unscheduled outage of the facility.		

Organization	Yes or No	Question 8 Comment
Maintenance power, also as defined in 18 CFR §292.101, means electric energy or capacity supplied by an electric utility during scheduled outages of the qualifying facility. Provincial regulations do the same in Canada. No change made.		
Texas Industrial Energy Consumers (TIEC)	Yes	TIEC supports this exclusion with two clarifications. The language currently excludes generation on the customer's side of the meter as long at "the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3." There are special circumstances in which an regional Reliability Coordinator may ask that customer-owned generation export to its maximum capability (i.e., with its load curtailed to the lowest level) in order to support grid reliability. Circumstances such as this should not be considered in determining whether the "net" capacity exported to the BES exceeds the threshold for registration. Additionally, there are often instances when customer-owned generation and associated load are in start-up or shut-down processes that may cause the net export to the BES to vary such that it temporarily exceeds the registration thresholds. Outlying situations such as these should not trigger registration. Rather, the "net" capacity should be interpreted as the typical amount exported during steady-state operation of the site. This interpretation of "net capacity" should also apply to exclusions E1 and E3.

Response: The SDT has discussed your concern and agrees that emergency or other extraordinary situations should not impair the general applicability of the E2 Exclusion.

The SDT has changed E1 and E3 to clarify the criteria applicable to non-retail generation.

E1 - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

d) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or,

e) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,

f) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A G~~g~~roup~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to

Organization	Yes or No	Question 8 Comment
		accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection~~ as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
FortisBC	Yes	We agree with most of the changes in Exclusion E2. However, we feel there is a need for evidence or technical study in regards to the limits described in I2 & I3. The real net aggregated power seen by the bulk power system at the interconnection, with the outlook of distributed generation systems, may be different than past experience. Hence it requires to be reassessed based on technical studies with respect to the future integration of DG's. (Please refer to comments in questions: 3 & 4). To establish a bright-line definition, E2 exclusion may be acceptable if the SDT provides adequate provisions within the exception procedure. See response to Q8 Accordingly, we suggest the SDT carefully craft the exception criteria that will allow entities to present their case to the ERO for exclusion from E2 requirements.
AltaLink	Yes	We agree with most of the changes in Exclusion E2. However, we feel there is a need for evidence or technical study in regards to the limits described in I2 & I3. The real net aggregated power seen by the bulk power system at the interconnection, with the outlook of distributed generation systems, may be different than past experience. Hence it requires to be reassessed based on technical studies with respect to the future integration of DG's. To establish a bright-line definition, E2 exclusion may be acceptable if the SDT provides adequate provisions within the exception procedure. Accordingly, we suggest the SDT carefully craft the exception criteria that will allow entities to present their case to the ERO for exclusion from E2 requirements.

Organization	Yes or No	Question 8 Comment
Response: Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA. See response to Q8. **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
City of St. George	Yes	The limits on generation levels need to be revisited, with similar concerns as noted to questions 7 & 9 for exclusions E1 & E3.
Response: Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA. The SDT adopted the criteria from the ERO Statement of Compliance Registry Criteria. **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
Illinois Municipal Electric Agency	Yes	Please see comments under Question 13.
Response: See response to Q13.		
New England States Committee on Electricity	Yes	Please refer to comments in number 7 above. Additionally, there appears to be an inconsistency in how generating units are expressed in E2 (net capacity) and in I2 and I3 (MVA).
Response: See response to Q7. The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. Exclusion E2 now designates for exclusion relevant behind-the-meter generation that provides net capacity to the BES that does not exceed 75 MVA. **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and		

Organization	Yes or No	Question 8 Comment
maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.		
New York State Dept of Public Service	Yes	This exclusion is appropriately specified. Behind the meter generation is mainly on the local distribution system and most likely modeled in power flow cases used to study the bulk system as netted against load. For the few sizable behind the meter generation that are: 1) connected at the 100 kV level and above; and, 2) exceed the 75 MVA threshold, if it is believed that these facilities will impact the bulk system they can be petitioned for inclusion under the rules of procedure.
Exelon	Yes	Exelon agrees with this Exclusion since this language is quoted from the Statement of Compliance Registry Criteria.
Public Utilities Commission of Ohio	Yes	Exclusion E2 is appropriate. Same as 7.
GTC	Yes	
Northeast Power Coordinating Council	Yes	
Imperial Irrigation District	Yes	
Santee Cooper	Yes	
MRO's NERC Standards Review Forum	Yes	
Michigan Public Service Commission(MPSC)	Yes	
ACES Power Participating Members	Yes	
National Rural Electric Cooperative Association	Yes	

Organization	Yes or No	Question 8 Comment
(NRECA)		
Overton Power District No. 5	Yes	
Arizona Public Service Company	Yes	
Rayburn Country Electric Cooperative, Inc.	Yes	
New York State Reliability Council	Yes	
New York Power Authority	Yes	
Luminant Energy	Yes	
Electricity Consumers Resource Council (ELCON)	Yes	
Western Area Power Administration	Yes	
National Association of Regulatory Utility Commissioners	Yes	
PacifiCorp	Yes	
Grand Haven Board of Light and Power	Yes	
Glacier Electric Cooperative	Yes	
FHEC	Yes	
South Texas Electric	Yes	

Organization	Yes or No	Question 8 Comment
Cooperative, Inc.		
Portland General Electric Company	Yes	
South Texas Electric Cooperative, Inc.	Yes	
National Grid	Yes	
Dayton Power and Light Company	Yes	
ExxonMobil Research and Engineering	Yes	
Duke Energy	Yes	
Alberta Electric System Operator	Yes	
Fayetteville Public Works Commission	Yes	
Florida Keys Electric Cooperative	Yes	
American Electric Power	Yes	
East Kentucky Power Cooperative, Inc.	Yes	
American Transmission Company, LLC	Yes	
Farmington Electric Utility System	Yes	

Organization	Yes or No	Question 8 Comment
Sierra Pacific Power Co d/b/a NV Energy	Yes	
Colorado Springs Utilities	Yes	
Consumers Energy Company	Yes	
Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)	Yes	
Muscatine Power and Water	Yes	
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	Yes	No comment.
Sacramento Municipal Utility District (SMUD)	Yes	
Puget Sound Energy	Yes	
GTC	Yes	
Idaho Power	Yes	
Long Island Power Authority	Yes	
PJM	Yes	
Oncor Electric Delivery Company LLC	Yes	

Organization	Yes or No	Question 8 Comment
City of Anaheim	Yes	
MEAG Power	Yes	
Xcel Energy	Yes	
Golden Spread Electric Cooperative, Inc.	Yes	
Response: Thank you for your support. The SDT modified Exclusion E3 to make non-retail generation in a local network subject to a comparable exclusion designation as that for customer-owned generation in Exclusion E2. Please see the modified definition.		

9. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: The SDT has modified the local network definition in the following manner:

- Elimination of the term "Distribution" in the label of this exclusion, making it a "local network".
- Changes were made to the introductory paragraph in Exclusion E3, which the SDT believes clarifies the intent of the local network, including a statement that the local network does not accommodate bulk power transfer across the interconnected system.
- Eliminated the provision in Exclusion E3.a which referred to automatic fault interrupting devices, and changed wording to clarify the connection point of the local network.

While the SDT disagrees with removal of restrictions on the amount of connected generation, it takes note of the concern about growing amounts of connected generation within the distribution system. As such, the SDT has made changes to those limits from the original posting in a new item E3.a limiting connected generation within a local network to 75 MVA aggregate non-retail generation similar to the provision in Exclusion E1.c. Commenters expressed concern about the lack of technical justification for a 75 MVA limit on connected generation; however, the SDT has been presented with no technical basis upon which to suggest a change from this value. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.

Items E3.c and E3.d were combined into a new item E3.b, incorporating the concepts of power flow into the Local Network and precluding energy transfers across the Local Network. This provision also effectively removed the comparison test between generation and minimum demand of the Local Network.

The SDT considered commenters' suggestions regarding allowance of some power flow out of the LN, and concluded that strict limits precluding out-flow are appropriate, particularly given that the local network comprises facilities that are electrically parallel to the BES.

Finally, the SDT, in consideration of regulatory concerns, inserted a provision in the local network exclusion to limit the operating voltage of the local network to 300 kV.

The revised Exclusion E3 reads as follows:

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection~~ as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Organization	Yes or No	Question 9 Comment
Northeast Power Coordinating Council	No	Regarding E3.a.--If the supply to a LDN is tapped off a Bulk Electric System facility, and the step down transformer is protected on its high side by a fault magnitude supervised automatic interrupting device (such as a circuit switcher), how does that affect the exclusion? The circuit switcher will only interrupt faults up to a certain magnitude. Above that threshold, depending on the system configuration, fault clearing might have to be done at the Bulk Electric System facility. Regarding E3.d.--The LDN cannot be used to transfer real or reactive power under all operating conditions. Suggest combining E3.c and E3.d to read as follows:Power is intended to flow only into the LDN. The generation within the LDN shall not exceed the electric real or reactive power demand within the LDN. The LDN only delivers real or reactive power to load, and is not to be used to transfer real or reactive power between different locations in the BES. Under no system condition is BES reliability to be dependent on LDN flow.

Response: The SDT has modified the local network definition, eliminating provision E3.a, which referred to the automatic fault interrupting devices. The point of demarcation of the local network may be clarified in subsequent guidance documents; however, it begins at the point where the three remaining characteristics (E3.a, b, and c) can be demonstrated. Additionally, the SDT has combined prior items E3.c and E3.d into a new item E3.b in the revised definition incorporating the concepts of power flow into the local network and precluding energy transfers across the Local Network.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to

Organization	Yes or No	Question 9 Comment
		accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection~~ as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Tri-State Generation and Transmission Association, Inc.	No	We believe that element c. needs to be changed to : "Power flows only into the Local Distribution Network, even under all contingency conditions that are considered under any TPL standard requirement dealing with transmission system performance: The generation within the LDN shall not exceed the electric Demand within the LDN;"
Response: The SDT has combined prior items E3.c and E3.d into a new item E3.b in the revised definition incorporating the concepts of power flow into the Local Network and precluding energy transfers across the Local Network. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the Interconnected System. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~		

Organization	Yes or No	Question 9 Comment
c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
NERC Staff Technical Review	No	Exclusion E3 is acceptable in general; however, (i) including the word "distribution" in the exclusion could be interpreted to imply that certain distribution facilities are included in the BES unless specifically excluded, (ii) item d) is unclear as to whether it applies to any parallel flow or only to parallel flow for which the group of Element(s) are part of the contract path, and (iii) interrupting devices should be included in the BES for the same reasons as stated above for Exclusion E1. >>>>>>>>>> The concern with the word distribution in the term "Local Distribution Network" can be avoided by eliminating use of this phrase. The proposed definition already defines the Elements covered by Exclusion E2 and does not require defining a term for use in this standard. An alternate solution would be to establish a different term to describe the groups of Elements that does not include the word distribution. >>>>>>>>>> The phrase "is used to" in item d) lacks clarity. Clarity should be provided by stating that the group of Elements does not transfer energy originating outside the group of Elements; this is consistent with item c) that requires that power flows only into the group of Elements. >>>>>>>>>> The reason for requiring automatic interrupting devices between the BES and the excluded LDN is to prevent faults and other abnormal conditions in the LDN from negatively impacting reliability of the BES. Given the reliance on the interrupting devices to support BES reliability, it is appropriate to include the interrupting devices in the BES so that they are planned, designed, maintained, and operated in accordance with NERC Reliability Standards the same as other BES Elements. Thus, when excluding groups of Elements at 100 kV or higher, the BES line of demarcation should be on the load side of the automatic interrupting devices. >>>>>>>>>> To address our concerns, Exclusion E3 should be changed to read: >>>>>>>>>> E3 - Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. Such groups of Elements are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. These groups of Elements are characterized by all of the following:a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the group of Elements must be connected through automatic fault-interrupting devices (the automatic interrupting device is part of the BES);b) Limits on connected generation: Neither the group of Elements, nor any underlying Elements operated at 100 kV or below, includes more than 75 MVA generation (in aggregate);c) Power flows only into the group of Elements: The generation within the group of Elements shall not exceed the electric Demand within the group of Elements;d) Not used to transfer bulk power: The

Organization	Yes or No	Question 9 Comment
		group of Elements does not transfer energy originating outside the group of Elements for delivery through the group of Elements; ande) Not part of a Flowgate or transfer path: The group of Elements does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Response: The term "Distribution" has been removed; these facilities are now referred to as "local networks". The SDT has combined prior items E3.c and E3.d into a new item E3.b in the revised definition incorporating the concepts of power flow into the local network and precluding energy transfers across the local network. Item E3.a has been removed from the definition, and as such, there is no longer any mention of the interrupting devices within this exclusion. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the Interconnected System. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Dominion	No	An Element or Facility should only be excluded where the Element or Facility is not necessary for operating an interconnected electric energy transmission network or is needed to maintain transmission system reliability.
Response: The SDT believes that the revised Exclusion E3 properly identifies facilities that are not necessary for operating an interconnected electric energy		

Organization	Yes or No	Question 9 Comment
transmission network and not needed to maintain transmission system reliability.		
SPP Standards Review Group	No	While the principle contained in (c) is valid, the explanation following it is too restrictive. This does not allow the LDN to maintain any excess generation for contingencies and normal load fluctuations. In (b) the implication is that the LDN is being treated like a single site in I3 whereby the total generation capability is restricted to 75 MVA. Is this a valid assumption for municipals? In (e) permanent flowgates may change from month to month, therefore an LDN could bounce into and back out of the BES depending upon what happens regarding a specific facility which may be included as part of a flowgate. This creates a very fluid situation which can lead to confusion.
Response: The SDT has revised the language concerning limits on connected generation in new item E3.a. A 75 MVA aggregate non-retail generation limit is proposed, and the SDT believes that this is consistent with the similar provision in the radial exclusion, E1.c. The SDT appropriately uses the word "permanent" in connection with the flowgates in E3.c, as its intent is to prevent facilities that might temporarily be considered to be a flowgate from qualifying for exclusion as a local network. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the Interconnected System. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
MRO's NERC Standards Review	No	The SDT is defining what a Local Distribution Network is but the term transfer bulk power is ambiguous.

Organization	Yes or No	Question 9 Comment
Forum		Please clarify what the intent of this exclusion is.

Response: The SDT has modified the definition such that the term "bulk power" is no longer used in the characteristics, specifically new item E3.b. The term "bulk power" was retained in paragraph E3, as the SDT believes it provides conceptual value to the exclusion principle.

> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:
>
> ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~
>
> **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;
>
> **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and
>
> ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~
>
> c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

SERC OC Standards Review Group	No	"b) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;" The SERC SDT believes you intended to grant exception E2 in this case; however, it is not explicitly identified" c)Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN;" Is this intended for each hour of the year or is it possible for some hours that generation may exceed load? This needs to be clarified.

Response: The revised definition includes a revised item E3.a, which clarifies the limits on connected generation within the local network.

It is the intent of the SDT that the power flowing into the local network be demonstrated through integrated hourly measurements over a period of time consistent with the ROP Exception Process, which is currently contemplated to be a period of two years.

Idaho Falls Power	No	We support this exclusion, however generation assets on a Local Distribution Network should be excluded

Organization	Yes or No	Question 9 Comment
		regardless of MVA rating if all other defining critera in E3 are met. Additionally, it is unclear as written whether a single generation asset greater than 20MVA would be excluded as E3(b) states 75 MVA, but is inconsist with E2(i). Some clarification of intent is needed to resolve the ambiguities between these two exclusions.

Response: The SDT disagrees with removing restrictions on the amount of connected generation, but has made changes to those limits to address industry concerns.

Please refer to the new item E3.a.

> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:
>
> ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~
>
> **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;
>
> **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and
>
> ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~
>
> c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Tennessee Valley Authority	No	The following comments are specific to subsections of E3:Section (c): We suggest the section to read, "Power flows out of the LDN shall not exceed the limitations imposed in Inclusions I3 and I5. "Section (d): We suggest the section be read, "Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN, except for the power flowing in a normally open switching device between radial systems operating in a make-before-break fashion as defined in exclusion E1."

Response: The SDT considered this suggestion regarding allowance of some power flow out of the local network, and concluded that strict limits precluding out-

Organization	Yes or No	Question 9 Comment
flow are appropriate, particularly given that the local network comprises facilities that are electrically parallel to the BES. The revised definition has included a change to the prior E3.d language, which is now reflected in the revised item E3.b. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
ReliabilityFirst	No	the LDN term must be a NERC defined term and if this is allowed as mentioned in the first comment, we feel the intent of the FERC Order was to simplify and not complicate the definition and the inclusion/exclusion process. This definition is now even more complex. we also feel that as a result of several defined terms such as the LDN teh proposed definition will in most cases exclude portions of networks in locations such as Washington DC, New York and other Metro Areas, many Munis and citiies that are currently registered. If the intent is to remove entities from the registry this will in most likely do it.
Response: The SDT intends to fully explain the characteristics of a "local network" within the BES definition, and as such, the term is not necessary in the Glossary. It is not the SDT's intent to specifically exclude any facilities in major metropolitan areas; it expects that the specific examples mentioned (NYC, Washington DC) would not qualify for exclusion under the revised Exclusion E3. No change made.		
Electricity Consumers Resource	No	There are two different types of LDN: utility owned and customer owned. They should not be treated the

Organization	Yes or No	Question 9 Comment
Council (ELCON)		same. Criteria (a) through (e) in Exclusion E3 may be appropriate for distinguishing between utility-owned LDN and utility-owned BES transmission often owned and operated by the same integrated utility. A separate, stand-alone exclusion criteria should be established for customer-owned elements that serve to distribute electric energy to on-site loads, including all or part of the electric energy from behind-the-meter generation. Thus, E3 criteria (a) through (e) would apply exclusively to utility-owned elements. For customer-owned elements, the new criterion (f) might read:"Or the LDN is also characterized by:"f) The Elements are customer owned and used to distribute electric energy to on-site loads, including all or part of the electric energy from behind-the-meter generation."See response to #11 below for further justification for this recommendation.

Response: The SDT has revised item E3.a to clarify that retail generation would not contribute toward the limits of connected generation within the local network.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups ~~of~~ contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Central Maine Power Company New York State Electric & Gas and Rochester Gas & Electric	No	This exclusion is vague, but needs to be clear and comply with Order 743. Also, "distribution" is already excluded from transmission and therefore "BES." Also, E1 refers to "automatic interruption device" and E3 refers to "automatic fault interrupting device", neither of which are defined.We think that large portions of the network may be inappropriately excluded under this exclusion and exclusion E3 should be deleted.

Organization	Yes or No	Question 9 Comment
Response: The term "Distribution" has been removed, and now this exclusion refers to "local networks". Also, the prior item E3.a, referring to automatic fault interrupting devices, has been removed in this revision of the definition. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Hydro-Quebec TransEnergie	No	Part b) is again very restrictive. It is not necessary to refuse exclusion when generation is above 75 MVA. However, a provision should be made so that reliability standards related to generator shall apply.
Response: The SDT disagrees with removing restrictions on the amount of connected generation, but has made changes to those limits to address industry concerns. Please refer to new item E3.a. The application of the reliability standards to generators will continue to be determined by the Statement of Compliance Registry Criteria. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and		

Organization	Yes or No	Question 9 Comment
		do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
National Grid	No	E3.c and E3.d - These two points can be combined into one:Power is intended to flow only into the LDN. The generation within the LDN shall not exceed the electric real or reactive power demand within the LDN. The LDN only delivers real or reactive power to load, and is not to be used to transfer real or reactive power between different locations in the BES. Under no system condition is BES reliability to be dependent on LDN flow. E3.e - We would like more clarification on flowgates and what they are. We are interpreting flowgate as the lines that make up defined operational interface, as defined by the Operations group not the Planning group. Is this the correct interpretation of flowgate?

Response:

Flowgate is a defined term in the Glossary of Terms used in Reliability Standards as follows:

1.) A portion of the Transmission system through which the Interchange Distribution Calculator calculates the power flow from Interchange Transactions.

2.) A mathematical construct, comprised of one or more monitored transmission Facilities and optionally one or more contingency Facilities, used to analyze the impact of power flows upon the Bulk Electric System.

Items E3.c and E3.d were indeed combined as suggested, and now have become new item E3.b.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusions I3, and

Organization	Yes or No	Question 9 Comment
		do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Electric Reliability Council of Texas, Inc.	No	See response to Question 7.
Southwest Power Pool	No	See response to question 7.
Response: See response to Q7.		
ExxonMobil Research and Engineering	No	Similar to the comments provided on Exclusion E1, the inclusion of a requirement for automatic fault interrupting device to separate the local distribution network from the interconnected transmission network will in many cases shift the onus of securing a reliable interconnected transmission network from the owners and operators of that interconnected transmission network to the customers and owners of local distribution networks that pay the owners and operators of the interconnected transmission network a fee for providing reliable transmission services. Furthermore, the Federal Power Act excludes all facilities used in the local distribution of electric energy and does not distinguish whether such local distribution facilities must be isolated by automatic fault interrupting devices.
Response: Item E3.a has been removed from the definition, and as such, there is no longer any mention of the interrupting devices within this exclusion. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA~~		

Organization	Yes or No	Question 9 Comment
		~~generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Colorado Springs Utilities	No	Colorado Springs Utilities generally supports Exclusion E3 that provides for the exclusion of Local Distribution Networks (LDNs) from the BES, with the following modifications: 1) It is not necessary to articulate the nature of the LDN's connection to the BES. If the characterizations are met, the number of connections and the reasons for the connections are immaterial. 2) If the LDN is a normal net import, there is no need to limit the amount of connected generation since the generation will have no material effect on the BES. 3) 'Bulk power transfers' are acceptable across an LDN if the transfer is to a nested LDN. Contractual energy, originating outside the LDN and delivered to a nested LDN, for example, is still load delivery and has the same physical characteristics of a holistic LDN and the transfer of bulk power is immaterial.We propose changing Exclusion E3 to read,"Local Distribution Networks (LDN): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the Interconnected System. The LDN is characterized by all of the following:a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;b) Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN;c) Not used to transfer bulk power, except transfers to nested LDNs: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN, except transfers to nested LDNs; andd) Not part of a Flowgate or Transfer Path: The LDN does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL)."
Response: The SDT has revised Exclusion E3 Local network in a way that removes the mention of automatic fault interrupting devices. This is a continent-wide definition that applies to all cases of a local network. One can not assume that a local network will always be a net importer in all situations, hence the limit on generation.		

Organization	Yes or No	Question 9 Comment
While the SDT does not fully understand the concept of "nested LDN", we believe that the revised Exclusion E3 in sum captures the concept of networks that are providing a distribution function. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)	No	(Note: Inserted language provided in brackets; deleted language denoted by empty brackets: [ ].) Exclusion E3 is also contrary to the plain language of Section 215 of the FPA. The SDT stated in commentary to E3 that it "believes that any network that simply supports distribution and is providing adequate protection should be excluded from the BES." This statement highlights the fundamental disconnect between the proposal and Section 215 of the FPA, which excludes facilities used in the local distribution of electric energy from the definition of the BES regardless of whether the facilities are "providing adequate protection." That is, Section 215 of the FPA states that the definition of the BES excludes "facilities used in the local distribution of electric energy," not "facilities used in the local distribution of electric energy [providing adequate protection]."With respect to the enumerated criteria in Exclusion E3, the requirement that Local Distribution Networks ("LDNs") "must be connected through automatic fault-interrupting devices" violates the FPA because, as discussed in response to Question 7, it places a condition on the unqualified exemption granted by Congress to facilities used in the local distribution of electric energy. Moreover, the other enumerated criteria also fail under Section 215 of the FPA and case law because they ignore, as discussed further in response to Question 11, a long line of precedent that requires a fact-specific analysis to be conducted to determine whether a facility is used in local distribution (see, e.g., Order No. 888 at 31,980). To make Exclusion E3 consistent with the requirements of Section 215 of the FPA and case law, Exclusion E3 could be rewritten as follows:E3 - [All

Organization	Yes or No	Question 9 Comment
		facilities used in the distribution of electric energy] ([“]Local [D]istribution [N]etworks,[“ or “]LDNs[“]): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN[]s are [normally] connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:a) [ ]b) Limits on connected generation: [Generally], neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;c) Power flows only into the LDN: The generation within the LDN [normally does] [ ] not exceed the electric Demand within the LDN;d) Not used to transfer bulk power: The LDN is [generally] not used to transfer energy originating outside the LDN for delivery through the LDN; ande) Not part of a Flowgate or transfer path: The LDN normally does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).Please see further discussion in response to Questions 11 and 12.

Response: The SDT has revised the Exclusion E3 Local network in a way that removes the mention of automatic fault interrupting devices, which it believes addresses the concern about the apparent disconnect between Section 215 and the prior proposal.

The SDT disagrees with the use of terms such as “normally” and “generally” as these tend to lack precision and objectivity. Please see the revised exclusion.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N’s emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Organization	Yes or No	Question 9 Comment
Muscatine Power and Water	No	The SDT is defining what a Local Distribution Network is but the expression "transfer bulk power" is ambiguous. Please clarify the purpose of this exclusion.

Response: The SDT has modified the definition such that the term "bulk power" is no longer used in the characteristics, specifically new item E3.b. The term "bulk power" was retained in paragraph E3, as the SDT believes it provides conceptual value to the exclusion principle.

> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:
>
> ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~
>
> **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;
>
> **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and
>
> ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~
>
> c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Exelon	No	Exelon has issues with the ambiguity of this Exclusion item. It seems that Local Distribution Networks will all need to be approved via the Rules of Procedure Exception Process because the characteristics of each LDN as described are not bright line. For example, does (b) refer to any generation, including behind-the-meter generation? Does (c) mean always, i.e., generation can never exceed the load under any condition? In theory or in actuality? How does (d) deal with parallel flows under abnormal conditions when some energy may go in and out? Exelon understands the concept that an LDN primarily serves load, but how will the owners prove that there is no impact to the BES under contingency configurations?

Response: The SDT has modified exclusion E3 in a manner that addresses the ambiguity of the proposal, clarifies the amount of connected generation rather

Organization	Yes or No	Question 9 Comment
than the prior comparison of demand and generation, and clarifies that the power flow must always be into the Local Network. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Springfield Utility Board	No	SUB agrees with items, a), b), and e) of the characteristics of an LDN. SUB believes that the language regarding c) and d) needs clarification.c) states: "Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN." There may be times where a closed system creates a situation where power flows through the system on an unscheduled basis (electron's will follow the path of least resistance). Left as is, there may be a situation where on a planning basis there is no power flowing out of the LDN, but on a real time basis power does flow in and out. "Power flows only into the Local Distribution Network: The sum of all power being delivered into the LDN at the points of measurement is greater than the sum of all the power measured as being delivered out of the LDN at the points of measurement" The generation within the LDN shall not exceed the electric Demand within the LDN."SUB suggests that the generation language should be deleted, but if the language "The generation within the LDN shall not exceed the electric Demand within the LDN." is retained, what does "Demand" mean? The lowest demand? The highest demand? Instantaneous demand?SUB suggests that if some generation language is added that the exclusion read:"Power flows only into the Local Distribution Network: The sum of all power being delivered into the LDN at the points of measurement is greater than the sum of all the power measured as being delivered out of the LDN at the points of measurement The generation within the LDN shall not exceed the

Organization	Yes or No	Question 9 Comment
		maximum electric Demand within the LDN, where the maximum electric Demand is the maximum electric Demand within the LDN as measured for over the prior sixty (60) months." d) states: "Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN". Again, this language needs clarification. How would an LSE/DP/TO (or other similar entity) know that their system is not being used to transfer bulk power when other parties are scheduling transmission paths via a Balancing Authority or other overarching entity?SUB suggests that the language be clarified to read "Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN. This would be evaluated using scheduled transmission paths and not measured amounts at the point of measurement. It is the responsibility of the Balancing Authority to notify the Registered Entity with an LDN twelve (12) months in advance of when an LDN would be used to schedule the transfer of energy outside the LDN for delivery through the LDN."Collectively, E3 would read:The LDN is characterized by all of the following:a)Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices; andb)Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation; and c)Power flows only into the Local Distribution Network: The sum of all power being delivered into the LDN at the points of measurement is greater than the sum of all the power measured as being delivered out of the LDN at the points of measurement; andd)Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN. This would be evaluated using scheduled transmission paths and not measured amounts at the point of measurement. It is the responsibility of the Balancing Authority to notify the Registered Entity with an LDN twelve (12) months in advance of when an LDN would be used to schedule the transfer of energy outside the LDN for delivery through the LDN.;ande)Not part of a Flowgate or Transfer Path: The LDN does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL). o Local distribution networks were added to the exclusion list after considerable discussions among the SDT and various registered entities that have configurations meeting these conditions. The SDT believes that any network that simply supports distribution and is providing adequate protection should be excluded from the BES.
Springfield Utility Board	No	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of

Organization	Yes or No	Question 9 Comment
		determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
Response: Items E3.c and E3.d were indeed combined as suggested, and now have become the new item E3.b. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
City of St. George	No	Local distribution networks should have an exclusion provision. However, the local generation limit of 75 MVA is too restrictive. As long as power flows into a LDN the amount of generation should not trigger a LDN to be included in the BES. E3b should be removed from these exclusion criteria or maybe a reasonable ratio of load level to allowed generation on the LDN.

Organization	Yes or No	Question 9 Comment
Response: The limits on connected generation, now described in item E3.a, have been revised, resulting in a less restrictive exclusion characteristic. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Southern California Edison Company	No	SCE is in support of the general LDN premise, but believes that this definition should more closely track the FERC seven-factor test from Order 888. As written, the five factors identified could lead to the reclassification of radial sub-transmission system facilities above 100kV from "distribution facilities" to "network facilities". For example, interconnection amounts within an LDN may exceed an aggregate level of 75MVA, but will not exceed the load in the LDN. SCE suggests striking characteristics "B" and "D" from Exclusion E3, and allowing characteristic "C" to stand alone as the generation characteristic which would define an LDN.The SDT may want to incorporate the following revision:"LDN's are connected to the Bulk Electric System (BES) at one or more location solely to improve the level of service to retail customer load."
Response: The genesis of the characteristics in the local network exclusion is the FERC seven-factor test; however, the SDT seeks to establish bright-line characteristics that add specificity and objectivity to these principles through this exclusion. The definition differentiates between radial systems and LNs by clarifying the connection points to the BES from these systems. Radial systems have a single connection point and LNs have multiple connection points. This alone establishes a bright-line between radial systems and LNs which does not allow for the re-classification of such systems as alluded to in the comment. Items E3.c and E3.d have now been combined, and have become the new item E3.b. After much discussion, the SDT believes that there must be a limit on		

Organization	Yes or No	Question 9 Comment
connected generation (new item E3.a) as well as a provision ensuring that power flow only into the local network (new item E3.b). **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Long Island Power Authority	No	Revise last two sentences in the introductory paragraph to read as follows: "LDN's are connected to the bulk electric system (BES) at several points and are characterized by all of the following:"; This removes ambiguity that exists in the deleted portion of the text.See also response to question 11 regarding Exclusion E3-b.
Response: The SDT has made changes to the introductory paragraph in E3, which it believes clarifies the intent of the local network; however, the SDT believes that the descriptive language adds necessary context to the entire exclusion principle and therefore should be retained. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;		

Organization	Yes or No	Question 9 Comment
		b) Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
The Dow Chemical Company	No	The Dow Chemical Company ("Dow) is an international chemical and plastics manufacturing firm and a leader in science and technology, providing chemical, plastic, and agricultural products and services to many essential consumer markets throughout the world. Dow and certain of its worldwide affiliates and subsidiaries, including Union Carbide Corporation, own and operate electrical facilities at a number of industrial sites within the U.S., principally, in Texas and Louisiana. The electrical facilities at these various industrial sites are configured similarly and perform similar functions. In most cases, a tie line or lines connect the industrial site to the electric transmission grid. Power is delivered from the electric transmission grid to the industrial site through the tie line(s). Lines within the industrial site then deliver power to individual manufacturing plants within the site. Additionally, cogeneration facilities are located at a number of industrial sites owned by Dow and its subsidiaries. These cogeneration facilities generate power that is distributed within the industrial site and used for manufacturing plant operations. In some instances, excess power not required for plant operations is delivered back into the electric transmission grid through the tie line(s) connecting the industrial site to the grid. Under all circumstances, electricity is not flowing into and out of such industrial sites at the same time. While the tie lines and some of the internal lines at these industrial sites operate at 100kV or higher, they do not perform anything that resembles a transmission function. Rather than transmit power long distances from generation to load centers, the tie lines and internal lines perform primarily a local distribution function consisting of the distribution of power brought in from the grid or generated internally to different plants within each industrial site. In some cases, the facilities also perform an interconnection function to the extent they enable power from cogeneration facilities to be delivered into the grid. The voltage of the tie lines and internal lines at these industrial sites is dictated by the load and basic configuration of each site. Higher voltage lines are used when necessary to meet applicable load requirements or to reduce line losses. That does not mean that such lines perform a transmission function. At some sites, Dow is registered as a Generation Owner and Generation Operator. At other sites, the applicable Regional Entity has found that such registration is not required because of the relatively small amount of power supplied to the grid from the applicable cogeneration resources, even though those cogeneration resources have an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating). Tie lines (to the grid) and internal lines at an industrial site that operate at 100kV or higher should be excluded from the BES definition if, due to the relatively small amount of power supplied to the grid from the generation resources at the site, the owner of those generation resources is not required to be registered as

Organization	Yes or No	Question 9 Comment
		a Generation Owner and the operator of those generation resources is not required to be registered as a Generation Operator.At sites where the owner of the generation resources is registered as a Generation Owner and the operator of those generation resources is registered as a Generation Operator, the internal lines (between the generation resources and the manufacturing plants) that operate at 100kV or higher should be excluded from the BES definition, because they are distribution and not transmission facilities. The lines interconnecting the generation resources at such sites to the transmission grid should be included in the BES definition, but the owner and operator of such interconnection lines should not be registered as a Transmission Owner or Transmission Operator. In no instance has a Regional Entity determined that Dow or any subsidiary should be registered as a Transmission Owner or Transmission Operator. Instead, such interconnection lines should be considered as part of the generation resource and Generation Owners and Generation Operators should be subject to reliability standards specifically developed for such interconnection lines. Dow is strongly opposed to any BES definition that would result in either the tie lines or the internal lines at industrial sites being subject to the mandatory reliability standards applicable to Transmission Owners and Transmission Operators. Complying with reliability standards would cause Dow and its subsidiaries to incur substantial compliance costs and create potential exposure to penalties in the future for noncompliance. Perhaps such costs and exposure could be justified if subjecting these facilities to compliance with reliability standards resulted in a material increase in reliability of the BES, but there is no reason to believe that will be the case. In fact, the opposite might be true. The tie lines and internal lines at industrial sites owned by Dow and its subsidiaries have been operated for decades as distribution and interconnection facilities, and practices and procedures have developed over the years that have enabled such operations to achieve a high degree of reliability for such sites. Requiring these facilities to now operate in a different manner as transmission facilities may well result in a degradation of the reliability of the manufacturing plants located at such sites. For example, outages would have to be coordinated with the RTO, which may not be interested in coordinating such outages with scheduled manufacturing plant outages.Dow recommends that a separate exclusion be added to the BES definition to address industrial distribution facilities. Proposed exclusion E-3 for local distribution networks is not sufficient to ensure that all industrial distribution facilities are excluded. For example, criteria b), entitled “Limits on connected generation” states that “Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation”. This criteria makes no sense for an industrial site with on-site electricity generation and a number of manufacturing plants that has internal power lines and lines interconnecting with the transmission grid that operate at 100 kV or higher where the owner and operator of the on-site electricity generation facilities are not registered as a Generation Owner and a Generation Operator because only a small amount of electricity is ever exported from the on-site electricity generation facilities to the transmission grid. This criteria also makes no sense with respect to internal electric lines (operated at 100 kV or higher) at such industrial sites even where the owner and operator of the on-site electricity generation facilities are registered as a Generation Owner and a Generation Operator.Criteria c) also causes proposed exclusion E-3 not to be sufficient to ensure that all industrial distribution facilities are excluded where the owner and operator of the

Organization	Yes or No	Question 9 Comment
		on-site electricity generation facilities are not registered as a Generation Owner and a Generation Operator because only a small amount of electricity is ever exported from the on-site electricity generation facilities to the transmission grid. Criteria c), entitled "Power flows only into the LDN", states: "The generation within the LDN shall not exceed the electric Demand within the LDN." Criteria c) also makes no sense with respect to internal lines at such industrial sites even where the owner and operator of the on-site electricity generation facilities are registered as a Generation Owner and a Generation Operator.
Response: Criteria E3.c has been revised to separate the concepts of power flow into the network from the comparison of generation to demand. Additionally, the new E3.a addresses the limits on connected generation and in so doing, excludes from consideration all retail generation. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Central Lincoln	No	Central Lincoln strongly supports the exclusion of LDNs. These networks are used for improving local service, not for BES reliability; and their use should not be discouraged. However, we see problems with the language of part d. Part d uses the term the undefined term "bulk power" as part of the overall definition of "bulk power system," leading to a circular definition. Did the SDT mean to indicate that no power may be transferred though an LDN? If so, suggest striking the word "bulk." We also believe the SDT meant to define the LDN in terms of normal operating conditions, since all LDNs would transfer power under the right contingency (such as a complete loss of load within the LDN). Please make it clear that part d test applies during normal operating conditions.

Organization	Yes or No	Question 9 Comment
Response: The SDT has modified the definition such that the term "bulk power" is no longer used in the characteristics, specifically new item E3.b. The term "bulk power" was retained in the paragraph E3, as we believe it provides conceptual value to the exclusion principle. The SDT disagrees with the use of the concept "normal operating conditions" as it tends to lack precision and objectivity for use in an effective definition. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection~~ as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
PPL Energy Plus and PPL Generation	No	See comments in Question 13.
Response: See response to Q13.		
Manitoba Hydro	No	Exclusion E3 needs to be strengthened to ensure that the LDN will have no impact on the BES. The protective elements preventing the LDN from impacting the BES should be included in the BES. As well, the term Local Distribution Network (LDN) should be defined as a separate NERC Glossary term, instead of being defined in the BES definition.
Response: The SDT has revised the E3 local network exclusion in a way that removes the mention of automatic fault interrupting devices. The SDT intends to fully explain the characteristics of a "local network" within the BES definition, and as such, the term is not necessary in the Glossary.		

Organization	Yes or No	Question 9 Comment
		E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
ISO New England, Inc.	No	We think that large portions of the network may be inappropriately excluded under this exclusion and the exclusion should be deleted.If E-3 is retained, then it is recommended that the SDT change the sentence "LDN's are connected to the Bulk Electric System (BES)" to "LDN's include transmission connected to the Bulk Electric System (BES)..." An Automatic Interruption device needs to be defined. For example, Iis a fuse an Automatic Interruption device? The definition needs clarification in the phrase: Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN;Should this be "Net power ..."? One transmission path could be exporting power but the net sum of all paths would always be importing power.
Response: The SDT has debated Exclusion E3 and has determined that it should be retained. However, the language has been changed to provide clarification similar to what your comment suggested. The SDT has revised the Exclusion E3 local network in a way that removes the mention of automatic fault interrupting devices. The revised Exclusion E3 now combines the prior items E3.c and E3.d into a revised item E3.b. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute		

Organization	Yes or No	Question 9 Comment
		power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Consolidated Edison Co. of NY, Inc.	No	Multiple Connections - The current wording in the second sentence "at more than one location" could be misinterpreted. Replace this sentence with the following wording:LDN's use multiple connections to the Bulk Electric System (BES) solely to improve the level of service to retail customer load.
Response: The SDT considered this suggestion and believes that reference to "more than one location" has sufficient clarity; therefore this language was retained. The paragraph has been revised to eliminate the term "solely" and to explain that the local network does not accommodate bulk transfer across the interconnected system. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN		

Organization	Yes or No	Question 9 Comment
		does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Independent Electricity System Operator	No	Consistent with our earlier comments in response to Q1, we do not agree that an LDN should be characterized by a 75 MVA limit on the connected generation as described in part (b). It is expected that under various "green energy" programs that the development and implementation of distributed generation will grow considerably in the future. The 75 MVA generation limit may discourage this development of distributed generation (in general, it may discourage the installation of generation in lieu of transmission to supply load) because installing generation in an LDN would cause the entire LDN to be classified as BES and, as a result, subject the LDN to NERC planning standards that are inconsistent with well established jurisdictional planning criteria. To avoid subjecting the LDN to NERC requirements, the planning authority may elect to build generation outside of the LDN, which is undesirable because of increased transmission losses and reduced reliability. We suggest that (b) be deleted or revised in keeping with our earlier suggestions. We also suggest modifying Exception E3 (c) and (d) for consistency with language used in Technical Principles for Demonstrating BES Exceptions, since Bullet 1 recognizes that the system for which the exemption is being applied, may not be necessary for BES reliability and may experience power flows out to the BES under specified conditions. The suggested modified wording for E3 (c) and (d) is shown below: (c) Power is intended to flow only into the LDN: the total net Generation output within the LDN shall not exceed the total electric Demand of the LDN. (d) Not intended for use in transferring bulk power: While the LDN is intended to deliver power to load and not transfer bulk power between different locations in the BES, it is acceptable that under specified system conditions, bulk power transfers may take place between different points of the BES via the LDN, when it can be demonstrated that these power flows through the LDN are not necessary for maintaining BES reliability.
Response: The SDT takes note of the concern about growing amounts of connected generation within the distributed generation arena, and has proposed a revision to the limits on connected generation, now found in item E3.a. Regarding the suggestion for language changes in sub-items c and d, the SDT has made a modification in the revised definition item E3.b to address both the power flow into the local network and the prohibition of use of a candidate local network for power flow transactions through the network (commonly referred to as "wheel-through" transactions). Since the local network is electrically parallel to facilities presumed to be BES, and hence, may have some interactive effect upon the BES, the SDT believes that in order to qualify for exclusion, the local network must exhibit characteristics that mimic a classic radial system; i.e., flow		

Organization	Yes or No	Question 9 Comment
only into the network and no utilization for "through" transactions. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
BPA	No	[As requested above BPA would like "automatic interruption device" and "automatic fault interrupting device" to be defined terms] Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices; BPA seeks clarification on: E3 – couldn't E2 and E3 both apply to the same system? If so, wouldn't the generation limit in E3(b) (75 MVA maximum) eliminate the exemption in E2 (can be above 75 MVA if maximum net capacity provided to BES does not exceed 75 MVA)? BPA seeks to have "transfer bulk power" defined. If an LDN had two connections, 200 MW flowed in on one, and 150 MW flowed out on another, how would that be counted?) How do you determine if the LDN is being used for bulk power transfer or not? One interpretation could be: any path that is scheduled across for purposes other than serving load

Organization	Yes or No	Question 9 Comment
		contained therein would be determined to be used to "transfer bulk power". In other words, transactions can only flow INTO an LDN. If transactions flow out of an area at any point, then from a compliance perspective that area would not meet this component of the LDN definition. The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and (end of comment)

Response: The SDT has revised the Exclusion E3 local network in a way that removes the mention of automatic fault interrupting devices.

The revised Exclusion E3 now specifically excludes from consideration the "behind the meter" generation in the limits on connected generation.

The SDT has modified the definition such that the term "bulk power" is no longer used in the characteristics, specifically new item E3.b. The term "bulk power" was retained in the paragraph E3, as the SDT believes it provides conceptual value to the exclusion principle.

In the example of 200 MW in-flow and 150 MW out-flow, this network would not meet the revised item E3.b, as power is flowing out at one or more of the interfaces; therefore the exclusion would not be satisfied.

The determination of use of the local network for transfer of bulk power would be characterized by the demonstration that power is flowing only in to the network and that the network is not accommodating power transfers for instance, it is not a contract path for power transactions.

> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:
>
> ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~
>
> **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;
>
> **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and
>
> ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~
>
> c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Portland General Electric Company		While PGE appreciates the SDT's efforts to exclude distribution systems, asrequired by the statute, PGE believes that this Exclusion needs further clarification to beworkable. PGE has specific concerns with the following aspects of the Exclusion:(b) The phrase "nor its underlying Elements (in aggregate)" is ambiguous.

Organization	Yes or No	Question 9 Comment
		It does notmake it clear how a utility could differentiate between the multiple Local DistributionNetworks within its service territory. (c) The phrase "Power flows only into the Local Distribution Network" does not makeclear that under certain abnormal circumstances power may flow out of a LocalDistribution Network. Wording such as "the predominant direction of flow is into theLocal Distribution Network during normal (non-outage) conditions" could account forsuch abnormal circumstances. (d) The phrase "Not used to transfer bulk power" should similarly be modified toindicate that it is meant to describe normal rather than abnormal conditions. Inaddition, this aspect of the Exclusion should account for the fact that two utilities mayhave multiple interchange points at the distribution level, but the fact that energy istransferred at these points does not inherently make them transmission paths. A phrasesuch as "none of the LDN facilities are identified as belonging to or having direct ratingimpact on a regionally-recognized constrained transmission path used to deliver energyto points outside of the LDN" could address this concern.
Response: The SDT appreciates your concern about the possible ambiguity in "underlying Elements"; however, the SDT believes that this language is appropriate in order to clarify that the lower than 100 kV facilities contribute to the limits on connected generation. The SDT has determined that it will refrain from the use of "predominant direction", "normal circumstances" etc., as the use of this language tends to lack precision and objectivity and is therefore unsuitable in a definition. No changes made for these comments.		
Georgia System Operations		In item c, What is meant by "generation" and by "electric Demand," and how is whether "generation within the LDN…exceed[s] the electric Demand within the LDN" to be calculated? Is this installed nameplate capacity (rather than energy) minus peak Demand, or minus forecast Demand, or minus actual Demand - in each case either for some period of time or at every moment (the NERC Glossary defines Demand as either)? Is it the actual generated energy minus actual or forecast Demand for some period of time or at every moment? If the definition is based on capacity, this exclusion should allow for the possibility that a larger than currently necessary generator may be installed in anticipation of future load growth, so long as it is never used to generate significantly more than what is needed for load. If actual generated energy is intended, the exclusion should provide for inadvertent and/or de minimis power flows.
Response: The SDT has removed the concept of comparison of generation to electric demand, and instead has moved to a simpler limit on connected generation. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to		

Organization	Yes or No	Question 9 Comment
		accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection~~ as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Tacoma Power		Tacoma Power generally supports Exclusion E3 that provides for the exclusion of Local Distribution Networks (LDNs) from the BES, with the following modifications: 1) It is not necessary to articulate the nature of the LDN's connection to the BES. If the characterizations are met, the number of connections and the reasons for the connections are immaterial. 2) If the LDN is a normal net import, there is no need to limit the amount of connected generation since the generation will have no material effect on the BES. 3) 'Bulk power transfers' are acceptable across an LDN if the transfer is to a nested LDN. Contractual energy, originating outside the LDN and delivered to a nested LDN, for example, is still load delivery and has the same physical characteristics of a holistic LDN and the transfer of bulk power is immaterial. We propose changing Exclusion E3 to read,"Local Distribution Networks (LDN): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the Interconnected System. The LDN is characterized by all of the following:a) Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;b) c) Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN;d) Not used to transfer bulk power, except transfers to nested LDNs: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN, except transfers to nested LDNs; ande) Not part of a Flowgate or Transfer Path: The LDN does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an

Organization	Yes or No	Question 9 Comment
		Interconnection Reliability Operating Limit (IROL)."

Response: The SDT considered this suggestion and believes that reference to "more than one location" has sufficient clarity; therefore this language was retained. The paragraph has been revised to eliminate the term "solely" and to explain that the Local Network does not accommodate bulk transfer across the interconnected system.

The primary goal of the SDT in the revision of the definition of the BES is to improve clarity in the current language and to provide as much certainty as possible in the identification of BES and non-BES Elements. The Commission provided guidance within Order Nos. 743 & 743a which identified the current application of the existing BES definition was essentially correct for the majority of the continent and directed clarification of the existing language to support consistent application across all regions. Additional guidance from the Commission spoke to significant changes in the scope of the definition with an expectation that the revision to the definition would not significantly expand or contract what is currently considered to be the BES. The SDT disagrees with removal of all limits on connected generation, as this could significantly change the scope of the definition and potentially limit the amount of generation that would be classified as BES Elements.

While the SDT does not fully understand the concept of "nested LDN", it believes that the revised Exclusion E3 in sum captures the concept of networks that are providing a distribution function.

> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:
>
> ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~
>
> **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;
>
> **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and
>
> ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~
>
> c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

City of Redding	Yes	Redding will support this high level exclusion of Local Distribution in the light that it is a "sharpening" of the Brightline and is part of the SDT's overall plan to make the distinction between distribution and transmission facilities. As Redding mentioned with the radial exclusion (E1), Redding's support rests on the fact that the

Organization	Yes or No	Question 9 Comment
		Exception Process will adequately address the distribution and transmission facilities issue and there will be a fair and equable method where LDN's that do not meet this criteria will be adequately identified as distribution facilities. However, Redding does believe (as noted in question #4) that the 75 MVA threshold has very little justification as "necessary" for the transmission system. Generators connected to LDNs are a classic example where the generation installed acts only as a load modifier. Redding suggests using the 200 MVA level for generation connected to a LDN.

Response: The SDT has determined that a generation limit is essential to qualify these local networks as distribution; however, in the revised Exclusion E3, the limits on connected generation have been made somewhat less restrictive as indicated in item E3.a.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

American Municipal Power and Members Florida Municipal Power Agency Florida Keys Electric Cooperative	Yes	The exclusion refers to groups of Elements that "distribute power to Load rather than transfer bulk power across the interconnected system." The use of the term "bulk power" is vague and could be read incorrectly as a reference to the "bulk-power system," which is defined in the Federal Power Act but is not a NERC defined term. If the LDN is connected to the BES at more than one location, there will by definition be some loop flow. We recommend below that Exclusion 3(d) be revised to quantify the amount of loop flow that is permissible in an excluded LDN. In the context of the first sentence of Exclusion E3, less specificity is needed, and the sentence should only

Organization	Yes or No	Question 9 Comment
		be revised for the sake of accuracy to state: "Groups of Elements operated above 100 kV that are primarily intended to distribute power to load rather than to transfer power across the interconnected System. "The exclusion's reference to connection "at more than one location" is vague. The sentence should be revised to read "connected to the Bulk Electric System (BES) from more than one Transmission source solely to improve the level of service to retail customer Load," and "Transmission source" should have the same meaning that it does in E1. E3(a) should require that there be switching devices between the LDN and the BES, not specifically automatic fault-interrupting devices. The term "separable by" in "Separable by automatic fault interrupting devices" is unclear and should be reworded. E3(b) To avoid pulling an LDN into the BES based on very small customer-owned generation (such as rooftop photovoltaics and hospital backup diesel generators) that the utility does not consider or rely on, or necessarily even know about, the item should be reworded: "Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA of generation used to meet the resource adequacy requirements of electric utilities." E3(d) states "Not used to transfer bulk power." As noted above, "bulk power" is a vague term. There will necessarily be some loop flow on a system that is connected to the BES at more than one location. The amount of permissible loop flow for this purpose needs to be determined and stated in this item.

Response: The SDT has modified the definition such that the term "bulk power" is no longer used in the characteristics, specifically new item E3.b. The term "bulk power" was retained in paragraph E3, as the SDT believes it provides conceptual value to the exclusion principle.

The SDT has made changes to the introductory paragraph in Exclusion E3, which it believes clarifies the intent of the local network; however, the SDT believes that the descriptive language adds necessary context to the entire exclusion principle and therefore should be retained.

The SDT considered this suggestion and believes that reference to "more than one location" has sufficient clarity; therefore this language was retained. The paragraph has been revised to eliminate the term "solely" and to explain that the Local Network does not accommodate bulk transfer across the interconnected system.

The SDT has revised the Exclusion E3 local network in a way that removes the mention of automatic fault interrupting devices.

The revised Exclusion E3 now specifically excludes from consideration the "behind the meter" generation in the limits on connected generation.

> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

Organization	Yes or No	Question 9 Comment
		~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Small Entity Working Group (SEWG)	Yes	Yes, with some clarifying edits. The first sentence of Exclusion 3 should be revised for accuracy as follows: ""Local Distribution Networks (LDN): Groups of Elements operated above 100 kV that are primarily intended to distribute power to Load rather than to transfer bulk power across the Interconnected System. "The second sentence should be revised for clarity as follows: "LDN's are connected to the Bulk Electric System (BES) from more than one Transmission source solely to improve the level of service to retail customer Load."Exclusion E3 a) should be revised as we note in our comments in Question#7 to allow for the use of switching devices in specific situations
Response: The SDT has made changes to the introductory paragraph in Exclusion E3, which it believes clarifies the intent of the local network; however, the SDT believes that the descriptive language adds necessary context to the entire exclusion principle and therefore should be retained. The SDT considered this suggestion and believes that reference to "more than one location" has sufficient clarity; therefore this language was retained. The paragraph has been revised to eliminate the term "solely" and to explain that the Local Network does not accommodate bulk transfer across the interconnected system. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA~~		

Organization	Yes or No	Question 9 Comment
		~~generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Hydro One Networks Inc	Yes	We agree with this concept of LDN as part of establishing a bright-line definition along with Exclusion E3. However, restrictions for LDN such as connected Generation must neither be more restrictive than radial nor should generation limits be applicable unless they impact the reliability of interconnected transmission network.Requirements in Exclusion E3 are very restrictive and we do not agree to the limits on connected generation for Local Distribution Networks (LDN), described in part (b). We suggest that bullet b) be revised and limits on connected generation must not include generation resources identified in Inclusions I2, I3, I4 and I5. The development and implementation of distributed generation will grow considerably in the future and will operate together with conventional sources of energy. The real net aggregated power of distributed generation seen by the bulk power system at the interconnection may be larger than past experience; hence it requires to be reassessed based on technical studies with respect to the future integration of DG's. (Please refer to comments in questions: 3 & 4) Also, we suggest combining exception E3 (c) and (d) as follows:"(c) Power is intended to flow only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN; The LDN is intended to deliver power to load and not be used to transfer bulk power between different locations in the BES. It is recognized that under specified system conditions, bulk power transfers may take place between different points of the BES via the LDN. However, for these conditions BES reliability is not dependent on the existence of these power flows through the LDN."
Response: The SDT has made changes to Exclusion E3 which promotes improved consistency between the restrictions of Exclusions E1 and E3. As well, the revised item E3.a now provides specific reference to items of the inclusion list. The SDT has made revisions to combine items E3.c and E3.d into a new item E3.a. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:		

Organization	Yes or No	Question 9 Comment
		~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
City of Santa Clara, California, dba Silicon Valley Power	Yes	Yes, Silicon Valley Power agrees with proposed Exclusion E3 that "Local Distribution Networks (LDNs): Groups of Elements above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System," that are (among the other characterizations) "connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer load" should be specifically excluded from the Bulk Electric System definition. SVP also agrees with the majority of the characteristics of an LDN set forth in proposed Exclusion E3. However, SVP believes that alternative language may be more appropriate with respect to characteristic "b" of proposed Exclusion E3. Part "b" to proposed Exception E3 states "Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation." SVP submits that the use of a fixed level of generation to determine whether an entity qualifies as an LDN is too arbitrary and does not reflect engineering reality. If a fixed level of generation is used, it will often be too high, if the registered entity has a small system, or too low, when the registered entity has a large system. SVP submits that NERC should consider modifying part "b" to proposed Exception E3 to give the Regional Entities discretion to determine whether 75 MVA of generation is the appropriate benchmark for an individual utility. Therefore, SVP submits that with respect to draft exception E3 b), "Limited connected generation to the LDN or its underlying Elements (in aggregate), as determined by the LDN's Regional Entity, using 75 MVA as a benchmark" may be appropriate. Alternatively, SVP submits that instead of a fixed level of generation, NERC could consider modifying the language of proposed Exception E3 b) to limit an LDN's connected generation to a high percentage of local minimum demand, or to a high percentage of generation not already committed to run to meet local reliability needs. Either option would meet the purpose of the LDN: a registered entity with connected generation that is, for the most part, only used to serve native or local load.SVP thanks NERC for the opportunity to comment

Organization	Yes or No	Question 9 Comment
		on its 1st Draft definition of BES, and its proposed inclusions and exceptions.

Response: The SDT appreciates the concern regarding the lack of technical justification for a 75 MVA limit on connected generation; however, the SDT has been presented with no technical basis upon which to suggest a change from this value. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The revised Exclusion E3 has resulted in a somewhat less restrictive limit on connected generation as provided in revised item E3.a.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Public Utility District No. 1 of Snohomish County, Washington	Yes	Snohomish strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. But providing an exclusion for radials without providing an equivalent exclusion for LDNs will have the opposite effect, to the ultimate detriment of electric consumers.Snohomish also

Organization	Yes or No	Question 9 Comment
		supports, with the reservations discussed below, the LDN exclusion as drafted by the SDT. At least conceptually, we believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system.Although Snohomish supports the LDN exclusion, we believe the exclusion should be refined in the following respects: o The SDT's draft states that:"LDN's are connected to the Bulk Electric System (BES) at more than one location SOLELY to improve the level of service to retail customer Load." (emphasis added) We are concerned that the use of the term "solely" implies the need for an examination of the motives of a local distribution utility in connecting to the BES at more than one location. This result is problematic because it defeats the purpose of the exclusion, which is to allow LDNs to be excluded from the BES without an in-depth and expensive inquiry into the exact nature of the LDN. In addition, the local utility may have a number of motives for connecting to the BES at more than one location, but the local utility's motives have nothing to do with how the LDN interacts with the interconnected bulk system, which should be the key determinant in including or excluding any Element from the BES. With these concerns in mind, we therefore recommend that the SDT revise the sentence quoted above as follows: "LDNs are connected to the Bulk Electric System (BES) at more than one location to improve the level of service to retail customer load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances. o We believe the characteristics specified by the LDN in subsections (b) and (c) of the exclusion are redundant. Subsection b specifies that the LDN would not interconnect more than 75 MVA of generation in aggregate. Subpart c specifies that power flows only into the LDN. We believe the SDT can eliminate subpart b of the definition and simply rely on subpart c because if power only flows into the LDN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system, only with the LDN. Further, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LDN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the subpart c criteria, would be wholly absorbed within the LDN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. In addition, the 75 MVA criterion would make an LDN interconnecting more than 75 MVA part of the BES. For the reasons set forth by the Project 2010-07 SDT, we are concerned the result will be the local utility being improperly classified as a Transmission Owner and Transmission Operator, which would subject the local utility to a number of reliability standards that would significantly increase its compliance burden without substantially improving bulk system reliability. In fact, in the LDN situation, there is even less reason to impose these burdens on the local utility than in the situation addressed by the Project 2010-07 team, where generators are interconnected to the BES by

Organization	Yes or No	Question 9 Comment
		dedicated interconnection facilities. Because the LDN is interconnected at multiple points, the generators interconnected to the LDN could continue to operate even if one or two interconnection points are out of service. On the other hand, in the situation addressed by the Project 2010-07 team, if the dedicated interconnection facility is out of service, the generation is unavailable because there is no alternative route to deliver it to load. Finally, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception.
Overton Power District No. 5	No	we support Snohomish's clarifications

Response: The introductory paragraph in Exclusion E3 has been revised to eliminate the term "solely" and to explain that the local network does not accommodate bulk transfer across the interconnected system.

The Commission provided guidance within Order Nos. 743 & 743a which identified the current application of the existing BES definition was essentially correct for the majority of the continent and directed clarification of the existing language to support consistent application across all regions. Additional guidance from the Commission spoke to significant changes in the scope of the definition with an expectation that the revision to the definition would not significantly expand or contract what is currently considered to be the BES. Based on these expectations, the SDT believes that there must be a limit on connected generation as well as a provision to ensure that power flows only into the local network. Elimination of the generation limit would potentially limit what generation is currently considered to be BES Elements. The SDT has proposed revised characteristics E3.a and E3.b to capture these concepts.

The SDT has made revisions to combine the items E3.c and E3.d into a new item E3.a.

The revised definition, Exclusion E3, and item E3.a makes the limit on connected generation somewhat less restrictive than in the prior definition document.

> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:
>
> ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~
>
> **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;
>
> **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN

Organization	Yes or No	Question 9 Comment
		does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Western Electricity Coordinating Council	Yes	WECC agrees in concept. However, in sub-bullet b), it should be clarified that the 75 MVA is gross-aggregate nameplate, as described in the inclusions. In sub-bullet c), it should be clarified whether this requirement is at any time or is for hourly integrated values. Also, the use of the term "major transfer paths" should be modified to be "major transfer paths in the Table titled Major WECC Transfer Paths in the Bulk Electric System." Finally, the reference to "above 100 kV" should be "at or above 100 kV" for consistency.
Response: The suggestion regarding "gross aggregate nameplate" has been incorporated into this revision of the definition. The SDT has removed the concept of comparison of connected generation to electric demand. The SDT has incorporated the suggestion to add the words in the introductory paragraph of Exclusion E3. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec		

Organization	Yes or No	Question 9 Comment
Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Western Montana Electric Generating and Transmission Cooperative	Yes	WMG&T strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. WMG&T supports the LDN exclusion, but we believe the exclusion should be refined in the following respects: o The SDT's draft states that:"LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load." We recommend that the SDT revise the sentence quoted above as follows: "LDN's are connected to the Bulk Electric System (BES) at more than one location to improve the level of service to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances.

Response: The introductory paragraph in Exclusion E3 has been revised to eliminate the term "solely" and to explain that the local network does not accommodate bulk transfer across the interconnected system.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~group~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a

Organization	Yes or No	Question 9 Comment
		major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Transmission Access Policy Study Group	Yes	The exclusion refers to groups of Elements that "distribute power to Load rather than transfer bulk power across the interconnected system." The use of the term "bulk power" is vague and could be read incorrectly as a reference to the "bulk-power system," which is defined in the Federal Power Act but is not a NERC defined term. If the LDN is connected to the BES at more than one location, there will by definition be some loop flow. We recommend below that Exclusion 3(d) be revised to quantify the amount of loop flow that is permissible in an excluded LDN. In the context of the first sentence of Exclusion E3, less specificity is needed, and the sentence should only be revised for the sake of accuracy to state: "Groups of Elements operated above 100 kV that are primarily intended to distribute power to load rather than to transfer power across the interconnected System. "The exclusion's reference to connection "at more than one location" is vague. The sentence should be revised to read "connected to the Bulk Electric System (BES) from more than one Transmission source solely to improve the level of service to retail customer Load," and "Transmission source" should have the same meaning that it does in E1. E3(a) should require that there be switching devices between the LDN and the BES, not specifically automatic fault-interrupting devices. The term "separable by" in "Separable by automatic fault interrupting devices" is unclear and should be reworded. E3(b) To avoid pulling an LDN into the BES based on very small customer-owned generation (such as rooftop photovoltaics and hospital backup diesel generators) that the utility does not consider or rely on, or necessarily even know about, the item should be reworded: "Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA of generation used to meet the resource-adequacy requirements of electric utilities. "E3(d) states "Not used to transfer bulk power." As noted above, "bulk power" is a vague term. There will necessarily be some loop flow on a system that is connected to the BES at more than one location. The amount of permissible loop flow for this purpose needs to be determined and stated in this item.
Response: The SDT has modified the definition such that the term "bulk power" is no longer used in the characteristics, specifically new item E3.b. The term "bulk power" was retained in the paragraph E3, as the SDT believes it provides conceptual value to the exclusion principle. The SDT has found no technical basis upon which to establish any limits on the amount of allowable loop flow in a local network; however, the technical exception process may be an avenue for considering such a metric. The SDT has made changes to the introductory paragraph in Exclusion E3, which the SDT		

Organization	Yes or No	Question 9 Comment
believes clarifies the intent of the local network; however, the SDT believes that the descriptive language adds necessary context to the entire exclusion principle and therefore should be retained. The SDT considered this suggestion and believes that reference to "more than one location" has sufficient clarity; therefore this language was retained. The paragraph has been revised to eliminate the term "solely" and to explain that the Local Network does not accommodate bulk transfer across the interconnected system. The SDT has revised Exclusion E3 local network in a way that removes the mention of automatic fault interrupting devices. The revised Exclusion E3 now specifically excludes from consideration the "behind the meter" generation in the limits on connected generation, and the SDT has made revisions that allow up to 75 MVA of connected generation to exist while still qualifying for this exclusion. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Northern California Power Agency	Yes	NCPA supports the comments of the Transmission Access Policy Study Group (TAPS) in this regard.In addition to this support, NCPA asks for consideration of an alternative approach for determining an exception in this regard, as opposed to having it based on a somewhat arbitrary fixed level of generation (75 MVA). NCPA suggests consideration be given for an approach based on a determined percentage of actual demand for a given LDN. As such, NCPA submits the following with respect to draft exception E3 (b), Limits on Connected Generation: Neither the LDN, nor its underlying Elements (in aggregate), include more than a certain percentage of minimum area load, as determined by the regional entity." Such an approach would require the regional entity to look at the amount of connected generation on a case-by-case basis.

Organization	Yes or No	Question 9 Comment
Response: The SDT has made modifications to the exclusion criteria under Exclusion E3; however, the SDT continues to believe that a flat, fixed value of generation is the most suitable approach in order to promote consistency and repeatability in the determination. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Texas Industrial Energy Consumers (TIEC)	Yes	Proposed exclusion E3 should be revised to categorically exclude all facilities that are part of a local distribution network (LDN), regardless of the specifics of the LDN's interconnection with the Bulk Electric System. As currently drafted, Exclusion 3 places a number of inappropriate limits on a whether a local distribution system is excluded from the Bulk Electric System definition. As recognized by the Commission in Order No. 743-A, Section 215 of the Federal Power Act categorically excludes local distribution systems from the Bulk Power System definition without qualification. As a result, LDNs are outside the FERC's jurisdiction and are outside the scope of this rulemaking. The SDT should revise the approach to Exclusion 3 to exclude all facilities that are part of a LDN, regardless of how the LDN is interconnected to the grid. Specifically, making exclusion of an LDN contingent upon the LDN being connected through automatic fault-interrupting devices is inappropriate. Similar to the concerns TIEC expressed in response to Question 7, above, if there are concerns about LDNs impacting the Bulk Electric System, then it is the responsibility of the transmission provider serving the LDN to ensure that systems and facilities are in place to protect the grid. The specifics of an LDN's interconnection to the grid should not dictate whether it is subject to regulation. TIEC would therefore recommend removing proposed qualification (a) to the LDN exclusion. Further, the requirement that generation in the LDN can never exceed demand is inappropriate. As the SDT

Organization	Yes or No	Question 9 Comment
		properly recognized in Exclusion 2, as long as the generation within an LDN does not trigger registration requirements, the LDN should be able to export power to the grid without subjecting itself to regulation. Many LDNs export small amount of power intermittently to balance the flow within the LDN. Subjecting these networks to regulation as a result of this balancing activity is inconsistent with the existing generation registration requirements and would exceed the scope of this rulemaking. The existing generation registration requirements exempt customer-owned generation that serves retail load from generation registration requirements as long as the net capacity provided to the bulk power system does not exceed the nameplate requirements for stand-alone generators. Consistent with this approach, an LDN should not have to be registered as long as its net exports to the grid do not exceed the generation registration requirements. TIEC accordingly requests that proposed LDN characteristics (c) and (d) be removed as qualifications to the LDN exclusion, and that the exclusion be revised to allow generation output to the grid as long the net export to the grid does not exceed the threshold levels for registration as a generator owner/operator.

Response: One of the objectives of the revised definition of the BES is to provide a deterministic method of identifying and excluding facilities that are used for distribution, and Exclusion E3 is one of the mechanisms by which the SDT proposes to accomplish this. The SDT has revised the Exclusion E3 local network in a way that removes the mention of automatic fault interrupting devices which the SDT believes addresses the concern about the apparent disconnect between Section 215 and the prior proposal.

The SDT believes that generation connected within a network that would otherwise be a distribution system, can change the functionality of that network to one that serves transmission functions; hence, the SDT believes that some limit on connected generation must continue to exist in this exclusion principle.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec

Organization	Yes or No	Question 9 Comment
Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
PacifiCorp	Yes	PacifiCorp believes this meets FERC's intent in Order Nos. 743 and 743A, however additional clarification may be added particularly around items b and c. Regardless of the generation level (item b), if the power only flows into the Local Distribution Network ("LDN") (item c) then the the level of generation is not material and should have no impact on the reliable operation of the BES.
Response: The primary goal of the SDT in the revision of the definition of the BES is to improve clarity in the current language and to provide as much certainty as possible in the identification of BES and non-BES Elements. The Commission provided guidance within Order Nos. 743 & 743a which identified the current application of the existing BES definition was essentially correct for the majority of the continent and directed clarification of the existing language to support consistent application across all regions. Additional guidance from the Commission spoke to significant changes in the scope of the definition with an expectation that the revision to the definition would not significantly expand or contract what is currently considered to be the BES. Therefore the SDT disagrees with removal of all limits on connected generation, but it has made this provision somewhat less restrictive as shown in the revised item E3.a. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Intellibind	Yes	This does address some of my concerns on small radial transmission systems. I think that there will be confusion when small entities try and apply both E3 and E1 to their particular situations. The ambiguity will cause more questions than it is trying to answer.
Response: The revisions to Exclusion E3 are intended to bring more clarity and consistency to the application of this exclusion principle. The SDT believes this		

Organization	Yes or No	Question 9 Comment
revision removes the ambiguity mentioned in your comment. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Company Consumers Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Inc	Yes	We strongly support the categorical exclusion of Local Distribution Networks from the BES. For reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are likely the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. We also support, with the reservations discussed below, the LDN exclusion as drafted by the SDT. We believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system.However, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception. The 100 MVA threshold seems more in alignment with technical standards such as Power System Stabilizer requirements.

Organization	Yes or No	Question 9 Comment
Okanogan Electric Cooperative PNGC Power Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative		

Response: The SDT has revised the Exclusion E3 Local Network in a way that removes the mention of automatic fault interrupting devices, which the SDT believes addresses the concern about the apparent disconnect between Section 215 and the prior proposal.

The limits on connected generation, now described in item E3.a, have been revised, resulting in a less restrictive exclusion characteristic. The SDT notes, however, that the responses to the comments in the first posting of the BES Definition did not yield any technically-based alternatives to the generation thresholds of the ERO Statement of Compliance Registry Criteria (SCRC), and as such, the SDT has no technical rationale to deviate from the SCRC. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.

> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:
>
> ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~
>
> **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;
>
> **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

Organization	Yes or No	Question 9 Comment
		~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Northern Wasco County PUD Chelan PUD – CHPD Kootenai Electric Cooperative Public Utility District No. 1 of Franklin County Midstate Electric Cooperative Northwest Requirements Utilities Big Bend Electric Cooperative, Inc	Yes	Northern Wasco County PUD strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. Northern Wasco County PUD supports the LDN exclusion, but we believe the exclusion should be refined in the following respects: o The SDT's draft states that:"LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load." (emphasis added) We recommend that the SDT revise the sentence quoted above as follows: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances.
Response: The SDT agrees with your suggestion, and has incorporated this concept into the revised introductory paragraph for Exclusion E3. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~		

Organization	Yes or No	Question 9 Comment
c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
PUD No. 2 of Grant County, Washington	Yes	Grant supports the categorical exclusion of Local Distribution Networks from the BES. We believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. Grant supports the LDN exclusion, but we believe the exclusion should be refined in the following respects: o The SDT's draft states that:"LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load." (emphasis added) We recommend that the SDT revise the sentence quoted above as follows: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances.Two more suggestions: Bullet d, starts with "bulk power" and ends with generic "energy" transferred through and out of the LDN. This is inconsistent and will likely lead to confusion. In addition, "paper only" contract path transfers that result in no physical flow across the LDN should be specifically excluded.

Response: The SDT agrees with your suggestion, and has incorporated this concept into the revised introductory paragraph for Exclusion E3.

The SDT has modified the definition such that the term "bulk power" is no longer used in the characteristics, specifically new item E3.b. The term "bulk power" was retained in the paragraph E3, as the SDT believes it provides conceptual value to the exclusion principle.

The SDT disagrees with the suggestion that "paper only" contract path transfers that result in no physical flow be specifically excluded, as the use of a local network for transaction scheduling purposes causes it to be serving a transmission function. Where transactions are scheduled through the facilities of a local network, some physical flow change will occur in accordance with the transfer distribution factor of the network in relation to the transaction source and sink.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups ~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

Organization	Yes or No	Question 9 Comment
		~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Clallam County PUD No.1	Yes	Clallam strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. Clallam also supports, with the reservations discussed below, the LDN exclusion as drafted by the SDT. At least conceptually, we believe the SDT has identified the key characteristics that separate LDNs from facilities that are part of the bulk transmission system and therefore should be classified as BES. Hence, LDNs can be excluded from the BES based on the characteristics identified by the SDT without compromising the reliability of the interconnected bulk transmission system.Although Clallam supports the LDN exclusion, we believe the exclusion should be refined in the following respects: o The SDT's draft states that:"LDN's are connected to the Bulk Electric System (BES) at more than one location solelyto improve the level of service to retail customer Load." (emphasis added)We are concerned that the use of the term "solely" implies the need for an examination of the motives of a local distribution utility in connecting to the BES at more than one location. This result is problematic because it defeats the purpose of the exclusion, which is to allow LDNs to be excluded from the BES without an in-depth and expensive inquiry into the exact nature of the LDN. In addition, the local utility may have a number of motives for connecting to the BES at more than one location, but the local utility's motives have nothing to do with how the LDN interacts with the interconnected bulk system, which should be the key determinant in including or excluding any Element from the BES. With these concerns in mind, we therefore recommend that the SDT revise the sentence quoted above as follows: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load and not to accommodate

Organization	Yes or No	Question 9 Comment
		bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances. o We believe the characteristics specified by the LDN in subsections (b) and (c) of the exclusion are redundant. Subsection b specifies that the LDN would not interconnect more than 75 MVA of generation in aggregate. Subpart c specifies that power flows only into the LDN. We believe the SDT can eliminate subpart b of the definition and simply rely on subpart c because if power only flows into the LDN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system, only with the LDN. Further, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LDN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the subpart c criteria, would be wholly absorbed within the LDN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. In addition, the 75 MVA criterion would make an LDN interconnecting more than 75 MVA part of the BES. For the reasons set forth by the Project 2010-07 SDT, we are concerned the result will be the local utility being improperly classified as a Transmission Owner and Transmission Operator, which would subject the local utility to a number of reliability standards that would significantly increase its compliance burden without substantially improving bulk system reliability. In fact, in the LDN situation, there is even less reason to impose these burdens on the local utility than in the situation addressed by the Project 2010-07 team, where generators are interconnected to the BES by dedicated interconnection facilities. Because the LDN is interconnected at multiple points, the generators interconnected to the LDN could continue to operate even if one or two interconnection points are out of service. On the other hand, in the situation addressed by the Project 2010-07 team, if the dedicated interconnection facility is out of service, the generation is unavailable because there is no alternative route to deliver it to load. Finally, for the reasons stated in our answers to Questions 3 and 4, we believe the SDT's wholesale adoption of the 20 MVA and 75 MVA thresholds from the NERC Statement of Compliance Registry lacks adequate technical justification. The SDT repeats that error here by incorporating those thresholds into the LDN exception.
Response: The SDT has made changes to the introductory paragraph in Exclusion E3, which the SDT believes clarifies the intent of the local network; however, the SDT believes that the descriptive language adds necessary context to the entire exclusion principle and therefore should be retained. The SDT has determined that a generation limit is appropriate from a bright-line perspective to qualify these local networks as distribution; however, in the revised Exclusion E3, the limits on connected generation have been made somewhat less restrictive as indicated in E3.a. Also, the revised Exclusion E3 now		

Organization	Yes or No	Question 9 Comment
specifically excludes from consideration the "behind the meter" generation in the limits on connected generation. Entities that own/operate facilities that are not necessarily captured for exclusion by Exclusion E3 can still pursue exclusion through the RoP Exception Process. The SDT notes that the responses to the comments in the first posting of the BES Definition did not yield any technically-based alternatives to the generation thresholds of the ERO Statement of Compliance Registry Criteria (SCRC), and as such, the SDT has no technical rationale to deviate from the SCRC. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
FortisBC	Yes	We agree with this concept as part of establishing a bright-line definition along with this clarifying exclusion in the revised BES definition. However, requirements in Exclusion E3 are restrictive and we do not agree to the limits on connected generation for Local Distribution Networks (LDN), described in part (b). The development and implementation of distributed generation will grow considerably in the future and will operate together with conventional sources of energy. The real net aggregated power of distributed generation seen by the bulk power system at the interconnection may be larger than past experience; hence it requires to be reassessed based on technical studies with respect to the future integration of DG's. (Please refer to comments in questions: 3 & 4)

Organization	Yes or No	Question 9 Comment
		Also, we suggest combining exception E3 (c) and (d) as follows:"(c) Power is intended to flows only into the LDN: The generation within the LDN shall not exceed the electric Demand within the LDN; The LDN is intended to deliver power to load and not be used to transfer bulk power between different locations in the BES. It is recognized that under specified system conditions, bulk power transfers may take place between different points of the BES via the LDN. However, for these conditions BES reliability is not dependent on the existence of these power flows through the LDN."Finally, we suggest and urge the SDT to carefully craft the exception criteria & procedure that is flexible and technically sound to adequately allow entities to present their case, and/or unique characteristics of the elements under exception to the ERO for exclusion

Response: The SDT has determined that a generation limit is essential to qualify these local networks as distribution; however, in the revised Exclusion E3, the limits on connected generation have been made somewhat less restrictive as indicated in E3.a. Also, the revised Exclusion E3 now specifically excludes from consideration the "behind the meter" generation in the limits on connected generation.

The revised Exclusion E3 now combines the prior items E3.c and E3.d into a revised item E3.b.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Sierra Pacific Power Co d/b/a NV Energy	Yes	NV Energy strongly supports the definitional exclusion of LDN's from the BES, and such exclusion is necessary to ensure that the BES definition meets the statutory requirement to exclude all facilities used in the local distribution of electric power.In the characteristics of the LDN, item (d) should be clarified to eliminate the ambiguity that arises from the term "used". We suggest the following revision:Not intentionally

Organization	Yes or No	Question 9 Comment
		used to transfer bulk power: The LDN is not used to provide a transaction scheduling path for, nor intentionally used to accommodate the transfer of, energy originating outside the LDN for delivery through the LDN;

Response: The SDT has incorporated this suggestion into the revised language of Exclusion E3.

> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:
>
> ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~
>
> **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;
>
> **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and
>
> ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~
>
> c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Consumers Energy Company	Yes	LDN needs to be specifically defined. The draft appears to come close with the term "Groups of Elements operated above 100kV that distribute power to Load rather than transfer bulk power across the interconnected System." These Groups of Elements should be contiguous to avoid confusion. We are also concerned with the limits on connected generation.

Response: The SDT agrees with the suggestion regarding the contiguous nature of these local networks and has incorporated that suggestion into the revision of Exclusion E3.

The SDT received many comments on the limits of connected generation, and it has made this provision somewhat less restrictive as shown in the revised item E3.a.

> **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher

Organization	Yes or No	Question 9 Comment
		~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Sacramento Municipal Utility District (SMUD)	Yes	SMUD agrees with the concept for Exclusion 3. However, sub-bullet "C" should address potential for integral values for variations of the load to the connected resource.

Response: The SDT has removed the concept of comparison of generation to electric demand, and instead has moved to a simpler limit on connected generation.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a

Organization	Yes or No	Question 9 Comment
		major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Puget Sound Energy	Yes	As suggested in Q1. If a limit on total aggregate load served by LDN is included, that would improve the clarity of this exclusion.
Response: To address similar concerns about the size of a local network, the SDT has now introduced a voltage cap for the LN exclusion of 300 kV. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Illinois Municipal Electric Agency	Yes	With the following clarfying edits. "Local Distribution Networks (LDN): Groups of Elements operated above 100 kV that are primarily intended to distribute power to Load rather than to transfer bulk power across the Interconnected System." The second sentence should be revised as follows: "LDN's are connected to the Bulk Electric System (BES) from more than one Transmission source solely to improve the level of service to retail customer Load."
Response: The SDT has made changes to the introductory paragraph in Exclusion E3, which the SDT believes clarifies the intent of the local network. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to		

Organization	Yes or No	Question 9 Comment
		accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection~~ as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Clark Public Utilities	Yes	Clark strongly supports the categorical exclusion of Local Distribution Networks from the BES. Clark also believes that adopting a 200 kV bright-line threshold will result in most, if not all, LDN being exempted from the BES without any need to analyze or self-certify an LDN. This is another case where a higher threshold (with an appropriate inclusion process) will have no affect on BES reliability but will focus resources on investigation low voltage facilities that truly have an impact on interconnected system operations. Clark does recommend a revision to the LDN exclusion language. E3 - Local distribution networks (LDNs): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system. The LDN is characterized by all of the following:
Response: The SDT has not uncovered nor been presented with any technical rationale for deviating from the voltage threshold of 100 kV in the definition of BES; however, the SDT believes that the revised definition speaks to, and sufficiently identifies, the exclusion of the facilities used for distribution functions. The SDT has made changes to the introductory paragraph in Exclusion E3, which the SDT believes clarifies the intent of the local network. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~		

Organization	Yes or No	Question 9 Comment
		a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
City of Anaheim	Yes	In E3 (b) use the same language as in E1 (b), i.e. Only including generation resources not identified in Inclusions I2, I3, I4, and I5. This avoids re-defining all of the generator provisions here. At a minimum "operated at a voltage of 100 kV or above" should be added at the end of E3 (b).

Response: The SDT has made modifications to the new item E3a, which addresses this concern.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~group~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Organization	Yes or No	Question 9 Comment
AltaLink	Yes	We agree with this concept as part of establishing a bright-line definition along with this clarifying exclusion in the revised BES definition. However, requirements in Exclusion E3 are restrictive and we do not agree to the limits on connected generation for Local Distribution Networks (LDN), described in part (b). The development and implementation of distributed generation will grow considerably in the future and will operate together with conventional sources of energy. The real net aggregated power of distributed generation seen by the bulk power system at the interconnection may be larger than past experience; hence it requires to be reassessed based on technical studies with respect to the future integration of DG's. We suggest and urge the SDT to carefully craft the exception criteria & procedure that is flexible and technically sound to adequately allow entities to present their case, and/or unique characteristics of the elements under exception to the ERO for exclusion.

Response: The SDT has determined that a generation limit is appropriate from a bright-line perspective to qualify these local networks as distribution; however, in the revised Exclusion E3, the limits on connected generation have been made somewhat less restrictive as indicated in E3.a. Also, the revised Exclusion E3 now specifically excludes from consideration the "behind the meter" generation in the limits on connected generation. Entities that own/operate facilities that are not necessarily captured for exclusion by Exclusion E3 can still pursue exclusion through the RoP Exception Process.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Modern Electric Water Company	Yes	Similar to our Question #7 comments regarding radial exclusions in E1, a usable BES definition excluding local distribution networks (LDNs) is needed to allow this industry to focus on and conduct business in a

Organization	Yes or No	Question 9 Comment
		fashion that promotes reliable and efficient system operation. In line with a 1/18/2011 Executive Order directing federal regulatory agencies to base their practices on science and to consider costs, excluding LDNs from the BES definition would achieve that aim on a national scale. While differing only in connectivity, LDNs operate and function exactly as radial systems. We suggest modifying the second and third sentences of E3 as "LDNs are normally operated such that they are connected to the BES through more than one AFID simultaneously, and exist to promote the level of service to Loads as commonly defined by states' utility commissions. For a System to be characterized as an LDN, it must meet all of the following:"Sub-bullet E3-c should be clarified to indicate conditions, timeframes and metrics used to demonstrate power flow direction.We support the intent of the remaining sub-bullets.
Response: The SDT has made changes to the introductory paragraph in Exclusion E3, which the SDT believes clarifies the intent of the local network. The SDT has revised the Exclusion E3 local network in a way that removes the mention of automatic fault interrupting devices. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~group~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Michigan Public Power Agency	Yes	I question the technical justification for the 75 MVA and the 100 KV as pointed out in my comments above. But given those points addressed above I would suggest the following clarification be considered. The exclusion refers to groups of Elements that "distribute power to Load rather than transfer bulk power across the interconnected system." The use of the term "bulk power" is vague and could be read incorrectly as a reference to the "bulk-power system," which is defined in the Federal Power Act but is not a NERC

Organization	Yes or No	Question 9 Comment
		defined term. If the LDN is connected to the BES at more than one location, there will by definition be some loop flow. We recommend below that Exclusion 3(d) be revised to quantify the amount of loop flow that is permissible in an excluded LDN. In the context of the first sentence of Exclusion E3, less specificity is needed, and the sentence should only be revised for the sake of accuracy to state: "Groups of Elements operated above 100 kV that are primarily intended to distribute power to load rather than to transfer power across the interconnected System." The exclusion's reference to connection "at more than one location" is vague. The sentence should be revised to read "connected to the Bulk Electric System (BES) from more than one Transmission source solely to improve the level of service to retail customer Load," and "Transmission source" should have the same meaning that it does in E1. E3(a) should require that there be switching devices between the LDN and the BES, not specifically automatic fault-interrupting devices. The term "separable by" in "Separable by automatic fault interrupting devices" is unclear and should be reworded. E3(b) To avoid pulling an LDN into the BES based on very small customer-owned generation (such as rooftop photovoltaics and hospital backup diesel generators) that the utility does not consider or rely on, or necessarily even know about, the item should be reworded: "Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA of generation used to meet the resource -adequacy requirements of electric utilities." E3(d) states "Not used to transfer bulk power." As noted above, "bulk power" is a vague term. There will necessarily be some loop flow on a system that is connected to the BES at more than one location. The amount of permissible loop flow for this purpose needs to be determined and stated in this item.
Response: The SDT has not uncovered nor been presented with any technical rationale for deviating from the voltage threshold of 100 kV or 75 MVA in the definition of BES; however, the SDT believes that the revised definition speaks to, and sufficiently identifies, the exclusion of the facilities used for distribution functions. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. The SDT has modified the definition such that the term "bulk power" is no longer used in the characteristics, specifically new item E3.b. The term "bulk power" was retained in the paragraph E3, as the SDT believes it provides conceptual value to the exclusion principle.		

Organization	Yes or No	Question 9 Comment
The SDT has revised the Exclusion E3 Local Network in a way that removes the mention of automatic fault interrupting devices. The SDT has made changes to the introductory paragraph in Exclusion E3, which the SDT believes clarifies the intent of the local network. After consideration of the establishment of limits on flow-through, the SDT has elected to make modifications to the local network characteristics to preclude the scheduled use of the network for flow-through rather than establishing a MW limit or transfer distribution factor. The SDT has determined that this is appropriate from a bright-line perspective to qualify these local networks as distribution; Entities that own/operate facilities that are not necessarily captured for exclusion by Exclusion E3 can still pursue exclusion through the RoP Exception Process. The revised Exclusion E3 now specifically excludes from consideration the "behind the meter" generation in the limits on connected generation. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Utility System Efficiencies, Inc.	Yes	USE agrees in concept with this Exclusion. However, in sub-bullet b), as noted in our response to Question 4, there is no technical justification for the 75 MVA threshold on connected generation. In sub-bullet c), it should be clarified whether this requirement is at any time or is for hourly integrated values. Also in sub-bullet e), the use of the term "major transfer paths" should be modified to be "major transfer paths in the Table titled Major WECC Transfer Paths in the Bulk Electric System." Finally, the reference to "above 100 kV" should be "at or above 100 kV" for consistency with the rest of the definition.
Response: See response to Q4.		

Organization	Yes or No	Question 9 Comment
The SDT has determined that a generation limit is appropriate from a bright-line perspective to qualify these local networks as distribution; however, in the revised Exclusion E3, the limits on connected generation have been made somewhat less restrictive as indicated in E3.a. Also, the revised Exclusion E3 now specifically excludes from consideration the "behind the meter" generation in the limits on connected generation. Entities that own/operate facilities that are not necessarily captured for exclusion by Exclusion E3 can still pursue exclusion through the RoP Exception Process. The revised version of the Exclusion E3 language removes the comparison of connected generation to network demand. The new item E3.c clarifies the language regarding WECC major paths. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~ **a)** Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **b)** Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
Cowlitz County PUD	Yes	Cowlitz strongly supports the categorical exclusion of Local Distribution Networks from the BES. In fact, for reasons discussed at length in our answer to Question 1, we believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement to exclude all facilities used in the local distribution of electric power. LDNs are, of course, probably the most common kind of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. Cowlitz supports the LDN exclusion, but we believe the exclusion should be refined in the following respects: o The SDT's draft states that:"LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load." (emphasis added) We recommend that the SDT revise the sentence quoted above as follows: "LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service

Organization	Yes or No	Question 9 Comment
		to retail customer Load and not to accommodate bulk transfers of power across the interconnected bulk system." By instituting this suggestion, the SDT would emphasize the key difference between an LDN, which is designed to reliably serve local, end-use retail customers, and the BES, which is designed to accommodate bulk transfer of power at wholesale over long distances. We propose that a reliable BES will help insure a reliable LDN. If the LDN is not reliable, it should then be an issue to be resolved by the local authorities. If the BES is not reliable, the local authorities lack the tools to remedy the situation.

Response: The introductory paragraph in Exclusion E3 has been revised to eliminate the term "solely" and to explain that the local network does not accommodate bulk transfer across the interconnected system.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN:~~ The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection~~ as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

New England States Committee on Electricity	Yes	NESCOE believes that this language appropriately excludes facilities that serve local distribution loads from the BES.
Public Utilities Commission of Ohio	Yes	Exclusion 3 is appropriate. This reflects the reality that local distribution can be at any level. As a reminder the Commission proposed seven indicators of local distribution to be evaluated on a case-by-case basis:(1) Local distribution facilities are normally in close proximity to retail customers.(2) Local distribution facilities are primarily radial in character.(3) Power flows into local distribution systems; it rarely, if ever, flows out.(4) When power enters a local distribution system, it is not reconsigned or transported on to some other market.(5) Power entering a local distribution system is consumed in a comparatively restricted geographical

Organization	Yes or No	Question 9 Comment
		area.(6) Meters are based at the transmission/local distribution interface to measure flows into the local distribution system.(7) Local distribution systems will be of reduced voltage.This test clearly indicates that not all radial circuit lines are the same. This exclusion would not only appropriately apply the seven factor test, but also comply with the Federal Power Act regarding appropriate authority.
New York State Dept of Public Service	Yes	This exclusion properly recognizes that local distribution facilities can be at any voltage level. It also properly recognizes that reliable service to load often requires parallel circuits. As written, the exclusion respects FERC's concern that major generation facilities should not be part of the LDN, by limiting the exclusion to generation of75 MVA or less, and to only facilities that move energy down to the LDN.
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	Yes	No comment.
Oregon Public Utility Commission Staff	Yes	Exclusion E3 is absolutely necessary for excluding local distribution elements from the interconnected bulk transmission system as required by Section 215 of the FPA of 2005. This exclusion mirrors the Seven Factor Test (established in FERC Order 888), which sets sound overarching principles for differentiating local distribution elements from bulk transmission elements. Also, the conversion of radial systems to local distribution networks is generally implemented by a distribution provider to improve the level of service to local retail customers, not to accommodate bulk transfer of wholesale power.Retaining Exclusion E3 is absolutely crucial for maintaining the 100 kV brightline in the core BES definition. Without the distribution network E3 exclusion, the voltage threshold in the core BES definition would need to be changed to the 200 kV level. Otherwise, NERC and Regional Entities will have to deal with endless exception applications and evaluations associated with the removal of local distribution elements that have no impact on the reliable operation of the interconnected bulk transmission system.
National Association of Regulatory Utility Commissioners	Yes	Exclusion 3 is essential for the standard to conform to Federal Power Act Section 215 that clearly excludes local distribution from FERC and NERC jurisdiction. The exclusion properly recognizes that local distribution can operate at above 100 kV. This exclusion seems to reflect the essence of the Seven Factor test from FERC's Order 888. Although FERC Order 743A did not bind NERC to the Seven Factor test, it makes sense to pursue consistency between these tests.
Michigan Public Service Commission(MPSC)	Yes	MPSC Staff Comments: The MPSC strongly supports this exclusion because it should exclude a large number of subtransmission facilities that are used for the distribution of local load. Also, this exclusion

Organization	Yes or No	Question 9 Comment
		together with E1 parallels the seven-factor technical-functional test for classifying transmission and distribution. The problem with the seven-factor test is that it does not provide an on-going clear bright line for BES determination. For example, an engineer cannot apply the seven-factor test using a one-line diagram of an electric power network and determine - without supplemental evidence - that an element is classified as distribution or not.
FHEC	Yes	We support the current wording of E3.
Public Service Enterprise Group LLC	Yes	
Imperial Irrigation District	Yes	
Santee Cooper	Yes	
ACES Power Participating Members	Yes	
National Rural Electric Cooperative Association (NRECA)	Yes	
Arizona Public Service Company	Yes	
Rayburn Country Electric Cooperative, Inc.	Yes	
New York Power Authority	Yes	
Southern Company	Yes	
Luminant Energy	Yes	
Western Area Power Administration	Yes	

Organization	Yes or No	Question 9 Comment
US Bureau of Reclamation	Yes	
Grand Haven Board of Light and Power	Yes	
Glacier Electric Cooperative	Yes	
South Texas Electric Cooperative, Inc.	Yes	
South Texas Electric Cooperative, Inc.	Yes	
Sweeny Cogeneration LP	Yes	
Dayton Power and Light Company	Yes	
Duke Energy	Yes	
Alberta Electric System Operator	Yes	
Fayetteville Public Works Commission	Yes	
MidAmerican Energy Company	Yes	
American Electric Power	Yes	
East Kentucky Power Cooperative, Inc.	Yes	
American Transmission Company, LLC	Yes	

Organization	Yes or No	Question 9 Comment
Farmington Electric Utility System	Yes	
GTC	Yes	
Idaho Power	Yes	
Pepco Holdings Inc	Yes	
PJM	Yes	
Oncor Electric Delivery Company LLC	Yes	
MEAG Power	Yes	
Xcel Energy	Yes	
Orange and Rockland Utilities, Inc.	Yes	
Golden Spread Electric Cooperative, Inc.	Yes	

Response: Thank you for your support. Based on stakeholder comments, the SDT modified the local network exclusion in the following manner:

Elimination of the term "Distribution" in the label of this exclusion, making it a "local network".

Changes were made to the introductory paragraph in Exclusion E3, which the SDT believes clarifies the intent of the local network, including a statement that the local network does not accommodate bulk transfer across the interconnected system.

Eliminated the provision in Exclusion E3.a which referred to automatic fault interrupting devices, and changed wording to clarify the connection point of the local network.

Please see the revised definition.

10. The SDT is discussing an exclusion from the Bulk Electric System (BES) for small utilities based on statements in Order No. 743 that FERC does not believe its suggested approach to the BES definition and exemption process will have a significant economic impact on a substantial number of small entities and that small entities will not adversely impact the reliability of the Bulk Electric System. The SDT has been made aware that organizations that are not presently required to be registered by the NERC Statement of Compliance Registry Criteria would meet the requirements to be registered as Transmission Owners given the current proposed BES definition. These small utilities could use the Rules of Procedure (ROP) exception process but this may be an issue that could be handled more appropriately through the BES definition. This would alleviate the paperwork burden for these small utilities and also avoid a possibly unnecessary and significant impact on the administration of the ROP exception process during the transition period to the revised BES definition. The proposed exclusion language is:

Exclusion E4: Transmission Elements, from a single Transmission source connected at a voltage of 100 kV or greater, owned by a small utility whose connection to the BES is solely through this single Transmission source, and without interconnected generation as recognized in the BES Designation Inclusion Items I2, I3, I4, or I5. A small utility is recognized as an entity that performs a Distribution Provider or Load Serving Entity function but is not required to register as a Distribution Provider or Load Serving Entity by the ERO.

Do you agree with this approach and the proposed language? If not, please be specific in your response with a technical reason for your disagreement and, if appropriate, suggested language for such an exclusion if you agree in general but feel that alternative language would be more appropriate.

Summary Consideration: The basis for the additional exclusion was predicated by the circumstances of radial systems and the demarcation of the automatic interrupting device. With the change of the demarcation point back to the point where the tap line intersects with the transmission line; this proposed exclusion is unnecessary. The SDT will drop consideration for this proposed exclusion given the change to radial systems. This shall serve as a single response to all comments submitted in response to this question.

Organization	Yes or No	Question 10 Comment
Northeast Power Coordinating Council Hydro One Networks Inc	No	Small utility or distribution provider is a relative term. A distribution provider may have an impact on the transmission network based on its design, configuration, connection point, and protection. Such an exception should apply regardless of the size of an entity. The concept discussed here is to define a radial system and not a small utility, as mentioned in the FERC Order. We do not believe that the SDT had sufficient discussions while crafting the proposed exclusion in regards to small utilities. The language used in the proposed clause

Organization	Yes or No	Question 10 Comment
		is only appropriate to establish a bright-line definition for a radial system.Many small utilities (and individual load customers or generation connections) have more than a single transmission source with a solid tap and, at the same time, be adequately protected and effectively isolated without any adverse impact on the transmission network. Such a practice and design is widely used across North America. Hence, we do not agree that this exclusion is an attempt to address the issue of small utilities. The definition and inclusions will force many small entities, load customers and generation unit owners to act and register as Transmission Owners. This may be in conflict with state or provincial regulatory act, Codes and Licenses. Consistent with the FERC Order, the ERO and the SDT should be aware of these conflicts and should not ignore them. The ERO and the SDT address this by providing explicit but simple provisions in the exception procedure by considering sound technical exception criteria that is flexible based on demonstration of evidence to justify the element's necessity for operation. Regulatory Acts and Rules will always overrule NERC requirements and the only evidence that should be required of small utilities/entities is: o Regulatory evidence o Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of their connection.
Tri-State Generation and Transmission Association, Inc.	No	We disagree with adding E4. This issue should be resolved by enhancing the NERC Statement of Compliance Registry Criteria, not by integrating registration exemptions in NERC definitions.
NERC Staff Technical Review	No	The basis for exclusion must be based on system reliability. The need for an interrupting device between the BES and excluded radial Elements is necessary for system reliability independent of ownership of the excluded radial Elements.
Dominion	No	It is Dominion's position that, all things being equal a generator or a load have similar, but typically inverse impacts of the bulk power system. The burden for small entities is similar, whether that entity is a LSE, DP, GO or GOP.
SPP Standards Review Group	No	What's the difference between the proposed E4 and E1(a)? Wouldn't they be the same? Would it be more appropriate to use single point of Transmission interconnection rather than single Transmission source in E1 and E4?
SERC Planning Standards Subcommittee	No	This seems to be covered by E1.
South Carolina Electric and Gas	No	This seems to be covered by E1.

Organization	Yes or No	Question 10 Comment
Michigan Public Service Commission(MPSC)	No	MPSC Staff Comments: The BES definition proposed by the SDT should not use the term “transmission”. BES should not equal transmission. A system element defined as BES should not determine jurisdiction, ownership, or require duplicative NERC registration.
SERC OC Standards Review Group	No	We suggest that our comments to Question 3 and Question 4 be incorporated. We also question whether this is going to have an unintended consequence of requiring Distribution Providers to register that otherwise wouldn’t have to register because some technical aspect has not been included in this exception.
Idaho Falls Power	No	Just as 100kv is an arbitrary number, so is 20MVA. We appreciate the NERC efforts made to define transmission material to the BES, and likewise feel the same efforts should be applied to small generation resources. There exists a large number of utilities with small generation serving local load on an LDN that will be possibly drawn into TO/TOP standard's compliance by the language in this draft.We hope the drafting team will define BES generation beyond a brightline criteria, as 20MVA lends no more clarity as to what is a BES asset than does 100kV.We believe it should be demonstrated as to why 20MVA is deemed a generation threshold of materiality to the BES. The opportunity now exists to address thresholds, not just the 100kV.
Western Electricity Coordinating Council	No	As written, it is unclear how this exclusion differs from the Radial exclusion. The term “single Transmission source” needs to be clarified - it could be read to be a single line or a single entity, which would change the meaning of this exclusion. It is also improper to include registration criteria in a definition. Furthermore, “small utility” needs to be defined more clearly. The last sentence appears circular because ownership of a transmission element would draw the owner into registration.
ReliabilityFirst	No	it needs to be clear that "all" items must be met to be excluded in E4, E4b seems to conflict with I2 that states it needs included, E4a should state a single source unless LDNs are allowed mutilple sources and then could be considered networked, E4c needs to define who make a the determination on flow and under all system configurations
Southern Company	No	This seems to be covered by Exclusions E1 and E3.
Electricity Consumers Resource	No	We support the concept and intent of the exclusion but it should apply equally to similarly situated loads such as manufacturing facilities that have loads comparable to small municipalities or rural cooperative utilities.

Organization	Yes or No	Question 10 Comment
Council (ELCON)		Thus the language should be amended as noted below:"Exclusion E4: Transmission Elements, from a single Transmission source connected at a voltage of 100 kV or greater, owned by a small utility or similarly situated load whose connection to the BES is solely through this single Transmission source, and without interconnected generation as recognized in the BES Designation Inclusion Items I2, I3, I4, or I5. A small utility or similarly situated load is recognized as an entity that performs a Distribution Provider or Load Serving Entity function but is not required to register as a Distribution Provider or Load Serving Entity by the ERO."
Central Maine Power Company New York State Electric & Gas and Rochester Gas & Electric	No	This exclusion E4 seems to already be covered under the E1 “radial” exclusion.
Intellibind	No	This does not address the full concerns of these small entities. In on case I am familiar with the entity has a switchyard over 100KV and it was convenient for the interconnected utility to utilize the location of the switchyard to add a line for the Transmission Operators purpose, however now that there are two lines into the switchyard it has affected the small utility and they will not have exemption as described in Question 10. The financial burden is very high for these entities when not exempted. In this particular case noted above, the entity is planning to eventually decommission its system, but is caught in having to bear the cost of operating a transmission system even though it is only one substation that is immediatly stepped down to 13.8Kv and feeding a small distributed load. The proposed exemption will still not allow this entity to be exempt.The ROP process does not serve these small utilities well as an alternative and the Drafting Team should resolve these issues in the definition of the BES if possible.
Hydro-Quebec TransEnergie	No	The case of small Utility is covered through other exclusions. However, the Facilities owned by small utility should have protection requirement applied.
US Bureau of Reclamation	No	The small entities can seek exclusion using the BES Exception Process developed under this project.
Grand Haven Board of Light and Power	No	We agree with addition of Exclusion E4, except that it should apply to small load serving distribution utilities even if they are required to register as a Distribution Provider and Load Serving Entity. In our last fiscal year, July 2009 through June 2010, the Grand Haven Board of Light and Power served 262,847 MWh and peaked at 54 MW. Even though we are required to register as DP/LSE, we are still a small utility. Please revise the definition of a small entity for the purpose of this exception to use more reasonable criteria.
South Texas Electric Cooperative, Inc.	No	I agree with everything up to “...but is not required to register...by the ERO”. There are many small utilities that fit into the scope and spirit of the exclusion BUT were required to register as DP and/or LSE by their ERO. This has generally been on the interpretation of “better safe”. Please remove the language which gives

Organization	Yes or No	Question 10 Comment
		this discretion to the ERO and insert language allowing already registered small utilities with have their registrations revoked or surrendered.
National Grid	No	This exclusion is not necessary. Many small utilities (and individual load customers or generation connections) have more than a single transmission source with a solid tap and, at the same time, be adequately protected and effectively isolated without any adverse impact on the transmission network. Such a practice and design is widely used across North America. Hence, we do not agree that this exclusion is an attempt to address the issue of small utilities. The definition and inclusions will force many small entities, load customers and generation unit owners to act and register as Transmission Owners. This may be in conflict with state or provincial regulatory act, Codes and Licenses, and may lead to jurisdictional challenges that could cause uncertainty and delay in implementing the new BES definition. Consistent with the FERC Order, the ERO and the SDT should be aware of these conflicts and should not ignore themThe ERO and the SDT address this by providing explicit but simple provisions in the exception procedure by considering sound technical exception criteria that is flexible based on demonstration of evidence to justify the element's necessity for operation. The only evidence that should be required of small utilities/entities is: o Regulatory evidence. o Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of their connection.
Electric Reliability Council of Texas, Inc.	No	These entities should be subject to the exception process. They may warrant "first instance" exclusion in that process, but any such action should occur there, as opposed to the definition of BES. ERCOT ISO believes this is more consistent with FERC's position that BES should reflect an objective threshold, with exceptions being subject to review by the ERO and FERC, as applicable. Accordingly, ERCOT ISO suggests that this issue be raised in the concurrent BES exception proceeding and ERCOT ISO reserves its right to comment on the substance in that proceeding.
ExxonMobil Research and Engineering	No	While the exclusion for a small utility makes sense, the exclusion should not be limited to a utility company. The SDT should extended the exclusion to similarly situated facilities or organizations with other primary business functions, such as industrial companies.
FortisBC	No	Small utility or distribution provider is a relative term. A smaller distribution provider may have an impact on the transmission network while a large one may not; this is based on their design, configuration and protection. Hence, such an exception should apply regardless of the size of an entity. Having said that, the concept discussed here is to define a radial system and not a small utility, as mentioned in the FERC Order. We do not believe that the SDT had sufficient discussions while crafting the proposed exclusion in regards to small utilities. The language used in the proposed clause is only appropriate to establish a bright-line definition for a radial system.It is worth noting that many small utilities (and individual load customers or generation connections) would have more than a single transmission source with a solid tap and, at the same

Organization	Yes or No	Question 10 Comment
		time, be adequately protected and effectively isolated without any adverse impact on the transmission network. Such a practice and design is widely used across North America. Hence, we do not agree that this exclusion is an attempt to address the issue of small utilities. The definition and inclusions will force many small entities, load customers and generation unit owners to act and register as Transmission Owners. In some parts of the continent this would be in conflict with state or provincial regulatory act, Codes and Licenses. Consistent with the FERC Order, the ERO and the SDT should be aware of these conflicts and should not ignore them for later. Hence, we suggest the ERO and the SDT address this by providing explicit but simple provisions in the exception procedure by considering sound technical exception criteria that is flexible based on demonstration of evidence to justify the element's necessity for operation. Regulatory Acts and Rules will always trump NERC requirements and hence we suggest that the only evidence that should be required of small utilities/entities is: o Regulatory evidence o Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of their connection.
American Transmission Company, LLC	No	ATC believes that small utilities have interfacing responsibilities, and should not be exempt if they own elements (e.g. CTs, batteries, etc.) that are part of a protection scheme that protects the BES Elements.
Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)	No	There is no legal basis to distinguish between "small utilities" and other similarly situated entities. Thus, to avoid unlawful discrimination, Exclusion E4 should be revised as follows:(Deleted language denoted by empty brackets: [ ].) Exclusion E4: Transmission Elements, from a single Transmission source connected at a voltage of 100 kV or greater [ ] whose connection to the BES is solely through this single Transmission source, and without interconnected generation as recognized in the BES Designation Inclusion Items I2, I3, I4, or I5. [ ]
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	No	An automatic interruption device should be required as in exclusion E1.
City of St. George	No	Is the transmission source a single line, a single substation? This needs to be defined. What is a small utility? This needs to be defined. Generation limits should also be revisited, see previous comments.
Southern California Edison Company	No	Small utilities should not be automatically excluded from the BES if the BES Definition continues to focus on the size of interconnecting generators to determine what facilities are included in the BES. Instead, small

Organization	Yes or No	Question 10 Comment
		utilities should be required to justify their exclusion using the exemption procedure and the Technical Principles for Demonstrating BES Exceptions. This would provide the necessary oversight to ensure these smaller systems continued to stay under the thresholds stipulated in the BES definition. In many areas, it is both faster and less expensive for renewable generators to interconnect with these systems, thus potentially allowing for the addition of large amounts of generation totaling more than the draft BES allowances within a relatively short period of time.
Idaho Power	No	As written, it is unclear how this exclusion differs from the Radial exclusion. The term “single Transmission source” needs to be clarified - it could be read to be a single line or a single entity, which would change the meaning of this exclusion. It is also improper to include registration criteria in a definition. Furthermore, “small utility” needs to be defined more clearly. The last sentence appears circular because ownership of a transmission element would draw the owner into registration.
Cogentrix Energy, LLC	No	We suggest that our comments to Question 3 and Question 4 be incorporated. We also question whether this is going to have an unintended consequence of requiring Distribution Providers to register that otherwise wouldn’t have to register because some technical aspect has not been included in this exception.
Clark Public Utilities	No	This proposed exclusion has no affect or benefit. If an entity is not required to register as a DP or LSE why do they then need to be exempted from a standard that does not apply to the entity. The Commission was obviously focusing on a small utility with facilities greater that 100 kV making that entity a Transmission Owner. A 100 kV facility owned by a utility with a small amount of load is either material or immaterial to the reliability of the BES irrespective of the amount of load that entity serves. Therefore the term ‘small utility” must refer to some other measure of size. This may be size of load, but also may include circuit miles of transmission greater than 100 kV, capacity of largest line greater than 100 kV line, and possible other measures of “smallness.”
The Dow Chemical Company	No	If this is adopted, it should apply to industrial sites as well as small utilities.
PJM	No	There is no technical justification to include/exclude elements based on the asset size of the owning company. The exclusion should be based on the technical merits.
New England States Committee on Electricity	No	This appears overly restrictive in that it only includes networks connected at a single source. Please see comments under 7 above.

Organization	Yes or No	Question 10 Comment
Southwest Power Pool	No	These entities should be subject to the exception process within the exclusion criteria. They warrant a "first instance" exclusion in that process, but any such action should occur there, as opposed to the definition of BES. SPP believes this is more consistent with FERC's position that BES should reflect an objective threshold, with exceptions being subject to review by the ERO and FERC, as applicable. It may prove through that process that these entities receive the presumption of exclusion, but that should take part in that process as opposed to being granted a de jure exemption from the definition. Accordingly, SPP suggests that this issue be raised in the concurrent BES exception proceeding as an exclusion criterion, and SPP reserves its right to comment on the substance in that proceeding.
Manitoba Hydro	No	Small utilities should be excluded under the definition of the BES without requiring an additional and specific exclusion.
ISO New England, Inc.	No	This exclusion would not be required if the automatic disconnect requirement was removed from E1. If E1 is not modified as proposed herein then a MW threshold might have to be considered for this E4 definition. E4 should have also been included in the draft definition as well as this comment form.
Xcel Energy	No	There seems to be an implication that if a facility is determined to be BES, registration is required. Yet, the registration criteria already includes exclusion of users, owners and operators of the BES from registration, if they do not meet all the criteria. So, we fail to see why a special exclusion is necessary.
Independent Electricity System Operator	No	Small utilities may be impactive to the bulk power system and as such should not be subject to a carte-blanche exemption but should be subject to assessment and if necessary exclusions after going through the exception process. The outcome of the exception process may well be that such small utilities can be excluded but this cannot be determined a priori. In addition, Exclusion E4 is worded very similarly to Exclusion E1. It is not clear what additional facilities will be excluded by E4 that are not already excluded by E1.
Golden Spread Electric Cooperative, Inc.	No	Suggested revision: Transmission Elements, from a single Transmission source connected at a voltage of 100 kV or greater, owned by a small utility whose connection(s) to the BES is(are) solely through this(these) single Transmission source(s), and without interconnected generation as recognized in the BES Designation Inclusion Items I2, I3, I4, or I5. The intent of the revision is to exlude a small utility with multiple radial connections to BES elements owned by others.
AltaLink	No	Small utility or distribution provider is a relative term. A smaller distribution provider may have an impact on the transmission network while a large one may not; this is based on their design, configuration and

Organization	Yes or No	Question 10 Comment
		protection. Hence, such an exception should apply regardless of the size of an entity. Having said that, the concept discussed here is to define a radial system and not a small utility, as mentioned in the FERC Order. We do not believe that the SDT had sufficient discussions while crafting the proposed exclusion in regards to small utilities. The language used in the proposed clause is only appropriate to establish a bright-line definition for a radial system.It is worth noting that many small utilities (and individual load customers or generation connections) would have more than a single transmission source with a solid tap and, at the same time, be adequately protected and effectively isolated without any adverse impact on the transmission network. Such a practice and design is widely used across North America. Hence, we do not agree that this exclusion is an attempt to address the issue of small utilities. The definition and inclusions will force many small entities, load customers and generation unit owners to act and register as Transmission Owners. In some parts of the continent this would be in conflict with state or provincial regulatory act, Codes and Licenses. Consistent with the FERC Order, the ERO and the SDT should be aware of these conflicts and should not ignore them for later. Hence, we suggest the ERO and the SDT address this by providing explicit but simple provisions in the exception procedure by considering sound technical exception criteria that is flexible based on demonstration of evidence to justify the element's necessity for operation. Regulatory Acts and Rules will always trump NERC requirements and hence we suggest that the only evidence that should be required of small utilities/entities is: o Regulatory evidence o Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of their connection.
Modern Electric Water Company	No	The BES definition has already had a significant economic (and operational) impact on a substantial number of small entities and those small entities have not adversely impacted the reliability of the BES. The Commission (and the SDT) should also consider the other side of the coin - an improved BES definition could have a positive impact on a significantly greater number of small entities than it will negatively impact small entities otherwise not currently registered. Crafting exclusions properly with industry suggestions should limit the small number affected by this proposed definition. Additionally, we point out that in one instance the SDT states that the BES definition does not address registration or the applicability of standards, yet in another instance is concerned what impact the definition will have on an entity's possible registration status. We don't believe you can have it both ways or continue to keep one's proverbial head in the sand any longer. We understand the SDTs scope is to provide a USABLE definition of the BES, but also understand that its intent is two-fold: 1) to correct what the Commission believes is a gap in reliability due to regional discretion, and 2) to remove ambiguity in what constitutes the BES so that industry can focus on and conduct business in a fashion that promotes reliable and efficient system operation and so that the RROs can implement their CMEPs. This second point is absolutely related to registration and the applicability of standards, and shouldn't be ignored.

Organization	Yes or No	Question 10 Comment
		As drafted, Exclusion E4 still would not allow for the exclusion of ALL small utilities that may inadvertently be included in the BES based on the currently-drafted definition, even though they are, indeed, small utilities that should be excluded from the BES. It appears that the SDT is struggling with the idea that the BES definition should properly evaluate every single element in North America by itself. We believe this is why the term "generally" was used in NERC's Statement of Compliance Registry Criteria (SCRC), and why the issue of the BES definition presently in front of the SDT cannot be entirely separated from registration and applicability of standards. If the SCRC will not be examined and modified similarly as the NERCs Rules of Procedure, then the BES definition must include some "grey area deference" for small utilities such as is the intent of E4. If it is the intent of the definition to exclude most small utilities from the BES, then exclusions should be granted based entirely on the definition. Otherwise, as the SDT correctly states, the RoP-based exclusion process will be flooded and ineffectual. As stated in the SCRC, the definition will initially identify those necessary, but still allows for refinements later. The SCRC utilizes NERC's approved definition of the BES, and will be "improved" by this BES definition. Therefore, craft E4 with language that does not limit its intent to exclude small utilities from the BES. Do not use metrics already used in other exclusions. Do not reference registration requirements in exclusions that comprise the definition of the BES - the BES should not be defined in terms of registration criteria. In Order 743, FERC defines a small utility in terms of an entity's annual MWhs sold. Consider aligning NERC's and FERC's definitions similarly.
City of Redding	No	Redding in theory supports this concept however the language proposed does little to improve the current LDN and Radial exemptions. Redding would like the SDT to continue exploring the issue however we have no suggestions for the definition level at this time. Redding does suggest that a viable alternative is to target this issue via the exception process by allowing a exception method to use system or entity "characteristics" as proof for an exception. This would allow a shorter and less burdensome exception process for small entities.
Tacoma Power		Tacoma Power supports the SDT's thoughtful approach to minimizing impacts to small entities. They have no measureable impact to the BES and should not be burdened with the exemption process.
Vermont Transco		The exclusion wording is difficult to understand and apply. Are their voltage levels where this would not apply (ex. 230 kV) or load levels that would be seen as too high? Cannot agree or disagree due to the wording
Exelon		Exelon is abstaining from voting on this item. How would this exclusion be different from E1? Furthermore, Exelon suggests that a definition of "Small Utility" would need to be developed.
BPA	Yes	Generally agree BPA would like to provide an exclusion for a small utility with multiple connections to a single Transmission source connected at a voltage of 100 kV or greater. An example would be a single long 115 kV

Organization	Yes or No	Question 10 Comment
		transmission line passing through a rural area where a small utility utilizes multiple taps to the 115 kV line to serve several radial systems
Cowlitz County PUD Cowlitz County PUD	Yes	Cowlitz supports the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that can ill afford the substantial costs that accompany imposition of mandatory compliance with reliability standards. Further, we agree that the small utilities covered by the exemption will have no measurable impact on the operation of the interconnected BES. In the Pacific Northwest, many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid. Further, the such resources used to comply with the reliability efforts unjustly take away from necessary resources needed for local quality of service efforts.
Small Entity Working Group (SEWG)	Yes	Yes, with some clarifying edits. The final sentence should be revised as follows: "For purposes of this exclusion, a 'small utility' is an entity that performs a distribution provider or load serving entity function but is not required to register as a Distribution Provider or Load Serving Entity by the ERO."
Florida Municipal Power Agency Transmission Access Policy Study Group Northern California Power Agency	Yes	FMPA supports this exclusion. For the sake of clarity, the final sentence should be revised to read as follows: "For purposes of this exclusion, a "small utility" is an entity that performs a Distribution Provider or Load Serving Entity function but is not required to register as a Distribution Provider or Load Serving Entity by the ERO."
American Municipal Power and Members	Yes	For the sake of clarity, the final sentence should be revised to read as follows: "For purposes of this exclusion, a "small utility" is an entity that benefits from the utility of the BES, but does not meet the registry criteria to perform functions in the BES."
National Rural Electric Cooperative Association (NRECA)	Yes	NRECA agrees with this approach, but also believes this could be addressed in the Statement of Compliance Registry Criteria document.
Overton Power District No. 5	Yes	We support exclusion E4, for small utilities, but we are unclear how small utilities are defined in the exclusion language presented here.

Organization	Yes or No	Question 10 Comment
PacifiCorp	Yes	PacifiCorp believes this concept is appropriate with the following concern: Essentially the only difference between this proposed exclusion and E1a is this proposed exclusion does not include “an automatic interruption device”. So if the proposed E4 is left as a stand-alone exclusion it should also require “an automatic interrupting device” qualifier. Technical justification for requiring an interrupting device is the same justification used by the SDT in E1.
FHEC	Yes	this begs the question of the Statement of Compliance Registry Criteria being updated also.
South Texas Electric Cooperative, Inc.	Yes	There are many small utilities that fit into the scope and spirit of the exclusion BUT are currently registered as a DP and/or LSE. Will this exclusion remove them from registration OR should language be inserted that automatically revokes the NERC registrations of “already registered” small utilities. I recommend that any such revocation be handled by NERC and NOT by the various EROs for the sake of consistency.
Sacramento Municipal Utility District (SMUD)	Yes	As written, it is unclear how this exclusion differs from the Radial exclusion. Furthermore, “small utility” needs to be defined more clearly. The last sentence appears circular because ownership of a transmission element would draw the owner into registration. Small entities have no measurable impact to the BES and should not be burdened with the exemption process.
Illinois Municipal Electric Agency	Yes	With the following clarifying edits. The final sentence should be revised as follows: “For purposes of this exclusion, a ‘small utility’ is an entity that performs a distribution provider or load serving entity function but is not required to register as a Distribution Provider or Load Serving Entity by the ERO.”
Michgan Public Power Agency	Yes	But I question if the "Small Entity definition" as indicated in Order 743 language "we certify that this Final Rule will not have a significant economic impact on a substantial number of small entities." has been appropriately addressed.
Public Utilities Commission of Ohio	Yes	It appears this could be applied consistently with other exclusions.
New York State Dept of Public Service	Yes	This exclusion is consistent with E1 and E2. There should not be discrimination against similarly situated loads.
Springfield Utility Board	Yes	Springfield Utility Board supports the SDT in its efforts to avoid unintended consequences from changes to

Organization	Yes or No	Question 10 Comment
		the BES definition, especially for small entities that cannot afford the substantial costs that accompany imposition of mandatory compliance with Reliability Standards. Further, we agree that the small utilities covered by the exemption will have no measureable impact on the operation of the interconnected BES. In the Pacific Northwest, many small entities were required to register by virtue of owning a very small portion of the region's 115 kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance, therefore, will have no measurable effect in improving the reliability of the interconnected Grid.
Springfield Utility Board	Yes	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
American Electric Power	Yes	AEP agrees with the proposed exclusion to the extent that such excluded small utilities would continue to provide any needed information the registered entities have requested from the excluded small utilities to ensure the reliability compliance of those registered entities.
MidAmerican Energy Company	Yes	Arbitrarily excluding small entities could affect reliability depinding on the specific transmission facilities the entity owns and/or operates.
Western Area Power Administration	Yes	As discussed in the Applicability of Federal Power Act Section 215 to Qualifying Small Power Production and Cogeneration Facilities document, the concerns regarding the Regulatory Flexibility Act Analysis of 1980 stated in section VII does not define the phrase a 'significant economic impact' from the perspective of a small entity. A small entity may have staffed maintenance personnel, to accomplish its' own maintenance but now prefers to transfer by written agreement with another entity based upon NERC's compliance registry criteria,

Organization	Yes or No	Question 10 Comment
		in order to bypass the NERC registration. The significant economic impact is the cost associated with the reduced work load for the small entity, maintenance personnel, and the work contracted to another entity.
Western Montana Electric Generating and Transmission Cooperative Public Utility District No. 1 of Snohomish County, Washington Blachly Lane Electric Cooperative Northern Wasco County PUD PUD No. 2 of Grant County, Washington Central Electric Cooperative Clearwater Power Company Consumers Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Inc Okanogan Electric Cooperative PNGC Power Raft River Rural Electric Cooperative Salmon River Electric	Yes	WMG&T supports the SDT in its efforts to avoid unintended consequences from changes to the BES definition, especially for small entities that can ill afford the substantial costs that accompany imposition of mandatory compliance with reliability standards. Further, we agree that the small utilities covered by the exemption will have no measurable impact on the operation of the interconnected BES. In the Pacific Northwest, many small entities were required to register by virtue of owning a very small portion of the region's 115-kV system. These utilities have faced substantial compliance burdens even though their operations are simply not material to the interconnected bulk grid in our region, and the investment of resources in compliance therefore will have no measurable effect in improving the reliability of the interconnected grid.

Organization	Yes or No	Question 10 Comment
Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Clallam County PUD No.1 Chelan PUD – CHPD Kootenai Electric Cooperative Public Utility District No. 1 of Franklin County Midstate Electric Cooperative Central Lincoln Northwest Requirements Utilities Big Bend Electric Cooperative, Inc		
Imperial Irrigation District	Yes	
Santee Cooper	Yes	
MRO's NERC Standards Review Forum	Yes	
ACES Power Participating Members	Yes	
Tennessee Valley Authority	Yes	
Arizona Public Service Company	Yes	
Rayburn Country Electric	Yes	

Organization	Yes or No	Question 10 Comment
Cooperative, Inc.		
New York Power Authority	Yes	
Luminant Energy	Yes	
Dayton Power and Light Company	Yes	
Fayetteville Public Works Commission	Yes	
Florida Keys Electric Cooperative	Yes	
East Kentucky Power Cooperative, Inc.	Yes	
Farmington Electric Utility System	Yes	
Sierra Pacific Power Co d/b/a NV Energy	Yes	
Colorado Springs Utilities	Yes	
Chevron Global Power, a division of Chevron U.S.A. Inc.	Yes	
Muscatine Power and Water	Yes	
Puget Sound Energy	Yes	
GTC	Yes	
Long Island Power Authority	Yes	

Organization	Yes or No	Question 10 Comment
Pepco Holdings Inc	Yes	
Oncor Electric Delivery Company LLC	Yes	
City of Anaheim	Yes	
MEAG Power	Yes	
Utility System Efficiencies, Inc.	Yes	
Response: The basis for the additional exclusion was predicated by the circumstances of radial systems and the demarcation of the automatic interrupting device. With the change of the demarcation point back to the point where the tap line intersects with the transmission line; this proposed exclusion is unnecessary. The SDT will drop consideration for this proposed exclusion given the change to radial systems.		

11. In Order No. 743, the Commission addressed the need to differentiate between Transmission and distribution in the revised definition of the Bulk Electric System (BES). Specifically, the Commission stated that local distribution facilities are to be excluded from the BES. The SDT believes that it has excluded local distribution facilities through the revised bright-line core definition and specific inclusions and exclusions. Do you agree with this position? If not, please provide specific comments and suggestions on what else needs to be addressed or added.

Summary Consideration: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT has also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that the revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunities to exclude distribution facilities above 100 kV. In addition, the "cranking path" and "automatic interrupting devices" language have been removed from the draft BES definition.

Bulk Electric System (BES): Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.

I~~3~~2 - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.

I~~4~~3 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.

E1 - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or,

b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,

c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

E3a. Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

E3b. Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

E3c. Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

Organization	Yes or No	Question 11 Comment
Northeast Power Coordinating Council	No	The current definition drafted by the SDT has not differentiated between Transmission and Distribution, nor excluded distribution facilities from the BES, nor addressed the issue of local distribution facilities above 100kV. It is important for the ERO and the SDT to understand and be consistent with the FERC Order for these important but complex issues. Many parts of the continent could be in conflict with state or provincial regulatory act, Codes, and Licenses. The ERO and SDT and RoP teams be aware of these conflicts and not disregard them, as they will pose many implementation complexities and confusion within the industry. Regulatory Acts and Rules will always supersede NERC requirements and hence it is important that ERO should neither be caught in regulatory conflict nor put entities in these situations.As responded to in Question 10, the ERO and SDT can address this by providing explicit but simple provisions in the exception criteria (to be used by exception procedure) by putting forward required technical assessments , which are based on a demonstration of evidence to justify the element's necessity for operation. For example, suggest that for local distribution, the evidence that should be required is: o Regulatory evidence o Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of

Organization	Yes or No	Question 11 Comment
		their connection Some of the other key attributes of such an exception criteria should be: o Elements are not to be part of interconnection between two balancing authority or contribute to IROLs o Entire system cannot be classified as contiguous o Entity to justify whether or not the elements are necessary for the operation of the interconnected transmission network o Distinguish if the element in question supplies load centers, major cities, serves the national interest and/or possibly impact national commerce or national security, or is identified by the relevant regulatory authority Accordingly, the exception criteria should ONLY list a menu of items and a prescribed report template that should be assessed and presented by an entity as their evidence and justification for exception to a RE, the ERO and any relevant regulatory authority. This evidence and justification would be used by the ERO as part of its decision making process.
Hydro One Networks Inc	No	We commend the SDT for their concept in putting forward a 100kV BES bright-line definition. However, we do not believe that the current definition drafted by the SDT has differentiated between Transmission and Distribution or excluded distribution facilities from the BES, or addressed the issue of local distribution facilities above 100kV. It is worth noting that different jurisdictions may use different terminology for "distribution" or non transmission facilities or elements. For example, some jurisdictions label certain facilities as distribution which connect and are owned and operated by the distribution utility, customer or a generator customer while other label them as connection facility or elements.(See Q10 response)
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT has also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Pepco Holdings Inc	No	see answer to #5
Response: See response to Q5.		
American Municipal Power and Members	No	

Organization	Yes or No	Question 11 Comment
Response: Thank you for your response. In the future please provide more information to let us know more specifically what you disagree with.		
Tri-State Generation and Transmission Association, Inc.	No	See the comments to Question 7.
Response: See the response to Q7.		
Dominion	No	Dominion believes the core BES definition should include any non-radial Element or Facility operated at 100 Kv or higher and should exclude any radial Element or Facility (regardless of operating voltage) as well as non-radial Element or Facility operated below 100 kV. The core definition should also include defined criteria that are applied to an Element or Facility to determine whether or not it meets the intent of the Section 215 of Federal Power Act Section 215 defines the bulk power system as (1) facilities and control systems necessary for operating an interconnected electric energy transmission network; and (2) electric energy from generation facilities needed to maintain transmission system reliability. (3) However, Section 215 excludes facilities used in the local distribution of electric energy From the definition of the bulk power system. An Element or Facility should be included where the Element or Facility is necessary for operating an interconnected electric energy transmission network or is needed to maintain transmission system reliability. Likewise an Element or Facility should be excluded where the Element or Facility is not necessary for operating an interconnected electric energy transmission network or is needed to maintain transmission system reliability.Dominion agrees that the BES definition should exclude local distribution facilities under state jurisdiction. In specific instances (including UFLS programs and transmission protection systems that are implemented on distribution elements or radial transmission) local distribution facilities can be included in approved NERC reliability standards following under explicit standards dedicated to their explicit mission without their automatic inclusion in a definition of BES that could infringe on state jurisdiction.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT has also included in the definition a statement that excludes facilities used in local distribution of electric energy. NERC Reliability Standards can apply to non-BES Facilities and compliance can be enforced for those entities in the NERC Compliance Registry. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
SPP Standards Review Group	No	The inclusion of Cranking Paths into the BES without regard to voltage level has the potential to pull distribution facilities into the BES. (See Question 5)

Organization	Yes or No	Question 11 Comment
Response: The SDT removed Cranking Paths from the BES definition. **I43** - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
Michigan Public Service Commission(MPSC)	No	MPSC Staff Comments: The intent of the updated BES definition should be to classify facilities required to meet mandatory NERC reliability standards. Unnecessary and costly duplication of standards work should be avoided.
Response: The SDT is revising the BES definition to meet the FERC directives in Order Nos. 743 and 743-A. The SDT does not believe it is contributing to any unnecessary and costly duplication of standards work. No change made.		
National Rural Electric Cooperative Association (NRECA)	No	NRECA believes the definition should explicitly state that facilities used in local distribution are excluded from the BES.
United Illuminating	No	The core definition should state that local distribution facilities are not included.
Response: The SDT included in the definition a statement that excludes facilities used in local distribution of electric energy. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy as established by applicable regulatory authorities.		
Idaho Falls Power	No	In the exclusions, we feel there has not been given enough clarification of generation assets on a LDN, specifically, is a single generation resource >20MVA but <75 MVA excluded? This does not seem clear because of the seeming inconsistencies of E2(i) and E3(b).Further, we believe generation on an LDN serving local load wherein the net flow is into the LDN should be excluded.
Response: The SDT made changes to the LDN, now LN, to address your comment and the comments of others. Specifically, LNs are permitted to have generating resources that in the aggregate do not exceed 75 MVA, and such generating resources are not already included under I3 of the BES definition. The SDT believes these changes clarify the amount of generation permitted in the LN. **E3a**. Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;		

Organization	Yes or No	Question 11 Comment
Overton Power District No. 5	No	Facilities used in local distribution should not be swept up into the BES
Western Montana Electric Generating and Transmission Cooperative	No	While WMG&T agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions - will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1, WMG&T believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. As discussed in our answer to Question 3, WMG&T notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that "users" of the BES can be subject to reliability regulation. Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BESDTF Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.
Texas Industrial Energy Consumers (TIEC)	No	TIEC appreciates the SDT's effort to identify situations where facilities rated above 100 kV should still be categorically excluded from the BES definition This recognition is consistent with the concerns raised by TIEC and many of its individual members in comments to the FERC in Docket RM09-18-000. However, TIEC submits that the SDT's approach to these exclusions should be revised to meet FERC's express recognition in Order No. 743-A that "facilities used for local distribution are excluded from the Bulk-Power System definition under section 215, and thus are excluded from the bulk electric system." Order No. 743-A at Â¶58. It is crucial that the BES definition is drafted in a way that recognizes that it is the transmission provider's responsibility to ensure that equipment is in place to protect the BES from the operations of excluded facilities, not the responsibility of a person owning facilities involved in the local distribution of electricity. These issues are addressed in further detail in response to the specific exclusions.
Electricity Consumers Resource Council (ELCON)	No	Section 215 of the Federal Power Act denies FERC jurisdiction over facilities used in the local distribution of electric energy. FERC has recognized that since facilities used in the local distribution of electric energy "are exempted from the Bulk-Power System, they also are excluded from the bulk electric system." Section 215 of the Federal Power Act does not qualify the exclusion from FERC jurisdiction of "facilities used in the local distribution of electric energy." For example, Section 215 does not state that:--The term "bulk power system" "does not include facilities used in the local distribution of electric energy [unless needed for reliability purposes];" or --The term "bulk power system" "does not include facilities [with automatic interruption devices] used in the local distribution of electric energy."Any definition of the bulk electric system that does not exclude all "facilities used in the local distribution of electric energy" is unlawful.

Organization	Yes or No	Question 11 Comment
		Further, the definition of the bulk electric system must recognize that Section 215 of the Federal Power Act does not allow the potential reliability impact of a facility to determine whether the facility is local distribution or transmission. By excluding all facilities used in the local distribution of electric energy from the definition of the Bulk-Power System in Section 215, Congress recognized that while facilities used in the local distribution of electric energy may be part of the Bulk-Power System, they are, nonetheless, not FERC jurisdictional. Thus, "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" that are used in the local distribution of electric energy are not FERC jurisdictional regardless of the potential reliability impact of the facilities.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Tennessee Valley Authority	No	We cannot be certain of the effect of the BES definition on distribution facilities until our comments to the inclusions and exclusions above are considered.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes these changes address your concerns. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Alabama Public Service Commission	No	In drafting the inclusions and exclusions that accompany the core BES definition, the SDT needs to be very careful in considering jurisdictional issues. FERC has recognized in its recent orders regarding the BES definition that local distribution facilities are not subject to its jurisdiction under Section 215 of the Federal Power Act. As the SDT considers the scope of the inclusions and exclusions from the BES Definition, it needs to consider whether the proposed provisions only include: 1) facilities or control systems that are "necessary" for operating an interconnected electric transmission network and 2) whether they involve generation facilities that are "needed" to maintain transmission system reliability. If the proposed inclusions and exclusions result in the BES definition applying to facilities beyond this "necessary" and "needed" scope (such as local distribution facilities), then the definition would be inconsistent with Section 215 and could improperly make those facilities subject to "reliability standards" contrary to the Federal Power Act.

Organization	Yes or No	Question 11 Comment
		The APSC generally supports the BES Core Definition and all three Exclusions proposed by the SDT. The APSC strongly supports Exclusion E3 for local distribution networks and Exclusion E1 for radial systems (subject to the concerns below). Exclusion E3 will ensure State jurisdiction over facilities that are used in the local distribution of electric energy. The APSC does not support Inclusion I2 for individual generating units greater than 20 MVA. Inclusion I2 should be eliminated entirely because it will result in too many radial sub-transmission load serving facilities losing their non-BES status, when those facilities are not "necessary" for bulk power system reliability. The APSC supports Inclusion I3 (75MVA) as a sufficient generating unit threshold for purposes of this definition.If Inclusion I2 is eliminated, then the reference to Inclusion I2 within Exclusion E1 should also be eliminated.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
ReliabilityFirst	No	we feel that BES elements have been included in teh exclusions
PJM	No	The bright line exclusion includes facilities that would normally be BES facilities but are excluded based on the asset size of the owner.
Response: The SDT does not believe it has excluded BES Elements in the draft BES definition. The SDT made a number of clarifying changes to the draft BES		

Organization	Yes or No	Question 11 Comment
definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Central Maine Power Company New York State Electric & Gas and Rochester Gas & Electric	No	Transmission and distribution facilities are already mutually exclusive and are already classified and reported in FERC Form 1. The SDT definition may have rolled in considerable portions of the distribution system for consideration as BES. A small generator that is entered into the black start program would make the complete cranking path BES. As documented previously this inclusion of immaterial generators and subsequently their distribution cranking paths is at odds with the Compliance Registry.
Exelon	No	As highlighted in the answers to Questions 5 and 7, Exelon does not believe that facilities used in local distribution of electric energy have been fully excluded in the draft BES definition. For example, there are many examples of black start cranking path facilities that are <100kV and that are currently defined as facilities used in the "local distribution of electric energy".
Response: The SDT removed Cranking Paths from the BES definition. The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy. **I43** - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
Western Area Power Administration	No	Numerous distribution lines in the western US are 115kV, and some are being upgraded from 115kV to 230kV.
Intellibind	No	Due to the voltage bright line of 100kV there is still a question of what makes up sub-transmission. Many rural companies with large geographic areas use the 115kV system internally as sub transmission, but because of the bright line it is considered part of the transmission system. This is not its purpose, or how it is operated. There are no commercial paths, and no transmission flow through. On the other hand there are significant generation resources (significantly over 20MVA) that are interconnected directly through the sub transmission system to the BES, and by definition, since they are not interconnected at 100kV, they are

Organization	Yes or No	Question 11 Comment
		exempted from BES status. Some of these facilities do have direct impact on the BES.
Public Utility District No. 1 of Snohomish County, Washington	No	While Snohomish County PUD agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions - will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1, Snohomish believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. To give a further example, assume that a local distribution utility operates a distribution network that currently would be excluded from the SDT's definition, but that a cogeneration facility with a capacity of 30 MVA and average production of 15 MW is constructed in one of the industrial areas served by local distribution facility and the output is purchased by one of the industrial customers. Because of inclusion I2, the local utility would now be classified as owning BES facilities, even though the output of the generator rarely exceeds 20 MW in practice and the output is, as a matter of physics, absorbed by the surrounding industrials loads rather than being transmitting onto the interconnected grid. Further, the fundamental nature of the local distribution facilities has not changed. They are still used to deliver electric power to the utility's end-use customers, not to deliver power on the wholesale market across the interconnected bulk grid. Hence, the result of the SDT's definition is to include "facilities used on the local distribution of electric energy" in contravention of FPA Section 215(a)(1), 16 U.S.C. Â§ 8240(a)(1). The practical result of the improper classification would be that the local utility would be required to register as a Transmission Owner and Transmission Operator, and would incur substantial costs to comply with requirements that are designed to ensure the reliable operation of transmission lines that are part of the interconnected grid, not local distribution facilities. For the reasons explained in the papers published by the Project 2010-07 Task Force, the result is substantially increased compliance costs that produce little or no improvement in the reliability of the interconnected bulk system. Accordingly, if viewed in isolation, the SDT's core definitions and list of inclusions/exclusions do not comply with the statute or produce optimum benefits for bulk system reliability. Whether the SDT's approach complies with the statute can only be determined by examining the Exception process now under development, in conjunction with the SDT's definition. If the Exception process results in the exclusion of facilities that are improperly swept into the BES by the bright-line thresholds included in the SDT's definition, and the Exception can be attained at a reasonable cost to the involved entities, then the SDT will have achieved a result that complies with the statute. But this conclusion can be reached only upon review of the entire package, not just the core definition and list of inclusions/exclusions. In this regard, as discussed in our answer to Question 3, Snohomish notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that "users" of the BES can be subject to reliability regulation. 16 U.S.C. Â§ 824o(b). Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BES Task Force

Organization	Yes or No	Question 11 Comment
		generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Company Consumers Power Inc. Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Inc Okanogan Electric Cooperative PNGC Power Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative	No	We agree that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions - will be effective in removing some local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed in our answer to Question 1, the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES.
Northern Wasco County PUD Chelan PUD – CHPD Kootenai Electric Cooperative	No	While Northern Wasco County PUD agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions - will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1, Northern Wasco County PUD believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. As discussed in

Organization	Yes or No	Question 11 Comment
Public Utility District No. 1 of Franklin County Northwest Requirements Utilities Big Bend Electric Cooperative, Inc. Cowlitz County PUD		our answer to Question 3, Northern Wasco County PUD notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that "users" of the BES can be subject to reliability regulation. Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BESDTF Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.
Clallam County PUD No.1	No	While Clallam County PUD agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions - will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1, Clallam believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. To give a further example, assume that a local distribution utility operates a distribution network that currently would be excluded from the SDT's definition, but that a cogeneration facility with a capacity of 30 MVA and average production of 15 MVA is constructed in one of the industrial areas served by local distribution facility and the output is purchased by one of the industrial customers. Because of inclusion I2, the local utility would now be classified as owning BES facilities, even though the output of the generator rarely exceeds 20 MVA in practice and the output is, as a matter of physics, absorbed by the surrounding industrials loads rather than being transmitting onto the interconnected grid. Further, the fundamental nature of the local distribution facilities has not changed. They are still used to deliver electric power to the utility's end-use customers, not to deliver power on the wholesale market across the interconnected bulk grid. Hence, the result of the SDT's definition is to include "facilities used on the local distribution of electric energy" in contravention of FPA Section 215(a)(1), 16 U.S.C. Â§ 8240(a)(1). The practical result of the improper classification would be that the local utility would be required to register as a Transmission Owner and Transmission Operator, and would incur substantial costs to comply with requirements that are designed to ensure the reliable operation of transmission lines that are part of the interconnected grid, not local distribution facilities. For the reasons explained in the papers published by the Project 2010-07 Task Force, the result is substantially increased compliance costs that produce little or no improvement in the reliability of the interconnected bulk system. Accordingly, if viewed in isolation, the SDT's core definitions and list of inclusions/exclusions do not comply with the statute or produce optimum benefits for bulk system reliability. Whether the SDT's approach complies with the statute can only be determined by examining the Exception process now under development, in conjunction with the SDT's definition. If the Exception process results in the exclusion of facilities that are improperly swept into the BES by the bright-line thresholds included in the SDT's definition, and the exclusion can be accomplished at a reasonable cost to the involved entities, then the SDT will have achieved a result that complies with the statute. But this

Organization	Yes or No	Question 11 Comment
		conclusion can be reached only upon review of the entire package, not just the core definition and list of inclusions/exclusions. In this regard, as discussed in our answer to Question 3, Clallam notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that "users" of the BES can be subject to reliability regulation. 16 U.S.C. Â§ 824o(b). Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BES Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.
Electric Reliability Council of Texas, Inc.	No	See response to question 1 - ERCOT ISO agrees that distribution facilities should be excluded, and such facilities are generally excluded in ERCOT ISO's proposed alternative definition. However, FERC stated in 743 and 743-A that it has the right to determine if facilities are distribution or transmission. Accordingly, to respect the FPA explicit exclusion of distribution facilities and FERC's authority to determine if a facility is transmission or distribution, ERCOT ISO position is that the general exemption should be in the BES definition, but any such exemptions must be subject to the exemption process to facilitate FERC's authority to make the relevant determination. With respect to that process, it may provide for a presumptive exclusion with additional at FERC's discretion. ERCOT ISO reserves its rights to comment on the criteria for exclusion/exemption/inclusion in that proceeding. In addition, the exception process should provide for the ability to include certain distribution facilities if the inclusion criteria of the exception process indicate such action is appropriate.
MidAmerican Energy Company	No	We disagree that the SDT has appropriately excluded local distribution facilities through the revised bright-line core definition and specific inclusions and exclusions. A similar bright line criterion excluding facilities below 100 kV would be better. The intent is to clearly define facilities below 100kV (exclusive of resources added under criterion I4) as local distribution (excluded from FERC jurisdiction in accordance with the Federal Power Act). Critical facilities below 100 kV would be brought back in under the provisions of inclusion exception criteria of the Technical Principles for Demonstrating BES Exceptions procedure.
Springfield Utility Board	No	While SUB agrees that the approach adopted by the SDT, a core definition, couple with specific inclusions and exclusions, will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. SUB believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. SUB notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt.

Organization	Yes or No	Question 11 Comment
Springfield Utility Board	No	These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause a inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
Midstate Electric Cooperative	No	While MSEC agrees that the approach adopted by the SDT -- a core definition coupled with specific inclusions and exclusions - will be effective in removing most local distribution facilities from the BES, it will not remove all such facilities. For the reasons discussed at greater length in our answer to Question 1,MSEC believes that the proposed definition is over-inclusive and is likely to sweep up certain facilities used in local distribution that should not be classified as BES. As discussed in our answer to Question 3, MSEC notes that exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. On the contrary, the statute provides that “users” of the BES can be subject to reliability regulation. Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BESDTF Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.
Public Utilities Commission of Ohio	No	While it appears there was an attempt to draft the standard to comply with the Federal Power Act, the issues outlined throughout the questions above raise concerns that local distribution could easily get captured in NERC and FERC reliability standards needlessly and inappropriately.

Organization	Yes or No	Question 11 Comment
New England States Committee on Electricity	No	As stated in 1 above, NESCOE is concerned that the proposed definition may unintentionally incorporate facilities into the BES that do not have a direct impact on the reliability of the system, potentially imposing significant costs without meaningful reliability benefits.
AltaLink	No	We commend the SDT for their concept in putting forward a 100kV BES bright-line definition. However, we do not believe that the current definition drafted by the SDT has differentiated between Transmission and Distribution or excluded distribution facilities from the BES, or addressed the issue of local distribution facilities above 100kV. We believe that the ERO and SDT can address this by providing explicit but simple provisions in the exception criteria (to be used by exception procedure) by putting forward a menu of key technical assessments , which are based on demonstration of evidence to justify the element's necessity for operation. For example, we suggest that for local distribution, the evidence that should be required is: o Regulatory evidence o Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of their connectionWe suggest that the exception criteria should ONLY list a menu of items and a prescribed report template that should be assessed and presented by an entity as their evidence and justification for exception to a RE, the ERO and any relevant regulatory authority. This evidence and justification would be used by the ERO as part of its decision making process.
Modern Electric Water Company	No	The proposed definition continues to inject ambiguity in that it introduces the use of the separately-defined capitalized term "Transmission". In NERC's Glossary of Terms (May 24, 2011), "Transmission" is defined in terms of function rather than voltage. As it should, the core definition implies that only Elements used for the transfer of energy to points where it is transformed for delivery to customers as well as certain resources are considered to be included in the BES. However, it also uses voltage, and we do not believe that the proposed definition goes far enough to distinguish between T and D. Under the language of the core definition, there exists a two-stage qualifier for non-resource Elements - namely that it must first be used for Transmission and not for "Distribution", and secondly, that it be operated above 100kV. Rather, the BES cannot contain Elements used for "Distribution" (a term not explicitly defined, but extrapolated from other NERC glossary terms to mean the "wires" between the transmission system and the end-use customer, and NOT defined by voltage). While the Exclusions detail characteristics of specific distribution-like Elements, we suggest that the core BES definition contain language explicitly excluding Distribution (there are Elements that are neither qualifying radials as defined in E1 nor local distribution networks as defined in E3). Section 215(a)(1) contains specific language that could be used in the core definition in this instance.
Michgan Public Power Agency	No	As I have indicated in my comments above the "small entity definition" is not being used when the 100 KV, 20 MVA, and 75 MVA aggregate are being used only. A unit with a long start up time and a low capacity factor and/or availability factor and connected to a local distribution system is interconnected to the BES has little opportunity to be counted on to support the BES during a critical event. With the environmental issues out

Organization	Yes or No	Question 11 Comment
		there it could be expected that owners of these types of units may well decide on economics of the issue and retire such units. How would the reliability of the BES be served then?
City of Redding	No	Redding agrees that addressing Radial's and LDN's in the core definition is a great first step in identifying distribution facilities, however there will still be a sizeable amount of elements operated over 100 kV that will not be identified as distribution facilities through the efforts of the brightline. Additionally, as noted in question #1, in the Western Interconnect the majority of 100 kV elements are used as Distribution facilities. Therefore, the exclusions E1 & E2 will help ease the burden of NERC and the Regional Entity in the West by reducing the number of Exception Process applications. Also, Redding believes the SDT needs to take a more literal approach to FERC's Orders and define the term "*necessary for operating the interconnected transmission network"* and clearly *"establish whether a particular facility is local distribution or transmission".* Without a clear distinction of these two foundational principles it will be difficult to remove the confusion between the Regulators and Entities as to the term "necessary".
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Hydro-Quebec TransEnergie	No	See comments on E3 (Q.9)
Response: See response to Q9.		
Oregon Public Utility Commission Staff	No	Without BES "demarcation" and "contiguous" principles being addressed in the proposed BES definition, this question is difficult to answer. NERC Staff has submitted written comments to this project stating that the BES "must be contiguous." Instituting a contiguous BES with Inclusion I2, for example, would result in a substantially over-inclusive BES definition. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of distribution elements that nothing to do with improving or protecting the reliability of bulk transmission system.There is no compelling reason to adopt a "contiguous" BES down into local distribution systems. Section 215 of the FPA of 2005 gives FERC jurisdictional authority over "users" as well as "owners" and "operators" of the bulk power system. Consequently, FERC has the jurisdictional authority to require generation and other entities in the Compliance Registry to comply with applicable NERC requirements. Hence, even where an entity does not own or

Organization	Yes or No	Question 11 Comment
		operate BES assets, it could still be required, for example, to provide necessary information to the applicable Reliability Coordinator or Planning Coordinator and to participate in programs to prevent instability, uncontrolled separation, or cascading outages to the bulk transmission system. This approach would fully achieve the goals of bulk transmission system reliability without imposing the full BES regulatory compliance burden on local distribution elements.
National Association of Regulatory Utility Commissioners		The standard as currently written seems to exempt most local distribution from NERC and FERC reliability standards. Section 215 of the Federal Power Act requires such exemptions. There remain some outstanding concerns, however. For example, earlier comments from NERC staff have suggested that the BES needs to be contiguous. If the definition were to require continuity, it would likely sweep in many local distribution facilities that should not (and cannot under the statute) be included in the BES definition.
Response: The SDT did not adopt a "contiguous" BES down into the local distribution systems. The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Grand Haven Board of Light and Power	No	The exclusions do not properly address the exclusion of single automatic interrupting device that serves a radial, load serving system and, through its operation, does not affect the BES.
Response: The SDT removed the requirement for an automatic interrupting device for radial exclusions. **E1** - ~~Any r~~Radial system~~s~~: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:		
FHEC	No	Not until the Statement of Compliance Registry Criteria is conformed to this proposed definition.
South Texas Electric Cooperative, Inc.	Yes	I agree, but believe that those distribution companies that were forced to register as LSEs under FERC interpretation should be excluded as well.
South Texas Electric Cooperative, Inc.	Yes	I agree, but believe that those local distribution companies operating below the bright-line that were forced to register as LSEs under FERC Order on Compliance Filing (October 16, 2008) should be excluded as well. For example, BAL-005-0.1b, CIP-001-1a, EOP-002-3 and others do not apply to DPs but affect small local

Organization	Yes or No	Question 11 Comment
		utilities as LSEs. If, according to FERC Order 743 a small local distribution utility would be rightly excluded from DP standards, then, by the same logic and as a distribution-level LSE, they should be excluded from LSE standards as well.If an operating system voltage below 100kV is too low to affect the BES/BPS, then it stands to reason that their connected load is too small as well. If not - then another bright-line should be established in the spirit of FERC Order 743 to differentiate between power flow across the BES/BPS and power flow to end-use consumers.
Response: The SDT was assigned the job of revising the BES definition as required by FERC Order Nos. 743 and 743-A. Any changes to the ERO Statement of Compliance Registry Criteria are outside the scope of the SDT's assigned work. No change made.		
Vermont Transco	No	The inclusion of all black start units "regardless of voltage", the unclear definition of "automatic interruption device" and "common bus" could lead to local distribution company facilities being included in the definition of BES.
ISO New England, Inc.	No	The SDT definition will unnecessarily roll in portions of the distribution system for consideration as BES. A small generator that is entered into the black start program would make the complete cranking path BES. As documented previously this inclusion of immaterial generators and subsequently their distribution cranking paths is at odds with the Compliance Registry.
Response: The SDT removed the requirement for (1) an automatic interrupting device for radial exclusions and (2) all Cranking Paths regardless of voltage from the draft BES definition. In addition, the "common bus" language has been deleted from the draft BES definition. **E1** - ~~Any r~~Radial systems: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: **I43** - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
National Grid	No	We don't believe the bright-line core definition and specific inclusions and exclusions prevent distribution from being considered as BES. Actually, it seems like a lot of distribution will be considered BES according to the inclusions and exclusions. (E1 may be interpreted to include step downs if they don't have automatic interruption devices and possibly the tied through distribution system to the other step-down transformer that doesn't have an automatic interruption device from the same Transmission source) If the definition is not revised to exclude more distribution, we are concerned about how the distribution elements that will be considered BES under the new definition will be classified. The BES definition should not be used to differentiate between transmission and distribution. It is important for the ERO and the SDT to understand and be consistent with the FERC Order for these important but complex issues. There could be conflicts with state or provincial jurisdictions. The ERO and SDT and RoP teams should be aware of these conflicts and not

Organization	Yes or No	Question 11 Comment
		disregard them, as they will pose many implementation complexities and confusion within the industry, and may lead to jurisdictional challenges that could cause uncertainty and delay in implementation of the new BES definition. It is important for the ERO to not put entities in situations where there is some confusion or conflict.Removing I4, the inclusion regarding blackstart resources and cranking paths, will prevent distribution from being considered as BES. Also, clarification that step downs which have one winding which is less than 100 kV but are tapped off of the BES system without an automatic interruption device are not BES could also prevent distribution from being considered as BES.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. In addition, the Cranking Path and automatic interruption device language has been removed from the draft BES definition. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy. **I43** - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~. **E1** - ~~Any r~~Radial systems: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:		
ExxonMobil Research and Engineering	No	The SDT has defined a specific type of local distribution facility in their bright-line definition of the bulk electric system. The SDT's definition focuses on a specific type of local distribution system that has a minimum impact on an interconnected transmission system when that interconnected transmission system does not include the facilities necessary to properly protect itself from faults originating on its boundary. Section 215 of the Federal Power Act does not qualify the type of local distribution facility that should be excluded. It exempts ALL facilities used in the local distribution of electric energy, regardless of whether the owners and operators of the interconnected transmission system have installed facilities that are necessary to secure the reliability of the interconnected transmission system from incidents originating at its boundaries.Additionally, the SDT should consider making its definition of a local distribution network consistent with exclusion E2. If a generation facility with a net aggregate rating less than 75 MVA or single unit with a net export capacity below 20 MVA is not a part of the bulk electric system, what is the technical justification of including a local distribution network that exports less than 75 MVA in the bulk electric system when it is not used to transmit electric energy between geographic regions? Many QFs and large industrial facilities may fall under the description of local distribution network due to the breadth of their private use network, connection to mulitple

Organization	Yes or No	Question 11 Comment
		138 kV / 230 kV substations (done to improve reliability in order to provide safer operation of the industrial process), and possible cyclical generation exports (sometimes exporting / sometimes importing).
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy as established by applicable regulatory authorities. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.		
FortisBC	No	We commend the SDT for their concept in putting forward a 100kV BES bright-line definition. However, we do not believe that the current definition drafted by the SDT has differentiated between Transmission and Distribution or excluded distribution facilities from the BES, or addressed the issue of local distribution facilities above 100kV. It is important for the ERO and the SDT to understand and be consistent with the FERC Order for these important but complex issues. Otherwise, many parts of the continent could be in conflict with state or provincial regulatory act, Codes, and Licenses. We urge the ERO and SDT and RoP teams be aware of these conflicts and not disregard them, as they will pose many implementation complexities and confusion within the industry. Regulatory Acts and Rules will always trump NERC requirements and hence it is important that ERO should neither be caught in regulatory conflict nor put entities in these situations. It is worth noting that different jurisdictions may use different terminology for "distribution" or non transmission facilities or elements. For example, some jurisdictions label certain facilities as distribution which connect and are owned and operated by the distribution utility, customer or a generator customer while other label them as connection facility or elements.As stated earlier (Q10), we believe that the ERO and SDT can address this by providing explicit but simple provisions in the exception criteria (to be used by exception procedure) by putting forward a menu of key technical assessments , which are based on demonstration of evidence to justify the element's necessity for operation. For example, we suggest that for local distribution, the evidence that should be required is: o Regulatory evidence. o Evidence demonstrating that NO adverse reliability impact is afflicted on the interconnected BES because of their connection.Some of the other key attributes of such an exception criteria should be: o Elements are not to be part of interconnection between two balancing authority or contribute to IROLs o Entire system cannot

Organization	Yes or No	Question 11 Comment
		be classified as contiguous o BESS Elements within exclusion can still be subject to relevant NERC Standards o Entity to justify whether or not the elements are necessary for the operation of the interconnected transmission network o Distinguish if the element in question supplies load centers, major cities, serves the national interest and/or possibly impact national commerce or national security, or is identified by the relevant regulatory authority.Accordingly, we suggest that the exception criteria should ONLY list a menu of items and a prescribed report template that should be assessed and presented by an entity as their evidence and justification for exception to a RE, the ERO and any relevant regulatory authority. This evidence and justification would be used by the ERO as part of its decision making process.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. Your comments regarding the exception process criteria will be addressed separately in the response to the exception process comments. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Consumers Energy Company	No	The proposed definition appears to treat “BES” and “Transmission” synonymously, and this is highly likely to have a significant effect on registration, even if this is not intended. To support consistency between reliability and tariffs, we recommend that more direct consideration be given to the FERC 7-factor test that has been consistently used to delineate transmission facilities for tariff purposes, and to discriminate between registration requirements for TO and DP based on this delineation. Further, reliability gaps will not be created (or can be addressed by minor changes to the applicable standards) if this recommendation is adopted because all aspects of the applicable standards/requirements are (or will be) captured by the current registration process.
Response: The SDT reviewed and considered the FERC 7-factor test and has included some concepts of that test in the LN portion of the draft BES definition. No change made.		
Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)	No	Local distribution facilities have not been excluded from the proposed definition of the BES. As FERC recognized in Order No. 743-A in directing NERC to exclude local distribution facilities from the revised definition of the BES, any definition that does not exclude all “facilities used in the local distribution of electric energy” is unlawful. FERC, as well as federal courts, have repeatedly stated that whether a facility is used in local distribution must be determined on a “case-specific” basis (see, e.g., Order No. 888 at 31,980-81). As a threshold matter, before devoting any additional time and resources to developing a definition of the BES, there must be a clear understanding of the factors to consider when determining whether a facility is either a

Organization	Yes or No	Question 11 Comment
		local distribution facility or a transmission facility. Currently, such a determination is made by considering a "seven-factor test" that FERC has adopted, and the U.S. Supreme Court has upheld. The "seven-factor test," of which no one factor is determinative, evaluates the following indicators: (1) Local distribution facilities are normally in close proximity to retail customers.(2) Local distribution facilities are primarily radial in character.(3) Power flows into local distribution systems; it rarely, if ever, flows out.(4) When power enters a local distribution system, it is not reconsigned or transported on to some other market. (5) Power entering a local distribution system is consumed in a comparatively restricted geographical area. (6) Meters are based at the transmission/local distribution interface to measure flows into the local distribution system.(7) Local distribution systems will be of reduced voltage (Order No. 888 at 31,981). The seven-factor test, which recognizes that a bright-line between transmission and distribution is a not a workable approach, is designed to ensure FERC does not impermissibly usurp state and local regulation of local distribution facilities. There is no evidence that the seven-factor test was considered in drafting the proposed definition of the BES. Please see further discussion in response to Question 12.
Central Lincoln	No	We believe the SDT has excluded most distribution facilities, but not all. The remaining distribution facilities will find it necessary to go through a lengthy exception process. As stated in Q1, we support the PNGC comments stating that local distribution as determined by the seven factor test should be excluded by definition. We note that the SDT has also developed a technical principal document that uses language similar to the seven factor test. To use it, though, an entity must apply for exception first. We believe the seven factors or technical principles should be part of the definition in order to avoid numerous exception applications and resulting delays.
City of Anaheim	No	A functional test, similar to the seven factor test used for FERC Order 888, should be used to identify transmission network facilities independent of voltage. All other electrical facilities not identified as transmission network facilities should be deemed local distribution facilities, and should excluded from the Bulk Electric System pursuant to the statutory Bulk Power System definition provided under federal law (18 CFR 39.1, Title 18, Chapter I, Subchapter B, Part 39)i.e. "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof), and electric energy from generating facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Please note that the statute does not reference any voltage level, therefore both transmission network and local distribution facilities each can operate at voltages higher or lower than 100 kV. The radial (E1) and local distribution network (E3)exclusions are a good starting point under the definition, but the exception procedure should have a functional exception for local distribution facilities independent of voltage level.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and		

Organization	Yes or No	Question 11 Comment
distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. In addition, the SDT reviewed and considered the FERC 7-factor test and has included some concepts of that test in the LN portion of the draft BES definition. However, the 7-factor test, in and of itself, has been cited by FERC as insufficient to prove a facility is distribution. The SDT has attempted to provide additional tests that will hopefully pass FERC scrutiny. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	No	BGE votes “NO” due to the lack of clarity in exclusion E1.
Response: The SDT made significant revisions to Exclusion E1 and hopes that addresses the lack of clarity referred to in your comment. **E1** - ~~Any r~~Radial system~~s~~: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and: a) Only ~~serving~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or, b) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or, c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating). Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.		
City of St. George	No	The way the definition is currently written it will include many entities with lines, generation and other facilities whose only purpose is for the local generation and distribution of energy to local customers. The generation restrictions and other language in the proposed definition will add additional registrations (i.e. TO/TOP) to many smaller entities which will have a significant economic impact to those utilities with little or no benefit to

Organization	Yes or No	Question 11 Comment
		the main bulk system. The problems may stem more from the "one size fits all" approach to the standards requirements, with the TO/TOP requirements being the most onerous and difficult to comply with especially for smaller entities. Allowed generation levels and the actual use of the transmission and generation facilities should be considered in what is and is not included in the BES. As the proposed definition stands now along with the current reliability standards a small utility with a few segments of 115 kV or 138 kV lines and with some generation to serve local load must comply with the same requirements as a very large utility with hundreds of miles of 345 kV or 500 kV lines and 1,000's of MVA of generation. The use of applying small, medium and large criteria to many of the standard requirements, similar to what is being considered for the CIP standards with low, medium and high requirements should be considered.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. The SDT is focused solely on revisions to the BES definition, and changes to specific standards are outside the scope of this project. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Puget Sound Energy	No	The language on total aggregate load served by LDN should be added for the exclusion list.
Response: The SDT did not see a need to provide an aggregate Load limitation on any of the draft BES definition exclusions. No change made.		
Southern California Edison Company	No	SCE believes that the BES Definition, as currently proposed, relies too heavily on the characterization of interconnected generation in its "Inclusion" criteria.
Response: The SDT made significant revisions to the draft BES definition, including changes to the inclusion and exclusion portions to address your concerns and those of others.		
GTC	No	Since distribution facilities are to be excluded can the drafting team clarify if the automatic interrupting protective device (breaker or circuit switcher) operating at 100kV or above and protecting an excluded transformer (non-BES) should be excluded with the excluded transformer? Perhaps an additional separate exclusion could eliminate any uncertainty.
Response: The SDT removed the automatic interrupting device language from the draft BES definition. **E1** - ~~Any r~~Radial systems: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of		

Organization	Yes or No	Question 11 Comment
100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:		
New York State Dept of Public Service	No	See comments under question 1.
Response: See response to Q1.		
Long Island Power Authority	No	We don't believe the bright-line definition and specific inclusions and exclusions prevents distribution from being considered as BES. It seems like the intent to exclude non bulk distribution systems would still be included because of E3b. We don't believe that the SDT has fully excluded local distribution facilities as required by the FERC Order. Specifically E3b should be eliminated. The other remaining items a,c,d,e adequately define the LDN.
Independent Electricity System Operator	No	The existing definition and the associated inclusions and exclusions do not exclude local distribution facilities because the 75 MVA limit on generation within LDNs in E3 (b) will result in portions of the power system that are serving a distribution function being classified as BES. As stated before, we suggest subjecting the LDNs to assessment to determine their impact on the BES and including them if impactive by using the Exception Process.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. In addition, item E3b) was revised to provide further clarity. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy. **E3b**) Only ~~including~~includes generation resources not identified in Inclusion~~s I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating).		
The Dow Chemical Company	No	The Dow Chemical Company ("Dow) is an international chemical and plastics manufacturing firm and a leader in science and technology, providing chemical, plastic, and agricultural products and services to many essential consumer markets throughout the world. Dow and certain of its worldwide affiliates and subsidiaries, including Union Carbide Corporation, own and operate electrical facilities at a number of industrial sites within the U.S., principally, in Texas and Louisiana. The electrical facilities at these various industrial sites are configured similarly and perform similar functions. In most cases, a tie line or lines connect

Organization	Yes or No	Question 11 Comment
		the industrial site to the electric transmission grid. Power is delivered from the electric transmission grid to the industrial site through the tie line(s). Lines within the industrial site then deliver power to individual manufacturing plants within the site. Additionally, cogeneration facilities are located at a number of industrial sites owned by Dow and its subsidiaries. These cogeneration facilities generate power that is distributed within the industrial site and used for manufacturing plant operations. In some instances, excess power not required for plant operations is delivered back into the electric transmission grid through the tie line(s) connecting the industrial site to the grid. Under all circumstances, electricity is not flowing into and out of such industrial sites at the same time. While the tie lines and some of the internal lines at these industrial sites operate at 100kV or higher, they do not perform anything that resembles a transmission function. Rather than transmit power long distances from generation to load centers, the tie lines and internal lines perform primarily a local distribution function consisting of the distribution of power brought in from the grid or generated internally to different plants within each industrial site. In some cases, the facilities also perform an interconnection function to the extent they enable power from cogeneration facilities to be delivered into the grid. The voltage of the tie lines and internal lines at these industrial sites is dictated by the load and basic configuration of each site. Higher voltage lines are used when necessary to meet applicable load requirements or to reduce line losses. That does not mean that such lines perform a transmission function. At some sites, Dow is registered as a Generation Owner and Generation Operator. At other sites, the applicable Regional Entity has found that such registration is not required because of the relatively small amount of power supplied to the grid from the applicable cogeneration resources, even though those cogeneration resources have an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating). Tie lines (to the grid) and internal lines at an industrial site that operate at 100kV or higher should be excluded from the BES definition if, due to the relatively small amount of power supplied to the grid from the generation resources at the site, the owner of those generation resources is not required to be registered as a Generation Owner and the operator of those generation resources is not required to be registered as a Generation Operator.At sites where the owner of the generation resources is registered as a Generation Owner and the operator of those generation resources is registered as a Generation Operator, the internal lines (between the generation resources and the manufacturing plants) that operate at 100kV or higher should be excluded from the BES definition, because they are distribution and not transmission facilities. The lines interconnecting the generation resources at such sites to the transmission grid should be included in the BES definition, but the owner and operator of such interconnection lines should not be registered as a Transmission Owner or Transmission Operator. In no instance has a Regional Entity determined that Dow or any subsidiary should be registered as a Transmission Owner or Transmission Operator. Instead, such interconnection lines should be considered as part of the generation resource and Generation Owners and Generation Operators should be subject to reliability standards specifically developed for such interconnection lines. Dow is strongly opposed to any BES definition that would result in either the tie lines or the internal lines at industrial sites being subject to the mandatory reliability standards applicable to Transmission Owners and Transmission Operators. Complying with reliability standards would cause Dow and its subsidiaries to incur

Organization	Yes or No	Question 11 Comment
		substantial compliance costs and create potential exposure to penalties in the future for noncompliance. Perhaps such costs and exposure could be justified if subjecting these facilities to compliance with reliability standards resulted in a material increase in reliability of the BES, but there is no reason to believe that will be the case. In fact, the opposite might be true. The tie lines and internal lines at industrial sites owned by Dow and its subsidiaries have been operated for decades as distribution and interconnection facilities, and practices and procedures have developed over the years that have enabled such operations to achieve a high degree of reliability for such sites. Requiring these facilities to now operate in a different manner as transmission facilities may well result in a degradation of the reliability of the manufacturing plants located at such sites. For example, outages would have to be coordinated with the RTO, which may not be interested in coordinating such outages with scheduled manufacturing plant outages.Dow recommends that a separate exclusion be added to the BES definition to address industrial distribution facilities. Proposed exclusion E-3 for local distribution networks is not sufficient to ensure that all industrial distribution facilities are excluded. For example, criteria b), entitled “Limits on connected generation” states that “Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation”. This criteria makes no sense for an industrial site with on-site electricity generation and a number of manufacturing plants that has internal power lines and lines interconnecting with the transmission grid that operate at 100 kV or higher where the owner and operator of the on-site electricity generation facilities are not registered as a Generation Owner and a Generation Operator because only a small amount of electricity is ever exported from the on-site electricity generation facilities to the transmission grid. This criteria also makes no sense with respect to internal electric lines (operated at 100 kV or higher) at such industrial sites even where the owner and operator of the on-site electricity generation facilities are registered as a Generation Owner and a Generation Operator.Criteria c) also causes proposed exclusion E-3 not to be sufficient to ensure that all industrial distribution facilities are excluded where the owner and operator of the on-site electricity generation facilities are not registered as a Generation Owner and a Generation Operator because only a small amount of electricity is ever exported from the on-site electricity generation facilities to the transmission grid. Criteria c), entitled “Power flows only into the LDN”, states: “The generation within the LDN shall not exceed the electric Demand within the LDN.” Criteria c) also makes no sense with respect to internal lines at such industrial sites even where the owner and operator of the on-site electricity generation facilities are registered as a Generation Owner and a Generation Operator.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. In addition, the SDT made extensive changes to Exclusion E3 to address your concerns and those of others.		

Organization	Yes or No	Question 11 Comment
		Bulk Electric System (BES): Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy. **E3** - Local ~~Distribution~~ Networks (L~~D~~N): **A** ~~G~~groups ~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following: ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~ **E3a**. Limits on connected generation: ~~Neither t~~The L~~D~~N~~,~~ ~~nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~; **E3b**. Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~ **E3c.** Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
Southwest Power Pool	No	See response to question 1 - SPP does not necessarily disagree with the characterization of excluded distribution facilities, but believes that issue should be addressed in the concurrent BES exemption proceeding for the reasons described in question 1. SPP reserves its rights to comment on the criteria for exclusion/inclusion in that proceeding.
Response: The SDT believes it is appropriate to exclude Facilities used in the local distribution of electric energy in the BES definition. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Golden Spread Electric Cooperative, Inc.	No	All load serving radials need to be excluded from the BES.

Organization	Yes or No	Question 11 Comment
Response: The SDT believes that the draft BES definition excludes Load-serving radial systems as your comment recommends. No change made.		
Tacoma Power		Tacoma Power supports the work of the SDT towards a revised BES definition directly linked to the exemption process of inclusions and exclusions. The definition must be closely coupled to the exemption process and the two must move forward together. This will ensure that only the facilities that materially impact the reliability of the BES will be burdened with the regulatory requirements.
Response: The SDT is working closely with the Rules of Procedure team to ensure that the respective work products are appropriately linked and proceed forward in a parallel manner.		
Edison Electric Institute		See comments to Question 13.
Response: See response to Q13.		
Portland General Electric Company		As stated above, PGE believes that the Exclusion for Local DistributionNetwork needs to be more explicit.
Response: The SDT made significant clarifying changes to the LDN, now LN, exclusion of the draft BES definition to address your concerns and those of others.		

E3 - Local ~~Distribution~~ Networks (L~~D~~N): A ~~G~~groups~~s~~ of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher ~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

E3a. Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

E3b. Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

E3c. Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the

Organization	Yes or No	Question 11 Comment
Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).		
SERC OC Standards Review Group	Yes	Exception E4 potentially does have issues - see our response to Question 10.
Response: See response to Q10.		
Colorado Springs Utilities	Yes	Please refer to comments on question 9 - Exclusion 3
Response: See response to Q9.		
Alliant Energy	Yes	In general we believe that the bright line has been created. There should however be one additional exclusion - Distribution Protection Systems designed specifically to protect Distribution System assets should not be considered part of the BES, even if they open an element of the BES (ie; Distribution Breaker Failure Relaying), as long as the action is to protect the Distribution System and not the BES.
Response: The SDT does not see a need to add the exclusion you requested since distribution protection systems that protect distribution systems are not determined to be BES under the draft BES definition. No change made.		
Illinois Municipal Electric Agency	Yes	Please see comments under Question 13.
Response: See response to Q13.		
Sacramento Municipal Utility District (SMUD)	Yes	SMUD does agree that the differentiation is established between the transmission & distribution systems. Although there is concern that the general “Bright-line” is not definitive and could afford additional value through incorporating clarifying language.
Sierra Pacific Power Co d/b/a NV Energy	Yes	Through the radial exclusion and the LDN exclusion (E1 and E3), the definition has made a delineation between distribution and bulk transmission. In this exclusion language, the definition as proposed addresses the quantifiable parameters from the FERC 7-factor transmission test.
American Transmission Company, LLC	Yes	ATC agrees that the revised bright-line core definition and associated inclusion and exclusion criteria excludes distribution, however, recognizes that there are protection elements that may be owned by distribution which may trip a BES Element. (Covered by NERC Standard PRC-005)

Organization	Yes or No	Question 11 Comment
PUD No. 2 of Grant County, Washington	Yes	Grant supports the concepts as presented in the draft. Exclusion of facilities from the BES does not mean that owners of those facilities are entirely exempt from reliability standards. The statutes provide that "users" of the BES can be subject to reliability regulation. Hence, even where an entity does not own BES assets, it could be required to, for example, provide necessary information to the applicable Reliability Coordinator and to participate in the regional Under-Frequency Load Shedding program by setting the UFLS relays in its Local Distribution Network at the appropriate settings. We note that participants in the WECC BESDTF Task Force generally agreed that appropriate information should be provided by non-BES entities, although there was considerable concern related to ensuring that the provision of information was not unduly burdensome.
Glacier Electric Cooperative	Yes	I do believe that the language in its plain sense does exclude local distribution systems, but I do see the possibility of differeing interpretations of the language across the regions again. Perhaps adding some example system diagrams showing what would and would not be included in the BES would help alleviate any possible ambiguity and increase consistency across the regions.
PacifiCorp	Yes	PacifiCorp understands that no single bright line can accommodate all the various scenarios of local distribution. The proposed definition appears to capture a high percentage of LDNs. Additional LDNs can be addressed through the exemption process. Also, please refer to additional comments in question 13 regarding a contiguous BES.
Santee Cooper	Yes	The commission should remain open to future modifications of the bright-line core definition and specific inclusion and exclusions.
BPA	Yes	
Utility System Efficiencies, Inc.	Yes	
Imperial Irrigation District	Yes	
Florida Municipal Power Agency	Yes	
NERC Staff Technical Review	Yes	
MRO's NERC Standards Review Forum	Yes	

Organization	Yes or No	Question 11 Comment
SERC Planning Standards Subcommittee	Yes	
ACES Power Participating Members	Yes	
Arizona Public Service Company	Yes	
Western Electricity Coordinating Council	Yes	
Transmission Access Policy Study Group	Yes	
Northern California Power Agency	Yes	NCPA supports the comments of the Transmission Access Policy Study Group in this regard.
New York Power Authority	Yes	
Southern Company	Yes	
Luminant Energy	Yes	
US Bureau of Reclamation	Yes	
Sweeny Cogeneration LP	Yes	
Dayton Power and Light Company	Yes	
Duke Energy	Yes	
Alberta Electric System Operator	Yes	

Organization	Yes or No	Question 11 Comment
South Carolina Electric and Gas	Yes	
Fayetteville Public Works Commission	Yes	
Florida Keys Electric Cooperative	Yes	
American Electric Power	Yes	
East Kentucky Power Cooperative, Inc.	Yes	
Farmington Electric Utility System	Yes	
Muscatine Power and Water	Yes	
Idaho Power	Yes	
Cogentrix Energy, LLC	Yes	
Clark Public Utilities	Yes	
Oncor Electric Delivery Company LLC	Yes	
Manitoba Hydro	Yes	
MEAG Power	Yes	
Xcel Energy	Yes	
Response: Thank you for your support. Several stakeholders made suggestions for clarifying changes to the draft BES definition that were adopted to provide a greater distinction between transmission and distribution facilities. Please see the revised definition.		

12. Are you aware of any conflicts between the proposed definition and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? If so, please identify them here and provide suggested language changes that may clarify the issue.

Summary Consideration: The task of the SDT is to put forward a 100 kV bright-line for the BES definition. The SDT has modified the definition and distribution facilities are now specifically excluded from the BES. However, the SDT acknowledges that there may still be regulatory conflicts as many of the commenters have voiced. The definition is neither intended to nor can it supersede any regulatory orders and/or rulings by relevant Federal, State, or Provincial Authorities. Although the SDT can not resolve all regulatory conflicts, it believes that a) proposed revisions to the definition should address many of these concerns; and b) remaining issues may be effectively addressed by the Rules of Procedure exception procedure currently under development.

Changes to the definition due to industry comments are as follows:

Bulk Electric System (BES): Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.

I~~3~~2 - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.

I~~4~~3 - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.

E1 - ~~Any r~~Radial systems: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

Organization	Yes or No	Question 12 Comment
AltaLink	Yes	
East Kentucky Power Cooperative, Inc.	Yes	

Organization	Yes or No	Question 12 Comment
Response: Without any details the SDT is unable to respond.		
BPA	Yes	The Low Voltage Ride Through standard is a U.S. industry standard via FERC Order 611A and applies to wind generation without regard to size. The I2 definition appears to be in conflict with the LVRT set by Order 611A. Request NERC clarification including when it will be issuing a LVRT reliability standard. DGF supports Rebecca Berdahl Comment 2, as discussed below.
Response: Inclusion I2 has been modified by the SDT in the revised BES definition to address your concerns and those of others. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Northeast Power Coordinating Council	Yes	The proposed definition will have a direct impact on entities not under FERC jurisdiction, and may be in conflict with regulatory requirements with which those entities must comply.
Dominion	Yes	The inclusion of an element or facility that is not integral to the reliable operation of the integrated bulk power system is in conflict with the intent of Section 215 of the FPA . This is especially true for radial facilities, whether used to connect generators or load to the bulk power system.
Michigan Public Service Commission(MPSC)	Yes	MPSC Staff Comments: The proposed BES definition creates friction with Order 888's seven-factor technical-functional test as implemented by state regulatory agencies. The resulting inconsistent treatment is likely to result in challenges by entities with FERC-defined distribution assets being now considered as transmission assets as inconsistent with the FPA. FERC's Order 888 discusses the two components of an unbundled transaction in interstate commerce has "for jurisdictional purposes -- a transmission component and a local distribution component." p 439 The Order also states that the Commission "will defer to recommendations by state regulatory authorities concerning where to draw the jurisdictional line under FERC's technical test for local distribution facilities" p 437, also known as the seven-factor technical-functional test. This test was applied by Michigan utilities, filed with the Michigan Public Service Commission in contested case-specific dockets, and after deliberation approved. These state-approved jurisdictional bright-line determinations were subsequently filed with and approved by FERC.
Hydro-Quebec TransEnergie	Yes	There appears to be a conflict between the proposed definition and the regulatory framework applicable in Quebec or at least there are some important differences between both.NERC's proposed definition of Bulk Electric System ("BES") is made in response to FERC's Order 743. FERC is looking to remove regional discretion, and in some cases to make sure BES includes the most important national load centers.As for

Organization	Yes or No	Question 12 Comment
		HQT's System, the BES definition shall meet the expectations of Quebec's regulator, the RÃ©gie de l'Ã‰nergie du QuÃ©bec, (Quebec Energy Board) which has the responsibility to ensure that electric power transmission in QuÃ©bec is carried out according to the reliability standards it adopts. In a recent order (D-2011-068), the RÃ©gie de l'Ã‰nergie du QuÃ©bec has recognized several level of application for the Reliability Standards in QuÃ©bec. It stated specifically that most reliability standards in QuÃ©bec shall be applied to the Main Transmission System (MTS). One other level of application recognised by this decision is the NPCC Bulk Power System (BPS) to which the standards related to the protection system (PRC-004-1 and PRC-005-1) and those related to the design of the transmission system (TPL 001-0 to TPL-004-0) will be applicable. The Main Transmission System definition is somewhat different than the Bulk Electric System definition. The Main Transmission System includes elements that impact the reliability of the grid, supply-demand balance and interchanges. It can be described as follows :The transmission system comprised of equipments and lines generally carrying large quantities of energy and of generating facilities of 50 MVA or more controlling reliability parameters: o Generation/load balancing o Frequency control o Level of operating reserves o Voltage control of the system and tie lines o Power flows within operating limits o Coordination and monitoring of interchange transactions o Monitoring of special protection systems o System restorationTherefore, it will be necessary to accommodate NERC's proposed definition of BES or the exception process with the QuÃ©bec situation where Entities are under a different jurisdiction. These differences include more than one level of application for the reliability standards, the Main Transmission System definition being the main one to which most reliability standards apply.
Hydro One Networks Inc		See earlier comments and suggestions. NERC's revised definition will have a direct impact on many entities across North America and could also be in conflict with regulatory requirements, Codes, and Licenses, which non FERC jurisdictional must comply. It would be hard if not impossible to identify the conflicts. For example: in one of the the provincial energy acts, NERC Standards maycan only apply to generation over 50 MVA which will cause one or more of the requirements to be in conflict and /or what constitutes distribution and what is not considered transmission (such as connection facility to a load or generation and owned by the proponent). However, we agree to establish a 100kV BES bright-line definition and we believe that the best venue to address avoiding compliance conflicts is through the exception criteria and the exception procedure. The benefits of such an approach are: o Establishment of a continent wide bright line definition o Avoidance of regulatory conflicts and legal complexities o Assurance of the reliability of the interconnected transmission network
Public Utility District No. 1 of	Yes	As noted in our responses to Question 1 and Question 11, we believe the SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used

Organization	Yes or No	Question 12 Comment
Snohomish County, Washington		in the local distribution of electric energy. Unless the SDT adopts some approach other than a core definition with inclusions and exclusions based on brightline thresholds, the SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities.
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Company Consumers Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Inc Okanogan Electric Cooperative PNGC Power Raft River Rural Electric Cooperative Salmon River Electric Umatilla Electric Cooperative West Oregon Electric Cooperative		As discussed in our answers to Question 1 and Question 11, the SDT proposal does not reflect the jurisdictional limitations of the FPA.
Northern Wasco County PUD Clallam County PUD No.1	Yes	The Exceptions process is a necessary part of making this proposal complaint with the Federal Power Act. As noted in our responses to Question 1 and Question 11, we believe the basic SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used in the local distribution of electric energy. The SDT's approach can meet the statutory requirements only if

Organization	Yes or No	Question 12 Comment
Chelan PUD – CHPD Kootenai Electric Cooperative Public Utility District No. 1 of Franklin County Midstate Electric Cooperative Northwest Requirements Utilities Big Bend Electric Cooperative, Inc		the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities.
PUD No. 2 of Grant County, Washington	Yes	The Exceptions process is a necessary part of making this proposal complaint with the Federal Power Act. The SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities.
ExxonMobil Research and Engineering	Yes	Section 215 of the Federal Power Act excludes facilities used in the local distribution of electric energy without any qualifications of the type of local distribution facility.
FortisBC	Yes	See earlier comments and suggestions. NERC's revised definition will have a direct impact on many entities across North America and could also be in conflict with regulatory requirements, Codes, and Licenses, which non FERC jurisdictional must comply. It would be impossible to identify each of these conflicts. For example: in one of the energy acts, NERC Standards can only apply to generation over 50 MVA which will cause one or more of the requirements to be in conflict and /or what constitutes distribution and what is not considered transmission (such as connection facility to a load or generation and owned by the proponent).However, we agree to establish a 100kV BES bright-line definition and we believe that the best venue to address avoiding compliance conflicts is through the exception criteria and the exception process. The benefits of such an approach are: o Establishment of a continent wide bright line definition o Avoidance of regulatory conflicts and legal complexities o Assurance of the reliability of the interconnected transmission network
Consumers Energy Company	Yes	The proposed definition creates a tension between FERC Order 888 and the resulting 7-factor test as applied for tariff purposes, and the registry criteria for registration of Transmission Owners and Transmission Operators. Entities with assets defined by FERC as Distribution might challenge any rules that treat Distribution assets as Transmission as not being consistent with the Federal Power Act of 2005.

Organization	Yes or No	Question 12 Comment
Exelon	Yes	To the extent facilities used in local distribution of electric energy may be included in the definition of BES, the proposed definition is in conflict with the Federal Power Act.
Springfield Utility Board	Yes	The exceptions process is a necessary part of making this proposal compliant with the Federal Power Act. As noted in responses to Questions 1 and 11, SUB believes the basic SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used in the local distribution of electric energy. The SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities.
New York State Dept of Public Service	Yes	As expressed in comments under question 1, we believe that use of a 100 kV brightline definition is an overreach of authority and that any definition must respect the limitations itemized in FPA 215. The FPA recognizes that only a subset of the electric system facilities have the capacity to impact multi-state portions of the electric system and rise to the level of federal attention. As a practical matter, however, the electric system is a continuous machine and efforts to maintain reliability on both the transmission and local distribution portions of the electric system must be compatible. That is the key role that the regional entities play and that role should be maintained and respected by NERC efforts. The time and effort it takes to draft standards to address issues on the bulk system is directly attributable to the many different options to design and operate transmission facilities, and options to ensure reliability are different for each design and mode of operation. Multiply that a hundred fold to the different approaches there are to design, operate and to ensure reliability on the local distribution system. Attempts at the federal level to design uniform standards to apply at lower and lower levels of the system are doomed to failure given the nuances of each local system. These attempts will only lead to needless complications and the actual undermining of the reliability on the local distribution system. NERC staff comments seeking to sweep into NERC standards behind the meter generation, meters and relays located deep within the distribution system, etc. and then insist that the bulk system be contiguous is a phenomenal overreach and an intrusion on the design and functioning of the distribution system which will a) complicate efforts to maintain a reliable distribution system; and 2) will needlessly incur costs on ratepayers. NERC needs to stay focused on the authorities extended to it in the FPA. Leave it to the regions to interface locally with utilities, state authorities and other stakeholders to shape seamless reliability protocols that will benefit us all.The question asks if there are orders that relate to this effort. In 1997, the New York Public Service Commission held a proceeding Case No. 97-E-0251 that supplemented the FERC Seven Factor Test with three additional factors to be used in New York to distinguish between transmission and local distribution. This order can be found at the following link:http://documents.dps.state.ny.us/public/Common/ViewDoc.aspx?DocRefId={3C7602E0-62E0-4831-82B6-8C34A72934F4}

Organization	Yes or No	Question 12 Comment
Midstate Electric CooperativePublic Utilities Commission of Ohio	Yes	See concerns above with exceeding authority under the Federal Power Act Section 215. State Utility Commissions are charged with assuring safe, reliable service to their customers. We are in a much better situated position than FERC or NERC to provide any necessary regulation and oversight of the local distribution system.
The Dow Chemical Company	Yes	Comments: Section 215 of the Federal Power Act denies FERC jurisdiction over facilities used in the local distribution of electric energy. FERC has recognized that since facilities used in the local distribution of electric energy "are exempted from the Bulk-Power System, they also are excluded from the bulk electric system." Section 215 of the Federal Power Act does not qualify the exclusion from FERC jurisdiction of "facilities used in the local distribution of electric energy." For example, Section 215 does not state that:ï‚§ The term "bulk power system" "does not include facilities used in the local distribution of electric energy [unless needed for reliability purposes];" or ï‚§ The term "bulk power system" "does not include facilities [with automatic interruption devices] used in the local distribution of electric energy."Any definition of the bulk electric system that does not exclude all "facilities used in the local distribution of electric energy" is unlawful.Further, the definition of the bulk electric system must recognize that Section 215 of the Federal Power Act does not allow the potential reliability impact of a facility to determine whether the facility is local distribution or transmission. By excluding all facilities used in the local distribution of electric energy from the definition of the Bulk-Power System in Section 215, Congress recognized that while facilities used in the local distribution of electric energy may be part of the Bulk-Power System, they are, nonetheless, not FERC jurisdictional. Thus, "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" that are used in the local distribution of electric energy are not FERC jurisdictional regardless of the potential reliability impact of the facilities.
Central Lincoln	Yes	Improper classification of local distribution facilities, even if only for the duration of the exceptions process; puts these facilities under the regulatory jurisdiction of NERC contrary to the Federal Power Act when they should be under the exclusive jurisdiction of state utility commissions or local utility boards.
Cowlitz County PUD	Yes	The Exceptions process is a necessary part of making this proposal complaint with the Federal Power Act. As noted in our responses to Question 1 and Question 11, we believe the basic SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used in the local distribution of electric energy. The SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities. Cowlitz understands the difficulty in demonstrating what is and is not distribution to FERC due to the vague statute language. Cowlitz will work to help provide technical arguments which will buttress the BES definition in the future.

Organization	Yes or No	Question 12 Comment
Response: The definition is neither intended to nor can it supersede any regulatory orders and/or rulings by relevant Federal, State, or Provincial Authorities. Although the SDT can not resolve all regulatory conflicts, it believes that a) proposed revisions to the definition should address many of these concerns; and b) remaining issues may be effectively addressed by the Rules of Procedure exception procedure currently under development. Specifically, the SDT added a sentence to the core definition to address concerns about local distribution. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
SPP Standards Review Group	Yes	See our responses to Questions 5 and 11 regarding the issue of distribution facilities and Cranking Paths.
Response: See responses to Q5 and Q11.		
Idaho Falls Power	Yes	It is unclear how the reliability standards will be applied to registered entities should some assets be deemed not to be a part of the BES. As an example; will a an LSE with >25MW of load connected at 161kv be responsible for relay maintenance under PRC-005-1 if the 161 kv is exempted as a local distribution network? Clarification of this issue may be beyond the scope of the BES definition effort, however guidance in this area should accompany this effort.
Response: The application of Reliability Standards is not based solely on registration or an Element being classified as BES or not. There are several standards that are currently mandatory for Elements that are non-BES and they will continue to apply if those Elements are considered necessary for the operation of BES, such as UFLS. No change made.		
Alabama Public Service Commission	Yes	See comments in response to Question 11 above.
Response: See response to Q11.		
Western Montana Electric Generating and Transmission Cooperative	Yes	The Exceptions process is a necessary part of making this proposal complaint with the Federal Power Act. As noted in our responses to Question 1 and Question 11, we believe the basic SDT proposal is potentially in conflict with the limitations of the Federal Power Act, and in particular the statutory exclusion for facilities used in the local distribution of electric energy. The SDT's approach can meet the statutory requirements only if the Exception process currently under development results in facilities that are not properly classified as BES being exempted from regulation as BES facilities.

Organization	Yes or No	Question 12 Comment
Electricity Consumers Resource Council (ELCON)	Yes	See response to question 11 above. The definition of "local distribution" should be as defined and practiced in each state (US only) under state laws and regulations, and similarly by the Canadian provincial governments.
MRO's NERC Standards Review Forum	Yes	Within the Commission's definition of BPS, it is clearly stated that BPS does not include facilities used in the local distribution of electrical energy.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
PacifiCorp	Yes	The SDT proposal combined with the ROP may be in conflict with Section 215 of the Federal Power Act ("FPA") which excludes "facilities used in the local distribution of electric energy" from the definition of "bulk-power system." As identified in other responses, without a technical reason for setting the generation limit to 20 MVA and even 75 MVA and/or requiring a contiguous BES to include such generators may be over-inclusive and by default require several elements which are not required for the reliable operation of the BES to be included in the BES definition.
Response: The definition is neither intended to nor can it supersede any regulatory orders and/or rulings by relevant Federal, State, or Provincial Authorities. Although the SDT can not resolve all regulatory conflicts, it believes that a) proposed revisions to the definition should address many of these concerns; and b) remaining issues may be effectively addressed by the Rules of Procedure exception procedure currently under development. The SDT did not adopt a "contiguous" BES. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		

Organization	Yes or No	Question 12 Comment
Grand Haven Board of Light and Power	Yes	This current definition does not comply with FERC Order No. 743 (and 743a) by not addressing the exclusion of a single automatic interrupting device that serves a radial, load serving system.
Response: The SDT revised Exclusion E1 to address your concern and those of others. **E1** - ~~Any r~~Radial systems: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:		
National Grid	Yes	There could be some conflicts with the ISO-NE Pool Transmission Facility (PTF) definition. If something is considered non-PTF, but is considered BES with this new definition, it could lead to confusion about which criteria should be applied to these entities and potentially which tariff (non-PTF or PTF) is truly the correct tariff. We believe adding more clarity as previously mentioned in the other questions to the definition and excluding I4 and clarifying E1 will minimize these issues.
Response: The task of SDT is to put forward a 100 kV bright-line definition for BES. The SDT acknowledges that there may be regulatory conflicts but believes that many of these concerns may be addressed by the revised BES definition and exception procedure currently under development. SDT has made some changes to Inclusion I4 (now Inclusion I3) and Exclusion E1 that may address your concerns. **I43** - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~. **E1** - ~~Any r~~Radial systems: ~~which is described as connected~~ A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:		
Electric Reliability Council of Texas, Inc.	Yes	See response to question 1 - ERCOT ISO believes defining BES in terms of the relevant exclusions may be contrary to FERC's suggested approach in 743 and 743-A. While FERC did not mandate a particular approach, and gave the ERO the opportunity to propose an alternative to its suggested approach, it stated that any alternative must be equal to or greater than its suggested approach in terms of remedying the identified flaws associated with the current definition. Part of the remedy envisioned by FERC included the removal of subjectivity in defining BES and the ability of the ERO and FERC to review any proposed exemptions from the bright line definition. Although the exclusions strive to apply objective criteria, it is arguable that any such circumstances may not be that clear and may require some level of subjective judgment as to whether elements deemed to be distribution according to the exclusion criteria actually are distribution, as opposed to transmission. In addition, FERC expressly stated that it reserved the right to make that determination in the first instance. This approach takes that away from FERC.
Southwest Power Pool	Yes	See SPP's response to question 1 - SPP believes defining BES in terms of the relevant exclusions may be contrary to FERC's suggested approach in 743 and 743-A. While FERC did not mandate a particular

Organization	Yes or No	Question 12 Comment
		approach, and gave the ERO the opportunity to propose an alternative to its suggested approach, it stated that any alternative must be equal to or greater than its suggested approach in terms of remedying the identified flaws associated with the current definition. Part of the remedy envisioned by FERC included the removal of subjectivity in defining BES and the ability of the ERO and FERC to review any proposed exemptions from the bright line definition. Although the exclusions strive to apply objective criteria, it is arguable that any such circumstances may not be that clear and may require some level of subjective judgment as to whether elements deemed to be distribution according to the exclusion criteria actually are distribution, as opposed to transmission. In addition, FERC expressly stated that it reserved the right to make that determination in the first instance. This approach takes that away from FERC.
Alberta Electric System Operator	Yes	Comments: Alberta's legislation enables reliability standards, but prevents the AESO from developing rules related to reliability standards. The AESO therefore would like to see retention of the following clause from the NERC "Statement of Compliance Registry Criteria (revision 5) included in the list of inclusions as well as identifying the authority that determines what generators are material to reliability:III.c.4 Any generator, regardless of size, that is material to the reliability of the bulk power system. The wording should reflect that, for example, in the case of Alberta, that the AESO has the authority to make this determination.
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV. The definition is neither intended to nor can it supersede any regulatory orders and/or rulings by relevant Federal, State, or Provincial Authorities. Although the SDT can not resolve all regulatory conflicts, it believes that a) proposed revisions to the definition should address many of these concerns; and b) remaining issues may be effectively addressed by the Rules of Procedure exception procedure currently under development. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)	Yes	The proposed definition conflicts with Section 215 of the FPA and case law because it ignores years of precedent regarding what constitutes "facilities used in local distribution" and defines the BES in such a way as to possibly cover local distribution facilities as well as transmission facilities. Specifically, FERC has jurisdiction over "all users, owners and operators of the bulk-power system" under Section 215 of the FPA (16 U.S.C. Â§ 824o(b)(1)). The bulk-power system is defined as:"(A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy" (Id. at Â§ 824o(a)(1)).By the plain language of Section 215 of the FPA, FERC's jurisdiction over the Bulk Power System cannot include any "facilities used in

Organization	Yes or No	Question 12 Comment
		the local distribution of electric energy." FERC has recognized that "[s]ince such facilities are exempted from the Bulk-Power System, they also are excluded from the bulk electric system" (Order No. 743-A at P 25). Congress specifically recognized that while facilities used in the local distribution of electric energy may be part of the Bulk-Power System, they are not FERC jurisdictional. Thus, "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" that are used in the local distribution of electric energy are not jurisdictional regardless of the potential reliability impact of the facilities. The proposed definition of the BES would rewrite Section 215 of the FPA to exclude only "facilities used in local distribution of electric energy [unless needed for reliability purposes]." As the DC Court of Appeals stated in Detroit Edison Co. v. FERC: "[s]uch an interpretation would eviscerate state jurisdiction over numerous local facilities, in direct contravention of Congress' intent" (Detroit Edison Co. v. FERC, 334 F.3d 48, 54 (U.S. App. D.C. 2003) (citation omitted)). In Detroit Edison Co. v. FERC, the DC Court of Appeals rejected FERC's proposed definition of a "FERC-jurisdictional distribution facility" as any distribution facility that is not "used exclusively to provide service to unbundled retail customers" (Id.). The Court stated: "FERC's position contradicts the plain language of the FPA," and further that "FERC would rewrite the statute to exclude only 'facilities used exclusively in local distribution'" (Id.). The exclusion of facilities used in the local distribution of electric energy from the definition of the BES does not mean that NERC lacks the ability to maintain the reliability of the BES. For example, if NERC determined that a retail customer's self-provided "hard-tapped" radial line that is located behind the retail delivery point created a reliability issue, NERC could require that the transmission facilities be equipped with automatic fault-interruption devices. NERC could not, however, define the BES to include such local distribution facilities, which is the result of the proposed bright-line core definition and specific inclusions and exclusions.While FERC "granted NERC discretion" in developing the revised definition of the BES because FERC wanted to give NERC "the greatest amount of flexibility to utilize its technical expertise" (Order No. 743-A at PP 0-71), NERC's discretion is not unbounded. Moreover, while FERC stated that it "will evaluate whether the [BES definition] proposal results in any conflicts with the statutory language" (Id. at P 72), it is imperative that NERC work within the statutory limitations of Section 215 of the FPA as to prevent submitting a proposal to FERC that is fundamentally unlawful. It would be a colossal waste of government and industry resources to develop and advance a definition that cannot withstand basic legal review. As provided above, the following are suggested language changes that may clarify the issue:Exclusion E1 - Any radial system which is described as connected from a single Transmission source [ ] and: a) Only serving Load. [ ] Or, b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or, c) Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5. Exclusion E3 - [All facilities used in the distribution of electric energy] (["]Local [D]istribution [N]etworks,[" or "]LDNs["]): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the interconnected System. LDN[]s are [normally] connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:a) [ ]b) Limits on connected generation: [Generally], neither

Organization	Yes or No	Question 12 Comment
		the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;c) Power flows only into the LDN: The generation within the LDN [normally does] [ ] not exceed the electric Demand within the LDN;d) Not used to transfer bulk power: The LDN is [generally] not used to transfer energy originating outside the LDN for delivery through the LDN; ande) Not part of a Flowgate or transfer path: The LDN normally does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).Exclusion E4 - Transmission Elements, from a single Transmission source connected at a voltage of 100 kV or greater [ ] whose connection to the BES is solely through this single Transmission source, and without interconnected generation as recognized in the BES Designation Inclusion Items I2, I3, I4, or I5. [ ]
Response: The SDT made a number of clarifying changes to the draft BES definition that it believes provides a greater distinction between transmission and distribution facilities. The SDT also included in the definition a statement that excludes facilities used in local distribution of electric energy. The SDT believes that revised Exclusions E1 (radial exclusion) and E3 (Local Network exclusion) provide appropriate opportunity to exclude distribution facilities above 100 kV.		
Muscatine Power and Water	Yes	Within FERC's definition of Bulk Power System, it is plainly stated that BPS does not include facilities used in the local distribution of electrical energy. Does this support or contradict the SDT's concept of Local Distribution Network?
Response: The LDN (now referred to as LN) is a unique case due to the multiple connections to the BES and as such the SDT believes it deserves a specific exclusion but it supports the SDT's concept.		
Southern California Edison Company	Yes	For participants in an ISO/RTO, such as the CAISO, the final BES Definition may change the party who will control system facilities, even if they are distribution or radial in nature, based on the amount or size of interconnected generation. Generally, within the CAISO, facilities that are included in the BES Definition are under CAISO's direct control, while radial and distribution facilities are not.
Response: Control of system facilities is not within the scope of the SDT and must be worked out locally.		
Clark Public Utilities	Yes	The BES Definition does not have any reference to the exception process being developed. Both the exclusion and inclusion sections of the BES Definition should have a reference to the process where "BES Definition included" Transmission Elements may be excluded and "BES Definition excluded" Transmission Elements may be included.

Organization	Yes or No	Question 12 Comment
Response: The reference to the exception process was inadvertently left off the posting. Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.		
New England States Committee on Electricity	Yes	A possible conflict exists with respect to state renewable resource objectives. Please refer to number 4 above regarding renewable energy objectives, which includes state legislation regarding renewable portfolio standards.
Response: The task of SDT is to put forward a 100 kV bright-line definition for BES. The definition is neither intended to nor can it supersede any regulatory orders and/or rulings by relevant Federal, State, or Provincial Authorities. Although the SDT can not resolve all regulatory conflicts, it believes that a) proposed revisions to the definition should address many of these concerns; and b) remaining issues may be effectively addressed by the Rules of Procedure exception procedure currently under development.		
PPL Energy Plus and PPL Generation	Yes	See comments in Question 13.
Edison Electric Institute		See comments to Question 13.
Response: See response to Q13.		
Manitoba Hydro	Yes	Canadian Entities are not under FERC jurisdiction, so the revised BES Definition may not apply. A number of Canadian Entities have the BES defined within their provincial legislation. This may introduce differences and even contradictions between elements that are included in the BES according to provincial legislation and the NERC definition.
Response: The definition is neither intended to nor can it supersede any regulatory orders and/or rulings by relevant Federal, State, or Provincial Authorities. Although the SDT can not resolve all regulatory conflicts, it believes that a) proposed revisions to the definition should address many of these concerns; and b) remaining issues may be effectively addressed by the Rules of Procedure exception procedure currently under development. Regional difference (vs. regional discretion), under the purview of the ERO, is acceptable methodology that will be consistently applied as a result of the definition and exception process.		
ISO New England, Inc.	Yes	The proposal to include all Blackstart units' cranking paths has the potential to roll into the BES facilities distribution level circuits. Inclusion of those circuits would appear to conflict with statutory exclusion of set out in Section 215(a)(1) of the Federal Power Act, which states that the term "bulk power system": "does not include facilities used in the local distribution of electric energy." Section 215 sets the limits on what may be included within the bulk electric system, and thus subject to regulation by the ERO and FERC under the

Organization	Yes or No	Question 12 Comment
		reliability standards regime.
Response: The SDT has eliminated Cranking Path from the definition. **I43** - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.		
Consolidated Edison Co. of NY, Inc.	Yes	As FERC stated in Order 743-A "... the Commission uses the term "exclusion" herein when discussing facilities expressly excluded by the statute (i.e., local distribution) and the term "exemption" when referring to the exemption process NERC will develop for use with facilities other than local distribution that may be exempted from compliance with the mandatory Reliability Standards for other reasons." (Footnote 82)Thereby, the Commission clearly established its preferred terminology; "exclusion" for local distribution and "exemption" for exceptions allowed under the NERC designations and Exception Process. The BES Definition and Designations do not fully utilize this FERC wording convention.
Response: The SDT and the corresponding Rules of Procedure team have created a set of terminology that is consistent across the two projects and in line with what they believe is the intent of FERC. No change made.		
Modern Electric Water Company	Yes	Exclusion E1 and WECC Compliance Bulletin #4 (April 15, 2011) conflict. We support the intent of E1 and have provided suggested language modifications to it in Question #7 herein.Link - http://compliance.wecc.biz/Documents/2%20-%20WECC%20-%20Compliance%20Bulletins/01.04%20-%20Compliance%20Bulletin%20-%204%20Interpretation%20PRC-004,%20PRC-005%20-%20April%2015,%202011.pdf
Response: Exclusion E1 has been modified under the revised BES definition to address your concerns and those of others. **E1** - ~~Any r~~Radial system<u>s:</u> ~~which is described as connected~~ <u>A group of contiguous transmission Elements emanating from a single point of connection of 100 kV or higher</u> ~~from a single Transmission source originating with an automatic interruption device~~ and:		
American Municipal Power and Members	No	In Ohio, 50 MW is the threshold for siting. Although 20 MW has recently been the criteria for the BES, if there is no technical justification (a study of some kind) then we highly recommend raising the threshold for generators to 50 MVA for a single unit. In our experience, registered generators, even those that have had severe violations, have been routinely classified as not having an impact on the BES in the enforcement process. Due to this truth, we can not understand the justification for keeping such a low threshold. We suggest raising the threshold to 50 MVA for single units, unless a technical study justifies inclusion.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus		

Organization	Yes or No	Question 12 Comment
of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Tacoma Power		Tacoma Power is not aware of any conflicts at this time.
Independent Electricity System Operator	No	At this point, we are not aware of conflicts for our own jurisdiction. However, NERC must exercise caution while developing the exception criteria and the associated processes as these may result in jurisdictional issues between state/provincial and federal entities. We repeat our earlier point that the BES definition and TPC must be developed and approved simultaneously to provide assurances that mechanisms are in place to exclude those Facilities from BES classification that are not impactive on the BES.
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch	No	We are not currently aware of any conflict, but have not had a chance to thoroughly consider the potential conflicts.
American Electric Power	No	AEP is not aware of any conflicts involving the proposed definition and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue.
City of Redding	No	
Illinois Municipal Electric Agency	No	
Tri-State Generation and Transmission Association, Inc.	No	
Imperial Irrigation District	No	
Florida Municipal Power Agency	No	

Organization	Yes or No	Question 12 Comment
NERC Staff Technical Review	No	
SERC Planning Standards Subcommittee	No	
ACES Power Participating Members	No	
SERC OC Standards Review Group	No	
Overton Power District No. 5	No	
Tennessee Valley Authority	No	
Arizona Public Service Company	No	
Western Electricity Coordinating Council	No	
ReliabilityFirst	No	
Rayburn Country Electric Cooperative, Inc.	No	
New York Power Authority	No	
Southern Company	No	
Luminant Energy	No	
Central Maine Power Company	No	
New York State Electric & Gas	No	

Organization	Yes or No	Question 12 Comment
and Rochester Gas & Electric		
Western Area Power Administration	No	
Intellibind	No	
US Bureau of Reclamation	No	
Glacier Electric Cooperative	No	
FHEC	No	
Vermont Transco	No	No Comment
South Texas Electric Cooperative, Inc.	No	
South Texas Electric Cooperative, Inc.	No	
Sweeny Cogeneration LP	No	
Dayton Power and Light Company	No	
Duke Energy	No	
South Carolina Electric and Gas	No	
Fayetteville Public Works Commission	No	
MidAmerican Energy Company	No	

Organization	Yes or No	Question 12 Comment
Florida Keys Electric Cooperative	No	
American Transmission Company, LLC	No	
Farmington Electric Utility System	No	
Sierra Pacific Power Co d/b/a NV Energy	No	
Colorado Springs Utilities	No	
Sacramento Municipal Utility District (SMUD)	No	
City of St. George	No	
Puget Sound Energy	No	
GTC	No	
Idaho Power	No	
Long Island Power Authority	No	
Cogentrix Energy, LLC	No	
PJM	No	
Oncor Electric Delivery Company LLC	No	
City of Anaheim	No	

Organization	Yes or No	Question 12 Comment
MEAG Power	No	
Xcel Energy	No	
Golden Spread Electric Cooperative, Inc.	No	
Michgan Public Power Agency	No	
Utility System Efficiencies, Inc.	No	
Response: Thank you for your response.		

13. Are there any other concerns with this definition that haven't been covered in previous questions and comments?

Summary Consideration: Comments received for Question 13 were mostly re-statements of comments expressed in the previous question. No changes were made to the core definition or Inclusions or Exclusions based solely on question 13 comments. However, changes were made to the Implementation Plan to clarify the effective date of the revised definition.

Organization	Yes or No	Question 13 Comment
Northeast Power Coordinating Council		Currently, the posted exception criterion is only a concept with many gaps and TBD, as posted details are later to follow. The exception criteria should be a menu of technical items (load flows, stability analysis etc) and non technical items (type of loads such as distribution companies versus major city center, national security, etc). Entities should be required to assess and provide their own justification under each category with a conclusion that takes into account all of the relevant items for element(s) under exception, in a consistent template and table of contents. Suggest the SDT to avoid specification of any parameters as they would differ under different design concepts, system configurations, system characteristics and regulatory requirements.The comments herein reflect thoughts on the document posted. An "all encompassing" comment is that the definition is too lengthy. The importance of the BES definition is recognized throughout the industry for its importance, and as such it should be simple, clear, and straightforward. The first draft definition posted was more along this line. I2, I3, and I5, being very similar, can they be combined into an encompassing generator inclusion criteria?
Response: Comments concerning the Technical Principles (Exception Criteria) associated with the RoP Exception Process will be addressed through the dedicated responses developed by the SDT and published in the specific Consideration of Comments document associated with that portion of the overall project. The primary goal of the SDT in the revision of the definition of the BES is to improve clarity in the language and to provide as much certainty as possible in the identification of Bulk Electric System (BES) and non-BES Elements. Although the clarifications added to the core definition and the inclusions and exclusions have lengthened the definition as a whole, the SDT feels that the improvements in clarity and the increased ability to apply the definition to achieve consistent results justify the overall length of the definition. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards		

Organization	Yes or No	Question 13 Comment
Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.		
Tri-State Generation and Transmission Association, Inc.		We believe that this definition is not consistent with the response from the SPCS in Project 2009-17, "Interpretation of PRC-004-1 and PRC-005-1 for Y-W Electric and Tri-State" and could change its intent. Existing tapped distribution transformers are clearly not BES Elements at this time. Under the proposed definition that clarity is lost.There are instances where "automatic interruption device" or "automatic interrupting device" is used. Each should be changed to include "fault" after "automatic."
Response: The Interpretation speaks to which Protection Systems are applicable to the PRC Standards, not which Elements are BES or non-BES. The SDT believes that the bright-line established by the draft BES definition is not necessarily the same bright-line that should be utilized to identify the Protection Systems that are applicable to the PRC Reliability Standards and should be addressed by a separate development project. No change made.		
Santee Cooper		What was the rationale for using aggregate capacity greater than 75 MVA on I2 and I5. I2 and I3 inclusions are not the same as defined by the SERC Regional Entity for MOD-024. The SERC guideline does not include an aggregate value for generating units.
Response: After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation thresholds at this time. There simply isn't enough time or resources to do that topic justice with the mandated schedule. Therefore, the primary focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the other issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations.		
NERC Staff Technical Review		The definition should include variable frequency transformers and back-to-back HVdc converters that connect portions of the system operated at 100 kV or higher, regardless of the dc voltage rating of the converter equipment, which often is less than 100 kV. Assuring reliable operation of nuclear plants requires that Elements subject to Nuclear Plant Interconnection Requirements are planned, designed, maintained, and operated in accordance with NERC Reliability Standards. An additional Inclusion I6 should be added to the definition to include "All transmission Elements subject to Nuclear Plant Interface Requirements (NPIRs) as agreed to by a Nuclear Plant Generator Operator and a Transmission Entity defined in NUC-001." Assuring reliable operation of the interconnected transmission network also is dependent on reliable operation

Organization	Yes or No	Question 13 Comment
		of generating units that system operators rely on for capacity and Contingency Reserves. Additional Inclusions I7 and I8 should be added to include: * Real Power resources fully or partially relied on to fulfill a capacity obligation, and * Real Power resources (supply-side or Demand-Side Management) relied on to provide Contingency Reserves to its Balancing Authority.
Response: The SDT believes that the language contained in the core definition (all Transmission Elements operated at 100 kV or higher) adequately captures specific components such as variable frequency transformers and back-to-back HVdc converters. No change made. The SDT does not believe that additional clarification beyond the designations currently established by the core definition and accompanying Inclusions and Exclusions are necessary to appropriately identify the vast majority of Elements that support the reliable operation of the interconnected transmission network. Additionally, the RoP Exception Process can be utilized to include facilities that are deemed necessary for the reliable operation of the interconnected transmission network but not captured by the BES definition. No change made.		
NERC Transmission Issues Subcommittee (TIS)		The definition should include variable frequency transformers and back-to-back HVdc converters that connect portions of the system operated at 100 kV or higher, regardless of the dc voltage rating of the converter equipment.
Response: The SDT believes that the language contained in the core definition (all Transmission Elements operated at 100 kV or higher) adequately captures specific components such as, variable frequency transformers and back-to-back HVdc converters. No change made.		
Dominion		Does the SDT assert that there is no reliability gap because the impact of load on the BES is covered because the DP and LSE are registered and therefore must comply with applicable reliability standards? If so, why shouldn't the same apply to generation elements? GO and GOPs, just like DPs and LSEs are registered users of the bulk power system and must adhere to applicable reliability standards. Other comments Dominion also has the following comments which are based, to a large degree upon the webinar of May 19th. Dominion is concerned that while the BES definition is going through the standards development process, where stakeholders have the ability to ballot, the exception process is being treated as a change to the Rules of Procedure, with no associated stakeholder ballot. For this reason, Dominion prefers that the exception criteria itself be part of the BES definition standards development process. As Dominion reviews the Inclusions and Exclusions included by the SDT in the BES definition, we believe that the SDT could just have easily developed criteria to determine whether impact on the BES is material. We believe this would negate the need for the exception process proposed for the Rules of Procedure. However, if this course is not chosen, then Dominion requests the NERC BOT apply these changes in an 'all or none' fashion. That is, the BES definition and the exception process should both require NERC BOT approval or neither should be moved to FERC for its approval. We are confused as to how the definition, in particular the Inclusions and Exclusions, and the exception process are meant to be applied to, or by, the registered entity.

Organization	Yes or No	Question 13 Comment
		We thought we heard differing views from the panel; one stating that, if the Element or Facility met the Inclusion or Exclusion in the BES definition, then an exception request submittal is not required. On the other hand, we thought we heard that, unless an exception request submittal had been approved then 'status quo' applies. What is 'status quo' based on, the current BES definition or the BES definition being proposed? Would an entity need to track the effective date of the BES definition change in order to determine 'status quo'? How will submittal or non-submittal of an exception request by the registered entity be applied for compliance purposes? Dominion believes the correct answer is that and Element or Facility that meets the BES definition is included and if it doesn't meet the BES definition, isn't included. Only when an exception request has been submitted by an entity, approved and any appeal resolved, is inclusion or exclusion based on the impact to the bulk power system as determined by the criteria used in the exception process.
Response: The SDT scope was determined by the language contained in Order Nos. 743 & 743a in which the Commission provided guidance to the ERO to clarify the definition for continent-wide application. The Commission did not propose significant changes to the current application of the existing definition over the majority of the continent. Therefore the SDT has developed a draft core definition, together with BES designations (Inclusions and Exclusions) that provide the specificity necessary to identify the vast majority of BES Elements by utilizing the existing definition and criteria previously approved for this purpose. Although load is a component that can impact the reliability of the BES, the development of the definition is bound by the limitations documented in Section 215 of the Federal Power Act. Expanding the definition to include load would exceed the jurisdictional boundaries into the area of local distribution facilities. No change made. Upon initiation of the development project in response to Order Nos. 743 & 743a, NERC staff and the NERC Standards Committee determined the appropriate mechanisms for the development of each aspect of the project. The revision of the BES definition and the development of the Technical Principles associated with the Exception Process are currently being developed through the Standards Development Process. The RoP Exception Process is being developed through the RoP process for the revision of the Rules of Procedure. The approvals will follow the applicable revision process. No change made. The BES definition (core definition and Inclusions & Exclusions) will be applied to classify BES vs. non-BES Elements. The SDT believes that this will cover the vast majority of the facilities in question. The remaining facilities will be candidates for the Exception Process (RoP) where the Technical Principles will be utilized to determine if the facility is necessary for the reliable operation of the interconnected transmission network. The term 'status quo' was referring to the draft BES definition. Once approved (BES definition, Exception Process and the Technical Principles) the current BES definition will be retired. No change made.		
MRO's NERC Standards Review Forum		In order to provide a clear and concise definition, please add the Brightline Criteria that all facilities less than a 100kV are excluded unless those facilities meet the criteria of an Inclusion.
Response: The SDT believes that the current draft BES definition provides sufficient clarity in establishing the bright-line of 100 kV and the identification of facilities operated at less than 100 kV for exclusion would be redundant and jeopardize the SDTs efforts of establishing clarity in the language of the definition. In an effort to provide additional guidance and in support of comments provided in response to Question 11, the SDT has modified the BES core definition with a		

Organization	Yes or No	Question 13 Comment
statement that specifically excludes 'local distribution facilities. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
SERC Planning Standards Subcommittee		The comments expressed herein represent a consensus of the views of the above-named members of the SERC EC Planning Standards Subcommittee only and should not be construed as the position of SERC Reliability Corporation, its board, or its officers.
Response: The SDT appreciates the clarification.		
ACES Power Participating Members		It is not clear if E1 covers networked sub-transmission. Consider the situation where a 138 kV line terminates into a 138/69 kV transformer, the 69 kV is networked and only serves load and possibly generation that does not meet any of the inclusion criteria. This is a situation that appears to meet the intent to exclude radial load under E1 and local distribution networks under E3 but does not appear to explicitly meet either criteria. E1 is not met because the 69 kV network is not radial and E3 is not met because it specifically limits the exclusion to 100 kV and above. This issue could be solved by making clear that E1 applies to even networked sub-transmission or by removing the voltage limit on E3 so that sub-transmission could be included within this exclusion criterion.
Response: Exclusions E1 & E3 identify facilities operated at a voltage of 100 kV or higher in an attempt to exclude those types of facilities that do not support the reliable operation of the interconnected transmission network. Facilities operated at a voltage level less than 100 kV are excluded by the 'bright-line' established by the BES core definition unless included through the RoP Exception Process. The SDT is unable to comment on specific system configurations without detailed information pertaining to the facility in question; however, the SDT believes that the application of the BES definition should start with the application of the 'bright-line' established at the 100 kV threshold.		
BPA		As presently written, this BES definition says that "Real Power resources … and Reactive Power resources connected at 100kV or higher" are to be considered as part of the BES unless one of the specified exclusions applies. Though exclusion E2 specifically excludes "generating units that serve all or part of a retail Load … on the customer's side of the meter", there is not a similar exclusion for Reactive Power resources that similarly provide such reactive support solely "on the customer's side of the meter". It seems that this results in such Reactive Power resources (i.e. capacitors, inductors, SVCs, etc.), customer side of the meter being defined as part of the BES. If this was not the SDT's intent, BPA requests a new exclusion to specifically exclude such Reactive Power resources "on the customer's side of the meter".

Organization	Yes or No	Question 13 Comment
Response: The SDT agrees with the commenter's concerns regarding retail customer-owned Reactive Power resources and has drafted an additional Exclusion E4 to address these concerns. **E4** – Reactive Power devices owned and operated by the retail customer solely for their own use.		
Hydro One Networks Inc		We believe that the concepts of inclusions and exclusions as part of the bright-line definition are excellent. However, these exclusions do not address adequately several complex issues along with directives in Order No. 743 and 743A, such as: differentiation between Transmission and Distribution, non-jurisdictional concerns, or distribution. BES definition itself is not a venue to address these complex issues and suggest that these should be addressed by the ERO's exception procedure. We suggest that SDT consider: Removing I5 and adding E4 to exclude intermittent renewable generation (wind and solar). As stated earlier, such units are intermittent and the planning and operational standards and practices ensure that their unavailability or unexpected (sudden) loss of generation won't jeopardize reliability of the network; therefore, they should not be BES. That the definition and/or exception process should provide acknowledgement and flexibility to avoid any regulatory conflicts. Introducing a concept of a new category of registration or BES Support (BESS) elements. These elements are NOT BES but support the reliable operation of the interconnected transmission network. A sub-set of relevant NERC Standards should still apply to BESS elements such as planning, design, and maintenance. However, they may not be contiguous or subject to mandatory compliance. We do plan to submit our comments on exception criteria and procedure as part of its process. However, we do suggest that the SDT: Carefully craft the exception criteria that is flexible and technically sound to adequately allow entities to present their case to the ERO for exception. Verify that the exception criteria should be at a high-level with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) mentioned in exclusions or inclusions based on technical assessment, evidence and justification for its unique characteristics, configuration, and utilization. Acknowledge and provide provisions in both NERC exception criteria and exception process for federal, state and provincial jurisdictions.
Response: The SDT agrees with the commenter that the Exception Process should be the primary mechanism for addressing the concerns surrounding issues such as: differentiation between Transmission and Distribution, non-jurisdictional concerns, or distribution. However, the SDT has made modifications to the BES core definition to address the issues associated with the jurisdictional concerns related to local distribution facilities. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		

Organization	Yes or No	Question 13 Comment
Although dispersed power producing resources (wind, solar, etc.) can be intermittent suppliers of electrical generation to the interconnected transmission network, the SDT has been made aware of geographical areas that depend on these types of generation resources for the reliable operation of the interconnected transmission network which has prompted the development of Inclusion I4 (previously Inclusion I5). Inclusion I4 has been revised to address industry concerns identified in responses to Question 6. **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a~~-~~ system designed primarily for aggregating capacity~~collector system~~ , connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above. The development of Reliability Standards is not limited in applicability to BES Elements. Reliability Standards are written against facilities that support the reliable operation of the interconnected transmission network. Therefore the SDT believes that the clarification of the BES definition does not require identification of these types of facilities and that the specific facilities in question are better addressed by the applicability of individual Reliability Standards and not through the BES definition or the Exception Process. No change made. Comments concerning the Technical Principles (Exception Criteria) associated with the RoP Exception Process will be addressed through the dedicated responses developed by the SDT and published in the specific Consideration of Comments document associated with that portion of the overall project.		
Edison Electric Institute		Comments: EEI appreciates the efforts of the SDT and offers these comments to help guide its efforts. EEI believes that the statutory framework of the Federal Power Act and Section 215 specifically must govern the definition of BES. While FERC has declined to further define the term "Bulk-Power System" ("BPS") and suggested in Order No. 743 that the BPS "reaches farther than those facilities that are included" in the BES, it is clear that the BES cannot extend further than the BPS, and therefore the statutory definition of BPS must be the guide for the SDT's efforts, particularly with regard to the treatment of local distribution facilities.The BPS definition in Section 215 includes:(1) facilities and control systems necessary for operating an interconnected electric energy transmission network; and (2) electric energy from generation facilities needed to maintain transmission system reliability. But the term BPS does not include facilities used in the local distribution of electric energy. The definition of BES must comply with the statutory definition.EEI points to several issues to which it believes the SDT should pay particular attention. First, the facilities and control systems to be included within the BPS/BES must be necessary for operating an interconnected electric transmission network. Therefore, each of the proposed inclusions and exclusions must be measured against this requirement - are they necessary? It is insufficient to include a particular facility or element within the BES definition merely because it would be desirable to have such a facility covered under the BES or a particular standard. In addition, EEI believes that imposing a requirement that all contiguous elements be included is too broad and may sweep in facilities to the BES definition that are statutorily excluded because they are not necessary. For example, while blackstart resources may be "necessary," including all facilities that are contiguous between a particular blackstart resource and the transmission system is likely to include elements that are not

Organization	Yes or No	Question 13 Comment
		"necessary" to the operation of the interstate transmission network and therefore not within the statutory definition. As a general rule, EEI believes it is appropriate to include contiguous elements or facilities above 100kV necessary for operating the interconnected transmission network, but not any below 100 kV unless the element is necessary to operate the interconnected transmission network.There is no reason to require a "contiguous" BES down to the local distribution facility level. Section 215 gives NERC and FERC jurisdiction over "users, owners and operators" of the BPS. Therefore, FERC has authority to require an entity that is not a BES facility to comply with applicable NERC requirements where necessary for BPS reliability. This approach would achieve the goals of BPS reliability without extending the full reach of BES applicability to facilities that may be local distribution facilities that are excluded from Section 215. Second, both the transmission and the generation facilities included within the BPS/BES must be tied to maintaining the reliable operation of the BPS. Section 215 defines the term "reliable operation" as "operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure. The statute does not require that there be no loss of load. The statute is aimed at avoiding uncontrolled separation or cascading failures. Therefore, consistent with the statute, the definition of BES should only include elements that are necessary to prevent these occurrences. Third, the statute contains a specific exclusion for facilities used in the local distribution of electric energy ("local distribution facilities"). FERC has agreed in Orders No. 743 and 743-A that local distribution facilities are not subject to Section 215. FERC, as the agency implementing Section 215, has the authority to interpret what that means. In Order 743-A, FERC left it to NERC, and therefore to the SDT, to determine in the first instance which facilities are local distribution and therefore excluded and whether or not to use tests such as the Seven Factor Test from Order No. 888. Order No. 888 set out seven indicators, a combination of functional and technical tests, to assist companies and state commissions with separating local distribution facilities from FERC jurisdictional transmission facilities on a case by case basis. The seven factors are: (1) Local distribution facilities are normally in close proximity to retail customers; (2) Local distribution facilities are primarily radial in character; (3) Power flows into local distribution systems; it rarely, if ever, flows out; (4) When power enters into a local distribution system, it is not reconsigned or transported on to some other market; (5) Power entering a local distribution system is consumer in a comparatively restricted geographical area; (6) Meters are based at the transmission/local distribution interface to measure flows into the local distribution facilities; and (7) Local distribution systems will be of reduced voltage. EEI acknowledges that the Seven Factor test does not draw a bright line between facilities used in local distribution and transmission facilities and may not be a perfect fit for applying to specific pieces of equipment as the SDT has tried to do. However, many state commissions have made determination of what are local distribution facilities and FERC has concurred with these determinations. Therefore, EEI proposes that if NERC or FERC seek to include facilities (or class of facilities) in the BES that have been previously determined by a state commission to be local distribution through application of the Seven Factor Test, that there is a rebuttable presumption that these are facilities used in local distribution for purposes of

Organization	Yes or No	Question 13 Comment
		the BES definition. In order to overcome this presumption, NERC/FERC must make a showing demonstrating that these facilities "necessary" for the reliable operation of the BPS. EEI will address this and a procedure for seeking exclusion of facilities that previously have been determined to be local distribution in its comments to be submitted on the exceptions process.In applying the statutory exclusion for local distribution facilities, the SDT should ensure that the inclusions do not include local distribution facilities and that the exclusions are sufficient to exclude local distribution facilities. Similarly, it is not sufficient to include an element that would otherwise be a local distribution facility merely to support a facility clearly within the BES. For example, the SDT should consider the how the proposed criteria would classify types of equipment such as distribution voltage equipment - some, such as cap banks in a generation switchyard do support the transmission system versus a regulator on a distribution feeder - the former may be part of the BES and the latter unlikely or not at all.
Response: The SDT has made modifications to the BES core definition to address the issues associated with the jurisdictional concerns related to local distribution facilities. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy. The SDT agrees that the establishment of a contiguous BES could have the unintended consequences of being overly-inclusive and has made corresponding changes to the Inclusions to address this concern. The primary goal of the SDT in the revision of the definition of the BES is to improve clarity in the current language and to provide as much certainty as possible in the identification of BES and non-BES Elements. The Commission provided guidance within Order Nos. 743 & 743a which identified the current application of the existing BES definition was essentially correct for the majority of the continent and directed clarification of the existing language to support consistent application across all regions. Additional guidance from the Commission spoke to significant changes in the scope of the definition with an expectation that the revision to the definition would not significantly expand or contract what is currently considered to be the BES. Limiting the draft definition to Elements where a loss could result in instability, uncontrolled separation, or cascading failures is a significant departure from the current definition and not in alignment with the expectations documented in the Orders (743 & 743a). No change made.		
LG&E and KU Energy LLC		YesLG&E and KU Energy have a concern that the approval and adoption of the BES definition project and BES exception procedure project are not linked. This would produce the possibility of the BES definition project completing and Registered Entities having to comply without having the appropriate and promised BES exception procedure in place to alleviate unreasonable compliance actions. More specifically, if the BES definition gets approved and BES exception procedure has not yet been approved (whether due to project delay or disapproval), then Registered Entities are required to ensure everything within the new definition is compliant, even if doing so is unreasonable or entirely unnecessary.

Organization	Yes or No	Question 13 Comment
Response: It is the intention of the SDT and the RoP team to file all portions of the project (BES definition, RoP Exception Process, and the Technical Principles) as a single response to the directives contained in Order Nos. 743 & 743a with the expectation that all portions would be approved at the same time.		
Alabama Public Service Commission		The Alabama Public Service Commission (APSC) appreciates the fact that a member of the Oregon PUC Staff is participating on this BES Definition drafting team. In reviewing the proposed definition, the APSC's focus is to ensure that appropriate definitional lines are drawn so that recognized jurisdictional boundaries are acknowledged and respected. The concern underlying this focus of the APSC is the fact that utilities must make significant investments to comply with mandatory reliability standards and, accordingly, compliance with such standards must be necessary and not duplicative. Furthermore, there should be a commensurate reliability benefit associated with the cost of the investments needed for compliance.The proposed definition and NERC's development of standards should focus on reliable operation of the interconnected electric transmission network (BES) in order to prevent local events from affecting other regions, not to ensure reliable operation at the local level.
Pennsylvania Public Utility Commission		The Pennsylvania Public Utility Commission offers the following comments in response to Standards Announcement Project 2010-17 BES Definition: As you know, Section 1211 of the Energy Policy Act of 2005, amending Section 215 of the Federal Power Act, provided for the promulgation of standards for the bulk power system by an Electric Reliability Organization subject to the approval of the U.S. Federal Energy Commission. Section 215 (a) states:'SEC. 215. ELECTRIC RELIABILITY.''(a) DEFINITIONS.-For purposes of this section:(1) The term 'bulk-power system' means-(A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability.The term does not include facilities used in the local distribution of electric energy.EPAct 2005, Section 1211, 16 U.S.C. Â§ 824 [emphasis supplied] While the PaPUC acknowledges the need for a more explicit definition of the Bulk Electric System (or, as it is stated in EPAct 2005, the "bulk power system"), we are concerned that the existing draft definition and stated exclusions is insufficiently clear and may be erroneously extended to distribution facilities that are currently subject to state jurisdiction expressly reserved by the language of EPAct 2005, Section 1211 (a).Exceptions E1-E4 are plainly drafted to address this issue, but there is a concern that the definition of "local distribution networks" contained in Exception E3 may not fully comport with the intent of Congress, particularly Exception E3 (d) which excepts facilities that are [n]ot used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN. The proposed language appears to be contrary to Congressional intent as it implies that some local distribution facilities which "transfer bulk power" are indeed subject to the ERO standards process. Additionally, the draft BES, which distinguishes local distribution facilities between those that "transfer bulk power" and those that do not appears insufficiently precise, as bulk power is ultimately transferred through every portion of the local distribution network to end users.Our major concern is that this draft standard definition will collide with state

Organization	Yes or No	Question 13 Comment
		regulation of distribution facilities, particularly where state commissions are seeking to impose standards and protective arrangements more stringent than might be required by the Electric Reliability Organization or Regional Reliability Organization. Accordingly, it is recommended that the Draft BES be modified to specifically define distribution facilities and exclude them from the ambit of the Bulk Electric System definition, as well as making it clear that State reliability standards relating to the local distribution network are not overridden or modified by standards applicable to the Bulk Electric System.
National Association of Regulatory Utility Commissioners		Congress clearly recognized that State utility commissions are concerned about and committed to reliability at the distribution level; that's why Congress explicitly limited FERC's reach, and directed FERC not to attempt to regulate facilities used in local distribution.The NERC standard setting process for defining the Bulk Electric System must respect the statutory limitations under Federal Power Act Section 215 that explicitly excluded local distribution from the definition of the Bulk Power System (BPS). The Bulk Electric System, while not necessarily equivalent to the BPS (See FERC Order 743 A P 102), cannot exceed the limitations of the BPS and cannot include facilities used in the local distribution of electric energy. State Utility Commissions are concerned about and committed to reliability. These Commissions are in the best position to provide reliability oversight and standards for the local distribution system in their State.
Response: The SDT is developing a revised definition of the BES to identify the facilities that support the reliable operation of the interconnected transmission network. The SDT has revised the draft BES definition to address the potential jurisdictional boundaries that currently exist in regards to local distribution facilities. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
Western Electricity Coordinating Council		The definition should also reference the exception process and technical justification allowed for further inclusion or exclusion from the BES.
Utility System Efficiencies, Inc.		The definition should also reference the exception process and technical justification allowed for further inclusion or exclusion from the BES.
Response: Such a statement was inadvertently left off of the first posted version of the definition. Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.		
Western Montana Electric Generating and Transmission		WMG&T has these additional concerns: The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." WMG&T is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC

Organization	Yes or No	Question 13 Comment
Cooperative		BESDTF approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. For the reasons we have explained in our answer to Question 11, we believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process.
Response: The SDT believes that the burden of proof issue should be resolved through the development of the RoP Exception Process. Your comments will be forwarded to the RoP team for consideration. Upon initiation of the development project in response to Order Nos. 743 & 743a, NERC staff and the NERC Standards Committee determined the appropriate mechanisms for the development of each aspect of the project. The revision of the BES definition and the development of the Technical Principles associated with the Exception Process are currently being developed through the Standards Development Process. The RoP Exception Process is being developed through the RoP process for the revision of the Rules of Procedure.		
PacifiCorp		Effective dates: While understanding that additional facilities will require up to two years to come into compliance, several facilities will also be excluded that are currently under the current bright line definition. Are utilities going to be responsible to maintain all NERC reliability standards during the two year period for facilities or elements that will be excluded by the new bright line definition? PacifiCorp proposes that the effective date for facilities being removed from the bright line become effective on the first day of the first calendar quarter after applicable regulatory approval. It is reasonable to retain the two year period for facilities that will be added to the BES. NERC Staff has submitted written comments to this project stating that the BES “must be contiguous.”

Organization	Yes or No	Question 13 Comment
		Instituting a contiguous BES with Inclusion I2, for example, would result in a substantially over-inclusive BES definition. The adoption of a "contiguous" BES is therefore likely to result in imposition of reliability standards on a substantial number of distribution elements that have nothing to do with improving or protecting the reliability of bulk transmission system.There is no compelling reason to adopt a "contiguous" BES that covers local distribution systems. Section 215 of the FPA provides FERC with jurisdictional authority over "users" as well as "owners" and "operators" of the bulk power system. Consequently, FERC has the jurisdictional authority to require generation and other entities to comply with applicable NERC requirements. Hence, even where an entity does not own or operate BES assets, it could still be required, for example, to provide necessary information to the applicable Reliability Coordinator or Planning Coordinator and to participate in programs to prevent instability, uncontrolled separation, or cascading outages to the bulk transmission system. This approach would fully achieve the goals of bulk transmission system reliability without imposing the full BES regulatory compliance burden on local distribution elements. Although not specifically the responsibility of the SDT, it should closely coordinate its efforts with the team developing the inclusion/exclusion process in the ROP. For instance, if the ROP team develops an overly onerous process to exclude elements which are not required to reliably operate the interconnected BES yet are not excluded through the bright-line definition then PacifiCorp would consider the bright-line definition to be over-inclusive.

Response: The SDT agrees with the commenter and has made revisions to the Implementation Plan to address these concerns surrounding the implementation dates.

The SDT agrees that the establishment of a contiguous BES could have the unintended consequences of being overly-inclusive. Inclusion I2 has been revised and merged with Inclusion I3 (now Inclusion I2) and as a result the implication of the continuity of the BES has been removed. Additionally, the SDT recognizes the limitations associated with FERC's jurisdiction as defined in the FPA Section 215 and has therefore provided additional clarification in the core BES definition to address these concerns.

> **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.
>
> **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.

It is the intention of the SDT and the RoP team to file all portions of the project (BES definition, RoP Exception Process, and the Technical Principles) as a single response to the directives contained in Order Nos. 743 & 743a with the expectation that all portions would be approved at the same time.

Organization	Yes or No	Question 13 Comment
Intellibind		Generation that is BES significant that is not connected at 100kV or above.
Response: This 'significant' generation should be identified with the appropriate technical justification, established and presented by the Regional Entity, in accordance with the Rules of Procedure Exception Process for 'inclusion' approval by the ERO. No change made.		
City of Redding		Additional concerns: The SDT has avoided directly addressing the predominate issues that plagues the industry. The two main issues are: a sound definition of the term "*necessary for operating the interconnected transmission network*" **and** "whether a particular facility is local distribution or transmission" as directed by FERC in both Orders 743 and 743A. As an example, in terms of pure operation of an interconnected transmission system there is only a small amount of the generation connected to the BES system where the energy is actually "necessary for operating the interconnected transmission network". As the users of the system increase load and remote generation responds then the transmission system only needs the VAR support and reserves from a select set of generators, therefore the Definition goes too far, and creates a generalization that all generators over 20 MVA are "necessary". This is especially not true if the generation is a load modifier embedded in a Distribution system and the generator only requires reserves from the BES. These services are a function of the BES and are paid for by the user. Redding is concerned that the SDT is intertwining the BES Definition and the Statement of Compliance Registry out of convenience. It is our view that the the NERC Registry Criteria serves a different function than the Definition in that it does not clarify what elements are BES elements but identifies the Owners, Operators, and Users of the BES and therefore the NERC Standards could be applied. The SDT does not have a technical justification to adopt the current thresholds in the Compliance Registry as part of the BES Definition. These thresholds have not been presented to the industry for validation or review. Additionally, the Statement of Compliance Registry was an initial attempt of NERC to begin a new regulation requirement and was not created through the NERC Standards Development Process. Redding suggests that the SDT, in the interest of reliability, recommend that the NERC Statement of Compliance Registry be modified to create a tiered level of responsibilities for entities. A 20 MVA generator has a different level of responsibility to the BES then an 800 MVA generation unit. A LDN that does not qualify for an exemption due to an impact on a path or flow gate should not be required to meet the full requirements of a Transmission Operator. This in fact reduces reliability by diverting the local training focus from the operation of a Local Control Center (LCC) and a sub-transmission system. Prior to the NERC Standards WECC had training classes for Sub-transmission Operators that were applicable to the reliable operation of a local Sub-transmission system. The implementation of the NERC Standards has decreased reliability in this area because the focus of coordinating with the LCC and sub-transmission level has been lost.

Organization	Yes or No	Question 13 Comment
Response: The SAR has clearly identified the responsibilities of the SDT in revising the definition of the BES. The scope does not include the additional definitions noted above. No change made. The Commission stated in Order Nos. 743 & 743a that they believe the current application of the definition is correct and should be maintained. The current application of the definition is based on Commission language contained Order 693 which directs the use of the BES definition and NERC Statement of Compliance Registry to identify the functional entities required to be registered and which Reliability Standards will apply. The linkage between the BES definition and Registry Criteria was established by the Commission in Order No. 693 and uncontested by the industry at the time of filing. No change made. The ERO Statement of Compliance Registry is governed by the Rules of Procedure and under the responsibilities of the ERO Certification and Registration Department and does not fall under the current responsibility of the SDT as defined by the scope in the SAR for Project 2010-17. No change made.		
Public Utility District No. 1 of Snohomish County, Washington		Snohomish County PUD has these additional concerns: We are concerned that the proposed 24-month delay in the effective date of the new definition will delay the potentially beneficial effects of the SDT's efforts, especially for utilities that have been inappropriately registered for BES-related functions, which is a common situation in WECC. We therefore urge the new BES definition to become effective immediately upon approval by FERC or other applicable regulatory agencies. Entities that have been improperly registered for BES functions can then immediately file for deregistration and obtain the benefits of the new definition as soon as possible. For entities that have not previously been registered for BES-related functions but that would be required to register under the new definition, we do not object to the 24-month transition period proposed by the SDT to allow the newly-registered entity to attain compliance with newly-applicable reliability standards, many of which require new training for employees, new maintenance procedures, and complex new operational protocols. However, the transition period for newly-registered entities should be structured in a way that does not prevent entities seeking deregistration from benefitting from the new definition at the earliest possible date. The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." Snohomish is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BES Task Force approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. For the reasons we have explained in our answer to Question 11, we believe the Exception process is critical

Organization	Yes or No	Question 13 Comment
		both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Compare NERC Rules of Procedure Â§ 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process. Further, we believe that the failure to vet all material elements of the BES definition through the Standards Development Process would constitute a violation of NERC's bylaws and the requirements of the Standards Development Process.
Response: The SDT agrees with the commenter and has made revisions to the Implementation Plan to address these concerns surrounding the implementation dates. The SDT believes that the burden of proof issue should be resolved through the RoP Exception Process. Your comments will be forwarded to the RoP team for consideration. Upon initiation of the development project in response to Order Nos. 743 & 743a, NERC staff and the NERC Standards Committee determined the appropriate mechanisms for the development of each aspect of the project. The revision of the BES definition and the development of the Technical Principles associated with the Exception Process are currently being developed through the Standards Development Process. The RoP Exception Process is being developed through the RoP process for the revision of the Rules of Procedure.		
Grand Haven Board of Light and Power		I can not over emphasize how unreasonable it would be for our utility to have to register as a TO/TOP because of one asset (138kV circuit switcher) that serves a radial, load serving system. It is equally unreasonable for us to have to use a long and arduous exception process to qualify for deregistration. Please take this into consideration as you prepare the final definition.
Response: The SDT is responsible for the revision of the BES definition. In fulfilling this responsibility the SDT is developing a definition that properly classifies facilities as BES or non-BES Elements. Defining registration requirements is not within the scope of Project 2010-17. No change made.		
National Grid		We are concerned that the proposed definition of BES and specified inclusions reaches farther into the electric system than the Bulk Power System (BPS) definition. The statutory framework of the Federal Power

Organization	Yes or No	Question 13 Comment
		and section 215 specifically must govern the definition of BES. It is clear in FERC's Order No. 743 that BES should not extend further than BPS, therefore the statutory definition of BPS must be the guide for the SDT's efforts, particularly with regard to the treatment of local distribution facilities. The BPS definition includes (1) facilities and control systems necessary for operating an interconnected electric energy transmission network; and (2) electric energy from generation facilities needed to maintain transmission system reliability. It does not include facilities used in the local distribution of electric energy. The definition of BES must comply with the statutory definition.First, the facilities and control systems to be included within the BPS/BES must be necessary for operating an interconnected electric transmission network. Therefore, one question to consider for each of the proposed inclusions and exclusions is "are they necessary?" A particular facility or element should not included in the BES definition just because it would be desirable to have the facility considered BES or covered by a particular standard. Imposing a requirement that all contiguous elements be included is too broad and may sweep in facilities to the BES definition that are statutorily excluded because they are not necessary. Second, both the transmission and the generation facilities included within the BPS/BES must be tied to maintaining the reliable operation of the BPS. Section 215 defines the term "reliable operation" as "operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure". The statute does not require that there be no loss of load. The statute is aimed at avoiding uncontrolled separation or cascading failures. Therefore, the definition of BES should only include elements that are necessary to prevent these occurrences.

Response: The SDT recognizes the limitations associated with FERC's jurisdiction as defined in the FPA Section 215 and has therefore provided additional clarification in the core BES definition to address these concerns.

> **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.

The SDT agrees that the establishment of a contiguous BES could have the unintended consequences of being overly-inclusive. Inclusion I2 has been revised and merged with Inclusion I3 (now Inclusion I2) and as a result the implication of the continuity of the BES has been removed.

> **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.

The primary goal of the SDT in the revision of the definition of the BES is to improve clarity in the current language and to provide as much certainty in the

Organization	Yes or No	Question 13 Comment
identification of BES and non-BES Elements. The Commission provided guidance within Order Nos. 743 & 743a which identified the current application of the existing BES definition was essentially correct for the majority of the continent and directed clarification of the existing language to support consistent application across all regions. Additional guidance from the Commission spoke to significant changes in the scope of the definition with an expectation of the revision to the definition would not significantly expand or contract what is currently considered to be the BES. Limiting the draft definition to Elements where a loss could result in instability, uncontrolled separation, or cascading failures is a significant departure from the current definition and not in alignment with the expectations documented in the Orders (743 & 743a). No change made.		
Northern Wasco County PUD		Northern Wasco County PUD has these additional concerns: The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." Northern Wasco County PUD is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BESDTF approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. For the reasons we have explained in our answer to Question 11, we believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process.
Clallam County PUD No.1 Chelan PUD – CHPD Public Utility District No. 1 of Franklin County		Clallam County PUD has these additional concerns: The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." Clallam is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BES Task Force approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions

Organization	Yes or No	Question 13 Comment
Northwest Requirements Utilities Big Bend Electric Cooperative, Inc. Cowlitz County PUD		listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. For the reasons we have explained in our answer to Question 11, we believe the exemption process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the exemption process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Compare NERC Rules of Procedure Â§ 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process. Further, we believe that the failure to vet all material elements of the BES definition through the Standards Development Process would constitute a violation of NERC's bylaws and the requirements of the Standards Development Process.
Response: The SDT believes that the burden of proof issue should be resolved through the development RoP Exception Process. Your comments will be forwarded to the RoP team for consideration. Upon initiation of the development project in response to Order Nos. 743 & 743a, NERC staff and the NERC Standards Committee determined the appropriate mechanisms for the development of each aspect of the project. The revision of the BES definition and the development of the Technical Principles associated with the Exception Process are currently being developed through the Standards Development Process. The RoP Exception Process is being developed through the RoP process for the revision of the Rules of Procedure.		
PUD No. 2 of Grant County, Washington		Grant has these additional concerns: We are concerned that the proposed 24-month delay in the effective date of the new definition will delay the potentially beneficial effects of the SDT's efforts, especially for utilities that have been inappropriately required to meet BES reliability standards, which is a common situation in WECC. We therefore urge the new BES definition become effective immediately upon approval by FERC or other applicable regulatory agencies. Entities that have been improperly required to meet standards can then immediately redirect resources to where they are truly needed. For entities that have not previously been

Organization	Yes or No	Question 13 Comment
		registered for BES-related functions but that would be required to register under the new definition, we agree that 24 months is an appropriate transition period to allow the newly-registered entity to attain compliance with newly-applicable reliability standards, many of which require new training for employees, new maintenance procedures, and complex new operational protocols. However, the transition period for newly-registered entities should be structured in a way that does not prevent entities seeking deregistration from benefitting from the new definition at the earliest possible date. The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." Grant is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BESDTF approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force.
Response: The SDT agrees with the commenter and has made revisions to the Implementation Plan to address these concerns surrounding the implementation dates. The SDT believes that the burden of proof issue should be resolved through the development RoP Exception Process. Your comments will be forwarded to the RoP DT for consideration.		
Wells Rural Electric Company		Dear NERC Standards Drafting Team:Enclosed are Wells Rural Electric Company's comments on NERC's Proposed Continent-wide Definition of Bulk Electric System. We believe that NERC's proposed Continent-wide Definition of Bulk Electric System is proceeding in the right direction on this important topic but that more work needs to the done. We would like to thank the Standards Drafting Team for their hard work. We support the detailed comments of the Snohomish County Public Utility District and Pacific Northwest Generating Cooperative with regard to the questions posed by the Comment Form for Project 2010-17 Definition of BES.We would like to emphasize these portions of Snohomish's and PNGC's comments: Question 1, both PNGC and Snohomish suggest that NERC start by adopting the statutory definition of the bulk power system as the core definition. We support that approach. That is, "(t) he term 'Bulk Electric System' means: (A) Facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and,(B) Electric energy from generation facilities needed to maintain transmission system reliability.The term does not include facilities used in the local distribution of

Organization	Yes or No	Question 13 Comment
		electric energy". See 16 U.S.C. Â§ 824o(a)(1)." Question 7, we support the exclusion for radial lines as drafted. Question 9, we support the categorical exclusion of Local Distribution Networks from the BES as defined here, but with Snohomish's clarifications. Question 10, we support exclusion E4, for small utilities, but we are unclear how small utilities are defined in the exclusion language presented here. Question 11, we support the approach to exclusion of local distribution facilities discussed in the draft but repeat that more work should be done on the definition so that facilities used in local distribution are not swept up into the BES.The primary value of clearly defining the BES is for registration determinations. We realize that clearly defining the BES also has value in determining which standards apply to registered entities. If a registered entity does not own any Elements of the BES that that registered entity should be able to efficiently and effectively demonstrate an exception. We encourage NERC to support the use of the BES definition for registration-issues and to develop the exception procedure for registered entities that do not own or operate any Elements of the BES.
Response: The SDT appreciates the industry support for this project. Please see the SDT responses in Questions 1, 7, 9, 10, and 11 of this document.		
ExxonMobil Research and Engineering		There are certain transmission network configurations in the south east portion of the country where the majority of the interconnected transmission network is owned and maintained by a single utility company, but approximately one hundred substations that are located along the interconnected transmission network and utilized to transmit power between regions are owned by separate companies (i.e. many companies own a single transmission substation). The SDT should consider this configuration and the lack of uniform operation and maintenance practices that may exist due to the differences in how the companies implement NERC compliance.
Response: The primary goal of the SDT in the revision of the definition of the BES is to improve clarity in the current language and to provide as much certainty as possible in the identification of BES and non-BES Elements. The Commission provided guidance within Order Nos. 743 & 743a which identified the current application of the existing BES definition was essentially correct for the majority of the continent and directed clarification of the existing language to support consistent application across all regions. Additional guidance from the Commission spoke to significant changes in the scope of the definition with an expectation of the revision to the definition would not significantly expand or contract what is currently considered to be the BES. The SDT is unable to comment on specific system configurations without detailed information pertaining to the facility in question.		
FortisBC		We believe that the concepts of inclusions and exclusions as part of the bright-line definition are excellent. However, these exclusions do not address several directives in Order No. 743 and 743A, such as:

Organization	Yes or No	Question 13 Comment
		differentiation between Transmission and Distribution, non-jurisdictional concerns, or distribution. We believe that the BES definition itself is not a venue to address these concerns but suggest that these issues should be explicitly addressed by the ERO's exception criteria and exception process. Currently, the posted exception criterion is only a concept with many gaps and TBD, as posted details are later to follow. We suggest that the exception criteria should be a menu of technical items (load flows, stability analysis etc) and non technical items (type of loads such as distribution companies vs. major city center, national security etc). Entities should be required to assess and provide their own justification under each category with a conclusion that takes into account all of the relevant items for element(s) under exception, in a consistent template and table of contents. We suggest the SDT to avoid specification of any parameters as they would differ under different design concepts, system configurations, system characteristics and regulatory requirements.
Response: The SDT agrees with the commenter that the Exception Process should be the primary mechanism for addressing the concerns surrounding issues such as: differentiation between Transmission and Distribution, non-jurisdictional concerns, or distribution. However the SDT has made modifications to the BES core definition to address the issues associated with the jurisdictional concerns related to local distribution facilities. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy. Comments concerning the Technical Principles (Exception Criteria) associated with the RoP Exception Process will be addressed through the dedicated responses developed by the SDT and published in the specific Consideration of Comments document associated with that portion of the overall project.		
MidAmerican Energy Company		While there were no questions directed to the draft implementation plan in the comment form, if the intent was to also solicit comments on that plan, the schedule in that plan is likely too agressive if the result of the revised BES definition is that new facilites are brought into the BES and are thereby obligated to now comply with standards they had not previously been required to meet. Perhaps a provision should be added to the implementation plan to address this situation and allow an extended schedule for new BES facilities to comply with applicable standards.
Response: The SDT believes that the 24 month schedule for implementation is a reasonable compromise considering the Commission suggested timeframe of 18 months and the burden of newly registered functional entities in establishing compliance with the applicable Reliability Standards. The SDT did, however, extend the effective date by an additional quarter of a year based on stakeholder comments.		
American Electric Power		Usage of the NERC term "Element" clearly excludes associated auxiliary equipment such as protective relay systems and metering systems. If this is not the intent of the SDT, then there needs to be more comprehensive BES nomenclature established that distinguishes among the applicable primary-voltage equipment, the associated auxiliary equipment having an impact to the BES, and the associated ancillary

Organization	Yes or No	Question 13 Comment
		equipment having no electrical impact to the BES.In addition, please see response to question 1 regarding the request for industry input on concurrent, closely related projects (approved definition of BES, the technical principles for demonstrating BES exception, and the exception process itself).
Response: The SDT has determined that the draft BES definition should identify BES Elements which are operated at a voltage of 100 kV or above. The SDT also has recognized the existence of facilities (i.e., auxiliary equipment and Protection Systems) that support the reliable operation of the interconnected transmission network but do not necessarily operate at voltages of 100 kV or above and should not necessarily be classified as BES Elements. Reliability of the interconnected transmission network is established by the application of Reliability Standards and the development of Reliability Standards is not limited in applicability to BES Elements. Reliability Standards are written against facilities that support the reliable operation of the interconnected transmission network. Therefore the SDT believes that the clarification of the BES definition does not require identification of these types of facilities and that the specific facilities in question are better addressed by the applicability of individual Reliability Standards and not through the BES definition or the Exception Process. No change made.		
Farmington Electric Utility System		The Rules of Procedure for Exceptions should define the compliance expectation of the entity while an exception is being considered; similar to the CIP TFE process.
Response: The SDT believes that compliance expectation issues should be resolved through the RoP Exception Process. Your comments will be forwarded to the RoP team for consideration.		
Colorado Springs Utilities		Colorado Springs Utilities supports the SDT's efforts to create an acceptable BES definition directly linked to an exemption process. Know that WECC has a task force, the Bulk Electric System Definition Task Force (BESDTF), which has done some notable work on this task. See WECC BESDTF Proposal 6, Appendix C (http://www.wecc.biz/Standards/Development/BES/default.aspx). The BES definition is very complex and the BESDTF has already addressed many of the tough issues that have yet to be addressed in this process, such as: o Local Distribution Network definition for automatic exemption o Determination of radial facilities o Demarcation of BES and non-BES Elements o Alternate dispute resolution process o Assignment of the burden of proof for the exemption process o Technical approach for the inclusion/exclusion determination
Sacramento Municipal Utility District (SMUD)		SMUD supports the SDT's efforts to create an acceptable BES definition directly linked to an exemption process. SMUD would also like to bring to the BES SDT's attention that the WECC the Bulk Electric System Definition Task Force has constructed the framework on this task that we encourage the SDT to review their work. SMUD would like to thank the BES SDT for consideration of these comments.
Tacoma Power		Tacoma Power supports the SDT's efforts to create an acceptable BES definition directly linked to an exemption process. Please be aware that the WECC has a task force, the Bulk Electric System Definition Task Force (BESDTF), which has done some notable work on this task. See WECC BESDTF Proposal 6, Appendix C (http://www.wecc.biz/Standards/Development/BES/default.aspx). The BES definition is very

Organization	Yes or No	Question 13 Comment
		complex and the BESDTF has already addressed many of the tough issues that have yet to be addressed in this process, such as: o Local Distribution Network definition for automatic exemption o Determination of radial facilities o Demarcation of BES and non-BES Elements o Alternate dispute resolution process o Assignment of the burden of proof for the exemption process o Technical approach for the inclusion/exclusion determinationThank you for consideration of our comments.
Response: The SDT has taken into account the work product of several regional efforts in the development of the draft BES definition.		
Consumers Energy Company		Yes.We propose an alternative core BES definition to read as follows: "All network System Elements operated at 100 kV or higher, Real Power resources as described below, and Reactive Power resources connected at 100 kV or higher unless such designation is modified by the list shown below." We support extending the transition period to 24 months.
Response: The SDT believes that the revised draft BES definition provides sufficient clarity in establishing the bright-line of 100 kV. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy. Thank you for your support.		
Occidental Energy Ventures Corp. (answers include all various Oxy affiliates)		Occidental Energy Ventures Corp ("OEVC") would like to emphasize that the proposed definition of the BES does not only impact OEVC and its affiliates. The proposed BES definition would include numerous facilities that are used for the local distribution of electric energy, not transmission, in direct contravention of Section 215 of the FPA. For example, there are likely hundreds, if not thousands, of retail customers that have self-provided "hard-tapped" facilities behind the retail delivery point. Those retail customers, many of who are likely unaware of the proposed BES definition, much less its impact, will have their facilities under the proposed BES definition suddenly become transmission facilities simply because their facilities are not separated from the BES by an automatic fault-interruption device.
Response: The SDT believes that the changes made to the wording of the definition based on comments received will provide clarity and address the concerns provided by the commenter's. In particular the SDT clarified the point of connection, removed the automatic interrupting device, moved the concept of the normally open switch to a note, and clarified the generation allowed within the system. In addition, the SDT wishes to point out that the definition also includes Exclusion E3 that can be used for multiple connections serving local networks. The SDT realizes that a bright-line definition may require entities to seek exceptions through the Rules of Procedure exception process.		

Organization	Yes or No	Question 13 Comment
Chevron Global Power, a division of Chevron U.S.A. Inc.		Chevron U.S.A. Inc. has reviewed the proposed Bulk Electric System definition and is concerned that the proposed changes designed to enhance reliability and accountability of Transmission and Generation are inadvertently catching parties whose prime operations are distribution in nature. Chevron is proposing minor changes that will not affect the necessary regulation of the bulk power industry, but will exempt parties that are not crucial to reliability and provide mostly, if not entirely, distribution or self use service.In remote areas of west Texas, Chevron has hundreds of non contiguous producing properties and facilities located over hundreds of square miles. In some cases where the utility was close and had the capability to serve, Chevron took utility service. Where service was not available or the utility did not have the capability, Chevron built its own private power distribution system to service its own facilities. Chevron has no generation and takes all of its power from transmission providers. In at least one instance Chevron takes power at over 100 kV from a transmission provider. Chevron has an automated interruption device between its facilities and the transmission facilities. Currently this field takes power from an ERCOT transmission owner at above 100 kV and then distributes the power over a Chevron owned and operated power distribution system to Chevron facilities. This Chevron system includes a substation, transformers and other facilities necessary to take power at above 100 kV and distribute and step down the power as necessary. Chevron uses the power for offices, repair facilities, oil wells, separation facilities, gas plants, drilling new wells and other related oil and gas activities. Located within the area of the Chevron power distribution system are ranchers, pump stations, third party oil wells and other small users. These parties are not located near any utility or coop facilities. For decades Chevron has worked to accommodate these parties by working with the local utility, transmission owners and the Texas Public Utility Commission to allow electrical service to these remote users. Many of these ranchers and other users are not located near any utility lines. Costs could run to the hundreds of thousands of dollars (or more) to provide an interconnect from the utility. Instead of leaving these parties with no electrical service, a procedure was developed that allowed parties such as Chevron to accommodate the small end user. For example if a utility/coop was unable or unwilling to serve a rancher at a reasonable cost, the rancher could approach Chevron. The goal would be to execute a three party agreement between the rancher, Chevron and the service provider. Under the terms of the agreement, the Rancher would interconnect with the Chevron system. A utility quality meter capable of remote reading would be installed and the rancher would be responsible for all costs beginning at the meter. The rancher contracts with a power provider for his power. Every month the meter between the Transmission owner and Chevron would be read. This smart meter located at the interconnect with the transmission system and its soft ware would show all deduct metering (such as our rancher) so that any non Chevron parties on the Chevron distribution system's usage would clearly be listed. The transmission owner then provides the billing information to the rancher's power provider. Chevron receives no compensation from the rancher, power provider or transmission owner. Chevron provides the service strictly on an accommodation basis. The Texas Public Utility Commission recognizes the needs of parties in remote areas of Texas and has blessed this type of service. Chevron is not considered a utility for providing this type of service.Chevron is concerned that the above described private power distribution system may inadvertently be forced to register as a bulk electric

Organization	Yes or No	Question 13 Comment
		system provider. This private distribution system is clearly at the terminus of a radial line and provides service to Chevron owned and operated facilities. The system is large in area and has been built over a period longer than any current employee's memory. Through what can be called "accidents of history" and a good neighbor policy, Chevron has accommodated parties that otherwise could not connect to utility quality power. This arrangement is blessed and encouraged by the State PUC. Chevron charges nothing for the service. The system is entirely distribution in nature and does not contribute to the reliability of the grid in any manner. The intent of the current rule making is not to encompass such a system. NERC needs to encourage parties such as Chevron to help bring power to remote areas and not discourage, or worse yet greatly increase the cost to provide such service.Chevron requests that the NERC include in its definition a statement making it clear that systems such as those described above should not be required to register. Chevron supports the technical changes suggested by ELCON in its filing.A party's facility should not be considered an essential facility where the facility would otherwise be considered exempt except that it is providing distribution services as an accommodation to third parties. This is especially true when1. The incumbent utility or coop is unable or unwilling to serve the third parties at a reasonable cost2. The service to the third party is provided as an accommodation3. The facility is not generating and/or selling power to the third party4. The third party is purchasing power from a power provider
Response: The primary goal of the SDT in the revision of the definition of the BES is to improve clarity in the current language and to provide as much certainty as possible in the identification of BES and non-BES Elements. The Commission provided guidance within Order Nos. 743 & 743a which identified the current application of the existing BES definition was essentially correct for the majority of the continent and directed clarification of the existing language to support consistent application across all regions. Additional guidance from the Commission spoke to significant changes in the scope of the definition with an expectation of the revision to the definition would not significantly expand or contract what is currently considered to be the BES. The SDT believes that establishing a 'bright-line' approach to identify BES Elements will inherently incorrectly identify a small number of facilities. The Exception Process is designed to clear up these discrepancies and render the proper classification of those questionable facilities. The SDT believes that with the draft core definition and the BES designations (Inclusions and Exclusions) the vast majority of facilities will be correctly identified as BES or non-BES Elements and therefore will produce the consistent application and results as desired by the Commission's language in Order Nos. 743 & 743a. The SDT made several revisions to the definition that should address your concerns.		
Muscatine Power and Water		In order to provide a unambiguous and concise definition of the BES, we ask the SDT to please include in the bright-line criteria that "all facilities less than a 100kV are excluded unless those facilities meet the criteria of an Inclusion."
Response: The SDT believes that the current draft BES definition provides sufficient clarity in establishing the bright-line of 100 kV and the identification facilities operated at less than 100 kV for exclusion would be redundant and jeopardize the SDTs efforts of establishing charity in the language of the definition. If an effort to provide additional guidance and in support of comments provided in response to Question 11, the SDT has modified the BES core definition with a statement		

Organization	Yes or No	Question 13 Comment
that specifically excludes 'local distribution facilities. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.		
BGE and on behalf of Constellation NewEnergy, Constellation Commodities Group and Constellation Control and Dispatch		BGE agrees with the SDT's position that support equipment such as UVLS and UFLS not be classified as BES. BGE strongly believes that including control centers and other BES support equipment in the BES definition is not necessary and will cause confusion. BGE commends the BES Definition Standards Drafting Team for the informative webinar on 5/19/2011. We were encouraged that the SDT's developed a transition plan for the implementation of the new BES definition. BGE urges the SDT to also address the issue of the addition of new BES elements (i.e., such as new designated blackstart resources which may include a cranking path that is reclassified as BES). A transition period would also be required for these situations. BGE appreciates the work of the drafting team and supports the goal to produce clear definition language so that upwards of 95% of the assets are clearly distinguished as either included or excluded from the BES. We are particularly sensitive to the potential for burdensome processes (e.g. TFEs) to be added to reliability compliance, so we appeal to the team for continued, vigilant consideration of the arduousness of the BES determination process.Also important to consider is that the subject of this comment form, the proposed BES definition, is only one part of the BES definition project. The accompanying technical principles for BES Exceptions and the Rule of Procedure Process must be evaluated together with the BES Definition to sufficiently understand the revisions. In the end, the Technical Principles and the BES Definition must coalesce and be clearly coordinated and understood. The BES Definition language must include reference to the role of the associated defining documents. One unambiguous document must not be made ambiguous by an associated document or process.
Response: The SDT appreciates the supportive comments and has taken into consideration the concerns raised by the commenter in its deliberations.		
Exelon		The definition assumes some inclusions or exclusions based on levels of generation used in the NERC Compliance Registry Criteria. Exelon does not view Orders 743 and 743-A as requiring a view or justification of these thresholds. See Order No. 743-A at P 47 ("it was not our intent to disrupt the NERC Rules of Procedure or the Statement of Compliance Registry Criteria").
Response: The SDT agrees with the commenter.		
Kootenai Electric Cooperative		Kootenai has these additional concerns: We are concerned that the proposed 24-month delay in the effective date of the new definition will delay the potentially beneficial effects of the SDT's efforts, especially for utilities that have been inappropriately registered for BES-related functions, which is a common situation in WECC.

Organization	Yes or No	Question 13 Comment
		We therefore urge the new BES definition to become effective immediately upon approval by FERC or other applicable regulatory agencies. Entities that have been improperly registered for BES functions can then immediately file for deregistration and obtain the benefits of the new definition as soon as possible. For entities that have not previously been registered for BES-related functions but that would be required to register under the new definition, we agree that 24 months is an appropriate transition period to allow the newly-registered entity to attain compliance with newly-applicable reliability standards, many of which require new training for employees, new maintenance procedures, and complex new operational protocols. However, the transition period for newly-registered entities should be structured in a way that does not prevent entities seeking deregistration from benefitting from the new definition at the earliest possible date. The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." Kootenai is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BESDTF approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. For the reasons we have explained in our answer to Question 11, we believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process.
Response: The SDT agrees with the commenter and has made revisions to the Implementation Plan to address these concerns surrounding the implementation dates. The SDT believes that the burden of proof issue should be resolved through the development RoP Exception Process. Your comments will be forwarded to the		

Organization	Yes or No	Question 13 Comment
RoP team for consideration. Upon initiation of the development project in response to Order Nos. 743 & 743a, NERC staff and the NERC Standards Committee determined the appropriate mechanisms for the development of each aspect of the project. The revision of the BES definition and the development of the Technical Principles associated with the Exception Process are currently being developed through the Standards Development Process. The RoP Exception Process is being developed through the RoP process for the revision of the Rules of Procedure.		
Springfield Utility Board		Springfield Utility Board requests that NERC create a distinction between the terms BPS and BES. Are the two to be used interchangeably, or will BPS no longer be used? SUB suggests NERC consider adopting the statutory definition of the Bulk Power System as the core definition of the Bulk Electric System. May 26, 2011Dear NERC Standards Drafting Team:Thank you for the opportunity to comment on NERC's proposed Continent-wide Definition of Bulk Electric System. We believe that NERC 's proposed Bulk Electric System definition is proceeding in the right direction, but that more work needs to be done. SUB's specific concerns are as follows: Bulk Power System (BPS) and Bulk Electric System (BES) - Springfield Utility Board requests that NERC create a distinction between the terms BPS and BES. Are the two to be used interchangeably, or will BPS no longer be used? SUB suggests NERC consider adopting the statutory definition of the Bulk Power System as the core definition of the Bulk Electric System. Clear definition of Radial - Because there still appears to be inconsistencies in both definition and application, SUB encourages NERC to develop a concise definition of a radial system. For example, if a system is normally operated as radial, but could be operated closed (by manually closing a breaker), would it be considered a radial or close-looped system? If the answer is "that a closed system", is this in all cases, or are there exceptions? Registration Status - SUB understands that one of the primary values of clearly defining the BES is for registration determinations, as well as determining which of the Standards apply to registered entities. SUB encourages NERC to support the use of the BES definition for entity registration, and to develop the exception procedure for registered entities that do not own or operate any BES Elements. Springfield Utility Board appreciates FERC and NERC's efforts to create a continent-wide definition of Bulk Electric System, and appreciates the opportunity to provide comment. Tracy Richardson Springfield Utility Board SUB requests NERC to consider the situation where an entity has multiple, but separate systems. The entity is required to become a Registered Entity because the sum of their individual systems meets the thresholds, but portions of their physically separated systems taken individually would otherwise not reach the threshold for registration. For example, an entity may be responsible for service over a third party's transmission for distribution service to a single end user with a load less than =<25MW that has a hard tap into the third parties' transmission. Because the load has a hard tap, it is technically served from more than

Organization	Yes or No	Question 13 Comment
		one transmission source. If there are no other loads served along the tap or along the third party's transmission segment, SUB believes that this type of situation warrants exclusion from the BES as it would otherwise be excluded - except for the fact that the combination of that service and other separate systems that the entity is responsible for triggers registration. SUB is concerned that devices such as shunt capacitor banks may be overlooked. For example, is a radial system serving only load with a shunt capacitor bank included or excluded from BES? It does raise the issue "what does "serving only load mean, exactly?" If a capacitor bank is used for purposes of managing reliability within an local network and the local network would otherwise be classified as an LDN, is the local network still classified as an LDN?
Springfield Utility Board		These comments are supplemental to Springfield Utility Board's comments provided to NERC on May 26, 2011 filed by Tracy Richardson. Please see the May 26 comments. This supplemental comment deals with the concept of "serving only load" and the classification of what types of generation are incorporated into the definition of generation for purposes of BES inclusion or exclusion.SUB's comment is that generation normally operated as backup generation for retail load is not counted as generation for purposes of determining generation thresholds for inclusion or exclusion from the BES. For purposes of BES inclusion or exclusion, a system with load and generation normally operated as backup generation for retail load is considered "serving only load" when using generation normally operated as backup generation for retail load (See Inclusions I2, I3, I5, and Exclusions E1, E2, E3).The rationalle is that backup generation for retail load is normally used during a localized outage and for testing for reliability during a localized outage event. Including backup generation for retail load in generation thresholds (e.g. 75MVA) would not reflect generation used for restoration or reliability of the BES. Including backup generation for retail load in generation threshold calculations would cause an inappropriate inclusion of elements and devices, accelerate the triggering of inclusion (and may make exclusion provisions meaningless), and push more activity of excluding smaller systems from the BES into the exception process.
Response: The SAR for Project 2010-17 identifies the scope of the SDTs responsibilities. The scope does not include revision or any level of assessment of the term Bulk Power System. Therefore any recommended revision to the definition of the BPS or recommendation on the usage or application of the term is not within the responsibilities of the SDT. No change made. The SDT has crafted language in Exclusion E1 that clearly identifies what constitutes a radial facility. The SDT is revising the definition of the BES and use or application of this definition for registration purposes solely resides under the responsibilities of the Certification and Registration department at NERC. The SDT is revising the definition of the BES to identify BES Elements without regard to the ownership of such facilities. Ownership is an issue better addressed by the registration process or the applicability of specific Reliability Standards. The SDT is not in a position to comment on specific situations without the opportunity		

Organization	Yes or No	Question 13 Comment
to review all available information pertaining to the facility in question. The SDT agrees with the commenter and has crafted revised Inclusion I5 language that specifically addresses Reactive Power resources. **I5** –Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1. The vast array of functional qualities of generation does not lend itself to a 'bright-line' concept of identifying BES Elements. Therefore the SDT has opted for the size threshold designation of generating facilities and allows for use of the Exception Process for further analysis of the facility and potential exclusion from or inclusion to the BES. No change made.		
City of St. George		What are proposed transition implementation plans for facilities that will now be included in the definition? The implementation plan indicates 24 months which may or may not be enough depending on the response time to exception process. How will a pending exception action affect compliance requirements and effective dates? It should be at least 24 months after it has been determined that a facility must be included.
Response: The SDT believes that the proposed 24 month period is sufficient time for entities to achieve the appropriate level of compliance with the Reliability Standards. Comments concerning the Exception Process will be directed to the Rules of Procedure team for review. The SDT did, however, extend the effective date by an additional quarter of a year based on stakeholder comments.		
CenterPoint Energy		CenterPoint Energy appreciates the opportunity to provide comments. In reviewing the draft definition, CenterPoint Energy believes the SDT may have unintentionally expanded the definition of the BES beyond the statutory definition in Section 215. Facilities included in the BES should be those facilities that are necessary for the reliable operation of the BES. Many interconnected facilities operated at 100kV and above, particularly those that are operated between 100kV and 200kV, are interconnected primarily to enhance the service provided to customers, rather than to maintain reliable operation of the BES.In addition; CenterPoint Energy is concerned with the addition of another exception process to the Rules of Procedure (ROP). In orders 743 and 743-A, the Commission allowed the ERO latitude to develop a definition that varied from the Commission's recommendation. CenterPoint Energy supports the inclusion/exclusion approach of the SDT and believes it should be possible to define what constitutes the BES without an exception process. Historically, exception processes within the ROP have been cumbersome, labor intensive, confusing, and require on-going maintenance and quarterly or annual updates. Indeed, in question 10 of this comment form the SDT recognizes the burden of administrating an exception process. While CenterPoint Energy understands the SDT may feel pressure to produce a product quickly, the Company does not believe the expedited nature justifies an inferior product. CenterPoint Energy recommends the SDT continue developing criteria that clearly defines BES facilities based on the Section 215 language. Once that is accomplished, an exception process will not be needed.

Organization	Yes or No	Question 13 Comment
Response: The primary goal of the SDT in the revision of the definition of the BES is to improve clarity in the current language and to provide as much certainty as possible in the identification of BES and non-BES Elements. The Commission provided guidance within Order Nos. 743 & 743a which identified the current application of the existing BES definition was essentially correct for the majority of the continent and directed clarification of the existing language to support consistent application across all regions. Additional guidance from the Commission spoke to significant changes in the scope of the definition with an expectation of the revision to the definition would not significantly expand or contract what is currently considered to be the BES. No change made. The SDT believes that establishing a 'bright-line' approach to identify BES Elements will inherently incorrectly identify a small number of facilities. The Exception Process is designed to clear up these discrepancies and render the proper classification of those questionable facilities. The SDT believes that with the draft core definition and the BES designations (Inclusions and Exclusions) the vast majority of facilities will be correctly identified as BES or non-BES Elements and therefore will produce the consistent application and results as desired by the Commission's language in Order Nos. 743 & 743a. The SDT made several changes to the definition, based on stakeholder comments that provide additional clarity to the definition. Please see the revised definition.		
Southern California Edison Company		As discussed during the May 19, 2011 NERC Webinar, SCE supports having one-line diagrams illustrating examples of the line and bus arrangements as they pertain to the BES Definition included as part of a set of support documents. A good start for these diagrams would be the ones developed by the WECC Bulk Electric System Definition Task Force (WECC BESDTF). These diagrams were developed by WECC to better illustrate the demarcation between BES and non-BES facilities and provide important information and insight into the WECC system.
Response: The SDT has taken into account the work product of several regional efforts in the development of the draft BES definition. The SDT also recognizes the value of a supporting reference document and will consider future development based on the project timeline and available resources.		
Midstate Electric Cooperative		Yes MSEC has these additional concerns: The current definition provides that "Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." MSEC is concerned that the SDT carefully delineate which entity has the burden of proof in the exclusion process. The WECC BESDTF approach, which we commend to the SDT, laid out these burdens in some detail. Under that approach, essentially, if a facility is excluded from the BES by virtue of the specific exclusions listed in the definition, the Regional Entity bears the burden of proving that the facility nonetheless has a material impact on the interconnected bulk transmission system and therefore should be included in the BES. On the other hand, if a facility is classified as BES by virtue of the list of inclusions set forth in the BES definition, it can still escape classification as BES, but bears the burden of demonstrating that its facility has no material impact on the interconnected transmission system. We urge the SDT to give careful consideration to these burden-of-proof questions and to follow the lead of the WECC BES Task Force. For the reasons we have explained in our answer to Question 11, we believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and

Organization	Yes or No	Question 13 Comment
		to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process. Dear NERC Standards Drafting Team:Enclosed are MSEC's comments on NERC's Proposed Continent-wide Definition of Bulk Electric System. We believe that NERC's proposed Continent-wide Definition of Bulk Electric System is proceeding in the right direction on this important topic but that more work needs to the done. We would like to thank the Standards Drafting Team for their hard work. We support the detailed comments of the Snohomish County Public Utility District and Pacific Northwest Generating Cooperative with regard to the questions posed by the Comment Form for Project 2010-17 Definition of BES.We would like to emphasize these portions of Snohomish's and PNGC's comments: Question 1, both PNGC and Snohomish suggest that NERC start by adopting the statutory definition of the bulk power system as the core definition. We support that approach. That is, "(t) he term 'Bulk Electric System' means: (A) Facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and,(B) Electric energy from generation facilities needed to maintain transmission system reliability.The term does not include facilities used in the local distribution of electric energy". See 16 U.S.C. Â§ 824o(a)(1)." Question 7, we support the exclusion for radial lines as drafted. Question 9, we support the categorical exclusion of Local Distribution Networks from the BES as defined here, but with Snohomish's clarifications. Question 10, we support exclusion E4, for small utilities, but we are unclear how small utilities are defined in the exclusion language presented here. Question 11, we support the approach to exclusion of local distribution facilities discussed in the draft but repeat that more work should be done on the definition so that facilities used in local distribution are not swept up into the BES.The primary value of clearly defining the BES is for registration determinations. We realize that clearly defining the BES also has value in determining which standards apply to registered entities. If a registered entity does not own any Elements of the BES that that registered entity should be able to efficiently and effectively demonstrate an exception. We encourage NERC to support the use of the BES definition for registration-issues and to develop the exception procedure for registered entities that do not own or operate

Organization	Yes or No	Question 13 Comment
		any Elements of the BES.
Response: The SDT believes that the burden of proof issue should be resolved through the development RoP Exception Process. Your comments will be forwarded to the RoP DT for consideration. Upon initiation of the development project in response to Order Nos. 743 & 743a, NERC staff and the NERC Standards Committee determined the appropriate mechanisms for the development of each aspect of the project. The revision of the BES definition and the development of the Technical Principles associated with the Exception Process are currently being developed through the Standards Development Process. The RoP Exception Process is being developed through the RoP process for the revision of the Rules of Procedure. No change made. The SDT appreciates the industry support for this project. Please see the SDT responses in Questions 1, 7, 9, 10, and 11 of this document.		
Illinois Municipal Electric Agency		Being a Joint Action Agency and Joint Registration Organization representing small municipal utility interests, IMEA appreciates this initiative to better define electric systems that should and should not be considered part of the Bulk Electric System. In addition to those comments provided above, IMEA supports comments addressing other concerns as submitted by the Transmission Access Policy Study Group and the Small Entity Working Group.
Response: Please see the SDT responses to the Transmission Access Policy Study Group and the Small Entity Working Group comments.		
Long Island Power Authority		The SDT should clarify that Local Distribution Networks, including any facilities that are within the LDN, are not subject to Reliability Standard Requirements pursuant to Section 215 of the Federal Power Act.
Response: The Local Distribution Network concept was developed to allow facilities operated at 100 kV or higher, that serve a distribution function, to be eligible for exclusion if specific criteria are met. The use of the term 'Local Distribution Network' has resulted in some confusion by the industry in relation to the exclusion of local distribution facilities indentified in Section 215 of the Federal Power Act. The SDT has elected to revise the Exclusion to be termed 'Local Networks' to eliminate the confusion as to what type of facilities are being addressed by the Exclusion.		
Clark Public Utilities		The process for identifying facilities as part of an LDN needs to be stated. Clark has heard that this will be through a self-certification process, however, there is no written description how a utility classifies its transmission facilities as an LDN.
Response: The SDT envisions that the current practice of self-identification continues with the revised definition of the BES. No change made.		
Pepco Holdings Inc		1) It would be very helpful to include examples (with an explanation and diagram) of the various configurations that meet each of the inclusions and exclusions. Can the next draft include such examples to provide further clarity to the definitions? Consideration should be given to developing an attachment for this

Organization	Yes or No	Question 13 Comment
		material and a method to add appropriate examples in the future. 2) The proposal is silent on whether associated auxiliary and protection and control system equipment that could automatically trip a BES facility independent of the protection and control equipment's voltage level are included as part of the BES. The RFC BES definition specially addresses this issue as an example. Does IRO-005 cover those elements so it is not necessary to address these in this proposal? Consideration should be given to referencing the issue in the BES document.
Response: 1) The SDT has taken into account the work product of several regional efforts in the development of the draft BES definition. The SDT also recognizes the value of a supporting reference document and will consider future development based on the project timeline and available resources. 2) The SDT has determined that the draft BES definition should identify BES Elements which are operated at a voltage of 100 kV or above. The SDT also has recognized the existence of facilities (i.e., auxiliary equipment and Protection Systems) that support the reliable operation of the interconnected transmission network but do not necessarily operate at voltages of 100 kV or above and should not necessarily be classified as BES Elements. Reliability of the interconnected transmission network is established by the application of Reliability Standards and the development of Reliability Standards is not limited in applicability to BES Elements. Reliability Standards are written against facilities that support the reliable operation of the interconnected transmission network. Therefore the SDT believes that the clarification of the BES definition does not require identification of these types of facilities and that the specific facilities in question are better addressed by the applicability of individual Reliability Standards and not through the BES definition or the Exception Process. No change made.		
Vigilante Electric Cooperative		Dear NERC Standards Drafting Team:Enclosed are Vigilante Electric Cooperative, Inc's (VIEC) comments on NERC's Proposed Continent-wide Definition of the Bulk Electric System (BES).We believe that NERC's proposed definition of the Bulk Electric System is moving in the right direction and we thank the Standards Drafting Team for their hard work. We support the comments of the Snohomish County Public Utility Distric and Pacific Northwest Generating Cooperative with regard to questions posed by the comment form for Project 2010-17.We would like to add the following additional comments: With regard to exclusion E3, part e) - we do not believe that just because an element is on a list that it cannot be excluded. If an element meets all of the criteria to be excluded, then it should be excluded and removed from the list. Otherwise, we strongly agree that LDNs have no material impact on the BES.We also strongly encourage the continued development of a reasonable method for determination of inclusion/exclusion. We believe that there should be a clearer path that would ultimately allow a utility to pursue being included/excluded from registration with WECC. Many small utilities have an element that may actually have no material impact on the BES yet is required to comply with all WECC standards. We also would like to comment on the WECC compliance bulletin of April 15, 2011. While we greatly appreciate the recognition that radial T-Taps with transformer or distribution protection schemes have no material impact to the BES, we would encourage you to take this the additional logical step to actually remove these instances from WECC responibilities. This would help reduce the burden both on WECC and the

Organization	Yes or No	Question 13 Comment
		individual entities and save everyone involved a tremendous amount of time, effort and money.We again thank the Team for their efforts and appreciate the opportunity to be allowed to comment on these issues.
Response: The primary goal of the SDT in the revision of the definition of the BES is to improve clarity in the current language and to provide as much certainty as possible in the identification of BES and non-BES Elements. The Commission provided guidance within Order Nos. 743 & 743a which identified the current application of the existing BES definition was essentially correct for the majority of the continent and directed clarification of the existing language to support consistent application across all regions. Additional guidance from the Commission spoke to significant changes in the scope of the definition with an expectation of the revision to the definition would not significantly expand or contract what is currently considered to be the BES. No change made. The SDT is drafting a definition with the expectation of consistent application across the continent. The introduction or removal of specific language to address specific circumstances that may reside in the WECC footprint would not support this concept. No change made. The SDT is not in a position to comment on a WECC Compliance Bulletin.		
Central Lincoln		We believe the Exception process is critical both to ensure that the BES definition is effective in producing measurable gains to bulk system reliability and to ensuring that the definition will comply with the limitations Congress placed in Section 215. Hence, we believe the entire BES definition, including the Exception process and related procedures, should be vetted through the NERC Standards Development Process, including the full comment periods and a ballot approvals provided for in that process. We are concerned that important elements of the BES definition have been assigned to the Rules of Procedure Team, and that changes in the Rules of Procedure are subject to approval in a process that provides considerably less due process and industry input than the Standards Development Process. Accordingly, we urge that all elements of the BES definition, including those elements that have been assigned to the Rules of Procedure Team, be vetted through the Standards Development Process. We note also that the SAR still does not apply the definition to all registered entity types in violation of the FERC order to provide a continent-wide definition. Please include PSEs in the SAR also. We are concerned that the proposed 24-month delay in the effective date of the new definition will delay the potentially beneficial effects of the SDT's efforts, especially for utilities that have been inappropriately required to meet BES reliability standards, which is a common situation in WECC. We therefore urge the new BES definition to become effective immediately upon approval by FERC or other applicable regulatory agencies. Entities that have been improperly required to meet standards can then immediately redirect resources to where they are truly needed. For entities that have not previously been registered for BES-related functions but that would be required to register under the new definition, we agree that 24 months is an appropriate transition period to allow the newly-registered entity to attain compliance with newly-applicable reliability standards, many of which require new training for employees, new maintenance procedures, and complex new operational protocols. However, the transition period for newly-registered entities should be structured in

Organization	Yes or No	Question 13 Comment
		a way that does not prevent other entities from benefitting from the new definition at the earliest possible date.
Response: Upon initiation of the development project in response to Order Nos. 743 & 743a, NERC staff and the NERC Standards Committee determined the appropriate mechanisms for the development of each aspect of the project. The revision of the BES definition and the development of the Technical Principles associated with the Exception Process are currently being developed through the Standards Development Process. The RoP Exception Process is being developed through the RoP process for the revision of the Rules of Procedure. No change made. The draft BES definition identifies assets that meet specific criteria for classification as a BES Element. The NERC Functional Model defines the Purchase Selling Entity (PSE) as: The functional entity that purchases or sells, and takes title to, energy, capacity, and reliability related services. The ownership or responsibility of assets should trigger the registration of the functional entity in question in another area of registration. No change made. The SDT agrees with the commenter and has made revisions to the Implementation Plan to address these concerns surrounding the implementation dates.		
New England States Committee on Electricity		As a general matter, the definition should reference the Exception Process, which may cause assets and facilities to be further "included" or "excluded." In particular, once a facility has qualified for Exclusion it is not clear how that status is maintained.
Response: The phrase requested was inadvertently omitted from the first posting. Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process. The SDT believes that maintaining an approved Exclusion should be resolved through the RoP Exception Process. Your comments will be forwarded to the RoP DT for consideration.		
PPL Energy Plus and PPL Generation		The BES definition strives to draw a line between transmission customers (load and generation) and the "network" that makes up the bulk electric system. All transmission customers served by the network are not necessarily part of the network just like an on-ramp is not part of the Interstate highway, even though on-ramps deliver cars to the Interstate highway. FERC Order 743 paragraph 115 clearly gives guidance to the NERC BES Definition Team (BESDT) on developing fair exclusion criteria for facilities not necessary for the operation of the grid. PPL Generation and PPL Energy Plus (PPL) are concerned that the FERC order is being read overly expansively to include much more generation in the BES than FERC intended. In the NERC BESDT's latest proposed version of a BES definition, the definition appears to apply to small radial generators (Inclusions I2 and I3) but not to large radial loads (Exclusions E1 and E3). The BESDT has chosen to exclude or include LDNs based solely on the direction of power flow (see for example Exclusion E3-c) when the magnitude of the power flow is more critical than the direction. An example of the stark contrast between treatment of looped and radial facilities is exemplified by the exclusion of looped load and generation facilities of almost any size (Exclusion E3) from the BES, versus the seeming omission of any effort to

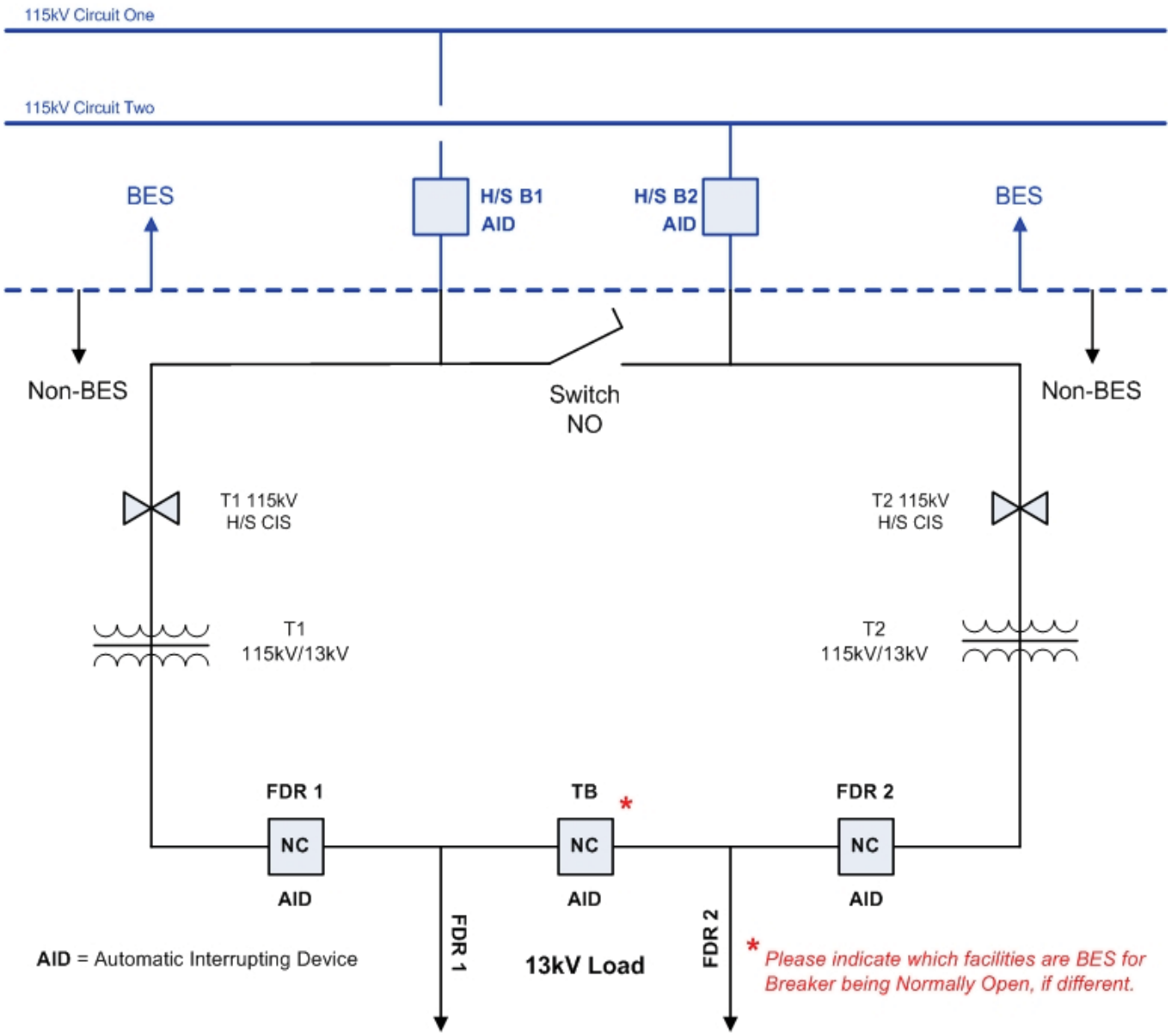
Organization	Yes or No	Question 13 Comment
		exclude radially connected generation facilities over 20 MVA. Clearly, FERC Order 743-A paragraph 55 instructs the BESDT to consider “additional facility characteristics” other than voltage to come up with a fair inclusion/exclusion process.The exclusion of looped facilities serving load and generation and the inclusion of radial facilities serving only generation does not appear consistent. Moreover, it ignores the physical reality that radial generator lead lines cannot be overloaded by outages on parallel paths because there are no parallel paths. Further, the MW flow on a radial line is well known and limited to a known maximum (limited to the larger of the generation or load on the end of the line): clearly reasons for exclusion. The BESDT should look carefully at FERC Order 743 paragraph 73 which describes the characteristics of the electrical network that the BES is trying to define. In that order, FERC justified its bright-line, 100 kV threshold, explaining that "many facilities operated at 100 kV and above have a significant effect on the overall functioning of the grid" because they share the following characteristics: 1. "operate in parallel with other high voltage and extra high voltage facilities"i. The “bright line” at 100 kV recognizes many 100 kV lines parallel other HV/EHV lines and can be significantly loaded by failure of the HV/EHV lines. This does not apply to radial lines, even at 100 kV and above.2. "interconnect significant amounts of generation sources"3. "operate as part of a defined flow gate"4. have a "parallel nature" and are capable of “caus[ing] or contribute[ing] to significant bulk system disturbances”.i. Radial lines cannot cause significant BES disturbances since the outage of a radial line is studied in all N-1 planning studies and if the TPL standards are followed, an N-1 should not cause such disturbances.To their credit, the BESDT recognizes part of paragraph 73 in Exclusion E3-d and E3-e (possibly exempting many hundreds of MVA load) but yet fails to exclude radial lines serving generators from the BES “network”. Generation should be excluded from the definition of the BES on the same basis as load. PPL requests the BESDT clearly exclude radial generators up to 200 MVA (1200 amps at 100 kV). This exclusion is clearly justified because it would recognize many (if not all) loads and generators served radially do NOT possess the Network Transmission Facilities characteristics described in FERC Order 743 paragraph 73. PPL hopes that the NERC BESDT will recognize (as FERC Order 743 in paragraph 120 recognizes) that radial facilities and distribution facilities can both be excluded.
Response: The SDT scope was determined by the language contained in Order Nos. 743 & 743a in which the Commission provided guidance to the ERO to clarify the definition for continent-wide application. The Commission did not propose significant changes to the current application of the existing definition over the majority of the continent. Therefore the SDT has developed a draft core definition, together with BES designations (Inclusions and Exclusions) that provide the specificity necessary to identify the vast majority of BES Elements by utilizing the existing definition and criteria previously approved for this purpose. Although load is a component that can impact the reliability of the BES, the development of the definition is bound by the limitations documented in Section 215 of the Federal Power Act. Expanding the definition to include load would exceed the jurisdictional boundaries into the area of local distribution facilities. No change made. The BES definition (core definition and Inclusions & Exclusions) will be applied to classify BES vs. non-BES Elements. The SDT believes that this will cover the vast majority of the facilities in question. The remaining facilities will be candidates for the Exception Process (RoP) where the Technical Principles will be utilized to determine if the facility is necessary for the reliable operation of the interconnected transmission network. Please see the revisions made to the revised definition.		

Organization	Yes or No	Question 13 Comment
Manitoba Hydro		Manitoba Hydro supports a 100kV bright line definition of the BES (excluding radial systems) that is consistent across all regions. We do not agree with the proposed impact based exception procedure and believe that the BES definition should be stand-alone. In addition, the complexity of the proposed BES definition and associated exception process may not provide the goal of uniform application of the BES definition and moves the burden of assessment and approval to the ERO.
Response: The SDT believes that establishing a 'bright-line' approach to identify BES Elements will inherently incorrectly identify a small number of facilities. The Exception Process, a Commission identified component of the project, is designed to clear up these discrepancies and render the proper classification of those questionable facilities. The SDT believes that with the draft core definition and the BES designations (Inclusions and Exclusions) the vast majority of facilities will be correctly identified as BES or non-BES Elements and therefore will produce the consistent application and results as desired by the Commission's language in Order Nos. 743 & 743a. The primary goal of the SDT in the revision of the definition of the BES is to improve clarity in the language and to provide as much certainty in the identification of BES and non-BES Elements. Although the clarifications added to the core definition and the inclusions and exclusions have lengthened and increased the complexity of the definition as a whole, the SDT feels that the improvements in clarity have increased the ability to apply the definition to achieve consistent results.		
Consolidated Edison Co. of NY, Inc.		The 'core' definition is not clear as to whether an Element would be included if it meets any one (or must meet more than one) of the 5 Inclusion criteria for inclusion?
Response: As inclusions speak to specific facilities and are not necessarily related other than for identification of BES Elements; if a facility meets the criteria of a single inclusion then the facility is classified as a BES Element. Therefore only one (1) inclusion must be met for a facility to be classified a BES Element.		
Independent Electricity System Operator		We have no other concerns with the definition but we believe a guide demonstrating the correct application of the definition under various transmission system configurations would be useful.
Response: The SDT also recognizes the value of a supporting reference document and will consider future development based on the project timeline and available resources.		
NB Power Transmission		Currently, the posted exception criterion is only a concept with many gaps and TBD, as posted details are later to follow. The exception criteria should be a menu of technical items (load flows, stability analysis etc). Entities should be required to assess and provide their own justification under each category with a conclusion that takes into account all of the relevant items for element(s) under exception, in a consistent

Organization	Yes or No	Question 13 Comment
		template and table of contents. Suggest the SDT to avoid specification of any parameters as they would differ under different design concepts, system configurations, system characteristics and regulatory requirements. An "all encompassing" comment is that the definition is too lengthy with an overly prescriptive exception process. The importance of the BES definition is recognized throughout the industry for its importance, and as such it should be simple, clear, and straightforward.
Response: Comments concerning the Technical Principles (Exception Criteria) associated with the RoP Exception Process will be addressed through the dedicated responses developed by the SDT and published in the specific Consideration of Comments document associated with that portion of the overall project.		
Orange and Rockland Utilities, Inc.		It was mentioned that Cranking Paths of Blackstart Resources are defined as BES. How about the path(s) of generation units that will be deemed as BES? Please clarify.
Response: The SDT has revised the Inclusion that identified Blackstart Cranking Paths as BES Elements. A significant number of comments identified that the Cranking Path could utilize local distribution facilities and could cross jurisdictional boundaries which should not be classified as BES Elements. Additionally the Inclusions related to generation facilities have been revised to eliminate the language which suggested paths between generation and the transmission are required to be contiguous Elements of the BES.		
AltaLink		We believe that the concepts of inclusions and exclusions as part of the bright-line definition are excellent. However, these exclusions do not address several directives in Order No. 743 and 743A, such as: differentiation between Transmission and Distribution, non-jurisdictional concerns, or distribution. We believe that the BES definition itself is not a venue to address these concerns but suggest that these issues should be explicitly addressed by the ERO's exception criteria and exception process. Currently, the posted exception criterion is only a concept with many gaps and TBD, as posted details are later to follow. We suggest that the exception criteria should be a menu of technical items (load flows, stability analysis etc) and non technical items (type of loads such as distribution companies vs. major city center, national security etc). Entities should be required to assess and provide their own justification under each category with a conclusion that takes into account all of the relevant items for element(s) under exception, in a consistent template and table of contents. We suggest the SDT to avoid specification of any parameters as they would differ under different design concepts, system configurations, system characteristics and regulatory requirements.
Response: The SDT agrees with the commenter that the Exception Process should be the primary mechanism for addressing the concerns surrounding issues such as: differentiation between Transmission and Distribution, non-jurisdictional concerns, or distribution. However the SDT has made modifications to the BES core definition to address the issues associated with the jurisdictional concerns related to local distribution facilities. **Bulk Electric System (BES)**: Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list~~		

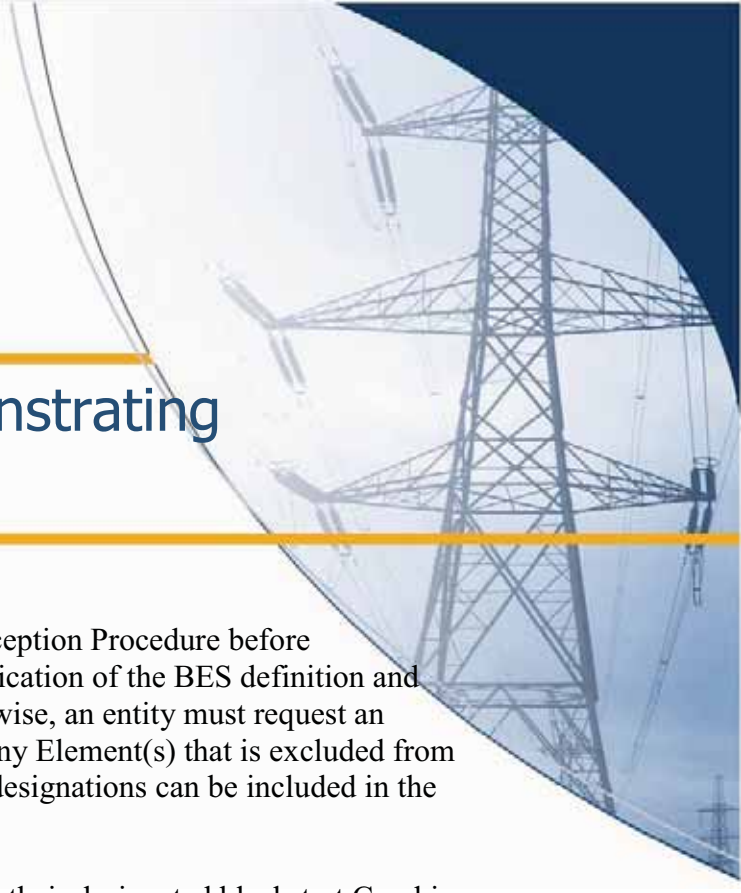
Organization	Yes or No	Question 13 Comment
~~shown below~~. This does not include facilities used in the local distribution of electric energy. Comments concerning the Technical Principles (Exception Criteria) associated with the RoP Exception Process will be addressed through the dedicated responses developed by the SDT and published in the specific Consideration of Comments document associated with that portion of the overall project.		
Modern Electric Water Company		1) The SDT states that "one of the basic tenets that the SDT is following is to avoid changes in registration due the revised definition". We stress the implications of a missed opportunity and the importance of a usable BES definition, because if the revised definition does not allow the industry (both registered and non-registered entities) as well as the regional reliability organizations to focus on and conduct business in a fashion that promotes reliable and efficient system operation (not just ultra-conservative compliance monitoring), then NERC has failed to do its job in this particular instance. 2) The proposed implementation plan indicates that the effective date of this definition is not for at least 24 months after regulatory approval. We strongly disagree with this suggested approach as it does not provide for any benefit from this much-needed improvement. We believe the SDT intended to imply that entities not currently registered would have at least 24 months to become compliant with applicable standards if the improved BES definition suddenly swept them into the BES as it did for many small utilities on June 18, 2007. The definition should become effective immediately upon regulatory approval, and transition plans for newly-registered entities could specify longer timeframes. 3) As currently drafted, NERC's Statement of Compliance Registry Criteria (Revision 5.0) contains the text of NERC's approved BES definition. Upon approval of any other language, the SCRC will become inaccurate without review and modification.
Response: 1) The goals and assumptions established by the SDT are based on the documented Commission expectations in Orders Nos. 743 & 743a. Opportunity does exist to further revise the definition beyond the clarification identified by the Commission in the Orders, however, technical justification is required to deviate from the current application of the current BES definition. No change made. 2) The SDT agrees with the commenter and has made revisions to the Implementation Plan to address these concerns surrounding the implementation dates. 3) Review and potential revision of the NERC Statement of Compliance Registry is beyond the scope of the current SAR for this project. No change made.		

Diagram below refers to BGE comment for Q7:


115kV Circuit One
115kV Circuit Two
BES
H/S B1
AID
H/S B2
AID
BES
Non-BES
Switch
NO
Non-BES
T1 115kV
H/S CIS
T2 115kV
H/S CIS
T1
115kV/13kV
T2
115kV/13kV
FDR 1
TB
*
FDR 2
NC
NC
NC
AID
AID
AID
FDR 1
13kV Load
FDR 2
AID = Automatic Interrupting Device
* Please indicate which facilities are BES for Breaker being Normally Open, if different.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Technical Principles for Demonstrating BES Exceptions



An entity must request an exception under this Exception Procedure before any Element(s) that is included in the BES by application of the BES definition and designations can be excluded from the BES. Likewise, an entity must request an exception under this Exception Procedure before any Element(s) that is excluded from the BES by application of the BES definition and designations can be included in the BES.

Due to the importance of Blackstart Resources and their designated blackstart Cranking Paths to restoration efforts, no exceptions will be allowed for those items.

Entities that have Element(s) already designated as excluded under the BES definition and designations do not have to seek exception under the Exception Procedure.

The reasonableness of any such demonstration will be subject to review and remand by the ERO itself, or by any agency having regulatory or statutory oversight of NERC as the ERO (e.g., FERC or appropriate Canadian authorities).

Specific content of the application is spelled out elsewhere in this appendix.

Exception Criteria – Exclusions

Entities can submit an application to seek an exception from the BES definition, including designations, by demonstrating the Element(s) are not necessary to reliably operate the interconnected transmission network as demonstrated by one or both of the following:

1. The Element(s) meet all of the following characteristics:
    a. System Element(s) are located in close electrical proximity to Load.
        i. Electrical proximity is a measurement of system impedance between the interconnected transmission network and the Load centers connected to the Element(s) within the system seeking exception. Loads within the system seeking exception are in close electrical proximity if they are separated by an impedance of no greater than TBD.

116-390 Village Blvd.
Princeton, NJ 08540
609.452.8060 | www.nerc.com

ii. Evidence to support this position could include impedance cut-sheets or power flow data.

b. System Elements are treated as radial in character.
   i. This can be demonstrated by the way the connections to the BES are operated, e.g., the Elements(s) are not operated as part of the BES with disconnection procedures for when a Disturbance occurs.
   ii. This can also be demonstrated by the way the Element(s) are treated in operations, for example, they are not included in a regional dispatch.
   iii. Evidence to support this position could include a one-line diagram and pertinent Operating Procedures.

c. Power flows into the system, but rarely flows out.
   i. This can be demonstrated through transactional records where it is shown that flow out occurs only under a very limited set of conditions and for a limited quantity of energy.
   ii. The limited set of conditions must clearly state the conditions where power flows out, for example, only under specified Contingency events.
   iii. Transactional records provided must be for the same time specified in the Exception Rules of Procedure for performing periodic exception self-certifications (presently two years).
   iv. The maximum amount of energy flowing out is TBD MWh per year.
   v. Evidence to support this position could include hourly energy data (MWh) for the most recent 12 month period.

d. Power entering the system is not intentionally transported through the system to some other system.
   i. This can be demonstrated by operational procedures that restrict use of delivered power to that system.
   ii. Evidence to support this position could include pertinent Operating Procedures.

OR,

2. The Element(s) in question can be demonstrated as not being necessary for reliable operation of the interconnected transmission network as follows:
   a. Based on the model used in the most recent applicable planning assessment:
      i. If required, update the model to reflect your local conditions.
      ii. If the model was updated, then run TPL studies for the first two years of the Near-term Transmission Planning Horizon.
      iii. Document all assumptions made in the analysis.
      iv. Analyze the subject Element(s) against the following criteria:
         1. Having a distribution factor of TBD% for any other Element.

2. Allowable transient voltage dip – criteria TBD
3. Allowable transient frequency excursion – criteria TBD
4. Voltage deviation – criteria TBD
5. Transient Stability – positively damped
6. Steady-state Stability – positively damped
7. No cascading outages
8. Other

v. If within the criteria in all cases, then the Element(s) can be excluded.
vi. If not within the criteria, then the Element(s) can't be excluded.

b. The ERO can override this criterion but would need to provide additional justification to support their finding.

Exception Criteria – Inclusions

Entities can submit an application to seek an exception for an inclusion in the BES based on the following condition:

1. The Element(s) in question can be demonstrated as being necessary for reliable operation of the interconnected transmission network as follows:
   a. Run TPL studies based on the existing model used in the most recent applicable planning assessment.
   b. Monitor the contribution of the disputed Element(s).
   c. Analyze against criteria set by SDT through industry feedback.
      1. Having a distribution factor of TBD% for any other Element.
      2. Allowable transient voltage dip – criteria TBD
      3. Allowable transient frequency excursion – criteria TBD
      4. Voltage deviation – criteria TBD
      5. Transient Stability – not positively damped
      6. Steady-state Stability – not positively damped
      7. Cascading outages
      8. Other
   d. If within the criteria, then the Element(s) can't be included.
   e. If not within the criteria, then the Element(s) can be included.
   f. The ERO can override this criterion but would need to provide additional justification to support their finding.

Comment Form for 1st Draft of Project 2010-17: Definition of BES (BES) Technical Principles for Demonstrating BES Exceptions

Please **DO NOT** use this form. Please use the electronic comment form to submit comments on the first draft of the Project 2010-17: Definition of the Bulk Electric System (BES) Technical Principles for Demonstrating BES Exceptions. **Only** submit comments on the first draft Technical Principles for Demonstrating BES Exceptions. The comments must be submitted by **June 10, 2011.**

If you have questions please contact Ed Dobrowolski at ed.dobrowolski@nerc.net or by telephone at 609-947-3673.

Background Information
Definition of the BES (Project 2010-17)

In parallel with the definition project, another stakeholder team outside the standards development process has been set up to develop a change to the NERC Rules of Procedure (ROP) to allow for entities to apply for excluding Elements from the BES that might otherwise be included according to the proposed definition and designations. This same process would be used by Registered Entities to justify including Elements in the BES that might otherwise be excluded according to the proposed definition and designations. This process would also be utilized for those situations where the core definition and designations do not clearly identify whether an Element is BES or not. The ROP team will develop the process for seeking an exception from the definition and designations, but the Definition of the BES Standards Drafting Team (DBESSDT), through the standards development process, has developed the criteria necessary for applying for an exception.

The exclusion exception process has been set up as a choice between two alternative forms of evidence. The first choice is seen as less onerous in nature as it does not require extensive technical analysis. An entity must choose which path it wants to pursue.

The inclusion exception process requires more detailed analysis and only one choice is provided.

The first draft of the criteria that has been posted contains the evidence that must be presented by an entity seeking an exception as well as specific criteria for how that evidence will be evaluated. The SDT is seeking industry feedback not just on the approach being presented but also on the specific numeric thresholds that will be used. Comments received from this posting will help to determine the final criteria that the industry will be required to adhere to. Therefore, industry feedback is vital to the development process.

It should be noted that the actual application process is described in the Rules of Procedure document that has been posted concurrent with the criteria document.

You do not have to answer all questions. Enter All Comments in Simple Text Format.

Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

1. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. The first item involves proximity to Load and requests industry feedback on how to measure this variable. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. In addition, in the comment field, please provide your thoughts on the appropriate impedance value to replace 'TBD,' including technical rationale for your argument.

   Yes:

   No:

   Comments:

2. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. The second item involves Element(s) treated as radial. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes:

   No:

   Comments:

3. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. The third item involves power flow. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. In addition, in the comment field, please provide your thoughts on the appropriate MWh value to replace 'TBD,' including technical rationale for your argument.

   Yes:

   No:

   Comments:

4. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. The fourth item involves power transport. Do

you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Yes:

No:

Comments:

5. Exclusions - The SDT has set up one path for evidence that includes technical analysis. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. In addition, in the comment field, please provide your thoughts on the proposed metrics for analysis and the appropriate values to replace 'TBD,' including technical rationale for your argument.

   Yes:

   No:

   5a. Comments on approach:

   5b.Comments on distribution factor measurement:

   5c. Comments on allowable transient voltage dip measurement:

   5d. Comments on allowable transient frequency response:

   5e. Comments on voltage deviation measurement:

6. Exclusions – Do you have other methods that may be appropriate for proving an exclusion claim? Or, other variables/measurements that may be added to the requirements already shown in the posted *Technical Principles for Demonstrating BES Exceptions*? If so, please provide your comments here with technical rationale for why they should be considered.

   Yes:

   No:

   Comments:

7. Inclusions - The SDT has set up only one path for evidence that includes technical analysis. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. In addition, in the comment field, please provide your thoughts on the proposed metrics for analysis and the appropriate values to replace 'TBD,' including technical rationale for your argument.

   Yes:

   No:

   7a. Comments on approach:

7b. Comments on distribution factor measurement:

7c. Comments on allowable transient voltage dip measurement:

7d. Comments on allowable transient frequency response:

7e. Comments on voltage deviation measurement:

8. Do you have concerns about an entity's ability to obtain the data they would need to do the indicated technical analyses? If so, please be specific with your concerns so that the SDT can fully understand the problem and address it in future drafts.

   Yes:

   No:

   Comments:

9. Are you aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? If so, please identify them here and provide suggested language changes that may clarify the issue.

   Yes:

   No:

   Comments:

10. Are there any other concerns with this approach that haven't been covered in previous questions and comments? Please be as specific as possible with your comments.

    Yes:

    No:

    Comments:

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standards Announcement

Technical Principles for Demonstrating BES Exceptions
Appendix 5C - BES Component Exception Process
Two Comment Periods Open May 11-June 10, 2011
Webinar Scheduled on Thursday, May 19, 2011

Now available at: http://www.nerc.com/filez/standards/Project2010-17_BES.html and http://www.nerc.com/filez/standards/Rules_of_Procedure-BES.html

On April 28, the BES Definition Drafting Team (DBES SDT) posted a revised draft BES definition for comment through May 27, 2011. This announcement identifies two additional documents related to the BES Definition that are also being posted for comment.

Two 30-day Comment Periods Open through 8 p.m. on June 10, 2011

To allow for comment in concert with the proposed definition of the Bulk Electric System under NERC Standards Project 2010-17, NERC is requesting comments on a proposed revision to the NERC Rules of Procedure to add *Appendix 5C Bulk Electric System Component Exception Procedure*. The proposed Appendix 5C is being posted for a 30-day comment period through **8 p.m. Eastern on Friday, June 10, 2011.**

In addition, a proposed approach to developing evidence to support an application for a BES Exception, *Technical Principles for Demonstrating BES Exceptions*, has been posted for a 30-day comment period until **8 p.m. Eastern on Friday, June 10, 2011.**

A webinar has been scheduled for Thursday, May 19 from 11:00 a.m. to 1:00 p.m. Eastern to review all three documents associated with the BES Definition project. A separate announcement will be sent with registration instructions for this webinar.

Instructions for Submitting Comments on the Proposed Technical Principles for Demonstrating BES Exceptions

Please use this electronic form to submit comments. If you experience any difficulties in using the electronic form, please contact Monica Benson at monica.benson@nerc.net. An off-line, unofficial copy of the comment form is posted on the project page: http://www.nerc.com/filez/standards/Project2010-17_BES.html

Instructions for Submitting Comments on the Proposed Rules of Procedure Modifications to Incorporate a Process for Requesting BES Exceptions

Please use this electronic form to submit comments. If you experience any difficulties in using the electronic form, please contact Elizabeth Heenan at Elizabeth.heenan@nerc.net. An off-line, unofficial copy of the comment form is posted on the project page: http://www.nerc.com/filez/standards/Rules_of_Procedure-BES.html

Next Steps

The DBES SDT will consider all comments received on the Technical Principles for Demonstrating BES Exceptions and make revisions to the document to incorporate stakeholder input. The team will post its response to comments prior to the next posting.

The BES ROP team will consider comments on the proposed changes to NERC's Rules of Procedure and make revisions if appropriate. An additional 45 day comment period on Appendix 5C is contemplated in August as Project 2010-17 is prepared for balloting.

Project Background

On November 18, 2010 FERC issued Order 743 and directed NERC to revise the definition of Bulk Electric System so that the definition encompasses all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. Additional specificity will reduce ambiguity and establish consistency across all Regions in distinguishing between BES and non-BES Elements and Facilities.

In addition, NERC was directed to develop a process for identifying any Elements or Facilities that should be excluded from the BES. NERC is working to address these directives with two drafting teams – the definition of Bulk Electric System (BES) is being revised through the standard development process and a BES Definition Exception Process is being developed as a proposed modification to the Rules of Procedure. The proposed approach to developing evidence to support an application for a BES Exception, *Technical Principles for Demonstrating BES Exceptions*, was drafted by the BES Definition SDT with assistance from the BES Rules of Procedure team.

The work of the BES Definition team is posted at: http://www.nerc.com/filez/standards/Project2010-17_BES.html

The work of the BES Rules of Procedure Definition Exception Process has been publicly posted at: http://www.nerc.com/filez/standards/Rules_of_Procedure-BES.html.

Standards Process

The Standard Processes Manual contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

For more information or assistance, please contact Monica Benson, Standards Process Administrator, at monica.benson@nerc.net or at 404-446-2560.

North American Electric Reliability Corporation
116-390 Village Blvd.
Princeton, NJ 08540
609.452.8060 | www.nerc.com

Individual or group. (92 Responses)
Name (67 Responses)
Organization (67 Responses)
Group Name (25 Responses)
Lead Contact (25 Responses)
Question 1 (85 Responses)
Question 1 Comments (92 Responses)
Question 2 (86 Responses)
Question 2 Comments (92 Responses)
Question 3 (83 Responses)
Question 3 Comments (92 Responses)
Question 4 (85 Responses)
Question 4 Comments (92 Responses)
Question 5 (79 Responses)
Question 5a Comments (92 Responses)
Question 5b Comments (92 Responses)
Question 5c Comments (92 Responses)
Question 5d Comments (92 Responses)
Question 5e Comments (92 Responses)
Question 6 (81 Responses)
Question 6 Comments (92 Responses)
Question 7 (79 Responses)
Question 7a Comments (92 Responses)
Question 7b Comments (92 Responses)
Question 7c Comments (92 Responses)
Question 7d Comments (92 Responses)
Question 7e Comments (92 Responses)
Question 8 (77 Responses)
Question 8 Comments (92 Responses)
Question 9 (80 Responses)
Question 9 Comments (92 Responses)
Question 10 (84 Responses)
Question 10 Comments (92 Responses)

Individual
Angela P Gaines
Portland General Electric Company
The proposed Continent-wide Definition of Bulk Electric System has an Exclusion rule (E1) which describes how radial facilities connected from a single Transmission source will not be considered part of the BES when the radial system meets subcategory (a), (b), or (c). For the proposed Technical Principles for Demonstrating BES Exemptions, the Exemption Criteria - Exclusions permits the entity to submit an application seeking exclusion from the BES definition when the network meets all of the following characteristics: a. System Elements are located in close electrical proximity to Load b. System Elements are treated as radial in nature c. Power flows into the system, but rarely flows out d. Power entering the system is not intentionally transported through the system to some other system Portland General Electric Company (PGE) asserts that subcategory (b) should be stricken from the criteria, since radial elements are already addressed in the Continent-wide Definition of Bulk Electric System. This subcategory specifies that to meet the criteria, System Elements must be "treated" as radial in nature. To be "treated" as radial, a system will inherently demonstrate compliance with all of subcategories (a), (c), and (d); and therefore, the inclusion of subcategory (b) is redundant in nature. In addition, PGE believes that Exception Criteria Exclusion 1.a.i. is ambiguous because it does not provide a clear definition of where the “interconnected transmission network” ends and the “Load center” begins. Also, PGE notes that a per unit impedance value will vary contingent on base voltage, so PGE does not believe this measure should be used in measuring “close proximity to Load.” Finally, PGE notes that the qualifiers “close,” “treated,” “rarely” and “intentionally”

are used in the current version of the proposed document. In following FERC's most recent Docket No. RM11-18 regarding the revised TPL standards, there should be an effort to replace all qualifiers with more quantifiable terms.
Group
Electric Market Policy
Connie Lowe
Yes
Yes
The word rarely should be struck from this item. It is meaningless in the context for which it is used and offers little to characterize an element or connection since it does not contain a measure.
Yes
Yes
Yes
Generation Owners and Generation Operators are typically not given access to non-public transmission information, especially that where a NDA or CEII signature is required. It would be virtually impossible for a GO to refute proposed inclusion of an Element owned by the GO unless they procure the services of a consulting firm with access to the data. And, even then, the consultant couldn’t provide specifics of the evaluation only their findings.
Yes

Dominion is concerned that the provision of the proposed technical principles prohibiting the seeking of an exclusion for a cranking path for blackstart resources will include local distribution facilities within the definition of the BES. This conflicts with the definition of "Bulk Power System" in Section 215 of the Federal Power Act, which excludes facilities used in local distribution.
Yes
Although Dominion didn't see a specific form to address comments on Appendix 5B to the NERC ROP, Dominion would like to point out a particular area of concern with that Appendix. Dominion requests that NERC include explicit language stating that exclusion or inclusion of an element (for compliance purposes) begins only after approval/disapproval and any associated appeal has been reviewed and a final decision reached. Dominion would also like to point out that it assisted in the preparation of the Edison Electric Institute's comments and therefore agrees with the comments raised by EEI.
Group
PacifiCorp
Sandra Shaffer
No
All of PacifiCorp's responses are based on the application of these items to a given interconnection and not on a continental basis. See comments on question 10. Setting a standard for close electrical proximity using an impedance measurement does not address a proper measurement in all interconnections. A better, more accurate measurement would be to utilize fault duty. Low fault duties provide a good measurement of impact on the BES. Fault Duty at adjacent BES substations should not exceed 5,000 MVA.
Yes
All of PacifiCorp's responses are based on the application of these items to a given interconnection and not on a continental basis. See comments on question 10. If this requirement is added to the four requirements to capture local distribution networks, which are often operated in a looped configuration, which may still be included in the BES by the proposed BES bright-line due to generator inclusions, then this requirement has merit. Otherwise, exclusion E1 in the proposed BES bright-line definition already covers this item and it becomes redundant.
Yes
All of PacifiCorp's responses are based on the application of these items to a given interconnection and not on a continental basis. See comments on question 10. This criterion is very similar to a part of exclusion 3 of the proposed bright-line, which requires that power flows into the system. If the intent of this requirement is to capture local distribution networks that may be included under the proposed bright-line definition, then this requirement has merit. PacifiCorp proposes that instead of using a measure of energy, that the SDT utilize a measure of time and recommends that flow out of the system be limited to 15% on an annual basis. PacifiCorp does not have a technical justification for 15%, nor does it believe that a technical justification can be provided for any reasonable percent of time used, or MWh used to be applied equally to all interconnections.
Yes
All of PacifiCorp's responses are based on the application of these items to a given interconnection and not on a continental basis. See comments on question 10. This criterion is very similar to parts of exclusion 3 of the proposed bright-line, which states "d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL)." If the intent of this requirement is to capture local distribution networks that may be included under the proposed bright-line definition, then this requirement has merit.
No
5a. Comments on approach: All of PacifiCorp's responses are based on a given interconnection and not on a continental basis. See comments on question 10. Using any technical criteria will allow many elements to be excluded from the BES regardless of the element's criticality to the interconnected system. Whatever technical criteria is established should only be applied to elements under 200 kV and any radial elements above 200 kV

5b.Comments on distribution factor measurement: All of PacifiCorp's responses are based on a given interconnection and not on a continental basis. See comments on question 10. Distribution factor has little to no bearing on entities in the Western Interconnection.
Yes
All of PacifiCorp's responses are based on a given interconnection and not on a continental basis. Fault duty may be appropriate for certain interconnections only.
Yes
Please refer to additional comments in question 13 regarding a contiguous BES.
No
Yes
The SDT proposal combined with the ROP proposal may be in conflict with Section 215 of the Federal Power Act, which requires "facilities used in the local distribution of electric energy" be excluded. The processes proposed may be over inclusive and by default require several elements which are not required for the reliable operation of the BES to in fact be included in the definition of "BES."
Yes
The SDT has proposed several technical criteria to be used to determine if an element has an impact on the reliability of the BES. PacifiCorp believes that the majority of non-BES elements can be excluded using a modified proposed bright-line and/or using the non-technical approach. However, in the event an entity requires additional justification to remove non-BES elements from the BES, then PacifiCorp feels the technical criteria should be established on an interconnection basis, not on a continent-wide basis. Because of the number of operating and geographic differences among the interconnections, to try to establish technical criteria on a continental basis would introduce confusion. PacifiCorp believes it is impossible to establish technical criteria that will allow unique interconnections to be treated in a comparable manner.
Group
ReliabilityFirst
Jim Uhrin
No
it is far too complicated for the smaller entities
Yes
yes only true radial without any impact should be excluded otherwise include it
No
All power flow studies can be don eto show a small impact, this is how the system is planned. This will only cause more confusion and debate between the FERC, NERC the Regions and registered entities
No
no one knows when some event will occur, putting this limitation will only cause debate. Any impact is an impact and should be included
No
to complicated and will only raise debate between FERC, NERC, the Regions and the Registered Entities
any impact is an impact, even generation is re-dispatched at 0% in some cases.
any impact is an impact, planning criteria between 3 & 5 % is often used and not allowed, why inject this into what define the BES. the criteria is applied it should be included
any impact is an impact, planning criteria between 5 & 10 % is often used and restricted to guard

against these changes, why inject this into what define the BES. the criteria is applied it should be included
any impact is an impact, planning criteria is often used and restricted to guard against these changes, why inject this into what define the BES. If the criteria is applied to the facility as a BES element it should be included
No
No
to complicated and will only raise debate between FERC, NERC, the Regions and the Registered Entities
any impact is an impact, even generation is re-dispatched at 0% in some cases
any impact is an impact, planning criteria between 3 & 5 % is often used and not allowed, why inject this into what define the BES. the criteria is applied it should be included
any impact is an impact, stability and planning criteria are often used and restricted and guard against these changes, why inject this into what define the BES. if the criteria is applied it should be included
any impact is an impact, planning criteria is often used and restricted to guard against these changes, why inject this into what define the BES. the criteria is applied to the facility as a BES element it should be included
Yes
many smaller entities would require assistance and or consultants to perform this analysis and some data many not be available or be shared etc.
Yes
FERC stated that entities registered were not to be taken off the registry without sound reasons and the definition sole intent was not to restrict or remove entities, but put in place a sound definition that everyone can use. I do not think this is a help, it is very detailed and allot of entities will be confused and lost
No
Individual
Michael Moltane
ITC
No
Please explain the rationale to require electrical proximity. Is it to limit fault exposure? Perhaps 2 miles of line could be shown to typically have few faults, thus limiting the number of voltage sags to nearby buses. At approximately 0.7 ohms per mile 1.5 ohms (for overhead) might be a reasonable number. Does it make a difference if the load is connected via underground cable?
Yes
ITC is in agreement if we are correct in assuming that any one of the three ways (i, ii, or iii) can be used to satisfy the exclusion. We would also like to request additional clarification as to what "disconnection procedures" would be valid for consideration in this requirement.

No
Individual
Michael Jones
National Grid
No
We feel that there is no relation between the proximity to load and system reliability. The impedance is technically irrelevant, and we suggest that this criteria be dropped. If the criteria is not dropped, there should be clarification on what is meant by "Load". For instance are you really referring to "major load centers"? In many areas of the country Load is connected all along a 100kV line and hence much of a line is in close proximity to Load – but it could be small industrial loads and not significant load centers. If significant Load Centers is what the drafting team was driving at then, we believe it should be explicit. We also believe that if the drafting team is defining some technical criteria, then it should not be in the exception process. It should be included as part of the core definition. The exception process should be strictly limited to the procedures for application and approval and should not include substantive elements.
Yes
We agree that elements that are treated as radial should be allowed to request an exception. We would like more clarification about what is meant by "regional dispatch". To the extent definitions of terms such as "regional dispatch" are necessary; they should be addressed in the core definition development process. The exception process should be strictly limited to the procedures for application and approval and should not include substantive elements. We would also like clarification on whether all three criteria under bullet b are required to show if the element is treated as radial, or if meeting one is enough.
Yes
We agree with this requirement, but feel that assigning a specific value to the energy flowing out of the system in MWh is unnecessary. The energy flowing out of a system depends on the size of the area, and thus could vary widely. Another concern is about non-wires alternatives (NWA). One type of non-wires alternative that is considered during planning studies is to reduce the amount of load on our system by paying customers to not operate during peak hours. One scenario to consider is a generator connected on a radial line that qualifies as BES, and will need upgrades if the generator runs frequently. If this generator produces power close to the MWh threshold in the specified time frame per NERC criteria, does it mean the utility company will have to consider paying the generator owner money to shut down in order to keep total MWh generation below the threshold and avoid BES criteria required radial line upgrades? This is another reason assigning a specific value to the energy flowing out of the system is unnecessary. We would like clarification on whether all criteria (i,ii,iii,iv,v) need to be met, or if just meeting one criteria is sufficient. We feel that meeting criteria 1.c.1, 1.c.ii OR 1.c.iii is sufficient in showing that power rarely flows out of the system. Criteria 1.c.iv and 1.c.v should be removed. The exception process should be strictly limited to the procedures for application and approval and should not include substantive elements.
No
We feel that this requirement is not specific enough. "System" is too general. It should be clear what is intended by "system". Also, we would like more clarification about what is meant by "intentionally transport". Is the intent to mean there is a contract between a generator and load? The exception process should be strictly limited to the procedures for application and approval and should not include substantive elements.
We do not agree with all the criteria listed in point 2.a.iv. For example we believe that the term in 2.a.vi.6 "Steady-state Stability – positively damped" does not relate to the concept of steady-state stability. We believe an acceptable measure of steady-state stability would be an angle difference

across the transmission line. That difference can vary depending on the line; however, a rule of thumb is typically 45 degrees which provides a 30% steady state stability margin. As mentioned previously, the exception process should be strictly limited to the procedures for application and approval and should not include substantive elements.
We don't think this measurement is necessarily relevant in determining whether an element is necessary to system reliability. This criterion can be removed from the list. The exception process should be strictly limited to the procedures for application and approval and should not include substantive elements.
Yes
The NERC process could potentially by very lengthy and could interfere with the timely completion of our studies. In the technical paths for exclusions, bullet v states "If within the criteria in all cases, then the Elements can be excluded." This could lead to a very high number of studies that need to be done to prove an element should be excluded. For this reason, National Grid endorses a more streamlined process. We propose a process where entities would only need to submit a short form that briefly describes what they would like to exempt and the reason why, along with a one-line diagram. The entity who is requesting the exception would have to maintain records that show why the elements can be exempted until NERC performs an audit. At the audit, the entity can show the proof of why the element should be granted an exception. This process also allows for the application to remain public and reduces documentation burdens, because the non-public, CEII, or NERC CIP protected supporting documentation is maintained by the applicant. In this process, the entity first submits the application to their RE, and if approved by the RE, the application is submitted to NERC. The entity should be able to appeal if either the RE or NERC denies the application; however, it should be clear that for the second appeal to NERC, the decision is made by a different group than whoever decided on the first appeal. The appeal process in this exception procedure could be similar to the appeal process set by CMEP (compliance, monitoring and enforcement program). For entities that don't wish to wait until the next audit, there can be an optional process by which the proposed exception can be reviewed to provide an immediate ruling. Also, there should be a grace period after the audit is performed if audit staff concludes that an exception or inclusion granted by the initial application is not supported by adequate evidence. NERC's approval of an exception during this initial application process should stand until an Entity is audited and a final audit report is issued. There should also be an implementation period included in the audit report for the entity to come into compliance if the audit report disagrees with the initial exception approval. Absent evidence of fraud or intentional misrepresentation by the entity, there should be no non-compliance assessed for the period from initial exception approval to the final audit report. This process would need to allow participation or comments by Regional Entities, Reliability Coordinators, and/or Balancing Authorities in the application process, but should not allow participation by other third parties.
There should be a non-technical process for inclusions similar to the exclusions process.
No
No
Insufficient time was provided to fully undertake this inquiry.
Yes
The exception process should be strictly limited to the procedures for application and approval and should not include substantive elements.
Group
Tennessee Valley Authority
Richard Dearman

Yes
We agree with the requirement of an element being radial in character as being a qualifier for exclusion thru the non-technical analysis. However, we recommend that the term "radial in character" needs to be better defined. In addition, the language is confusing and we recommend the following: i.: suggest replacing “disconnection procedures” with “automatic disconnection devices” ii.: The intent of this item is not clear, and the term "regional dispatch" is not defined. Recommend the item be clarified or deleted.
Yes
One possible starting point for selecting a MWh threshold: Generators of 20 MVA or less are typically exempt from detailed modeling requirements. Suggest that reverse flows of this level or less, for a period of 24 hours or less would be an acceptable threshold. Therefore, this would provide a basis for selecting a threshold MWh level for reverse flows into the system under part iv. of 20 MW x 24 hours = 480 MWh per year.
No
There is not sufficient evidence provided by the SDT to distinguish between this fourth item for exclusion and the third item for exclusion. They both seem to fall in line with what is excluded per the bright line exclusion E3 (or Local Distribution Networks), but as written, it would be difficult to measure what is meant by “is not intentionally transported through” in this fourth item just as it would be difficult to measure what’s meant by “flows into the system, but rarely flows out” for the third item. Such an exclusion should be required to include some technical analysis, but not extensive technical analysis (at least the inclusion of power flow base case as a minimum).
No
As written, most of this approach makes no sense. The words imply that if you have planned the system properly, you can exclude it from the BES! In TPL studies you make sure that voltage dips, frequency excursions, voltage deviations are acceptable, oscillations are damped, and no cascading outages occur. So if you meet the performance requirements of TPL studies, you can exclude the element from the BES. What good is this?
This is the only part of this technical analysis that may make sense. If the loss of any element of the BES results in a distribution factor of less than X% on the element being considered for exclusion, then exclude it. We suggest a value of 3% for this, since 3% is the threshold typically used in transfer studies.
As stated above, it does not make sense to use this category.
As stated above, it does not make sense to use this category.
As stated above, it does not make sense to use this category.
Yes
Comments: Revise second paragraph to read “Due to the importance of designated Blackstart Resources and their Cranking Paths to restore efforts, no exceptions will be allowed for those items that are included in a system restoration plan.” Technical rationale: Multiple Blackstart Resources and Cranking Paths are frequentlyavailable but are not included in a system restoration plan. System restoration plans describe the Blackstart resources and cranking paths thar are deemed to be necessary for system restoration. Section “Exception Criteria – Exclusions”: Add 1.e. “Generation that is inoperable and not planned to be placed back into service but not yet officially decommissioned.” Technical rationale: These facilities are not relied on to insure the reliability of the BES.
No
Applications for inclusion of facilities into the BES should include justification for doing so. However, there should not necessarily be specific criteria that must be met, but the importance of the facility to the BES should be clearly demonstrated.
No

No
No
Individual
Scott Bos
Muscatine Power and Water
No
The relevance and rationale for this criterion is unknown. If this criterion is intended to exempt elements, like circuit switchers, that are part of the distribution transformer circuits operated above 100 kV, and located within a mile of the BES interconnection point, then NSRF would expect the wording to be "in close electric proximity to the BES" rather than in "close electric proximity to Load". Requesting the SDT explain the relevance and rationale for this criterion before agreeing on its inclusion.
No
Radial in Character –propose that this criterion be removed for the reason that it does not illustrate any materially different characteristics beyond Exclusion E1 of the bright-line BES definition.
No
Proposing that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the bright-line BES definition.
No
This criterion should be eliminated based on the fact that it does not describe any materially different characteristics beyond Exclusion E3 of the BES definition.
No
Would like to propose that this technical analysis criterion be changed to criteria that are more closely tied to the Adequate Level of Reliability (ALR) characteristics. Would like to offer the following alternate criteria as possible examples, "(1) the BES can be controlled to stay within acceptable limits following a fault on or loss of the Element; (2) the BES performs acceptably subsequent to credible contingences of the Element; (3) the Element does not limit the impact and scope of instability and cascading outages once they occur; (4) BES Facilities are protected from undesirable damage by operating the Element within its ratings; (5) the reliability of the BES can be restored promptly subsequent to a fault on or loss of the Element; and (6) the BES has the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times, taking into account scheduled or reasonably expected unscheduled outages of the Element. Currently not aware of any continent-wide appropriate BES performance metrics for voltage dip, frequency excursion, voltage deviation, stability, etc. and would speculate that different values are likely for the different regions and system characteristics across the continent. Thus, it is not advisable to try to adopt unproven values without reasonable industry investigation and development.
Suggest replacing this aspect with those cited above because a distribution factor measurement indicates how much system changes influence the element, not how much a loss of the element would compromise the ALR of the BES. Currently unable to establish a clear correlation between this factor and any of the six characteristics of Adequate Level of Reliability (ALR) of the BES.
Suggest replacing this factor with those cited above because there is presently no established, continent-wide, acceptable transient voltage dip performance level for evaluating whether a fault or loss of the element would not compromise the ALR of the BES. In addition, the appropriate performance level for this factor may be different in other areas and system characteristics across the continent.
Suggest replacing this factor with those cited above. There are recognized, continent-wide transient frequency performance levels in the PRC-006-1 standard; however, the elements that are applicable to this standard are not necessarily BES elements and the transient frequency response requirements are not intended to be a criterion for BES classification.
Requesting the STD replace this factor with those cited above. At this time there is no established, continent-wide, acceptable (steady state) voltage deviation performance level for evaluating whether

a fault or loss of the element would not compromise the ALR of the BES. Moreover, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
Yes
Recommending that this process address the six characteristics of the Definition of Adequate Level of Reliability (ALR) as listed in the comments above in Question #5. Also recommend that municipalities and other small entities having transmission systems designed to serve local load only, operated below 200 kV and not having any IROL's or SOL's be excluded from the BES definition. Rationale: this could affect smaller registered entities within a BA. The standards, especially those for Transmission Operators, aren't written for the smaller utilities. A small, municipal utility could have 75 MW of generation and operate a 115 kV looped system around their service area that is used primarily to serve their own load. Subsequently, they get forced into significant compliance requirements that does not enhance the reliability of the BES whatsoever.
No
Would like to propose that the technical analysis criterion be replaced by criteria that are more closely tied to the Adequate Level of Reliability (ALR) characteristics. The following alternate criteria are offered as possible examples, "(1) the BES cannot be controlled to stay within acceptable limits following a fault on or loss of the Element; (2) the BES does not perform acceptably after credible contingences of the Element; (3) the Element limits the impact and scope of instability and cascading outages when they occur; (4) BES facilities are not protected from unacceptable damage by operating the Element within its ratings; (5) the integrity of the BES cannot be restored promptly following a fault on or loss of the Element; and (6) the BES does not have the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times, taking into account scheduled or reasonably expected unscheduled outages of the Element. Currently not aware of any continent-wide appropriate BES performance measures for voltage dip, frequency excursion, voltage deviation, stability, etc. and would speculate that different values are likely for different regions and system characteristics across the continent. Therefore, would like to state that it is not advisable to try to adopt unproven values without reasonable industry investigation and development.
Proposing to replace this factor with those cited above because a distribution factor measurement indicates how much system changes affect the element, not how a fault or loss of the element would compromise the ALR of the BES. There is no clear correlation between this factor and any of the six characteristics of Adequate Level of Reliability (ALR) of the BES.
Propose replacing this factor with those cited above because there is presently no established, continent-wide, acceptable transient voltage dip performance level for evaluating whether a fault or loss of the element would compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
Propose replacing this factor with those cited above because there are established, continent-wide transient frequency performance levels in the PRC-006-1 standard, but the elements that are applicable to the standard do not have to be BES elements and the transient frequency response requirements are not intended to be a criterion for BES classification.
Propose replacing this factor with those cited above because there is presently no established, continent-wide, acceptable (steady state) voltage deviation performance level for evaluating whether a fault or loss of the element would compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
No
No
Yes
1. Propose replacing the wording in the Exclusion preface, Exclusion 2 preface, and Inclusion 1 preface of "not necessary to reliably operate the interconnected transmission network" with "necessary to maintain an Adequate Level of Reliability (ALR) of the Bulk Electric System". 2. Currently having reservations concerning the following statement made in the introduction of this document: " Due to the importance of Blackstart Resources and their designated blackstart Cranking

Paths to restoration efforts, no exceptions will be allowed for those items." This does not allow for a provision to exclude any designated Blackstart Cranking Path (at any voltage) even though there may be technical justification for it. 3. The first page states that "Specific content of this application is spelled out elsewhere in this appendix." Request the SDT describe where this appendix will be published and indicate if this is a compliance document or just technical "guidance"? 4. By having the following statement included for both exclusions and inclusions will lead to disagreement: "The ERO can override this criterion but would need to provide additional justification to support their finding." Suggesting that any override should include adequate technical justification and not interfere with other statutory requirements. Also, it does not clarify or identify who would make the determination whether NERC has made adequate justification to override the criterion. 5. Do not believe that the "Inclusion" process should be completely removed from BES Definition. Would like to recommend using bright-line criteria indentifying everything 100 kV and above to be considered BES and then allow for the "Exception" process to take out Facilities that do not have an impact on the reliability of the BES. Selecting BES Facilities based on bright-line criteria is what FERC requested in its Order regarding BES Definition. This would streamline and simplify the process by removing a large quantity of exceedingly unnecessary paperwork.

Individual

Bud Tracy

Blachly Lane Electric Cooperative

Yes

First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes

We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.

Yes

We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify facilities that are not necessary for the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should

be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT's view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were constructed on certain facilities to cause power to flow out of those facilities more than ten percent of the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.

Yes

As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to particular facilities will provide a ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.

Yes

We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task Force.

The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a "hub and spoke system" where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the

Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.
Specific transient voltage dip thresholds are proposed on page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided on pages 12-16 of Snohomish's White Paper.
Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.
Please see our response to Question 5d.
No
Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish's White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.
Please see our corresponding answers to Question 5 for 7b-7e.
No
As discussed on page 12 of Snohomish's White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.
No
Yes
In general, , as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES

definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.
Individual
RoLynda Shumpert
South Carolina Electric and Gas
No
SCE&G disagrees with the assumption that the proximity of a BES facility to Load is indicative of it's importance to BES reliability. Some lower voltage facilities can be quite short and thus have lower impedance but be important to BES reliability. Furthermore, the term "Load centers" is not defined leaving it subject to interpretation. Assuming a load center has many busses, where would the measurement be made - From the most distant load bus in the load center or the nearest? Similarly - does a single facility get measured from it's terminal to the load center or does the presence or lack of breakers need to be considered when selecting the measurement point?
Yes
SCE&G agrees with the requirement of an element being radial in character as being a qualifier for exclusion thru the non-technical analysis. However, we recommend that the term "radial in character" be better defined. In addition, the language is confusing and we would like to recommend the following: i.: suggest replacing "disconnection procedures" with "automatic disconnection devices" ii.: The intent of this item is not clear, and the term "regional dispatch" is not defined. Recommend the item be clarified or deleted.
Yes
One possible starting point for selecting a MWh threshold: Generators of 20 MVA or less are typically exempt from detailed modeling requirements. Suggest that reverse flows of this level or less, for a period of 24 hours or less would be an acceptable threshold. Therefore, this would provide a basis for selecting a threshold MWh level for reverse flows into the system under part iv. of 20 MW x 24 hours = 480 MWh per year
No
There is not sufficient evidence provided by the SDT to distinguish between this fourth item for exclusion and the third item for exclusion. They both seem to fall in line with what is excluded per the bright line exclusion E3 (or Local Distribution Networks), but as written, it would be difficult to measure what is meant by "is not intentionally transported through" in this fourth item just as it

would be difficult to measure what's meant by "flows into the system, but rarely flows out" for the third item. Such an exclusion should be required to include some technical analysis, but not extensive technical analysis (at least the inclusion of power flow base case as a minimum).
No
As written, most of this approach makes no sense. The words imply that if you have planned the system properly, you can exclude it from the BES! In TPL studies you make sure that voltage dips, frequency excursions, voltage deviations are acceptable, oscillations are damped, and no cascading outages occur. So if you meet the performance requirements of TPL studies, you can exclude the element from the BES. This does not seem to be what was intended.
This is the only part of this technical analysis that may make sense. If the loss of any element of the BES results in a distribution factor of less than X% on the element being considered for exclusion, then exclude it. We suggest a value of 3% for this, since 3% is the threshold typically used in transfer studies.
As stated above, it does not make sense to use this category.
As stated above, it does not make sense to use this category.
As stated above, it does not make sense to use this category.
Yes
Revise second paragraph to read "Due to the importance of designated Blackstart Resources and their Cranking Paths to restore efforts, no exceptions will be allowed for those items that are included in a system restoration plan." Technical rationale: Multiple Blackstart Resources and Cranking Paths are frequently available but are not included in a system restoration plan. System restoration plans describe the Blackstart resources and cranking paths thar are deemed to be necessary for system restoration. Section "Exception Criteria – Exclusions": Add 1.e. "Generation that is inoperable and not planned to be placed back into service but not yet officially decommissioned." Technical rationale: These facilities are not relied on to insure the reliability of the BES.
No
SCE&G recommends that applications for inclusion of facilities into the BES should include justification for doing so. However, there should not necessarily be specific criteria that must be met, but the importance of the facility to the BES should be clearly demonstrated.
No
No
No
Group
Northeast Power Coordinating Council
Guy Zito
No
1.a.i. Electrical Proximity - If impedance is to be used as a measure of electrical proximity, which in turn is a replacement for geographical proximity, then how would the presence of parallel lines, capacitors, phase-angle regulators (PARs), tap-changing transformers, generation and reactors be treated in determining electrical proximity? How does this approach effectively differentiate between transmission and distribution lines of the same voltage and length? When using impedance, how is "greater than" determined? Sum of the Impedances - Would the filing entity simply add up the in-series impedances for each radial Element to demonstrate its electrical proximity? For example, would the sum of the impedances from this radial path example be equal to the sum of the two feeder and transformer impedances, i.e., measured from a 230 kV bus along a 230 kV feeder, through a 230/138 kV step-down transformer, and an in-series 138 kV feeder to a 138/13.8 kV step-down distribution

transformer? What impedance would the SDT apply to a PAR (or tap-changing transformer) and to the overall path if a PAR (or tap-changing transformer) were located in-series with the measured Elements? 1.a.ii. Power Flows – What is the meaning of "power flow data" as the term is used here and how is the meaning different from the term when used under 1.c. Power flows into the system, but rarely flows out? Should this sentence use the phrase "impedance data extracted from a load flow study" instead? Entities should be required to identify the significance of the element's physical characteristics. Such identification can be done through a simple checklist along with any relevant comments. The SDT should revise the exception criteria to seek an alternative language and/or revise exclusion criteria (a), which will require entities to provide the previously stated information for their element.
No
The term "regional dispatch" is not defined. Provide a definition or reference to a definition to be used in making this determination. Recommend adoption of the alternate term "operational control." 1.b.ii, Operational Control - The SDT should consider using the terms "under the operational control of a Balancing Authority." It is instructive that the overarching requirement for a finding of transmission system integration in Mansfield was that the facilities be under operational control of the Independent System Operator (ISO).* * Southern Cal. Edison Co., 92 FERC ¶ 61,070 at 61,255 (2000), reh'g denied 108 FERC ¶ 61,085 (2004). Replace the example in 1.b.i. with a clearer example. Entities should be allowed to demonstrate the radial characteristics to determine if they are permitted for an exception, and demonstrate compliance with radial defining criteria.
No
If an entity provides hourly MWh power flow data on a radial for a 12-month period (under v.) showing no power flow reversals, would transaction data (under i. through iv.) still be required? Could the entity just say "no transactional records?" If there were power flow reversals, wouldn't the power flow data (provided under v.) also show those, e.g., the amount and duration? Isn't this request redundant? If reversing power flows on a feeder caused it to fail one of the criteria, could the radial still be excluded, or is it necessary for the Element to pass all requirements? Alternatively, could the entity choose to file for Exclusion of that Element under the technical analysis option? What happens and what are the implications when the two approaches produce different outcomes? Recommend that "iv. The maximum amount of energy flowing out" limit be set to no more than 24 hours of reverse power flows within any rolling 12-month period. Consider avoiding prescribing values and eliminate bullet (iv). The intended performance outcome should be described, but without setting values. This should not have any impact on the reliability of the transmission network if items 1, 2 and 3 are satisfied.
Yes
No
This method may allow an entity to exclude Elements which perform a transmission function, but that are not the most limiting Element. "Not being necessary for reliability operation" needs definition. The SDT should consider developing a Guidance Document to provide examples and insights to guide prospective filing entities. The TPL Reliability Standards already describe the full set of requirements for a reliable system. Why are added requirements necessary? Why would any such added criteria not conflict with the TPL Reliability Standards to the extent that they were either more or less restrictive? Entities should be given an option to conduct an analysis to demonstrate if an element is necessary for the operation of a transmission network. NERC should specify all the relevant criteria categories to be listed as under 2 (a). NERC should avoid prescribing numerical values, but instead establish a range of values (or reference industry standards) that would be consistent with industry/ regional standards or practices without compromising the reliability of the transmission network.
2.a. The term "Planning Assessment" is not a defined term in the NERC Glossary of Terms Used and should not be capitalized, or it should be defined. 2.a.iv.1. Distribution Factor - This is a judgment of what feeder power flow participation level is material and what is non-material. While TDF and OTDF analysis is an indication of contributions from the element, the SDT should avoid setting values and instead describe the intended performance outcome from a distribution factor measurement. Note that ultimately NERC as an ERO or relevant regulatory authority will approve the application and can assess the performance outcome in their decision making presented in an entity's application.
Voltage dip is specified in terms of duration and retained voltage, usually expressed in percentage.

Suggest that either the SDT avoid using voltage dip as a criteria, or clearly specify that the transient voltage not exceed the X limit of Y cycles (time). References to relevant industry standards such as IEEE standard 1346-1998 should be made.
Suggest that for assigning a value for transient frequency response, entities conduct and submit to the SDT their quantitative and qualitative technical assessment based on the conditions of the element(s) under the application. Do not establish a fixed binary value within the exception criteria but rather focus on the performance outcome. See 5 (a) above.
Voltage deviation is generally expressed as a percentage, between the voltage at a given instant at a point in the system. Do not establish a fixed binary value within the exception criteria but rather focus on the performance outcome. Adequate voltage performance does not guarantee system voltage stability. Steady state stability is the ability of the grid to remain in synchronism during relatively slow or normal load or generation changes, and to damp out oscillations caused by such changes. The requirement should suggest that following checks are carried out to ensure system voltage stability for both the pre-contingency period and the steady state post-contingency period: • Properly converged pre- and post-contingency power flows are to be obtained with the critical parameter increased up to 10% with typical generation as applicable; • All of the properly converged cases obtained must represent stable operating points. This is to be determined for each case by carrying out P-V analysis at all critical buses to verify that for each bus the operating point demonstrates acceptable margin on the power transfer; and • The damping factor must be acceptable (the real part of the eigen values of the reduced Jacobian matrix are positive).
Yes
An impact-based method should be available for entities seeking Exclusions and Inclusions. The method should not allow excess regional discretion and unintended continent-wide variation. Recommend the power Transfer Distribution Factor (power TDF) approach mentioned in the reply to Question 5 above. If the Transmission Planner (TP) or Planning Authority (PA), were tasked with performing such analyses using standardized assumptions, then regional discretion could be minimized. Technical Analysis must fundamentally use NERC – TPL methodology and testing requirements.
No
Inclusions criteria should mirror the Exclusion criteria, and that consistent values should be employed for Inclusions here and for Exclusions above. That is, for example, if 0.95 to 1.05 (+/- 5%) p.u. is adopted as an acceptable voltage deviation range for Exclusions, then Elements resulting in post-transient system voltage deviations outside that range should be candidates for Inclusion. Further, all assumptions should also be fully documented for any proposed Inclusions. Also refer to comments on exclusions.
See reply to Questions 5b and 6 above.
Refer to the response to Question 5c
Refer to the response to Question 5d
See reply to Questions 5e and 6 above.
No
Yes
It is imperative to understand that the NERC’s revised definition will have a direct impact on entities across North America and may conflict with regulatory requirements, Codes, and Licenses. FERC in its Orders 743 and 743A has directed NERC to address these concerns. For Ontario, the BES exception criteria shall meet the expectations of Ontario's regulator (Ontario Energy Board) which has the sole authority and responsibility for the reliability of customer connections and loads within Ontario. Therefore, it will be necessary to accommodate NERC's proposed definition of BES or the exception process with the Ontario situation. The SDT and RoP teams should: • Modify the exception criteria and procedure to provide regulatory flexibility with requirements to conduct basic technical analysis , to allow entities to consistently present their case to the ERO and/or the regulator for a step by step expedited evaluation. • Include provisions in both the NERC exception criteria and exception process for federal, state and provincial jurisdictions. These provisions should provide clear guidance so that, if and when there are deviations from the exception criteria, they are identified with technical and regulatory justifications ensuring there is no adverse impact on the interconnected transmission

network. • Understand that the path to generating facilities need not be always BES contiguous. Generating units can/should be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not always require contiguous paths.
Yes
Exception criteria should be crafted at a high-level with key menu items of assessment that can be followed continent-wide by entities to put forward their exception(s) for element(s) that are not necessary for the interconnected transmission network based on technical assessment, evidence and justification for unique characteristics, configuration, and utilization. (Also see suggestions/ comments in Question 6)
Individual
Josh Dellinger
Glacier Electric Cooperative
No
I do not think that the proximity to load should be a factor in determining whether or not an element should be included in the BES. Rather, the purpose of the element should be the important factor. If an element only serves load, then that should be the most important factor and the proximity (electrical or physical) to that load should not matter.
No
I do agree that radial elements should definitely be excluded. However, I believe that non-radial elements should be able to be excluded by Path 1 as well. If a small local distribution system is operated non-radially for the purpose of improving reliability for its loads, then that system should be eligible for exclusion from the BES. I also believe that language needs to be included that makes the provision for radial elements that can be temporarily and briefly looped together during switching to prevent an outage (e.g. for transformer maintenance) to also be excluded from the BES.
No
Regarding using power flow into and out of a system as a criterion fro BES exclusion, I do not think that establishing a hard MWh per year is the proper approach to take. Once again, I believe that the purpose of the system should be the most important factor. If the purpose of a system is to serve load or transport non-essential generation (i.e. wind power), then that system should be able to be exluded.
No
I believe that there should be a provision for systems that intentionally transport variable, non-essential generation (such as systems that transport wind power) to be excluded from the BES. By nature, these types of systems cannot be essential to the BES due to the variability of the generation, and, therefore, should be able to be excluded from the BES.
No
I strongly agree that there should be a way for elements to be excluded from the BES based on a technical analysis. However, the current approach only provides one technical avenue for exclusion and that is through a transmission planning study. Performing and analyzing such a study could be very, very difficult for a small entity to do. If this is the approach that NERC continues with, then I believe there needs to be some extra language outlining who is responsible for performing and analyzing these transmission planning studies. The question is should the RRO (WECC, etc.) be responsible for performing the study and determining through the technical criteria what elements are included and excluded in the BES, or should that resposiblity fall on control area operators within an RRO, or should that responsibility fall on individual entities? I believe it should fall on either the RROs or the control area operators within the RROs. Perhaps an alternative approach could be to establish a few techincal checks that could be evaluated first before a transmission planning study is required. For example, a max fault MVA value could be established and if the available fault MVA at an element is less than the established value, then that element and could be excluded without having to go through a transmission planning study. If the available fault MVA at the element is above the established value, then the study would have to be done for determination.

Yes
Perhaps using an element's available fault MVA as a "quick screening" method to quickly determine if an element should be included or excluded. If an element's available fault MVA exceeds a properly established value, then a more detailed technical analysis can be done to determine whether or not the element truly should be included in the BES. But if the elemet's available fault MVA is less than the established value, then that element could quickly be excluded.
Yes
I do strongly agree that there should be an avenue for elements to be included or excluded from the BES based on technical analysis. I do believe who's responsibility it will be to perform and analyze the transmission planning studies needs to be clarified.
Yes
It could be very, very difficult and costly for small utilities to perform the necessary transmission planning studies described in the proposal. I think there needs to be language clarifying how smaller utilities should be able to obtain this data.
No
No
Individual
Diane Barney
New York State Department of Public Service
The core BES definition based on a 100 kV brightline is an overreach of bulk system designation under the provisions of the Federal Power Act; a properly specified BES core definition would avoid the extensive analysis required under the exceptions procedure. That said, the proposed principles for use in the exceptions process are consistent with previous FERC efforts to distinguish between transmission and local distribution. The upfront exclusion of applying the proposed principles to blackstart cranking path facilities is a potential overreach into the local distribution system and can be counter productive reliability. Mandating compliance of NERC standards to cranking paths will result in the specification of only one cranking path by host utilities to minimize costs, where designating

multiple paths in restoration paths would provide the flexibility needed to minimize customer outage duration.
Individual
John Bee
Exelon
No
The term “close proximity” is ambiguous and open ended. Exelon believes that all facilities used in local distribution of electric energy that are presently under state jurisdiction should be excluded from the BES regardless of system impedance.
No
The term “rarely” is ambiguous and should be removed or quantified. Furthermore, the requirement for power flow analysis will be viewed by many entities as extensive technical analysis.
No
This item calls for the use of criteria in order to prove that a facility should be excluded the BES. First of all, the items 5b – 5e do indeed require extensive technical analysis which will be outside of the capabilities of many users of the BES. Furthermore, it is not clear who’s criteria will be used? The user’s? The Transmission Owner’s? The Planning Authority’s? This question of ownership needs to be resolved and in itself poses a problem for this process. If differing criteria levels are used across the continent, there remains the possibility that similarly-situated facilities in different Regions will not be treated consistently.
No
: Exelon points out that most of the Regions don’t have Region-wide criteria for distribution factor measurement, voltage excursions, or transient frequency response for use in this proposed Inclusion Process. In addition, most of the Regions do not have region-wide criteria developed for these attributes. If differing criteria levels are used across the continent, there remains the possibility that similarly-situated facilities in different Regions will not be treated consistently.
Yes
As mentioned above, this process will require extensive technical analysis from users, owners, operators and the Regions. In many cases, the Principles anticipate the use of criteria that is not in existence today. Rather than reinforcing the bright line approach, these Principles have the potential to create processes that will result in high costs with little to no corresponding benefits to reliability.
Yes
To the extent facilities used in local distribution of electric energy may be included in the BES, the proposed principles are in conflict with the Federal Power Act.
No
Individual
Bob Casey
Georgia Transmission Corporation
No

GTC disagrees with the assumption that the proximity of a BES facility to Load is indicative of it's importance to BES reliability. Some lower voltage facilities can be quite short and thus have lower impedance but be important to BES reliability. Furthermore, the term "Load centers" is not defined leaving it subject to interpretation. Assuming a load center has many busses, where would the measurement be made - From the most distant load bus in the load center or the nearest? Similarly - does a single facility get measured from it's terminal to the load center or does the presence or lack of breakers need to be considered when selecting the measurement point?
Yes
GTC agrees with the requirement of an element being radial in character as being a qualifier for exclusion thru the non-technical analysis. However, GTC recommends that the term "radial in character" needs to be better defined. In addition, the language is confusing and the PSS would like to recommend the following: i.: suggest replacing "disconnection procedures" with "automatic disconnection devices" ii.: The intent of this item is not clear, and the term "regional dispatch" is not defined. Recommend the item be clarified or deleted.
Yes
One possible starting point for selecting a MWh threshold: Generators of 20 MVA or less are typically exempt from detailed modeling requirements. Suggest that reverse flows of this level or less, for a period of 24 hours or less would be an acceptable threshold. Therefore, this would provide a basis for selecting a threshold MWh level for reverse flows into the system under part iv. of 20 MW x 24 hours = 480 MWh per year.
No
As written, most of this approach makes no sense. The words imply that if you have planned the system properly, you can exclude it from the BES! In TPL studies you make sure that voltage dips, frequency excursions, voltage deviations are acceptable, oscillations are damped, and no cascading outages occur. So if you meet the performance requirements of TPL studies, you can exclude the element from the BES. What good is this?
This is the only part of this technical analysis that may make sense. If the loss of any element of the BES results in a distribution factor of less than X% on the element being considered for exclusion, then exclude it. We suggest a value of 3% for this, since 3% is the threshold typically used in transfer studies.
As stated above, it does not make sense to use this category.
As stated above, it does not make sense to use this category.
As stated above, it does not make sense to use this category.
Yes
Revise second paragraph to read "Due to the importance of designated Blackstart Resources and their Cranking Paths to restore efforts, no exceptions will be allowed for those items that are included in a system restoration plan." Technical rationale: Multiple Blackstart Resources and Cranking Paths are frequently available but are not included in a system restoration plan. System restoration plans describe the Blackstart resources and cranking paths that are deemed to be necessary for system restoration. Section "Exception Criteria – Exclusions": Add 1.e. "Generation that is inoperable and not planned to be placed back into service but not yet officially decommissioned." Technical rationale: These facilities are not relied on to insure the reliability of the BES.
No
GTC recommends that applications for inclusion of facilities into the BES should include justification for doing so. However, there should not necessarily be specific criteria that must be met, but the importance of the facility to the BES should be clearly demonstrated.
No

No
No
Group
SERC Planning Standards Subcommittee
Charles W. Long
No
The PSS disagrees with the assumption that the proximity of a BES facility to Load is indicative of it's importance to BES reliability. Some lower voltage facilities can be quite short and thus have lower impedance but be important to BES reliability. Furthermore, the term "Load centers" is not defined leaving it subject to interpretation. Assuming a load center has many busses, where would the measurement be made - From the most distant load bus in the load center or the nearest? Similarly - does a single facility get measured from it's terminal to the load center or does the presence or lack of breakers need to be considered when selecting the measurement point?
Yes
The PSS agrees with the requirement of an element being radial in character as being a qualifier for exclusion thru the non-technical analysis. However, the PSS recommends that the term "radial in character" needs to be better defined. In addition, the language is confusing and the PSS would like to recommend the following: i.: suggest replacing “disconnection procedures” with “automatic disconnection devices” ii.: The intent of this item is not clear, and the term "regional dispatch" is not defined. Recommend the item be clarified or deleted.
Yes
One possible starting point for selecting a MWh threshold: Generators of 20 MVA or less are typically exempt from detailed modeling requirements. Suggest that reverse flows of this level or less, for a period of 24 hours or less would be an acceptable threshold. Therefore, this would provide a basis for selecting a threshold MWh level for reverse flows into the system under part iv. of 20 MW x 24 hours = 480 MWh per year.
No
There is not sufficient evidence provided by the SDT to distinguish between this fourth item for exclusion and the third item for exclusion. They both seem to fall in line with what is excluded per the bright line exclusion E3 (or Local Distribution Networks), but as written, it would be difficult to measure what is meant by “is not intentionally transported through” in this fourth item just as it would be difficult to measure what’s meant by “flows into the system, but rarely flows out” for the third item. Such an exclusion should be required to include some technical analysis, but not extensive technical analysis (at least the inclusion of power flow base case as a minimum).
No
As written, most of this approach makes no sense. The words imply that if you have planned the system properly, you can exclude it from the BES! In TPL studies you make sure that voltage dips, frequency excursions, voltage deviations are acceptable, oscillations are damped, and no cascading outages occur. So if you meet the performance requirements of TPL studies, you can exclude the element from the BES. What good is this?
This is the only part of this technical analysis that may make sense. If the loss of any element of the BES results in a distribution factor of less than X% on the element being considered for exclusion, then exclude it. We suggest a value of 3% for this, since 3% is the threshold typically used in transfer studies.
As stated above, it does not make sense to use this category.
As stated above, it does not make sense to use this category.
As stated above, it does not make sense to use this category.
Yes
Revise second paragraph to read “Due to the importance of designated Blackstart Resources and their Cranking Paths to restore efforts, no exceptions will be allowed for those items that are included in a system restoration plan.” Technical rationale: Multiple Blackstart Resources and Cranking Paths are

frequently available but are not included in a system restoration plan. System restoration plans describe the Blackstart resources and cranking paths thar are deemed to be necessary for system restoration. Section "Exception Criteria – Exclusions": Add 1.e. "Generation that is inoperable and not planned to be placed back into service but not yet officially decommissioned." Technical rationale: These facilities are not relied on to insure the reliability of the BES.
No
The PSS recommends that applications for inclusion of facilities into the BES should include justification for doing so. However, there should not necessarily be specific criteria that must be met, but the importance of the facility to the BES should be clearly demonstrated.
No
No
No
The comments expressed herein represent a consensus of the views of the above-named members of the SERC EC Planning Standards Subcommittee only and should not be construed as the position of SERC Reliability Corporation, its board, or its officers.
Individual
Chris de Graffenried
Consolidated Edison Co. of NY, Inc.
No
We generally support this exclusion option concept, to the extent that it is fashioned after the FERC Seven Factor test. However, we have a number of questions as to how it might work in practice. 1.a.i. Electrical Proximity - If impedance is to be used as a measure of electrical proximity, which in turn is a replacement for geographical proximity, then how would the presence of parallel lines, capacitors, phase-angle regulators (PARs), tap-changing transformers, generation and reactors be treated in determining electrical proximity? How does this approach effectively differentiate between transmission and distribution lines of the same voltage and length? When using impedance, how is "greater than" determined? Sum of the Impedances - Would the filing entity simply add up the in-series impedances for each radial Element to demonstrate its electrical proximity? For example, would the sum of the impedances from this example radial path be equal to the sum of the two feeder and transformer impedances, i.e., measured from a 230 kV bus along a 230 kV feeder, through a 230/138 kV step-down transformer, and an in-series 138 kV feeder to a 138/13.8 kV step-down distribution transformer? What impedance would the SDT apply to a PAR (or tap-changing transformer) and to the overall path if a PAR (or tap-changing transformer) were located in-series with the measured Elements? 1.a.ii. Power Flows – What is the meaning of "power flow data" as the term is used here and how is the meaning different from the term when used under 1.c. Power flows into the system, but rarely flows out? Should this sentence use the phrase "impedance data extracted from a load flow study" instead?
No
We generally support this exclusion option concept, to the extent that it is fashioned after the FERC Seven Factor test. However, we have a number of questions as to how it might work in practice. For example, the term "regional dispatch" is not defined. Please provide a definition or reference to a definition to be used in making this determination. Below we recommend adoption of the alternate term "operational control." 1.b.ii, Operational Control - The SDT should consider using the terms "under the operational control of a Balancing Authority." It is instructive that the overarching requirement for a finding of transmission system integration in Mansfield was that the facilities be under operational control of the Independent System Operator (ISO).* * Southern Cal. Edison Co., 92 FERC ¶ 61,070 at 61,255 (2000), reh'g denied 108 FERC ¶ 61,085 (2004). Replace the example in 1.b.i. with a clearer example.

No
We generally support this exclusion option concept, to the extent that it is fashioned after the FERC Seven Factor test. However, we have a number of questions as to how it might work in practice. For example: • If an entity provides hourly MWh power flow data on a radial for a 12-month period (under v.) showing no power flow reversals, would transaction data (under i. through iv.) still be required? Couldn't the entity just say "no operating records?" • If there were power flow reversals, wouldn't the power flow data (provided under v.) also show those, e.g., the amount and duration? Isn't this request redundant? If not, why not? Please explain. • If reversing power flows on a feeder caused it to fail one of the criteria, could the radial still be excluded, or is it necessary for the Element to pass all requirements? Alternatively, could the entity choose to file for Exclusion of that Element under the technical analysis option? What happens and what are the implications when the two approaches produce different outcomes? We recommend that "iv. The maximum amount of energy flowing out" limit be set to no more than 24 hours of reverse power flows within any rolling 12-month period. Replace "transactional records" with "operating records."
Yes
No
The technical analysis approach may have merit. However, we have a number of questions about how it would be implemented in practice. We are concerned that this method may allow an entity to exclude Elements simply because they are not the most limiting Element in a particular TPL analysis. What does "not being necessary for reliability operation" mean? Please define. The SDT should consider developing a Guidance Document to provide examples and insights to guide prospective filing entities. The TPL Reliability Standards already describe the full set of requirements for a reliable system. Why are added requirements necessary? Why would any such added criteria not conflict with the TPL Reliability Standards to the extent that they were either more or less restrictive?
2.a. The term "Planning Assessment" is not a defined term in the NERC Glossary of Terms Used and should not be capitalized, or alternatively it should be defined. 2.a.iv.1. Distribution Factor - The issue comes down to a judgment call concerning what feeder power flow participation level is material and what is non-material. In New York, the NYISO has traditionally used a 1% power transfer distribution factor (power TDF) cut-off. Feeders showing less than a 1% power transfer in a study are not materially participating in transmission.
The NYISO uses a 0.95 to 1.05 p.u. as the acceptable range for post-transient system conditions.
Yes
An impact-based method should be available for entities seeking Exclusions and Inclusions. The method should not allow excess regional discretion and unintended continent-wide variation. We recommend the power Transfer Distribution Factor (power TDF) approach mentioned in the reply to Question 6 above. If the Transmission Planner (TP) or Planning Authority (PA), e.g., the NYISO, were tasked with performing such analyses, using standardized assumptions, then regional discretion could be minimized.
No
We believe that Inclusions criteria should mirror the Exclusion criteria, and that consistent values should be employed for Inclusions here and for Exclusions above. That is, for example, if 0.95 to 1.05 (+/- 5%) p.u. is adopted as an acceptable voltage deviation range for Exclusions, then Elements resulting in post-transient system voltage deviations outside that range should be candidates for Inclusion. Further, all assumptions should also be fully documented for any proposed Inclusions.
See reply to Question 6.
See reply to Question 6.
Yes
See the EEI reply to BES Definition and Designations Question 11.

No
Group
Idaho Falls Power
Richard Malloy
No
We do not agree that all four criteria under exclusion #1 need be applied in combination to an element to determine its material impact. Assets satisfying all four defining criteria would seem exceedingly small and likely already excluded by the BES definition. This exception criteria appears redundant to, and shadows the NERC BES definition draft's language excluding radial elements and local distribution networks, and as such add little value to the exclusions built into the BES definitions. Further, the language of the exception criteria addresses transmission elements and doesn't provide exclusion criteria for generation assets. We would hope that NERC could develop criteria to exempt certain generation, especially those small resources on local distribution networks wherein the generation is completely allocated to local load. Language in section 215 of the FPA excludes distribution "elements." We assert that generation on a distribution network serving only load on that network is an "element" of the network and deserves exclusionary defining criteria.
Using these criteria assumes that every asset must be radial in nature in order to receive consideration that it may not be material to the BES. This then implies that the BES is a contiguous connected system as only radial off-shoots could receive exemption consideration. We disagree. Our assertion is that the BES is comprised of assets that due to their size or location are vital to a sound BES but may or may not necessarily be connected to each other. This defining criteria in the exception could be a stand-alone criteria or stricken.
No
We agree in general, however believe there is little distinction between the defining criteria in this exception and the local distribution network exclusion already provided for in the BES definition. We would like to see added language that provides an exclusion for all elements on such a system, to include generation regardless of MVA rating, wherein the power flows are generally into the system. We would agree that a number of MWh of annual outflow needs to be established as a limitation to the size and amount of generation under consideration. This exclusion should be geared towards smaller municipal or like sized systems having no material impact upon a BA much less the region.
No
We generally agree with this requirement. If a system has redundant transmission to move power that is normally wheeled through, the question of materiality could be addressed by technical analysis.
We generally agree with having two paths towards exclusion.
No
No comments
Yes
No
No comments
No
We believe that the final drafts of the definition and exemptions should comport to the legal

requirements of Section 215.
No
No comments
Individual
Tracy Richardson
Springfield Utility Board
Yes
SUB agrees with providing an exclusion exception for System Elements that are treated as "radial in character", but feels this should be part of the core definition in NERC's Proposed Continent-wide Definition of Bulk Electric System rather than requiring an exclusion/exemption application process. In SUB's May 27, 2011 BES definition comments SUB expressed concern that there still appears to be inconsistencies in both definition and application of "radial." SUB encourages NERC to develop a concise definition. For example, if a system is normally operated as radial, but could be operated closed (for example, by manually closing a breaker), would it be considered a radial or close-looped system?
No
NERC's Proposed Continent-wide Definition of Bulk Electric System contains Exclusion E3 (LDNs) as part of the BES core definition. Why would this fourth item be necessary in demonstrating BES Exceptions if LDNs are already excluded as part of NERC's core BES definition?
Yes
In general, SUB supports a technical analysis approach as a secondary/ alternative option for qualifying to apply for BES Element exclusions.
No
NERC's Exception Criteria for Inclusions states that, "Entities can submit an application to see an exception for an inclusion in the BES...", but SUB would ask NERC to clarify whether an entity can 1) seek an inclusion exception for them only, or 2) can an entity seek an inclusion exception for another entity? SUB would not support another entity having the ability to file for another entity.
Yes
• The four characteristics defined in the "Exception Criteria – Exclusions" portion of Technical Principles for Demonstrating BES Exceptions appears to be in conflict with, rather than in parallel to, the exceptions which are part of the proposed "core definition" in the Proposed Continent-wide Definition of Bulk Electric System. SUB proposes that NERC postpone work related to Technical Principles for Demonstrating BES Exceptions until a continent-wide BES definition is approved. • FERC Order No. 743 states, "We believe that it would be worthwhile for NERC to consider formalizing the criteria for inclusion of critical facilities operated below 100 kV in developing the exemption process". However, there is no mention of critical facilities operated below 100 kV in NERC's Exception Criteria. SUB would encourage NERC to include critical facilities consideration in their exception criteria.
Yes
SUB has the following concerns regarding NERC's Technical Principles for Demonstrating BES Exceptions: • Clear Definition of Radial - As previously addressed in our BES Definition comments,

SUB would encourage a more clear definition of a "radial" versus "closed-loop" system. Because there still appears to be inconsistencies in both definition and application, SUB encourages NERC to develop a concise definition of a radial system. For example, if a system is normally operated as radial, but could be operated as closed (by manually closing a breaker), would it be considered a radial or close-looped system? If the answer is close-looped, then is this in all cases, or are there exceptions? • Approval of Exceptions – SUB would like for NERC to clarify the process for receiving, reviewing, and accepting or rejecting exception applications. The Technical Principles for Demonstrating BES Exceptions states that, "…will be subject to review and remand by the ERO itself, or by any agency having regulatory or statutory oversight of NERC as the ERO." During NERC's presentation at APPA's BES Definition webinar, it was explained that the exception process would look like the following: 1. Entity applies for expemption, 2. Region receives application, verifies received, and forward to NERC with recommendation(s), and 3. NERC makes final determination (decision is appealable by entity). For consistent application of the expemption procedure, SUB would encourage NERC to adopt the process as it was communicated during the APPA webinar, with regions making recommendations, but NERC making the final decision. • Duration of Approved Exclusions/Inclusions – The Technical Principles for Demonstrating BES Exceptions does not indicate the duration for approved exclusions or inclusions. How long are granted exclusions/inclusions? Permanent? Annual? Other? • Publication of Exceptions – For consistent application, as well as transparency and accountability, SUB would request that all exceptions be published ; those applied for, as well as whether they were rejected or accepted, as well as decision rationale.
Individual
John Pearson
ISO New England
No
We disagree with this exception and believe that Section 1.a. should be deleted in it's entirety and replaced with a definition that excludes remote areas of a generally lesser overall value to reliability and includes areas that are heavily networked serving large loads. The premise of the existing section 1.a. seems at odds with overall system reliability and possibly removes large metropolitan areas from the BES definition. How is close electrical proximity to load defined? A maximum number of Ohms? Heavily networked areas will have lower impedance and are more likely to serve larger amounts of demand and are therefore more likely to be impactful on the overall integrity of the BES.
No
This three part definition of radial presented in section 1.b. appears cumbersome and requires more definition. With regard to b.i - Where is the disturbance? Is sending a person to the field to perform manual disconnection a requirement of this exception? This item is so vague that we have difficulty providing replacement language as we do not understand its intent. With regard to b.ii – Elements (Excluding generators) are not dispatched in operations. If this approach were to be taken, what would be the criteria for the way the Element is treated in Operations? Again, this item is so vague that we have difficulty providing replacement language. The existing definition appears to require a good deal of technical scrutiny and be at odds with the goal of having a path for evidence that does not include extensive technical analysis. Overall it seems simpler to replace section b with a simpler definition of radial such as – all load served from a single substation at a single voltage level.
No
Section 1.c again appears to allow the exclusion of large portions of the system in metropolitan areas. How does this differ from the LDN exclusion already presented in the definition? Section c should simply be deleted.
No
This appears to be the same as section 1.c and again possibly allows for the exclusion of large portions of the system in metropolitan areas. Section 1.d. should simply be deleted.
No
The use of distribution factors is a significant concern. The term distribution factor is used a number of ways in the industry. Is this determined using the percentage pickup on the element in question following the loss of another element, or is this the percentage of a transfer that is picked up on the element in question, or a combination of both? Item 2.a.ii states that the TPL studies have to be run if the model is updated. The distribution factor is not required to be calculated as part of the TPLs and

therefore will require additional analysis in all circumstances, not just when the model is updated.
The use of distribution factors is a significant concern. The term distribution factor is used a number of ways in the industry. Is this determined using the percentage pickup on the element in question following the loss of another element, or is this the percentage of a transfer that is picked up on the element in question, or a combination of both? Item 2.a.ii states that the TPL studies have to be run if the model is updated. The distribution factor is not required to be calculated as part of the TPLs and therefore will require additional analysis in all circumstances, not just when the model is updated.
Is the requirement to evaluate the voltage dip on the element or is the test to evaluate the voltage dip on the BES due to a contingency on the element? Under the draft TPL standards, this will have to be tested and investigated anyway, so it is unclear as to what is being added or evaluated here.
Is the requirement to evaluate the voltage dip on the element or is the test to evaluate the voltage dip on the BES due to a contingency on the element? Under the draft TPL standards, this will have to be tested and investigated anyway, so it is unclear as to what is being added or evaluated here.
No
No
Comments were already included above.
No
No
Yes
Any generator that is studied individually will not be shown as material since the electric system is designed to allow the outage of any individual generator. Generators must be studied within the context of the electric system to assess materiality. The generator and its interconnecting transmission facilities would likely be able to be excluded based on this process although they meet the Registry Criteria thresholds requiring inclusion.
Group
SPP Standards Review Group
Robert Rhodes
No
Physical characteristics as described in 1.a.i. do not capture the true picture of the functionality of an Element. Rather than use impedance perhaps the SDT should use ‘radial’ or ‘having one source’ as the descriptive term.
No
Could the SDT clarify what is meant by ‘disconnection procedures’ in 1.b.ii? It appears that the SDT is okay with excluding an element that can be switched out of service without removing another element. How are automatic breaker operations or manual switching factored into disconnection procedures? We need clarification on this. More and better examples, including the type of connectivity to the grid, would be helpful.
No
Rather than combining two conflicting criterion – ‘rarely’ and the number of MHh of backflow allowed annually – we would suggest the following. 1) That the maximum outflow doesn’t create an issue on the BES. This would be determined by study of the system and conditions. Or 2) when the condition exists, be able to mitigate the condition within a prescribed time relevant to the prevailing system conditions.
No

It may be better to focus on the purpose, or need, of a facility, the functionality of the facility, rather than how electric flows impacted the facility during a given situation. Therefore, we would suggest moving away from the term 'intent'.
No
There are situations where setting a minimum TDF will not work due to the nature of the TDF. For example, a radial line connected to a bus with two networked lines. The radial line serves only load and would normally be excluded from the BES. However, if we use the TDF as a factor the radial line would be included in the BES since the TDFs would be high.
Yes
We would suggest that the SDT consider an exclusion for networked municipal systems operating below 200kV which have more than 75 MVA of generation and whose systems do not include flowgates or IROLs.
No
Please see our comment in 5b above.
No
Yes
In Question 5 regarding the Transient and Steady State Stability criteria, we would suggest establishing criteria for the damping such that the time required to return to normal is limited. Damping in 1-5% range may be sufficient to accomplish this. Also, delete 2.a.iv.8. in the Exclusion Criteria and 1.c.8. in the Inclusion Criteria.
Individual
Jonathan Appelbaum
The United Illuminating Company
No
No
No
What does rarely mean? How is maintenance conditions considered? This is simply worded but conceptually extremely complicated.
No
The wording is ambiguous. What is meant by system? Different voltage levels, Owners?
No
This is not very different from trying to demonstrate no adverse impact outide the local area.
Distribution factor requires a definition.
Measured where on the BES?
Measured where on BES?
No
Procees is complicated and fraught with interpretations.

No
No
NERC modeling Standards should be sufficient
Yes
under the technical principles, some facilities that are local distribution facilities may be included the BES. This is in conflict with the definition of the Bulk Power System in Section 215 which excludes facilities used in local distribution. In particular, Local distribution facilities can not be included in the BES even if they are part of a cranking path.
Yes
UI is concerned that the method used to characterize exclusions in Method 1 did not follow the proposed BES Definition and believe the process developed for Method 2 (and reused for Sub-100kV Inclusions) is overly complicated, lacks necessary regional standards to support the process and may prove too difficult for some companies to fully comply with thereby discouraging a consistent and uniform application of the definition across all regions and affected BES element owners. These Principles are not technical Principles. Further the use of these Planning criteria and impact assessments is not very different from the NPCC functional test that drew the ire of FERC. The Drafting Team is attempting to develop definitions and identifiers for the fringes of the bulk power system, but they are replacing one set of ambiguities with a set of technical ambiguity. This product is poor because given the very first term, that is the first principle to be met, is those facilities necessary for the reliable operation of an interconnected transmission system, is full of undefined concepts such that anything attempting to define it in a subtle manner is immediately lost in the ether. Recognizing that these technical principles will be permanent, UI suggests excluding them and sticking with the bright line exclusions and inclusions in the proposed definition.
Individual
Neil Phinney
Georgia System Operations Corporation
The concept of "Load centers" is vague and needs more specificity for this to be clear.
If the BES Definition itself is clarified to allow for some de minimis amount of power flow out of a customarily radial line that is excluded by definition, this justification for an exclusion may not be necessary. We encourage the Drafting Team to pursue that approach because we believe it is technically justified and could significantly reduce the need for exceptions.
The concept of "intentional" transport of power is vague and needs more specificity for this to be clear. Also, it would help to have more information about the sort of "operational procedures" that would be acceptable as evidence.
It would be helpful to specify which TPL Standard(s) the referenced studies are usually prescribed for.

Group
Western Electricity Coordinating Council
Michelle Mizumori
Yes
As long as this remains an "AND" statement, WECC supports this concept. It helps to support the concept that the element is used as distribution to serve Load, rather than to transfer bulk power. However, some correlation between the size of the Load and the size of an element may be needed. For example, a line that can carry 600 MW in close electrical proximity a 20-MW Load may not meet the intent of this characteristic. Furthermore, the criteria must define where the load is located for the measure of electrical proximity. In planning models, loads are often aggregated to a higher voltage substation bus, while in a distribution system model they are typically modeled along a distribution feeder. The SDT should clarify how it intends for the load to be modeled for this analysis of close proximity.
No
This characteristic is vague and subjective. It is unclear what "radial in character" means, and the methods for demonstration do not appropriately clarify the meaning. WECC recommends that the SDT determine what it is looking for to show "radial in character" and clearly identify that concept in the methods for demonstration. It is not clear how Operating Procedures can demonstrate that an element is "radial in character" nor is it clear how a re-evaluation might be processed if such Operating Procedures, ownership, or operations change. WECC believes that BES inclusion or exclusion should be based on physical, technical characteristics of the element, and requests a justification for use of procedural or contractual documentation as evidence of a technical principle.
Yes
WECC agrees in concept with this characteristic, but it needs to be clarified whether the items i-v are "AND" statements. WECC also suggests that i and ii be switched and re-worded. Suggested language for ii would be "A limited set of conditions where power flows out must be identified; for example, only under specified Contingency events." Then i can become a sub-bullet of ii. It must also be clarified that the specified conditions must have a technical justification to show that the element is not "necessary for reliable operation." Otherwise it is not clear that the "limited conditions" are truly a justification for exclusion. Any non-zero MWh limit must have a technical justification, otherwise zero should be used. In addition to the imports/exports from the system, the size of the system (in MW) should also be defined.
Yes
WECC agrees in concept with this characteristic, but believes that there needs to be more clarity of what constitutes the evidence. Since flow data is used for characteristic c, it seems that the same sort of data (but separated into hourly flow in and hourly flow out) could be used to demonstrate this. Otherwise, a simple procedure that claims "power entering this system is not intentionally transported through the system to some other system" would meet the letter of the law, but gives no description of how this is achieved. If Operating Procedures are allowed, more clarity must be provided on what those procedures must entail.
Yes
WECC agrees in concept that a technical analysis can be used and should be allowed to show that an element is not necessary for reliable operation. However, the technical analysis must be based on sound reasoning and a justification must be given as to why the analysis makes a showing that the element is not necessary for reliable operation. Furthermore, the technical principles must identify what category(ies) of TPL studies must be run. Finally, the values used for the threshold criteria and/or disturbances must be more stringent than the applicable TPL criteria/disturbances. Otherwise the argument becomes circular because all BES elements must meet the TPL criteria, so by meeting them all elements could be excluded.

Yes
WECC recommends that the SDT consider not only the single-phase faults used in the TPL standards, but also the effect of more severe events such as two- or three-phase faults, with delayed clearing and the necessity of the element in those cases.
Yes
Yes
The Owner should have all of the data to perform this analysis for an Exclusion; however, an Inclusion would likely be sought by an entity other than the Owner (i.e., Regional Entity, RC, BA, TOP) that may not have sufficient data. It should be clarified in the Rules of Procedure that such an entity has the right to request such data and that the Owner must provide such data.
Yes
It must be clear that under NERC Standard IRO-010, the Reliability Coordinators are required to obtain information relating to the operation of the bulk power system within their respective areas. In light of this requirement, Reliability Coordinators may request the submittal of information for network facilities that ultimately are not determined to be BES facilities. It would be reasonable to also include a requirement that Reliability Coordination staff will explain why they require the requested information from non-BES facilities when seeking such information.
Yes
The biggest concern is that the Technical Principles and the reasoning behind them need to be fully explained. The SDT has mentioned on calls the possibility of a white paper or resource document, and WECC fully supports the creation of such a document. This white paper should describe the rationale for the criteria as well as how that indicates that the element is necessary for reliable operation. Also, the justification for the ERO to override these criteria should be clarified. It should be clear that the ERO's ability to override these criteria is on a case-by-case basis.
Individual
Michelle R DAntuono
Occidental Energy Ventures Corp.
Yes
Yes
Yes
Yes
Yes
Suggested additional method. The Element(s) meet all the following characteristics: 1) generally radial in nature, and 2) used to supply a retail customer from the point of delivery to the load regardless of voltage. Evidence to support this position could be an interconnection agreement indicating the point of delivery, a one-line diagram showing the point of delivery and load, etc. The

technical rationale is that protection of the BES for facilities serving a retail customer is the responsibility of the service provider (e.g., transmission owner/operator). These facilities are distribution facilities and are not now part of the BPS. Alternatively, this could be an Exclusion in the BES Definition as it is in the current definition.

Yes

The proposed technical principles seem to be in contradiction to the exemption in FPA Section 215 against the inclusion in the BES of facilities used in the local distribution of electric energy.

Yes

The Technical Principles and the new BES Definition seem to include a significant number of retail customers as proposed. Surely this is not the intent of these changes. There should be an exclusion along the lines of Comment 6.

Individual

Russ Schneider

Flathead Electric Cooperative, Inc.

No

agree in principle that one characteristic of local distribution systems is that they are usually confined to a relatively limited geographic area, as opposed to transmission systems, which (especially in the West) tend to cover very large distances. We also believe the proximity test may be a sensible way to identify local distribution facilities. However, we believe that the proximity test may be unnecessary, and if an Element or group of Elements meets other tests proposed by the SDT, it should be excluded from the BES, even if it does not meet the proximity test.

Yes

agree conceptually that systems operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. That is because local distribution systems typically operate adjacent to, or at the end of transmission lines, and function operationally to move power from the Transmission Service Provider's point of delivery of bulk power that has moved across the integrated bulk transmission system to end-users located within the local distribution utility's service territory. To be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as a system that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that system is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution systems and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution system interconnected with those relays should not, and cannot legally, be classified as BES.

Yes

agree conceptually that one critical characteristic distinguishing local distribution facilities that must be excluded from the BES from transmission facilities that should be included is the manner in which power flows on those facilities. Power on local distribution systems generally flows only from the interconnected transmission source and across the distribution system for delivery to end-use customers. By contrast, power on transmission systems generally flows in two (or multiple, in networked systems) directions and is delivered in bulk to distribution utilities rather than to end-users. Hence, the SDT has properly identified power flows as one important characteristic that distinguishes BES transmission systems from local distribution systems. We agree conceptually that the fact that power may flow out of a local distribution system onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the system as local distribution. Accordingly, we support inclusion of power flow analysis as one element of characteristics

that can be used to exclude local distribution facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a local distribution system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify systems that are not necessary for the operation of the BES under this text, we propose that any system where real power flows into the local distribution system 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That a system meets this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. In addition, the presence of generation within a local distribution system that only modifies the level of the load served by the bulk system, but does not result in power being injection into the bulk system, does not change the reliability effect of the local network and therefore should not require the local network to be classified as BES.
Yes
agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. In fact, we believe this may be the most important and readily identifiable distinction. As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Local distribution systems do not share any of these operational characteristics. Accordingly, we agree that if power is not intentionally transported through a particular system, that system is not used for transmission and should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to a particular system will provide a ready guide to whether power is intentionally scheduled across that system. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test.
Yes
agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with local distribution and not BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES.
The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a "hub and spoke system" where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of operations. For example, the Western Interconnection uses a rated paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A we support exemption criteria for individual frequency independent regions, or interconnections.
we propose that, if an Element is to be excluded from the BES, removal of that Element should

produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency.
we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more.
we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more.
No
supports the exemption of generation interconnected to local distribution networks if the generation is less than 300 MW capacity and where the power generated is consumed within the LDN and rarely flows out of the LDN consistent with the section III.c.4 [Exclusion] of the NERC Statement of Compliance Registry Criteria as well as the Load modifiers used in the Eastern Interconnection. "Load Modifiers" (small generators that only affect load at the distribution level).”
Yes
Elements otherwise excluded from the BES should be included only upon a technically valid showing that the Elements contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system.
Yes
Obtaining data creates a cost and should be minimized as possible.
No
the proposed BES Definition could conflict with Section 215 of the Federal Power Act if the Definition, the Exception Process, and the Technical Criteria do not effectively exclude facilities used in local distribution from the BES or if the BES definition does not focus on cascading outages, separation events, and instability on the interconnected bulk system. These statutory limits on the scope of the BES and reliability standards are a minimum that must be met.
Yes
supports the approach to the exclusion process proposed by the SDT, which provides two different paths to exclusion, one based on readily-identifiable operational characteristics of a system, and one based on technical reliability analysis. We believe it is important to provide for the first path, based on operational characteristics, so that systems that are marginally disqualified under the BES Definition (because, for example, generation within the system exceeds demand for a few hours a year) can obtain an exclusion without the large investment of resources that otherwise might be required for a full-scale technical analysis. we question whether the first subsection of the characteristic test, relating to system proximity, is necessary, and we are concerned that the requirement that a system meet all four requirements of the characteristics test may be overly restrictive. For example, it is easy to imagine a distribution system in a rural area that covers a widely dispersed area, so that load is many miles from the relevant generation/transmission source, and that the system therefore does not meet the electrical proximity element, but meets the other three elements of the characteristics test. Such a system should be excluded because it clearly serves a local distribution function, and not a transmission function, as demonstrated by the fact that the system meets subsections (c) (power flows into the system but rarely flows out) and (d) (power is not intentionally transported over the system). Accordingly, we recommend that the SDT consider eliminating the first test. In the alternative, the SDT should consider allowing exempting a system from the BES if it, for example, meets three of the four criteria rather than all four.
Individual
Ed Davis
Entergy Services
No
Entergy does not agree with the assumption that the proximity of a BES facility to Load is indicative of it's importance to BES reliability. Some lower voltage facilities can be quite short and thus have lower impedance but be important to BES reliability. Likewise some facilites remote from load centers may

have virtually no impact on BES reliability. There is also insufficient information as to how the impedance would be measured (locations of measurements within and outside of the "Load pockets". This Exemption Criteria should be removed. The term "Load centers" is not defined leaving it subject to interpretation. "Loads" are not BES Elements and therefore can not be exempted from being considered BES Elements. Item 1.a.i - "Loads within the system seeking exception are in close electrical proximity if they are separated by an impedance of no greater than TBD." This sentence needs to be deleted.
Yes
Entergy agrees that radial facilities should be excluded directly. However, the "radial in character" language is nebulous. A simpler approach could be to allow exceptions for facilities which become radial as a consequence of a normal system response to a disturbance (breakers opening during normal clearing of a fault).
No
Power flows into or out of a portion of the BES may characterize BES facilities less important to BES reliability but without limits to the size of the area, it would be difficult to show compliance. An entire state could be excluded from the BES. Additionally, there is no process specified to review the characteristics as transmission topology and resources change over time.
No
There is not sufficient evidence provided by the SDT to distinguish between this fourth item for exclusion and the third item for exclusion. They both seem to fall in line with what is excluded per the bright line exclusion E3 (or Local Distribution Networks), but as written, it would be difficult to measure what is meant by “is not intentionally transported through” in this fourth item just as it would be difficult to measure what’s meant by “flows into the system, but rarely flows out” for the third item. Such an exclusion should be required to include some technical analysis, but not extensive technical analysis (at least the inclusion of power flow base case as a minimum).
No
The entire approach seems overly complex and difficult to document.
Yes
Revise second paragraph to read “Due to the importance of designated Blackstart Resources and their Cranking Paths to restore efforts, no exceptions will be allowed for those items that are included in a system restoration plan.” Technical rationale: Multiple Blackstart Resources and Cranking Paths are frequently available but are not included in a system restoration plan. System restoration plans describe the Blackstart resources and cranking paths that are deemed to be necessary for system restoration. Section “Exception Criteria – Exclusions”: Add 1.e. “Generation that is inoperable and not planned to be placed back into service but not yet officially decommissioned.” Technical rationale: These facilities are not relied on to insure the reliability of the BES.
No
It is unclear why an inclusion process should be necessary. Including facilities not otherwise included in the basic definition should be at the discretion of the TO.
No
No
No

Individual
Jack Stamper
Clark Public Utilities
Yes
Clark believes the proximity test should be considered be a valid factor in determining whether a facility is part of the BES or not. Just as this factor is used in the consideration on whether a facility is part of a Local Distribution Network. Clark is not convinced that "proximity" and "impedance" are interchangeable. While impedance will be lower for shorter distances it will also be affected by other factors that are not indicative of close proximity. Distance seems more appropriate to use since it would complement a literal interpretation of the term proximity.
Yes
Clark agrees conceptually that systems operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. That is because local distribution systems typically operate adjacent to, or at the end of transmission lines, and function operationally to move power from the Transmission Service Provider's point of delivery of bulk power that has moved across the integrated bulk transmission system to end-users located within the local distribution utility's service territory. To be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as a system that may include one or more lines into a load area or referenced as a local distribution network. In addition, Clark agrees that the manner in which a system is operated during BES disturbances may be an indication of whether that system is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution systems and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution system interconnected with those relays should not.
Yes
Clark agrees conceptually that one critical characteristic distinguishing local distribution facilities that must be excluded from the BES from transmission facilities that should be included is the manner in which power flows on those facilities. Power on local distribution systems generally flows only from the interconnected transmission source and across the distribution system for delivery to end-use customers. By contrast, power on transmission systems generally flows in two (or multiple, in networked systems) directions and is delivered in bulk to distribution utilities rather than to end-users. Hence, the SDT has properly identified power flows as one important characteristic that distinguishes BES transmission systems from local distribution systems. In order to identify systems that are not necessary for the operation of the BES under this text, we propose that any system where real power flows into the local distribution system 90 percent of the time or more under normal operating conditions.
Yes
Clark agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. Clark believes this may be the most important and readily identifiable distinction. Accordingly, Clark agrees that if power is not intentionally transported through a particular system, that system is not used for transmission and should not be considered part of the BES.
Yes
Clark agrees conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with local distribution and not BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Clark supports the technical arguments and the White Paper presented by Snohomish County PUD in their comments. Clark recommends that the SDT modify its approach to the technical exclusion process to match the approach advocated in the White Paper, which is based upon the approach recommended by the WECC BES Task Force.

The use of distribution factors, such as Power Transfer Distribution Factors (“PTDF”) and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection.
Specific transient voltage dip thresholds are proposed at page 15 of Snohomish’s White Paper. For example, Clark proposes that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Page 15 of Snohomish’s White Paper also sets forth recommended thresholds for transient frequency response. For example, Clark proposes that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
See Clark’s comments on 5c and 5d.
No
Yes
As a general matter, Clark agrees with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid showing that the Elements contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. Clark also agrees that the SDT has, in general, identified the correct technical approach, although Clark recommends that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in the Snohomish PUD White Paper, in the WECC BES Task Force Proposal 6, and in Clark’s answer to Question 5.
See comments in 5.
See comments in 5.
See comments in 5.
See comments in 5.
No
As discussed on page 12 of the Snohomish White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis Clark recommends is the current base case operated by the relevant Regional Entity, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data.
No
No
Individual
Dave Markham
Central Electric Cooperative
Yes
First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other

mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes

We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.

Yes

We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify facilities that are not necessary for the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT's view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were constructed on certain facilities to cause power to flow out of those facilities more than ten percent of the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.

Yes

As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to particular facilities will provide a ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.

Yes
We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task Force.
The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a "hub and spoke system" where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.
Specific transient voltage dip thresholds are proposed on page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided on pages 12-16 of Snohomish's White Paper.
Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.
Please see our response to Question 5d.
No
Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish's White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary

because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.

Please see our corresponding answers to Question 5 for 7b-7e.

No

As discussed on page 12 of Snohomish's White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.

No

Yes

In general, as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.

Individual

Dave Hagen
Clearwater Power Electric Cooperative
Yes
First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.
Yes
We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.
Yes
We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify facilities that are not necessary for the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT's view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were constructed on certain facilities to cause power to flow out of those facilities more than ten percent of the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.
Yes
As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We

also agree that examining the Operating Procedures applicable to particular facilities will provide a ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.
Yes
We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task Force.
The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a "hub and spoke system" where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.
Specific transient voltage dip thresholds are proposed on page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided on pages 12-16 of Snohomish's White Paper.
Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.
Please see our response to Question 5d.
No
Yes

As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish's White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.

Please see our corresponding answers to Question 5 for 7b-7e.

No

As discussed on page 12 of Snohomish's White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.

No

Yes

In general, as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece

of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.
Individual
Roman Gillen
Consumer's Power Inc.
Yes
First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.
Yes
We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.
Yes
We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify facilities that are not necessary for the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT's view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were

constructed on certain facilities to cause power to flow out of those facilities more than ten percent of the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.

Yes

As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to particular facilities will provide a ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.

Yes

We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task Force.

The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a "hub and spoke system" where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.

Specific transient voltage dip thresholds are proposed on page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical

justification for these thresholds is provided on pages 12-16 of Snohomish's White Paper.
Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.
Please see our response to Question 5d.
No
Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish's White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.
Please see our corresponding answers to Question 5 for 7b-7e.
No
As discussed on page 12 of Snohomish's White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.
No
Yes
In general, as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and

control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.

Individual

Roger Meader

Coos-Curry Electric Cooperative

Yes

First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes

We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.

Yes

We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which

generation within the system exceeds demand. In order to identify facilities that are not necessary for the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT's view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were constructed on certain facilities to cause power to flow out of those facilities more than ten percent of the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.

Yes

As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to particular facilities will provide a ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.

Yes

We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task Force.

The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a "hub and spoke system" where loads are very remote from large generation plants, with margins that

are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.
Specific transient voltage dip thresholds are proposed on page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided on pages 12-16 of Snohomish's White Paper.
Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.
Please see our response to Question 5d.
No
Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish's White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.
Please see our corresponding answers to Question 5 for 7b-7e.
No
As discussed on page 12 of Snohomish's White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.
No
Yes

In general, as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.

Individual

Dave Sabala

Douglas Electric Cooperative

Yes

First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes

We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.

Yes

We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those

facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify facilities that are not necessary for the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT's view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were constructed on certain facilities to cause power to flow out of those facilities more than ten percent of the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.

Yes

As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to particular facilities will provide a ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.

Yes

We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task

Force.
The use of distribution factors, such as Power Transfer Distribution Factors (“PTDF”) and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a “hub and spoke system” where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.
Specific transient voltage dip thresholds are proposed on page 15 of Snohomish’s White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided on pages 12-16 of Snohomish’s White Paper.
Page 15 of Snohomish’s White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.
Please see our response to Question 5d.
No
Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish’s White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT’s overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to “override this criterion” if it provides “additional justification” for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if “additional justification” is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.
Please see our corresponding answers to Question 5 for 7b-7e.
No
As discussed on page 12 of Snohomish’s White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting

point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.

No

Yes

In general, as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.

Individual

Bryan Case

Fall River Electric Cooperative

Yes

First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes

We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution

network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.

Yes

We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify facilities that are not necessary for the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT's view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were constructed on certain facilities to cause power to flow out of those facilities more than ten percent of the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.

Yes

As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to particular facilities will provide a ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.

Yes

We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES.

Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task Force.
The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a "hub and spoke system" where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.
Specific transient voltage dip thresholds are proposed on page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided on pages 12-16 of Snohomish's White Paper.
Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.
Please see our response to Question 5d.
No
Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish's White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e)

have been exhausted.

Please see our corresponding answers to Question 5 for 7b-7e.

No

As discussed on page 12 of Snohomish's White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.

No

Yes

In general, as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.

Individual

Rick Crinklaw

Lane Electric Cooperative

Yes

First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using

impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes

We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.

Yes

We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify facilities that are not necessary for the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT's view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were constructed on certain facilities to cause power to flow out of those facilities more than ten percent of the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.

Yes

As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to particular facilities will provide a ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are

concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.

Yes

We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task Force.

The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a "hub and spoke system" where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.

Specific transient voltage dip thresholds are proposed on page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided on pages 12-16 of Snohomish's White Paper.

Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.

Please see our response to Question 5d.

No

Yes

As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish's White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach,

we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.

Please see our corresponding answers to Question 5 for 7b-7e.

No

As discussed on page 12 of Snohomish's White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.

No

Yes

In general, as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to

comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.

Individual

Michael Henry

Lincoln Electric Cooperative

Yes

First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes

We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.

Yes

We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify facilities that are not necessary for the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT's view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were constructed on certain facilities to cause power to flow out of those facilities more than ten percent of the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.

Yes

As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased

on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to particular facilities will provide a ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.
Yes
We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task Force.
The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a "hub and spoke system" where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.
Specific transient voltage dip thresholds are proposed on page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided on pages 12-16 of Snohomish's White Paper.
Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.
Please see our response to Question 5d.
No

Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish's White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.
Please see our corresponding answers to Question 5 for 7b-7e.
No
As discussed on page 12 of Snohomish's White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.
No
Yes
In general, as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would

come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.
Individual
Richard Reynolds
Lost River Electric Cooperative
Yes
First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.
Yes
We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.
Yes
We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify facilities that are not necessary for the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT's view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for

new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were constructed on certain facilities to cause power to flow out of those facilities more than ten percent of the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.

Yes

As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to particular facilities will provide a ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.

Yes

We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task Force.

The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a "hub and spoke system" where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.

Specific transient voltage dip thresholds are proposed on page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element

should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided on pages 12-16 of Snohomish's White Paper.

Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.

Please see our response to Question 5d.

No

Yes

As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish's White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.

Please see our corresponding answers to Question 5 for 7b-7e.

No

As discussed on page 12 of Snohomish's White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.

No

Yes

In general, as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with

reliability standards for only the Bulk-Power System." 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.

Individual

Annie Terracciano

Northern Lights Electric Cooperative

Yes

First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes

We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.

Yes

We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system

exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify facilities that are not necessary for the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT's view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were constructed on certain facilities to cause power to flow out of those facilities more than ten percent of the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.

Yes

As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to particular facilities will provide a ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.

Yes

We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task Force.

The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical

exemption process be allowed on an interconnections wide basis. The Western Interconnection is a "hub and spoke system" where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.

Specific transient voltage dip thresholds are proposed on page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided on pages 12-16 of Snohomish's White Paper.

Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.

Please see our response to Question 5d.

No

Yes

As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish's White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.

Please see our corresponding answers to Question 5 for 7b-7e.

No

As discussed on page 12 of Snohomish's White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data,

although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.
No
Yes
In general, as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.
Individual
Doug Adams
Okanogan Electric Cooperative
Yes
First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.
Yes
We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and,

while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.

Yes

We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify facilities that are not necessary for the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT's view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were constructed on certain facilities to cause power to flow out of those facilities more than ten percent of the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.

Yes

As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to particular facilities will provide a ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.

Yes

We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and

resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task Force.
The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a "hub and spoke system" where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.
Specific transient voltage dip thresholds are proposed on page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided on pages 12-16 of Snohomish's White Paper.
Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.
Please see our response to Question 5d.
No
Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish's White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.
Please see our corresponding answers to Question 5 for 7b-7e.

No

As discussed on page 12 of Snohomish's White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.

No

Yes

In general, as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.

Individual

Heber Carpenter

Raft River Rural Electric Cooperative

Yes

First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes
We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.
Yes
We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify facilities that are not necessary for the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT's view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were constructed on certain facilities to cause power to flow out of those facilities more than ten percent of the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.
Yes
As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to particular facilities will provide a ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.
Yes
We agree conceptually with the idea that two different paths to exclusion should be adopted, one

relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task Force.
The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a "hub and spoke system" where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.
Specific transient voltage dip thresholds are proposed on page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided on pages 12-16 of Snohomish's White Paper.
Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.
Please see our response to Question 5d.
No
Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish's White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected

transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.
Please see our corresponding answers to Question 5 for 7b-7e.
No
As discussed on page 12 of Snohomish's White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.
No
Yes
In general, as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.
Individual
Ken Dizes

Salmon River Electric Cooperative

Yes

First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes

We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.

Yes

We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify facilities that are not necessary for the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT's view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were constructed on certain facilities to cause power to flow out of those facilities more than ten percent of the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.

Yes

As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to particular facilities will provide a

ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.

Yes

We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task Force.

The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a "hub and spoke system" where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.

Specific transient voltage dip thresholds are proposed on page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided on pages 12-16 of Snohomish's White Paper.

Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.

Please see our response to Question 5d.

No

Yes

As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should

be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish's White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.

Please see our corresponding answers to Question 5 for 7b-7e.

No

As discussed on page 12 of Snohomish's White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.

No

Yes

In general, as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the

criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.

Individual

Steve Eldrige

Umatilla Electric Cooperative

Yes

First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes

We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.

Yes

We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify facilities that are not necessary for the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT's view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were constructed on certain facilities to cause power to flow out of those facilities more than ten percent of

the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.
Yes
As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to particular facilities will provide a ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.
Yes
We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task Force.
The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a "hub and spoke system" where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.
Specific transient voltage dip thresholds are proposed on page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided on pages 12-16 of Snohomish's White Paper.

Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.

Please see our response to Question 5d.

No

Yes

As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish's White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.

Please see our corresponding answers to Question 5 for 7b-7e.

Yes

As discussed on page 12 of Snohomish's White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.

No

Yes

In general, as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or

any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.

Individual

Marc Farmer

West Oregon Electric Cooperative

Yes

First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes

We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.

Yes

We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify facilities that are not necessary for

the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT's view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were constructed on certain facilities to cause power to flow out of those facilities more than ten percent of the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.

Yes

As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to particular facilities will provide a ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.

Yes

We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task Force.

The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a "hub and spoke system" where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with

loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.

Specific transient voltage dip thresholds are proposed on page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided on pages 12-16 of Snohomish's White Paper.

Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.

Please see our response to Question 5d.

No

Yes

As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish's White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.

Please see our corresponding answers to Question 5 for 7b-7e.

No

As discussed on page 12 of Snohomish's White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.

No

Yes

In general, as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.

Individual

Rick Paschall

Pacific Northwest Generating Cooperative

Yes

First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes

We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.

Yes

We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those

facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify facilities that are not necessary for the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT's view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were constructed on certain facilities to cause power to flow out of those facilities more than ten percent of the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.

Yes

As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to particular facilities will provide a ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.

Yes

We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task

Force.
The use of distribution factors, such as Power Transfer Distribution Factors (“PTDF”) and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a “hub and spoke system” where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.
Specific transient voltage dip thresholds are proposed on page 15 of Snohomish’s White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided on pages 12-16 of Snohomish’s White Paper.
Page 15 of Snohomish’s White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.
Please see our response to Question 5d.
No
Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish’s White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT’s overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to “override this criterion” if it provides “additional justification” for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if “additional justification” is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.
Please see our corresponding answers to Question 5 for 7b-7e.
No
As discussed on page 12 of Snohomish’s White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting

point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.

No

Yes

In general, as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.

Individual

Aleka Scott

PNGC Power

Yes

First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes

We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution

network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.

Yes

We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify facilities that are not necessary for the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT's view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were constructed on certain facilities to cause power to flow out of those facilities more than ten percent of the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.

Yes

As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to particular facilities will provide a ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.

Yes

We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES.

Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task Force.

The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a "hub and spoke system" where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.

Specific transient voltage dip thresholds are proposed on page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided on pages 12-16 of Snohomish's White Paper.

Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.

Please see our response to Question 5d.

No

Yes

As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish's White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e)

have been exhausted.

Please see our corresponding answers to Question 5 for 7b-7e.

No

As discussed on page 12 of Snohomish's White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.

No

Yes

In general, as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.

Individual

Stuart Sloan

Consumer's Power Inc.

Yes

First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using

impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes

We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.

Yes

We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify facilities that are not necessary for the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT's view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were constructed on certain facilities to cause power to flow out of those facilities more than ten percent of the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.

Yes

As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to particular facilities will provide a ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are

concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.

Yes

We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task Force.

The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a "hub and spoke system" where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.

Specific transient voltage dip thresholds are proposed on page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided on pages 12-16 of Snohomish's White Paper.

Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.

Please see our response to Question 5d.

No

Yes

As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish's White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach,

we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.

Please see our corresponding answers to Question 5 for 7b-7e.

No

As discussed on page 12 of Snohomish's White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.

No

Yes

In general, as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." 16 U.S.C. § 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to

comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.
Individual
Bill Keagle
BGE
No
BGE is not clear as to why "close electrical proximity to load" is appropriate to use as a factor in determining exclusion.
Yes
No comment.
No
BGE is generally opposed to this requirement because the MWh factor is too variable and/or may be utilized in a way contrary to reliable system operation.
Yes
BGE generally agrees with this requirement, but believes that the term "system" should be clarified.
Yes
BGE believes that there is value in allowing for exclusions through a technical analysis path. Because multiple entities may perform "planning assessments" using different models, the phrase, "*the* most recent *applicable* planning assessment" should be clarified to avoid ambiguity as to which model(s) are acceptable. It may be useful to designate the models used in the Planning Authority analyses as acceptable.
BGE requests that it be made clear that the 2(a) iv.1 criteria refers to the of the distribution factor for the loss of any other facility on the subject Element, whereas criteria 2 through 7 refer to the performance following the loss of the subject Element.
For PJM members, this figure is set at 5%. BGE suggests a lower figure such as 2-3%.
No comment.
BGE believe the loss of the facility in question should cause only a small voltage deviation to the BES (on the order of 1%).
No
No comment.
Yes
BGE believes that there is a value in allowing for inclusions through a technical analysis path; however, it is critical that such a path does not allow for unreasonable inclusion of facilities that do not warrant BES status.
No comment.
No comment.
No comment.
No comment.
No
No comment.
No
No comment.
No
It is important to consider that the Technical Principles for Demonstrating BES Exceptions is only one part of the BES definition project. The Technical Principles and the Rule of Procedure Process must be evaluated together with the BES Definition to sufficiently understand the revisions. In the end, the Technical Principles and the BES Definition must coalesce and be clearly coordinated and understood. The BES Definition language must include reference to the role of the associated defining documents. One unambiguous document must not be made ambiguous by an associated document or process. We appreciate the work of the drafting team and support the goal to produce clear definition language so that upwards of 95% of the assets are clearly distinguished as either included or excluded from the BES. We are particularly sensitive to the potential for burdensome processes (e.g. TFEs) to be added

to reliability compliance. We appeal to the team for continued, vigilant consideration of the arduousness of the BES determination process.
Group
NERC Staff
David Taylor
No
Electrical proximity to load is not an informative measure of whether Element(s) are necessary for reliable operation or the potential reliability impact of excluding Element(s) from the BES. Establishing a maximum impedance threshold as proposed would assure only that the excluded Element(s) do not span a large electrical distance. While minimizing impedance may be beneficial for some aspects of reliability, other aspects of BES reliability are improved with higher impedance. For example, higher impedance minimizes through-flow of power and minimizes impacts to BES reliability associated with faults and switching errors.
No
We believe that restating this measure as "System performance impacts are similar to radial systems" would be more in-line with the SDT intent and a better measure of whether Element(s) are necessary for reliable operation. We also believe that the best measure of whether Element(s) affect system performance in a manner similar to radial systems is through distribution factor analysis. Such analysis, when limited to this purpose, does not require extensive technical analysis. Analysis for a limited number of stressed transfer conditions, and contingencies involving the Element(s) under consideration and in the area of the Element(s) under consideration, is sufficient to demonstrate whether the system performance impacts are similar to radial systems.
No
Requiring that power flows into, and rarely out of, the Element(s) considered for exclusion is an appropriate measure, as is requiring an entity to define the conditions under which power will flow out. In addition to information such as specified contingencies in item (ii), details on the conditions should include other relevant information such as the system load level, generation dispatch, system transfer levels, etc., and the number of hours per year these conditions are expected. An exception request also should include the maximum flow expected. E.g., the following information would be useful in evaluating a request for exception: "Power will flow out only when line A is out of service, system load is at or below X percent of peak load, and generator B is on-line; based on the load duration curve for this area and the number of hours generator B is dispatched at these load levels, the exposure to power flow out for this contingency is limited to N hours per year and the maximum flow if the contingency occurred during these hours would be Y MW." This type of information will be far more informative than a pass/fail test as to whether a MWh threshold is expected to be exceeded. While a MWh threshold may be useful for evaluating requests, it is unlikely that a one-size-fits-all threshold could be established for evaluating exception requests.
No
Limitations on through-flow of power is an appropriate consideration; however, whether the power flow is intentional should not be a primary consideration. Intent is not measurable and most major disturbances are the result of unintentionally placing the system in an unreliable operating condition. The main clause in item (d) should be modified to reflect that transporting power to another system through the Element(s) to be excluded is prevented (such as by system configuration and/or impedance) or restricted (such as by Operating Procedures). Sub-items (i) and (ii) already are consistent with this revision to the main clause.
No
NERC staff is not opposed to development of evidence based on technical analysis; however, the type of analysis included in this exception criterion requires extensive resources and lacks sufficient detail to allow for consistent and repeatable application. Concerns with this approach include (1) the ability to provide sufficient guidance on the system conditions and contingencies necessary to support an exception request, (2) difficulty with identifying thresholds for items iv-1 through iv-4, and (3) the ability to address interdependencies among exception requests. These concerns can be addressed by deleting this second path for evidence and including technical analysis on a limited basis to assess performance as described in our response to Question 2. If the SDT elects to retain this second path for evidence, then our three concerns must be addressed. In particular with regard to our third

concern, the ERO must be able to deny requests for exception based on the cumulative impact of all previously approved exceptions.

No

No

NERC staff is not opposed to development of evidence based on technical analysis; however, we have the same concerns with the exception criterion for including Element(s) as with exception criterion 1 for excluding Element(s). The type of analysis included in this exception criterion requires extensive resources and lacks sufficient detail to allow for consistent and repeatable application. Additional concerns with this approach include (1) the ability to provide sufficient guidance on the system conditions and contingencies necessary to support an exception request, (2) difficulty with identifying thresholds for items iv-1 through iv-4, and (3) the ability to address interdependencies among exception requests.

No

No

Yes

A criterion should be added for supporting a request for inclusion of an Element. If an Element has been identified as causal or contributory to a Category 2 or higher event as defined in the ERO Event Analysis Process, that should be sufficient evidence that it is necessary for the Element to be planned, designed, maintained, and operated in accordance with NERC Reliability Standards. An assessment of the Element should include consideration of any corrective actions that have been implemented to prevent a reoccurrence. The Exception criteria also should include a list of characteristics of Elements that will not be considered for exclusion, on the basis that this list of characteristics already identifies the importance of such Elements to reliable operation of the interconnected transmission network. Characteristics should include: (1) Elements that are relied on in the determination of an Interconnection Reliability Operating Limit (IROL); (2) Blackstart resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage, (3) Elements subject to Nuclear Plant Interface Requirements (NPIRs) as agreed to by a Nuclear Plant Generator Operator and a Transmission Entity defined in NUC-001, and (4) Elements identified as required to comply with a NERC Reliability Standard by application of criteria defined within the standard (e.g., the test defined in PRC-023 to identify sub-200 kV Elements to which the standard is applicable.)

Individual

Rick

Spyker

No

We agree with this concept to allow entities to submit an exception application that does not include extensive technical analysis. Such an option will make the process efficient for all stakeholders, such as entities, Regions, NERC and relevant regulatory authority. However, our opinion is that there is no real relation between reliability and the proximity of load. Consistent with references in the FERC Order, we feel that it is much more important to identify and ensure if the element(s) are serving load pockets associated with large metropolitan load centers (e.g. New York City, Washington DC, Toronto), loads of significance to national security and/or as identified by relevant Federal, State or

Provincial Regulatory Authority. We believe that entities should be required to identify the significance of the elements' physical characteristics, such as the proximity of element or, being served or impacted by the element to a load of significant interest. Such identification can be done through a simple checklist along with any relevant comments. Therefore, we suggest the SDT to revise the exception criteria to seek an alternative language and/or re-craft exclusion criteria (a), which will require entities to provide the previously stated information for their element.
Yes
We agree with this concept. Entities should be allowed to demonstrate the radial characteristics to determine if they are permitted for an exception.
Yes
We agree with the criteria set out in 1(c), but suggest the SDT to avoid prescribing values and eliminate bullet (iv). The SDT should describe the intended performance outcome but avoid setting values. This should have little, if any impact on reliability of the transmission network if the items 1, 2 and 3 are satisfied.
Yes
Yes
We agree that entities should be given an option to conduct an analysis to demonstrate if an element is necessary or not for the operation of transmission network. We also support that NERC should specify all the relevant criteria category to be listed as under 2 (a). However, we suggest that NERC should avoid prescribing numerical values but establish a range of value (or reference industry standard) that would be consistent with industry/ regional standards or practices without compromising the reliability of transmission network.
The SDT should avoid setting values and instead describe the intended performance outcomes from the measurement
We suggest SDT to make references to relevant industry standard such as IEEE standards
The SDT should avoid setting values and instead describe the intended performance outcomes from the measurement
The SDT should avoid setting values and instead describe the intended performance outcomes from the measurement
Yes
Technical Analysis must fundamentally use NERC – TPL methodology and testing requirements.
Yes
We agree that entities should be allowed to conduct an analysis to demonstrate if an element is necessary or not for the operation of transmission network. We also support that NERC should specify all the relevant criteria category to be listed as under 2 (a). However, we suggest that NERC should avoid prescribing numerical values but establish a range of value (or reference industry standard) that would be consistent with industry/ regional standards or practices without compromising the reliability of transmission network.
See comments in section 5
See comments in section 5
See comments in section 5
See comments in section 5
No
Yes
NERC's revised definition will have a direct impact on entities across North America and may conflict with regulatory requirements, Codes, and Licenses. FERC in its Order 743 and 743A has directed NERC to address these concerns. We suggest the SDT and RoP teams should: • modify the exception criteria and procedure to provide regulatory flexibility with requirements to conduct basic technical analysis , to allow entities to consistently present their case to the ERO and/or the regulator for a step by step expedited evaluation. • Include provisions in both the NERC exception criteria and exception process for federal, state and provincial jurisdictions. These provisions should provide clear guidance

so that, if and when there are deviations from the exception criteria, they are identified with technical and regulatory justifications ensuring there is no adverse impact on the interconnected transmission network. • Understand that the path to generating facilities need not be always BES contiguous. Generating units can/should be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not always require contiguous paths.
Yes
Exception criteria should be crafted at a high-level with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) that are not necessary for the interconnected transmission network and based on technical assessment, evidence and justification for its unique characteristics, configuration, and utilization.
Individual
Clint Gerkensmeyer
Benton Rural Electric Association
No
We believe that the proximity test may be unnecessary, and if an Element or group of Elements meets the other three tests proposed by the SDT, it should be excluded from the BES, even if it does not meet the proximity test. Secondly, using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.
Yes
Benton REA agrees conceptually that systems operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. That is because local distribution systems typically operate adjacent to, or at the end of transmission lines, and function operationally to move power from the Transmission Service Provider's point of delivery of bulk power that has moved across the integrated bulk transmission system to end-users located within the local distribution utility's service territory. To be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as a system that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that system is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution systems and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution system interconnected with those relays should not.
Yes
Benton REA agrees conceptually that one critical characteristic distinguishing local distribution facilities that must be excluded from the BES from transmission facilities that should be included is the manner in which power flows on those facilities. Power on local distribution systems generally flows only from the interconnected transmission source and across the distribution system for delivery to end-use customers. By contrast, power on transmission systems generally flows in two (or multiple, in networked systems) directions and is delivered in bulk to distribution utilities rather than to end-users. Hence, the SDT has properly identified power flows as one important characteristic that distinguishes BES transmission systems from local distribution systems. In order to identify systems that are not necessary for the operation of the BES under this text, we propose that any system where real power flows into the local distribution system 90 percent of the time or more under normal operating conditions.
Yes
Benton REA agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. In fact, we believe this may be the most important and readily identifiable distinction. Accordingly, Benton REA agrees that if power is not intentionally transported through a particular system, that system is not used for transmission and should not be considered part of the BES. One exception may

be for a small embedded generation unit owned by a different party that may be "scheduled" out of an area, but in reality, does not produce any physical flow. These circumstances should not trigger inclusion.
Yes
We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with local distribution and not BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Benton REA supports the technical arguments and the White Paper presented by Snohomish County PUD in their comments. We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in the White Paper, which is based upon the approach recommended by the WECC BES Task Force.
The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection.
Specific transient voltage dip thresholds are proposed at page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Please see our response to Question 5d.
No
Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid showing that the Elements contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in the Snohomish PUD White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5.
See exclusion comments Question 5
See exclusion comments Question 5
See exclusion comments Question 5
See exclusion comments Question 5
No
As discussed on page 12 of the Snohomish White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant Regional Entity, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data.
No

As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
Yes
Benton REA generally supports the approach to the exclusion process proposed by the SDT, which provides two different paths to exclusion, one based on readily-identifiable operational characteristics of a system, and one based on technical reliability analysis. We believe it is important to provide for the first path, based on operational characteristics, so that systems that are marginally disqualified under the BES Definition (because, for example, generation within the system exceeds demand for a few hours a year) can obtain an exclusion without the large investment of resources that otherwise might be required for a full-scale technical analysis. That being said, we question whether the first subsection of the characteristic test, relating to system proximity, is necessary, and we are concerned that the requirement that a system meet all four requirements of the characteristics test may be overly restrictive. For example, it is easy to imagine a distribution system in a rural area that covers a widely dispersed area, so that load is many miles from the relevant generation/transmission source, and that the system therefore does not meet the electrical proximity element, but meets the other three elements of the characteristics test. Such a system should be excluded because it clearly serves a local distribution function, and not a transmission function, as demonstrated by the fact that the system meets subsections (c) (power flows into the system but rarely flows out) and (d) (power is not intentionally transported over the system). Accordingly, we recommend that the SDT consider eliminating the first test. In the alternative, the SDT should consider allowing exempting a system from the BES if it, for example, meets three of the four criteria rather than all four.
Individual
Robert Ganley
Long Island Power Authority
Yes
Agree with close proximity to load concept but further direction (define suggested methodology) is required for how to calculate impedance value. In addition to impedance value suggest consideration of adding mileage or relative phase angle differences between locations be also an allowable criteria.
Yes
Elements could be included in a regional dispatch such as a large regional ISO, but still serve only local load and therefore should still be treated as radial.
Yes
Item iv. The maximum amount of energy flowing out is (TBD-1,752,000) MWh per year. Another measure that may be more appropriate is a percent % of total energy requirements in the area.
Yes
In addition to Operating Procedures, electrical elements that restrict or control flow over the line should be allowed to be used as evidence.
Exclusion under this criteria would require that the analysis be performed by the registered TP. Criteria identified is based on interconnection to neighboring utilities.
No
Yes
Yes

The Reliability Coordinator would be required to provide much of the data needed to perform the technical analyses.
Individual
Thad Ness
American Electric Power
Yes
Using "proximity to load" is a reasonable metric, but would require further consideration given the impedance value eventually chosen to replace "TBD".
Yes
Considering whether or not the element is treated as radial is a reasonable approach.
Yes
Requiring that "power flows into the system, but rarely flows out" is a reasonable approach, but would require further consideration given the MWh value eventually chosen to replace "TBD".
Yes
Requiring that "power entering the system is not intentionally transported through the system to some other system" is a reasonable approach.
Yes
No
No
Yes
Each criterion specified would not be able to be provided, or even applicable, for each exclusion requested. If the criteria provided may be selected from as necessary for each request, then we have no concerns on our ability to provide the data. Our only concern would be if the intent is that each and every criterion specified must be provided for each request made.
No
AEP is not aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue.
Yes
AEP appreciates the work that the drafting teams have done within the various deliverables related to the BES definition, technical principles for demonstrating BES exceptions, and the BES definition exception process. AEP acknowledges the benefits of agreeing to a BES definition and exception process, and appreciates the drafting teams' requests for industry involvement. Due to the interrelated nature of the deliverables currently out for review regarding the BES definition and exception processes, it is difficult if not impossible, to comment "in isolation" on any individual facet of the project. For example, there needs to be a defined relationship between an approved definition of BES, the technical principles for demonstrating BES exception, and the exception process itself. When closely related projects such as these are done simultaneously, no individual deliverable can rely on the completed work of another. As a result, we risk having conflicting decision making across

these projects. As a result, AEP is not in the position to make further comments at this time beyond those recently and concurrently made regarding the BES definition and technical principles for demonstrating BES exceptions. We suggest that further work on these efforts, when appropriate, become more consolidated and that care be taken to not undertake concurrent efforts before sufficient progress has been made on important aspects of the project. AEP appreciates the drafting teams' requests for industry input, and looks forward to its future involvement after additional progress has been made on these issues.
Individual
David Burke
Orange and Rockland Utilities, Inc.
No
The approach does not differentiate between transmission and distribution. There is no direct relation between impedance and load. A study of the particular system should be performed to assess impact on BES.
Yes
Yes
The "TBD" value should be reasonable and well justified.
Yes
No
This approach is not necessary since NERC TPL Reliability Standards already addressed how to maintain a reliable electric system.
Yes
FERC Order No. 888 – Seven Factor Test.
No
The Inclusion criteria should mirror Exclusion criteria. See comments 5.
No
No
No
Individual
David Thorne
Pepco Holdings Inc
No
A specific impedance value would not be appropriate for all regions and all configurations.
No
Radial system is already an explicit Exclusion by definition (E1). Does this imply that ALL radial systems require a request to be submitted for the RE and NERC approval that the elements are in fact radial? There may not be internal written procedures describing the radial system operation. The

evidence that an entity can provide should include a description or justification of the radial operation and non impact to the BES.
No
The characteristic statement should be reworded to say: "Power flow is generally load serving." The criteria as written have very burdensome MWh record requirements. Yearly totals for flows in and out and an overall description or justification for this exception should be allowable.
No
This criterion is very similar to the third item. Written operating procedures may not exist. The entity should be allowed to summit a description and justification.
No
Generally agree that a specific technical analysis approach (power flow studies) showing no impact on BES is appropriate, but don't know how to define specific criteria on which to base decision.
No
No
Same comments as question #5
Yes
The entity may not have the tools, model or resources to do a full transmission planning study
Yes
Facilities defined as local distribution facilities should not be forced into BES classification due to this new bright line definition.
Yes
Concern that as this proposal is written such that each exclusion in the BES definition (E1, E2 and E3) will require a submittal to approve that is an exclusion.
Individual
Paul Titus
Northern Wasco County PUD
No
We believe that the proximity test may be unnecessary, and if an Element or group of Elements meets the other three tests proposed by the SDT, it should be excluded from the BES, even if it does not meet the proximity test. Secondly, using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.
Yes
Northern Wasco County PUD agrees conceptually that systems operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. That is because local distribution systems typically operate adjacent to, or at the end of transmission lines, and function operationally to move power from the Transmission Service Provider's point of delivery of bulk power that has moved across the integrated bulk transmission system to end-users located within the local distribution utility's service territory. To be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as a system that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree

that the manner in which a system is operated during BES disturbances may be an indication of whether that system is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution systems and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution system interconnected with those relays should not.
Yes
Northern Wasco County PUD agrees conceptually that one critical characteristic distinguishing local distribution facilities that must be excluded from the BES from transmission facilities that should be included is the manner in which power flows on those facilities. Power on local distribution systems generally flows only from the interconnected transmission source and across the distribution system for delivery to end-use customers. By contrast, power on transmission systems generally flows in two (or multiple, in networked systems) directions and is delivered in bulk to distribution utilities rather than to end-users. Hence, the SDT has properly identified power flows as one important characteristic that distinguishes BES transmission systems from local distribution systems. In order to identify systems that are not necessary for the operation of the BES under this text, we propose that any system where real power flows into the local distribution system 90 percent of the time or more under normal operating conditions.
Yes
Northern Wasco County PUD agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. In fact, we believe this may be the most important and readily identifiable distinction. Accordingly, Northern Wasco County PUD agrees that if power is not intentionally transported through a particular system, that system is not used for transmission and should not be considered part of the BES. One exception may be for a small embedded generation unit owned by a different party that may be "scheduled" out of an area, but in reality, does not produce any physical flow. These circumstances should not trigger inclusion.
Yes
We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with local distribution and not BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Northern Wasco County PUD supports the technical arguments and the White Paper presented by Snohomish County PUD in their comments. We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in the White Paper, which is based upon the approach recommended by the WECC BES Task Force.
The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection.
Specific transient voltage dip thresholds are proposed at page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of

that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
No
Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid showing that the Elements contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in the Snohomish PUD White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5.
No
As discussed on page 12 of the Snohomish White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant Regional Entity, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data.
No
As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
Yes
Northern Wasco County PUD generally supports the approach to the exclusion process proposed by the SDT, which provides two different paths to exclusion, one based on readily-identifiable operational characteristics of a system, and one based on technical reliability analysis. We believe it is important to provide for the first path, based on operational characteristics, so that systems that are marginally disqualified under the BES Definition (because, for example, generation within the system exceeds demand for a few hours a year) can obtain an exclusion without the large investment of resources that otherwise might be required for a full-scale technical analysis. That being said, we question whether the first subsection of the characteristic test, relating to system proximity, is necessary, and we are concerned that the requirement that a system meet all four requirements of the characteristics test may be overly restrictive. For example, it is easy to imagine a distribution system in a rural area that covers a widely dispersed area, so that load is many miles from the relevant generation/transmission source, and that the system therefore does not meet the electrical proximity element, but meets the other three elements of the characteristics test. Such a system should be excluded because it clearly serves a local distribution function, and not a transmission function, as demonstrated by the fact that the system meets subsections (c) (power flows into the system but rarely flows out) and (d) (power is not intentionally transported over the system). Accordingly, we recommend that the SDT consider eliminating the first test. In the alternative, the SDT should consider allowing exempting a system from the BES if it, for example, meets three of the four criteria rather than all four.
Individual
Alice Ireland
Xcel Energy
Yes
Yes

Yes
Regarding the question on MWH, one possible approach is to use 175,000 MWH/ year which would be just under the annual hourly output from the smallest generator (not at a plant) that must be registered under the registry criteria.
Yes
It is not clear what 'some other system' would be. Is this another point on the BES in general?
Yes
Yes
Xcel Energy would like the SDT to consider a Capacity Factor exclusion for generating resources that are rarely used. For example, at least two standards that are currently being drafted exempt generators that have an average Capacity Factor of 5% or less over a three year period.
Yes
No
No
No
Individual
Jianmei Chai
Consumers Energy Company
No
Consumers Energy Company (CECo) proposes that this criterion be eliminated, as it is not a definitive BES criterion. There is no correlation between the proximity of Elements that are 100kV and above to load.
Yes
Yes
Yes
No
Generally, this approach seems sound.
This criterion raises concerns. If based on transfer distribution factor it may have some merit, depending on the TBD value. However, the criteria should not be based on outage transfer distribution factor, as Draft 1 implies, since loss of certain local distribution facilities can result in local distribution load being transferred to other local distribution facilities. Distribution facilities should not be prevented from exclusion from BES.
The criterion related to Transient Voltage Deviations should be removed. This criterion, regardless of

value TBD, would be impossible to achieve, and would render this process meaningless. A fault on non-BES elements will cause significant transient voltage dips on nearby BES elements until the fault is cleared. If the non-BES element is at the same voltage level, the dip will result in near-zero voltages; if at different voltage levels, the dip magnitude will be determined by the ratio of the system Thévinen impedance at the BES to the intervening transformer impedance - if the system Thévinen impedance is 2% and the transformer impedance is 18%, the voltage on the BES will dip to 10%.
The criterion relative to frequency response should be removed. Frequency deviations can result from large changes in distribution load. Distribution facilities should not be prevented from being excluded from BES.
This criterion may be reasonable, depending on the TBD value. The TBD value may need to vary for different voltage levels or system configurations. The criteriona needs to recognize that loss of multiple capacitors at the distribution level could result in significant voltage deviation at the BES and this must not prevent distribution facilities from being excluded from BES.
No
We believe all of the Inclusion criteria should be replaced by a single criterion, which would include any element that could cause cascading outages of greater than 1,000 MW.
If our suggestion in 7a is not adopted, we propose the following: If based on transfer distribution factor this criterion may have some merit, depending on the TBD value. However, the criterion should not be based on outage transfer distribution factor, as Draft 1 implies since loss of certain distribution facilities can result in distribution load being transferred to other interconnection points. Distribution facilities should not be classified as BES.
If our suggestion in 7a is not adopted, we propose the following: The criterion related to Transient Voltage Deviations should be removed from the Inclusion Process. This criterion, regardless of value TBD, would cause any element, perhaps even including radial Primary Distribution Facilities (8.2 kV, etc.) to be sequentially included as BES. A fault on non-BES elements will cause significant transient voltage dips on nearby BES elements until the fault is cleared. If the non-BES element is at the same voltage level, the dip will result in near-zero voltages; if at different voltage levels, the dip magnitude will be determined by the ratio of the system Thévinen impedance at the BES to the intervening transformer impedance - if the system Thévinen impedance is 2% and the transformer impedance is 18%, the voltage on the BES will dip to 10%.
If our suggestion in 7a is not adopted, we propose the following: The criterion relative to frequency response should be removed. Frequency deviations can result from large changes in distribution load. Distribution facilities should not be classified as BES.
If our suggestion in 7a is not adopted, we propose the following: This criterion may be reasonable, depending on the TBD value. The TBD value may need to vary for different voltage levels or system configurations. Loss of multiple capacitors at the distribution level could result in significant voltage deviation at the BES and the criterion should be developed so as not to result in Distribution facilities being classified as BES.
Yes
CECo is not able to formulate detailed comments at this time, as the criteria have not been finalized. There are a number of items that are somewhat open ended, i.e. TBD and Other. Once those gray areas are filled in, we will have a better idea of our ability to obtain the necessary data.
Yes
The Technical Principles for Demonstrating BES Exceptions should not conflict with the seven-factor test provisions of FERC Order 888. In particular, provisions should not be established by the Standard Drafting Team that contradict prior Commission rulings associated with seven-factor test provisions.
Yes
In addition to the owner, only those with jurisdictional authority, such as the ERO and RRO, should be permitted to register Exception Requests. A third party may have a business reason for wishing to encumber another entity with regulatory compliance risk and responsibility. In addition, this could create an additional strain on the Exception Request process due to an excessive number of requests from third parties. We do want to ensure that the term "Other", used in Exclusion Section 2.a.iv.8., and Inclusion Section 1.c.8., not remain in the final Technical Principles document.

Group
PPL Supply
John Cummings
No
See comments in Questions 9 and 10
No
See comments in Questions 9 and 10
No
See comments in Questions 9 and 10
No
See comments in Questions 9 and 10
No
See comments in Questions 9 and 10
Yes
See comments in Questions 9 and 10
No
See comments in Questions 9 and 10
Yes
See comments in Questions 9 and 10
Yes
Based on FERC Order 743 paragraph 120, radial and local distribution facilities should be excluded from the definition of the Bulk Electric System (BES). The exclusion of non-networked facilities such as radial lines is further re-enforced with Order 743 paragraph 73 which describes the characteristics of a network and does not include most generator interconnection facilities. In that order, FERC justified its bright-line, 100 kV threshold, explaining that "many facilities operated at 100 kV and above have a significant effect on the overall functioning of the grid" because they share the following characteristics: 1. "operate in parallel with other high voltage and extra high voltage facilities" i. The "bright line" at 100 kV recognizes many 100 kV lines parallel other HV/EHV lines and can be significantly loaded by failure of the HV/EHV lines. This does not apply to radial lines, even at 100 kV and above. 2. "interconnect significant amounts of generation sources" (emphasis added) 3. "operate as part of a defined flow gate" 4. have a "parallel nature" and are capable of "caus[ing] or contribute[ing] to significant bulk system disturbances". i. Radial lines cannot cause significant BES disturbances since the outage of a radial line is studied in all N-1 planning studies and if the TPL standards are followed, an N-1 should not cause such disturbances. Excluding generator lead lines is very practical because the physical reality of a radial generator lead line is that it cannot be overloaded by outages on parallel paths because there are no parallel paths. Further, the MW flow on a radial line is well known and limited to a known maximum (limited to the larger of the generation or load on the end of the line); clearly these are reasons for excluding radial lines. When and if a generator lead line is tapped by another generator or load, it is possible that the line between the tap point and the original point of interconnection might need to be rolled into the electrical network. However, at that time, it might also be possible for the transmission owner to purchase the line and make the tap point the new point of interconnection.
Yes
General PPL Supply concerns with draft Technical Principles for exclusion/inclusion: 1. It may be

premature to work on an exclusion/exemption/inclusion process since the BES definition is not established yet. A lot of work could be done on the Exclusion/Inclusion that is meaningless because there is some chance the exclusion/inclusion process will not complement or might duplicate the BES definition. 2. The proposal will result in inclusion of generation facilities that are not significant to BES reliability. 3. The exclusion/inclusion drafting team does not appear to have considered the FERC assessment in Order 743-A (17-Mar-11) that "material impact assessments" cannot be unduly subjective and must be technically based as stated in paragraph 47. a. For the material impact tests in the Exclusion/Inclusion Technical Principles to be technically based, it is important that the tests actually measure what FERC states are the characteristics of the BES (see Order 743 paragraph 73), namely 1) operate in parallel, 2) carry significant amounts of generation, 3) operate as part of a defined flowgate, 4) are parallel in nature and 5) are capable of causing or contributing to significant disturbances. The proposed tests do not make these measurements. b. Further, since all facilities already meet the technically based NERC planning and operating standards, any additional measure beyond these standards such as those created by the BES Exclusion/Inclusion drafting team will be unduly subjective, as these new measures go beyond the technical basis of the NERC standards. 4. It is unclear how the exclusion/inclusion drafting team considered FERC's concerns with the use of "material impact assessments," as described in Order 743, paragraph 85 ("no grounds on which to reasonably assume that the results of the material impact assessment are accurate, consistent, and comprehensive"). Specific comments on Technical Principles paper from NERC DT 20110510 A. Please add wording to make complete sentences as needed in order to clarify whether facilities meeting these criteria are included or excluded. For example, the clarifying words are added to the following Exclusion 1 to help the reader better understand the meaning. 1. "The elements that meet all of the following characteristics are not necessary for the reliable operation of the grid and are thus excluded:" a. System elements that are located in close electrical proximity to Load are exempt from inclusion in the BES. B. Notwithstanding the need for complete sentences to assure proper interpretation, the following comments should be considered by the drafting team: o Exclusion 1 a) uses an unduly subjective, non-technically based material impact test. o Exclusion 1 b) i and ii attempts to introduce disconnect procedures in the classification as "radial" which may hurt reliability by disconnecting radial equipment that could provide voltage support. The exclusion also introduces commercial (dispatch) considerations which may not be appropriate in a reliability-based document. o Exclusion 1 c) assuming "system" is short for "system elements", this requirement for exclusion is overly discriminatory to generators which flow power out. o Exclusion 1 d) is too vague to be useful because "system" seems to have more than one meaning in this requirement. o Exclusion 2 and Inclusion 1 in their entirety are unduly subjective, non-technically based material impact tests. We are concerned that the proposed inclusion and exclusion procedures could result in not only significant generation interconnection facilities being included in the BES – but also less significant generation interconnection facilities. Such a result would be inconsistent with FERC Order 743. Accordingly, PPL Supply respectfully requests NERC to: o Exclude radial facilities less than 100 kV and not black start (these facilities are excluded in the latest definition of the BES). o Exclude radial facilities greater than 100 kV but less than 200 MVA (proposed BES now includes generators over 20 MVA) o Exclude local distribution networks (LDNs) with flow into network up to 200 MVA o Currently, LDNs are excluded if they only absorb (not produce) net power (Technical Principles Exclusion 1-c). It is also appropriate to exclude LDNs with less than net 200 MVA flow into the BES electrical network. o Inclusion efforts should not consider such issues as proximity to markets, proximity to load or nuclear facilities, or length of generator lead line.

Individual

Jo Elg

United Electric Co-op Inc.

No

We believe that the proximity test may be unnecessary, and if an Element or group of Elements meets the other three tests proposed by the SDT, it should be excluded from the BES, even if it does not meet the proximity test. Secondly, using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes

United Electric Co-op Inc agrees conceptually that systems operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. That is because local distribution systems typically operate adjacent to, or at the end of transmission lines, and function operationally to move power from the Transmission Service Provider's point of delivery of bulk power that has moved across the integrated bulk transmission system to end-users located within the local distribution utility's service territory. To be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as a system that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that system is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution systems and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution system interconnected with those relays should not.

Yes

United Electric Co-op Inc agrees conceptually that one critical characteristic distinguishing local distribution facilities that must be excluded from the BES from transmission facilities that should be included is the manner in which power flows on those facilities. Power on local distribution systems generally flows only from the interconnected transmission source and across the distribution system for delivery to end-use customers. By contrast, power on transmission systems generally flows in two (or multiple, in networked systems) directions and is delivered in bulk to distribution utilities rather than to end-users. Hence, the SDT has properly identified power flows as one important characteristic that distinguishes BES transmission systems from local distribution systems. In order to identify systems that are not necessary for the operation of the BES under this text, we propose that any system where real power flows into the local distribution system 90 percent of the time or more under normal operating conditions.

Yes

United Electric Co-op Inc agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. In fact, we believe this may be the most important and readily identifiable distinction. Accordingly, United Electric Co-op Inc agrees that if power is not intentionally transported through a particular system, that system is not used for transmission and should not be considered part of the BES. One exception may be for a small embedded generation unit owned by a different party that may be "scheduled" out of an area, but in reality, does not produce any physical flow. These circumstances should not trigger inclusion.

Yes

We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with local distribution and not BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. United Electric Co-op Inc supports the technical arguments and the White Paper presented by Snohomish County PUD in their comments. We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in the White Paper, which is based upon the approach recommended by the WECC BES Task Force.

The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection.

Specific transient voltage dip thresholds are proposed at page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B

contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Please see our response to Question 5d.
No
Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid showing that the Elements contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in the Snohomish PUD White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5.
See exclusion comment.
See exclusion comment.
See exclusion comment.
See exclusionn comment.
No
As discussed on page 12 of the Snohomish White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant Regional Entity, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data.
No
As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
Yes
United Electric Co-op Inc generally supports the approach to the exclusion process proposed by the SDT, which provides two different paths to exclusion, one based on readily-identifiable operational characteristics of a system, and one based on technical reliability analysis. We believe it is important to provide for the first path, based on operational characteristics, so that systems that are marginally disqualified under the BES Definition (because, for example, generation within the system exceeds demand for a few hours a year) can obtain an exclusion without the large investment of resources that otherwise might be required for a full-scale technical analysis. That being said, we question whether the first subsection of the characteristic test, relating to system proximity, is necessary, and we are concerned that the requirement that a system meet all four requirements of the characteristics test may be overly restrictive. For example, it is easy to imagine a distribution system in a rural area that covers a widely dispersed area, so that load is many miles from the relevant generation/transmission source, and that the system therefore does not meet the electrical proximity element, but meets the other three elements of the characteristics test. Such a system should be excluded because it clearly serves a local distribution function, and not a transmission function, as demonstrated by the fact that the system meets subsections (c) (power flows into the system but rarely flows out) and (d) (power is not intentionally transported over the system). Accordingly, we recommend that the SDT consider eliminating the first test. In the alternative, the SDT should consider allowing exempting a system from the BES if it, for example, meets three of the four criteria rather than all four.
Individual

Ned Ratterman
Oregon Trail Electric Cooperative, Inc.
No
We believe that the proximity test may be unnecessary, and if an Element or group of Elements meets the other three tests proposed by the SDT, it should be excluded from the BES, even if it does not meet the proximity test. Secondly, using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.
Yes
Oregon Trail Electric agrees conceptually that systems operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. That is because local distribution systems typically operate adjacent to, or at the end of transmission lines, and function operationally to move power from the Transmission Service Provider's point of delivery of bulk power that has moved across the integrated bulk transmission system to end-users located within the local distribution utility's service territory. To be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as a system that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that system is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution systems and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution system interconnected with those relays should not.
Yes
Oregon Trail Electric agrees conceptually that one critical characteristic distinguishing local distribution facilities that must be excluded from the BES from transmission facilities that should be included is the manner in which power flows on those facilities. Power on local distribution systems generally flows only from the interconnected transmission source and across the distribution system for delivery to end-use customers. By contrast, power on transmission systems generally flows in two (or multiple, in networked systems) directions and is delivered in bulk to distribution utilities rather than to end-users. Hence, the SDT has properly identified power flows as one important characteristic that distinguishes BES transmission systems from local distribution systems. In order to identify systems that are not necessary for the operation of the BES under this text, we propose that any system where real power flows into the local distribution system 90 percent of the time or more under normal operating conditions.
Yes
Oregon Trail Electric agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. In fact, we believe this may be the most important and readily identifiable distinction. Accordingly, Oregon Trail Electric agrees that if power is not intentionally transported through a particular system, that system is not used for transmission and should not be considered part of the BES. One exception may be for a small embedded generation unit owned by a different party that may be "scheduled" out of an area, but in reality, does not produce any physical flow. These circumstances should not trigger inclusion.
Yes
We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with local distribution and not BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Oregon Trail Electric supports the technical arguments and the White Paper presented by Snohomish County PUD in their comments. We recommend that the SDT modify its approach to

the technical exclusion process to match the approach advocated in the White Paper, which is based upon the approach recommended by the WECC BES Task Force.
The use of distribution factors, such as Power Transfer Distribution Factors (“PTDF”) and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric m. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection.
Specific transient voltage dip thresholds are proposed at page 15 of Snohomish’s White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Page 15 of Snohomish’s White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Please see our response to Question 5d.
No
Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid showing that the Elements contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in the Snohomish PUD White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5.
See exclusion comment
See exclusion comment
See exclusion comment
See exclusion comment
No
As discussed on page 12 of the Snohomish White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant Regional Entity, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data.
No
As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
Yes
Oregon Trail Electric generally supports the approach to the exclusion process proposed by the SDT, which provides two different paths to exclusion, one based on readily-identifiable operational characteristics of a system, and one based on technical reliability analysis. We believe it is important to provide for the first path, based on operational characteristics, so that systems that are marginally disqualified under the BES Definition (because, for example, generation within the system exceeds demand for a few hours a year) can obtain an exclusion without the large investment of resources that otherwise might be required for a full-scale technical analysis. That being said, we question whether the first subsection of the characteristic test, relating to system proximity, is necessary, and we are concerned that the requirement that a system meet all four requirements of the characteristics

test may be overly restrictive. For example, it is easy to imagine a distribution system in a rural area that covers a widely dispersed area, so that load is many miles from the relevant generation/transmission source, and that the system therefore does not meet the electrical proximity element, but meets the other three elements of the characteristics test. Such a system should be excluded because it clearly serves a local distribution function, and not a transmission function, as demonstrated by the fact that the system meets subsections (c) (power flows into the system but rarely flows out) and (d) (power is not intentionally transported over the system). Accordingly, we recommend that the SDT consider eliminating the first test. In the alternative, the SDT should consider allowing exempting a system from the BES if it, for example, meets three of the four criteria rather than all four.

Individual

Steve Alexanderson

Central Lincoln

No

Central Lincoln agrees in principle that one characteristic of local distribution systems is that they are usually confined to a relatively limited geographic area, as opposed to transmission systems, which (especially in the West) tend to cover very large distances. We also believe the proximity test may be a sensible way to identify local distribution facilities. However, as explained in more detail in our response to Question 10, we believe that the proximity test may be unnecessary, and if an Element or group of Elements meets the other three tests proposed by the SDT, it should be excluded from the BES, even if it does not meet the proximity test. Secondly, using impedance to benchmark system load proximity would likely not yield consistent demarcations. High voltage relative or per-unit impedances are typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance. Central Lincoln proposes that "proximity" be determined in the dictionary manner with units of distance.

No

Central Lincoln agrees that systems operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. That is because local distribution systems typically operate adjacent to, or at the end of transmission lines, and function operationally to move power from the Transmission Service Provider's point of delivery of bulk power that has moved across the integrated bulk transmission system to end-users located within the local distribution utility's service territory. To be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as a system that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that system is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution systems and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution system interconnected with those relays should not, and cannot legally, be classified as BES.

Yes

Central Lincoln agrees that one critical characteristic distinguishing local distribution facilities that must be excluded from the BES from transmission facilities that should be included is the manner in which power flows on those facilities. Power on local distribution systems generally flows only from the interconnected transmission source and across the distribution system for delivery to end-use customers. By contrast, power on transmission systems generally flows in two (or multiple, in networked systems) directions and is delivered in bulk to distribution utilities rather than to end-users. Hence, the SDT has properly identified power flows as one important characteristic that distinguishes BES transmission systems from local distribution systems. Central Lincoln also agrees that the fact that power may flow out of a local distribution system onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the system as local distribution. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude local distribution facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can

be used to demonstrate that demand within a local distribution system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify systems that are not necessary for the operation of the BES under this test, we propose that any system where real power flows into the local distribution system 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That a system meets this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course of two years. In addition, the presence of generation within a local distribution system that only modifies the level of the load served by the bulk system, but does not result in power being injection into the bulk system, does not change the reliability effect of the local network and therefore should not require the local network to be classified as BES.

No

Central Lincoln agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. In fact, we believe this may be the most important and readily identifiable distinction. As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Local distribution systems do not share any of these operational characteristics. Accordingly, Central Lincoln agrees that if power is not intentionally transported through a particular system, that system is not used for transmission and should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to a particular system will provide a ready guide to whether power is intentionally scheduled across that system. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test.

Yes

We agree that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with local distribution and not BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish PUD has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which are attached to their comments and we recommend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task Force.

The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, Central Lincoln suggests that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a "hub and spoke system" where loads are very remote from large generation

plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of operations. For example, the Western Interconnection uses a rated paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A Central Lincoln supports exemption criteria for individual frequency independent regions, or interconnections.
Fault induced transient voltage measurements will always be low if taken at a point electrically close to the fault during the fault. The question should be about voltage recovery following the clearing of the fault as in the TPL standards. The Technical Principles do not make this distinction, and the resulting effect would be the exclusion of elements that should be included and the inclusion of elements that should be excluded.
Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Please see our response to Question 5d.
No
Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid showing that the Elements contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in the Snohomish PUD White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.
Please see 5b.
Please see 5c.
Please see 5d.
Please see 5e.
No
As discussed on page 12 of the Snohomish PUD White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.
No
As we explained in our response to Question 1 of the Comment Form on the 1st Draft of Definition of BES, filed on May 27, Central Lincoln believes that the proposed BES Definition could conflict with

Section 215 of the Federal Power Act if the Definition, the Exception Process, and the Technical Criteria do not effectively exclude facilities used in local distribution from the BES or if the BES definition does not focus on cascading outages, separation events, and instability on the interconnected bulk system. These statutory limits on the scope of the BES and reliability standards are a minimum that must be met.
Yes
Central Lincoln generally supports the approach to the exclusion process proposed by the SDT, which provides two different paths to exclusion, one based on readily-identifiable operational characteristics of a system, and one based on technical reliability analysis. We believe it is important to provide for the first path, based on operational characteristics, so that systems that are marginally disqualified under the BES Definition (because, for example, generation within the system exceeds demand for a few hours a year) can obtain an exclusion without the large investment of resources that otherwise might be required for a full-scale technical analysis. That being said, we question whether the first subsection of the characteristic test, relating to system proximity, is necessary, and we are concerned that the requirement that a system meet all four requirements of the characteristics test may be overly restrictive. For example, it is easy to imagine a distribution system in a rural area that covers a widely dispersed area, so that load is many miles from the relevant generation/transmission source, and that the system therefore does not meet the electrical proximity element, but meets the other three elements of the characteristics test. Such a system should be excluded because it clearly serves a local distribution function, and not a transmission function, as demonstrated by the fact that the system meets subsections (c) (power flows into the system but rarely flows out) and (d) (power is not intentionally transported over the system). Accordingly, we recommend that the SDT consider eliminating the first test. In the alternative, the SDT should consider allowing exempting a system from the BES if it, for example, meets three of the four criteria rather than all four.
Group
New York State Reliability Council
Roger Clayton
No
NERC's Glossary definition of Load is "An end-use device or customer that receives power from the electric system." which is not specific enough to permit the definition of an appropriate impedance value. It is not clear from the proposed wording whether the exception applies to the Loads or the electrically close System Elements or both. In any case, the concept of a single impedance value as a metric is flawed because it could be a low impedance breaker or a relatively high impedance transformer connecting the BES to a "radial" Load center. This exclusion is superfluous given the radial test in item 2. Suggest dropping this exclusion test. N.B. The proposed criteria in items 1 – 4 must all be met in order for an element to qualify for an exclusion.
Yes
It should be clarified that radial Element(s) include all system elements in load pockets.
Yes
It should be clarified that this exclusion should not apply to inter-regional transfers, which clearly are candidates for inclusion as BES.
Yes
Yes
A single threshold value for performance based testing does not recognize differences in regional system characteristics. Therefore, regional approaches for at least generation exclusions should be used, like NPCC's A-10 criterion.
Yes
See answer to 5a.

Yes
See answer to 5a.
No
NPCC A-10 criteria data is freely available.
No
Group
Electricity Consumers Resource Council (ELCON)
John P. Hughes
Yes
We recommend that this item be added to the BES definition.
Yes
We recommend that that the item be added to the BES definition.
Yes
The thresholds for power flows out of the system should be made consistent with Exclusion E2 in the definition. We recommend that this item be added to the BES definition.
Yes
This requirement should be further relaxed to allow for intentional flows that are provided as a courtesy to the local distribution company. In such cases, private, customer-owned facilities may be used to deliver power from a DP to a small number of the DP's retail customers who are unaffiliated with the owner/operator of the private network. These flows are generally de minimis. We also recommend that this item (with our qualification) be added to the BES definition.
Yes
Yes
We recommend an additional method (or alternatively this be added to the BES Definition Exception E1): System Elements are part of facilities, generally radial in nature, supplying a retail customers from the point of delivery to the load regardless of voltage. Evidence to support this position could be an interconnection agreement indicating the point of delivery, a one-line diagram showing the point of delivery and load etc. The technical rationale is that protection of the BES for facilities serving load is the responsibility of the service provider (e.g., TO/TOP). These facilities are distribution facilities and are not now part of the BPS.
Yes
NERC (and the BES SDT) should not assume that data pursuant to Large Generator Interconnection Agreements (LGIA) or the Large Generator Interconnection Procedures (LGIP) will be forthcoming on a timely basis for the purpose of demonstrating BES exceptions. While such information is generally available from ISOs and RTOs, it is not so forthcoming from vertically-integrated utilities in regions of the country not served by ISOs or RTOs because such utilities are generally hostile to third-party

generation in their service territory. They are capable of delaying or otherwise obstructing requests for data and information. We recommend that NERC or the SDT identify mechanisms for requesting and getting the necessary data and information. This process should be included in the NERC Rules of Procedure.
Yes
The proposed technical principles violate the exemption in FPA section 215 against the inclusion in the BES of facilities used in the local distribution of electric energy, given that the BES is a subset of the BPS.
Yes
The bright-line tests used in the revised BES definition and technical principles may capture the facilities of hundreds of entities that may not know that NERC exists or the enforceability of NERC Reliability Standards. The technical principles should be supplemented with a technical guide or appendix that provides examples of the steps that may be necessary to demonstrate BES exceptions.
Individual
Darryl Curtis
Oncor Electric Delivery
Yes
Oncor Electric Delivery agrees with the proposed language as it is stated, related to load proximity.
Yes
Oncor Electric Delivery agrees with the proposed language that describes the exclusion criteria for system Elements that are radial in character.
Yes
Oncor Electric Delivery agrees with the proposed language that describes the exclusion criteria based upon power flows.
Yes
Oncor Electric Delivery agrees with the proposed language that describes the exclusion criteria based upon the non – intentional flow of power through the system to some other system.
Yes
Oncor Electric Delivery agrees with the proposed language that describes the exclusion criteria based technical analysis.
No
Yes
Oncor Electric Delivery agrees with the proposed language that describes the inclusion criteria based technical analysis.
No
No
No
Although Oncor Electric Delivery understands the need for the ERO to be in a position to override the inclusion criterion, Oncor desires more clarity on what factors contribute to an overriding action.
Individual

Jerome Murray
Oregon Public Utility Commission Staff
Yes
Use of the 100 kV brightline and the core BES definition as proposed is an overreach into local distribution systems and an overreach of FERC's authority as set out in the FPA 215. A full engineering technical analysis - required every 2 years - is too onerous and not necessary for identifying most local distribution elements miss-identified as BES Elements. A simple screening methodology consistent with the 7-Factor Test (from FERC Order 888) is needed as the first stage of the exception process.
Yes
Use of the 100 kV brightline and the core BES definition as proposed is an overreach into local distribution systems and an overreach of FERC's authority as set out in the FPA 215. A full engineering technical analysis - required every 2 years - is too onerous and not necessary for identifying most local distribution elements miss-identified as BES Elements. A simple screening methodology consistent with the 7-Factor Test (from FERC Order 888) is needed as the first stage of the exception process.
Yes
Use of the 100 kV brightline and the core BES definition as proposed is an overreach into local distribution systems and an overreach of FERC's authority as set out in the FPA 215. A full engineering technical analysis - required every 2 years - is too onerous and not necessary for identifying most local distribution elements miss-identified as BES Elements. A simple screening methodology consistent with the 7-Factor Test (from FERC Order 888) is needed as the first stage of the exception process.
Yes
Use of the 100 kV brightline and the core BES definition as proposed is an overreach into local distribution systems and an overreach of FERC's authority as set out in the FPA 215. A full engineering technical analysis - required every 2 years - is too onerous and not necessary for identifying most local distribution elements miss-identified as BES Elements. A simple screening methodology consistent with the 7-Factor Test (from FERC Order 888) is needed as the first stage of the exception process.
Individual
Anthony Schacher
Salem Electric
No
We believe that the proximity test may be unnecessary, and if an Element or group of Elements meets the other three tests proposed by the SDT, it should be excluded from the BES, even if it does not meet the proximity test. Secondly, using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered

typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes

Salem Electric agrees conceptually that systems operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. That is because local distribution systems typically operate adjacent to, or at the end of transmission lines, and function operationally to move power from the Transmission Service Provider's point of delivery of bulk power that has moved across the integrated bulk transmission system to end-users located within the local distribution utility's service territory. To be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as a system that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that system is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution systems and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution system interconnected with those relays should not.

Yes

Salem Electric agrees conceptually that one critical characteristic distinguishing local distribution facilities that must be excluded from the BES from transmission facilities that should be included is the manner in which power flows on those facilities. Power on local distribution systems generally flows only from the interconnected transmission source and across the distribution system for delivery to end-use customers. By contrast, power on transmission systems generally flows in two (or multiple, in networked systems) directions and is delivered in bulk to distribution utilities rather than to end-users. Hence, the SDT has properly identified power flows as one important characteristic that distinguishes BES transmission systems from local distribution systems. In order to identify systems that are not necessary for the operation of the BES under this text, we propose that any system where real power flows into the local distribution system 90 percent of the time or more under normal operating conditions.

Yes

Salem Electric agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. In fact, we believe this may be the most important and readily identifiable distinction. Accordingly, Salem Electric agrees that if power is not intentionally transported through a particular system, that system is not used for transmission and should not be considered part of the BES. One exception may be for a small embedded generation unit owned by a different party that may be "scheduled" out of an area, but in reality, does not produce any physical flow. These circumstances should not trigger inclusion.

Yes

We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with local distribution and not BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Salem Electric supports the technical arguments and the White Paper presented by Snohomish County PUD in their comments. We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in the White Paper, which is based upon the approach recommended by the WECC BES Task Force.

The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the

approach is unlikely to work in the Western Interconnection.
Specific transient voltage dip thresholds are proposed at page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Please see our response to Question 5d.
No
Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid showing that the Elements contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in the Snohomish PUD White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5.
See exclusion comment
See exclusion comment
See exclusion comment
See exclusion comment
No
As discussed on page 12 of the Snohomish White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant Regional Entity, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data.
No
As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
Yes
Salem Electric generally supports the approach to the exclusion process proposed by the SDT, which provides two different paths to exclusion, one based on readily-identifiable operational characteristics of a system, and one based on technical reliability analysis. We believe it is important to provide for the first path, based on operational characteristics, so that systems that are marginally disqualified under the BES Definition (because, for example, generation within the system exceeds demand for a few hours a year) can obtain an exclusion without the large investment of resources that otherwise might be required for a full-scale technical analysis. That being said, we question whether the first subsection of the characteristic test, relating to system proximity, is necessary, and we are concerned that the requirement that a system meet all four requirements of the characteristics test may be overly restrictive. For example, it is easy to imagine a distribution system in a rural area that covers a widely dispersed area, so that load is many miles from the relevant generation/transmission source, and that the system therefore does not meet the electrical proximity element, but meets the other three elements of the characteristics test. Such a system should be excluded because it clearly serves a local distribution function, and not a transmission function, as demonstrated by the fact that the system meets subsections (c) (power flows into the system but rarely flows out) and (d) (power is not intentionally transported over the system). Accordingly, we recommend that the SDT consider

eliminating the first test. In the alternative, the SDT should consider allowing exempting a system from the BES if it, for example, meets three of the four criteria rather than all four.
Group
Edison Electric Institute
Mark Gray
No
We do not believe that a meaningful "not to exceed" impedance value can be proffered which would be appropriately useful across all regions. EEI recommends that Exclusion benchmarks should directly correlate to the BES definition exclusions as written. Although the "4 Item" approach was obviously intended to provide a simple approach, the outcome suggested in the draft was less than satisfactory and we submit it does not hold true to the exclusions provided by the Drafting Committee in their proposed BES Definition. (see additional comments provided at the end of the Comment form)
Yes
The verbiage used in the BES Principles document does not closely match the verbiage used in the NERC Bright-line Exclusion. For that reason, we submit the following alternative language. System Elements and Facilities treated in total as a radial system shall have the following characteristics: 1. Shall be separated from the BES with an Automatic Interrupting Device, AND 2. Only load serving and must be isolated from other radial systems through a normally open switching device, OR 3. Only include generation resources but cannot include any of the Inclusions (i.e., I2, I3, I4 and I5) identified in the BES Definition, OR 4. Is a combination of Load and Generation but cannot include any of the Inclusions (i.e., I2, I3, I4 and I5) identified in the BES Definition Evidences to be supplied shall include: • One-line Diagram clearly showing all demarcations between BES Facilities and the Radial System (including the Automatic Interrupting Device, AND • Operating procedures or interconnection agreements that indicate Generating Units contained within the Radial System are not dispatchable (if applicable), AND/OR • Operating procedures that show that the Radial System is not operated as part of the BES
Yes
Although EEI agrees in principle to the exclusion, we feel the current language has some problems which need to be addresses. Note the following: The word "rarely should be struck. It is meaningless in the context for which it is used and offers little to characterize an element or connection since it does not contain a measure. A more appropriate statement to broadly characterize a Non-BES element or connection would be the following: "Power flows are broadly characterized as Load Serving." Items i. and iii. are excessive requirements which do not aide in defining what is "necessary for operating an interconnected electric transmission network". What might be more a more useful measure is a comparison of total MW hours of load consumed vs. MW hours fed back into the BES as measured on an annual basis. Item v. – Hourly energy data (MWh) for the most recent 12 month period for every excluded BES element is an excessive requirement. Annual records indicating that MW hours consumed annually verses MW hours that flow through the non-BES element would be a better indicator in line with the definition.
Yes
A radial system by definition transports power from the BES System to a Distribution System, similarly an LDN operates in a like manner. A strict reading of the above criteria would exclude both from consideration yet the definition allows both. We believe that in an attempt to develop a set of criteria useful for all situations, the outcome has weakened the original intent as set in the Definition. Although much of the criteria used is largely appropriate, a stricter adherence to the BES definition criteria would substantially help to avoid confusion between what was developed as principles and what was developed as the BES Definition.
Yes
In general, we agree that an alternative path allowing a technical analysis to demonstrate that a Facility (or Element) should not be considered part of the BES is appropriate. However, we disagree with the measures offered and suggest an alignment with efforts already being developed within NERC's Event Analysis Working Group. EEI proposes that the technical analysis criterion which has been proposed is too complicated, inconsistent with what is currently being done across the regions and submits that a better approach would be to align reliability impacts with the Event Analysis Criteria being developed by NERC's EAWG. These criteria would be a better benchmark as to whether

a Facility or Element should be excluded from the BES. The proposed alternate criteria are as follows: (1) The loss of the Facility (or Element) would not interfere or negatively impact the BES from staying within acceptable limits (i.e., frequency, voltage and System Operating limits) following a fault on or loss of that Facility (or Element); (2) The loss of the Facility (or Element) would not interfere or negatively impact the BES from performing acceptably after credible contingences; (3) Facility (or Element) faults, failures, or trips do not push the system to a point of Instability or otherwise initiate cascading outages; (4) BES facilities are protected from unacceptable damage by operating the Facility (or Element) within its ratings; and (5) The unexpected loss of the Facility (or Element) does not negatively impact the BES from achieving its mission of to supply the aggregate electric power and energy requirements of its customers.
In general, we do not agree this is a relevant factor for consideration and should be excluded.
Presently no regional standards exist for allowable transient voltage dip beyond WECC. It is also doubtful a useful standard could be developed for all regions or interconnections.
Presently no regional standards exist for allowable transient frequency response beyond WECC. It is also doubtful a useful standard could be developed for all regions or interconnections.
Presently no regional standards exist for allowable voltage deviation beyond WECC. It is also doubtful a useful standard could be developed for all regions or interconnections.
No
None beyond what was offered under question 5
Yes
See comments for Question 5 above
See comments for Question 5 above
See comments for Question 5 above
See comments for Question 5 above
See comments for Question 5 above
Yes
Method 2 is largely based on System Planning Criteria developed by WECC. At the present time, we do not believe that any of the other regions have similar planning criteria for which they could use or could easily integrate similar criteria into useable Planning Standards which could be applied in useful manner across all regions. For this reason, it is recommended that a separate Design Committee be created which would include representatives from all regions. It is expected that this effort may be substantial but is necessary before Method 2 or the Inclusion Process as written could be used. We would further caution the use or imposition of such a process since some transmission owners may not have the necessary skills or tools required to conduct studies of this type (in-house) and imposing this level of evidence will likely cause many who cannot meet this requirement to include unnecessary elements diluting the BES as defined and negating the value of the exclusion process.
Yes
EEI is concerned that under the technical principles, some facilities that are local distribution facilities may be included the BES. This is in conflict with the definition of the Bulk Power System in Section 215 which excludes facilities used in local distribution. In particular, EEI is concerned that the provision of the technical principles prohibiting the seeking an Exclusion for a cranking path will include local distribution within the definition of BES.
Yes
We are concerned that the method used to characterize exclusions in Method 1 did not follow the proposed BES Definition and believe the process developed for Method 2 (and reused for Sub-100kV Inclusions) is overly complicated, lacks necessary regional standards to support the process and may prove too difficult for some companies to fully comply with thereby discouraging a consistent and uniform application of the definition across all regions and affected BES element owners. In the proposed (BES) definition and accompanying Inclusions and Exclusions, the Drafting Committee went to some effort to clearly and methodically define what was included and what was permissible to exclude. Unfortunately the NERC proposed "Technical Principles for Demonstrating BES Exceptions" did not follow that same clear and concise manner adding some confusion which could lead to inconsistent application of the Exclusion (and Inclusion) Criteria. For example, at no point did the "Principles" ever identify Inclusions I2 through I5 which were liberally used in the exclusion criteria

within the BES definition. Additionally within the body of the Proposed BES definition, there are three (3) approved Exclusions (E1 – Radial System; E2 – Small Customer Generator/Generation System and E3 – Local Distribution Networks). Each of the Exclusions have its own set of criteria used to define and characterize the methodology necessary to meet each exclusion, however, the "Principles" contained in this document only loosely follow the criteria provided and in some cases miss that criteria all together. We refer the SDT to the EEI comments previously submitted on the BES Definition regarding the relationship of the BES definition to the statutory exclusion of local distribution facilites.

Group

Florida Municipal Power Agency

Frank Gaffney

No

Impedance is a function of a line's length; it does not measure whether a line serves a BES function. A very long line can exist only to serve load, and a short line in an urban area (where the load is physically close to the grid) could be needed for transmission but would have low impedance. This proposed metric is thus both over- and under-inclusive, and should be discarded. Transfer distribution factor is a more appropriate metric, as described in FMPA' response to Question 4. FMPA supports having two paths for exclusions, one that includes extensive technical analysis and another that does not. The path with less technical analysis is appropriate for Elements that a relatively high-level examination shows to be not relevant to the reliability of the grid. This opportunity should be available in the context of exclusions to reduce the burden on small entities. Reliability will not be impaired by this option; all exception requests will be reviewed by NERC, and in any case where NERC is less than certain that an exception is appropriate, NERC can perform any or all of the analyses that would be required for a more technical exclusion or inclusion, and a positive result on any one of the analyses would be sufficient justification to deny the exclusion request.

We believe that this criterion is intended, like those in 1(a) and (d), to determine whether an Element is planned and operated to function as part of the interconnected grid. It is, however, too vague to be useful and should be discarded.

The third item is "power flows into the system, but rarely flows out." This criterion is vague. FMPA suggests instead the following language, which is consistent with FMPA' comments on Exclusion E3 of the BES definition: "Neither the Element, nor any Elements that it connects to the grid (in aggregate), includes more than 75 MVA of generation used to meet the resource-adequacy requirements of electric utilities."

Yes

FMPA supports the criterion in concept, but "intention[]" is a vague term and not relevant to an Element's impact on the grid. We suggest instead that to obtain an exclusion for such a quasi-radial Element, the owner be required to demonstrate that the Element has no more than a 5% transfer distribution factor on any BES Element for transfers that could be curtailed through the NAESB TLR procedure (e.g., interchange transactions, or generator to load distribution factors (GLDF) for BES generators). Transfer distribution factor (or GLDF) is a good measure of an Element's impact on the grid and is not subject to varying interpretations. In addition, NAESB standards are also approved by FERC and mandatory to jurisdictional entities. Hence, the 5% TDF "Curtailment Threshold" has already been approved by FERC as indicating an insufficient impact on the BES to be considered for TLR. And, it shows consistency between NERC and NEASB standards.

Yes

FMPA supports including specific technical criteria that Elements must meet to obtain an exclusion through the exception process. This approach will facilitate uniform application of the exception process. FMPA responds to the first five proposed criteria in response to 5b-5e below. In the sixth proposed criterion, "steady state stability" is ambiguous, does the SDT mean voltage stability, power angle curve stability, or small signal stability? The seventh proposed criterion, "No cascading outages," is insufficiently granular and should be discarded. The criteria are intended to measure whether, among other things, a particular Element can cause a cascading outage. They need to set out how decision-makers will determine whether an Element can cause a cascading outage, not simply state that an Element that can cause a cascading outage cannot be excluded from the BES.

The first proposed criterion, "Having a distribution factor of 5% for any other Element," should instead be "Having a distribution factor of 5% for Interchange Transactions or BES generator to load

curtailable in Transmission Loading Relief stages one through five.”
The second criterion, “Allowable transient voltage dip – criteria TBD,” should specify where the transient voltage dip is, i.e. “Allowable transient voltage dip on another BES Element for events on the Element that is a candidate of the Exception Request—criteria TBD.”
The third proposed criterion, “Allowable transient frequency excursion – criteria TBD,” should be rephrased like the second: “Allowable transient frequency excursion on another BES Element for events on the Element that is a candidate of the Exception Request – criteria TBD.”
The fourth proposed criterion should be revised in the same way as the second and third: “Voltage deviation on another BES Element for events on the Element that is a candidate of the Exception Request – criteria TBD.” The fifth proposed criterion should be similarly revised: “Transient Stability on another BES Element for events on the Element that is a candidate of the Exception Request – positively damped.”
Yes
TAPS proposes a simpler set of exclusion exception criteria: 1. Having a distribution factor of 5% for curtailable Interchange Transactions or BES generator – load identified in Transmission Loading Relief stages one through five, and 2. Category B and C contingencies on the Element that is the subject of the Exception Request meet the TPL-002 criteria for other BES Elements. (With the new TPL-001-3 standard recently approved by ballot, Category P0 through P7 contingencies on the Element that is subject of the Exception Request meets the criteria of P0 through P3 for other BES Elements) 3. The Element that is the subject of the Exception Request is not: (1) part of an IROL, (ii) part of a blackstart or cranking path used in a TOP’s restoration plan, and (iii) is not used in NUC-001 to provide service to a nuclear plant. TAPS believes these three criteria meet the intent of all of the criteria presented by the SDT.
FMPA supports using a uniform set of technical criteria to decide inclusion exceptions. Such an approach will facilitate uniform application of the criteria. In addition to having clear and uniform criteria, the technical analysis for inclusions and exclusions should use the same criteria (though one should of course be the inverse of the other). We note that the steps laid out for Inclusions do not quite track those in Exclusions 2(a). For example, Inclusions 1(b) states, confusingly, “Monitor the contribution of the disputed Element(s),” but there is no corresponding step in Exclusions 2(a). FMPA suggests that Inclusions 1 be revised to mirror Exclusions 2.
See FMPA comments in response to Question 5.
See FMPA comments in response to Question 5.
See FMPA comments in response to Question 5.
See FMPA comments in response to Question 5.
Yes
The third paragraph of the introduction to the Technical Principles is awkwardly worded and might be misconstrued. FMPA suggests the following rewording: “Entities are not required to seek exceptions under the Exception Procedure to exclude from the BES Element(s) that are already excluded under the BES definition and designations.” For the sake of consistency, Exclusions (1) should contain a provision analogous to Exclusions (2)(b) and Inclusions (1)(f) addressing the circumstances under which the ERO can override a demonstration based on these criteria. As noted above, one of those circumstances would be a demonstration by NERC that the Element in question meets the criteria for inclusion in the BES.
Individual
Laura Lee
Duke Energy
No
Duke Energy does not agree that this characteristic materially demonstrates that an Element is not necessary for operating an interconnected electric transmission network. There is no correlation between the electrical proximity of an element to load and its necessity for operating an interconnected transmission network. In general, the path that does not include extensive technical analysis is not adequate to distinguish between the Elements that are and that are not necessary for

said operation.
No
This second characteristic does not add clarity to the E1 Exclusion in the proposed BES definition. And in general, the path that does not include extensive technical analysis is not adequate to distinguish between the Elements that are and that are not necessary for operating an interconnected electric transmission network.
No
This third characteristic does not add clarity to the E3 Exclusion in the proposed BES definition. And in general, the path that does not include extensive technical analysis is not adequate to distinguish between the Elements that are and that are not necessary for operating an interconnected electric transmission network.
No
This fourth characteristic does not add clarity to the E3 Exclusion in the proposed BES definition. And in general, the path that does not include extensive technical analysis is not adequate to distinguish between the Elements that are and that are not necessary for operating an interconnected electric transmission network.
Yes
Duke Energy agrees with the approach of using a technical analysis based on transmission system modeling but the specific criteria do not need to be specified here – they should be consistent with the latest revision of the TPL-001. R5 of TPL-001-2, Transmission System Planning Performance Requirements states that each Transmission Planner and Planning Coordinator shall have criteria for acceptable System steady state voltage limits, post-Contingency voltage deviations, and the transient voltage response for its System. The technical analysis required for exclusion of an Element from the BES should evaluate the loss of the Element against a more conservative set of criteria than that specified by the Transmission Planner and Planning Coordinator responsible for that Element. There are currently no continent-wide performance levels defined for these evaluations, and there is no technical basis for developing performance levels that would be applicable continent wide.
This should be removed – there is no correlation between distribution factor and whether or not an element is necessary for reliable operation of the interconnected transmission network.
See general comment on approach.
See general comment on approach.
See general comment on approach.
No
Yes
The approach and evaluation values should be consistent with those for the Exclusions.
No
No
No
Individual
Bill Dearing
Grant County PUD No. 2 (Grant)
No
We believe that the proximity test may be unnecessary, and if an Element or group of Elements meets the other three tests proposed by the SDT, it should be excluded from the BES, even if it does

not meet the proximity test. Secondly, using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes

Grant agrees conceptually that systems operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. That is because local distribution systems typically operate adjacent to, or at the end of transmission lines, and function operationally to move power from the Transmission Service Provider's point of delivery of bulk power that has moved across the integrated bulk transmission system to end-users located within the local distribution utility's service territory. To be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as a system that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that system is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution systems and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution system interconnected with those relays should not.

Yes

Grant agrees conceptually that one critical characteristic distinguishing local distribution facilities that must be excluded from the BES from transmission facilities that should be included is the manner in which power flows on those facilities. Power on local distribution systems generally flows only from the interconnected transmission source and across the distribution system for delivery to end-use customers. By contrast, power on transmission systems generally flows in two (or multiple, in networked systems) directions and is delivered in bulk to distribution utilities rather than to end-users. Hence, the SDT has properly identified power flows as one important characteristic that distinguishes BES transmission systems from local distribution systems. In order to identify systems that are not necessary for the operation of the BES under this text, we propose that any system where real power flows into the local distribution system 90 percent of the time or more under normal operating conditions.

Yes

Grant agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. In fact, we believe this may be the most important and readily identifiable distinction. Accordingly, Grant agrees that if power is not intentionally transported through a particular system, that system is not used for transmission and should not be considered part of the BES. One exception may be for a small embedded generation unit owned by a different party that may be "scheduled" out of an area, but in reality, does not produce any physical flow. These circumstances should not trigger inclusion.

Yes

We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with local distribution and not BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Grant supports the technical arguments and the White Paper presented by Snohomish County PUD in their comments. We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in the White Paper, which is based upon the approach recommended by the WECC BES Task Force.

The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand

that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection
Specific transient voltage dip thresholds are proposed at page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
See responsde to 5d
No
No comments
Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid showing that the Elements contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in the Snohomish PUD White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5.
See exclusion comment
See exclusion comment
See exclusion comment
See exclusion comment
No
As discussed on page 12 of the Snohomish White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant Regional Entity, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data.
No
As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
Yes
Grant generally supports the approach to the exclusion process proposed by the SDT, which provides two different paths to exclusion, one based on readily-identifiable operational characteristics of a system, and one based on technical reliability analysis. We believe it is important to provide for the first path, based on operational characteristics, so that systems that are marginally disqualified under the BES Definition (because, for example, generation within the system exceeds demand for a few hours a year) can obtain an exclusion without the large investment of resources that otherwise might be required for a full-scale technical analysis. That being said, we question whether the first subsection of the characteristic test, relating to system proximity, is necessary, and we are concerned that the requirement that a system meet all four requirements of the characteristics test may be overly restrictive. For example, it is easy to imagine a distribution system in a rural area that covers a widely dispersed area, so that load is many miles from the relevant generation/transmission source, and that the system therefore does not meet the electrical proximity element, but meets the other three elements of the characteristics test. Such a system should be excluded because it clearly serves a local distribution function, and not a transmission function, as demonstrated by the fact that the system meets subsections (c) (power flows into the system but rarely flows out) and (d) (power is

not intentionally transported over the system). Accordingly, we recommend that the SDT consider eliminating the first test. In the alternative, the SDT should consider allowing exempting a system from the BES if it, for example, meets three of the four criteria rather than all four.

Individual

Si Truc PHAN

Hydro-Quebec TransEnergie

No

Close electrical proximity to load does not appear to be an appropriate criteria. There is no reason that this criteria would prevent exclusion of a radial system with long lines feeding far away loads. Instead of considering proximity to load, it would be better to consider the way the Element is connected to the BES and the function of the excluded part of the system, mainly to deserve loads or integrate some generation, but not to transfer power to another Balancing Authority. Those are covered by criteria b., c. and d., so we believe that criteria a. should not be maintained.

Yes

However, the point B.i. is hard to understand and would need clarification. Here is a proposal: "For an Element to be excluded from BES, its should be demonstrated that there are a proper disconnection procedure when facing a disturbance that would prevent this Element to impact the BES" ?. The point should be to make sure a fault on the Element will be isolated effectively without adverse impact on the BES, even when we have a second transmission source for the syb system seeking exclusion. Also, for point B. ii., it should be explained what is meant by the expression "regional dispatch". Is it an alternate way of transfer of power outside the Balancing Authority ?

Yes

However, this is only part of an exclusion. The point c. iv and v, MWh is not relevant for real-time operation. It would be more simple to put a time reference, such as a total number of days or a % of the time. In number iii, do you mean the first self certification ? In fact, the evidence for exclusion will be done once, but ROP suppose that the self certification will be done many times (every two years).

Yes

Yes

Comments on distribution factor measurement: The choice of the maximum distribution factor could be difficult to establish. For this point, the comparison of the distribution factor prior and after the events could be considered.

Comments on allowable transient voltage dip measurement: The TPL-001 to 004 do not specify any reference measurement for stability (such as Allowable transient voltage, frequency excursion, voltage deviation, etc.). Instead, it request that the system shall remain stable, without cascading or uncontrolled islanding. Also, it is requested that the Planning Entities shall define and document the criteria or methodology used in the analysis to identify System instability for conditions such as Cascading, voltage instability, or uncontrolled islanding. This is exactly what should be requested in the analysis and demonstration of Element seeking exclusion from BES. The analysis and burden of proof should be left to the Entity as is done in the TPL, considering that there are no common values with the different interconnection.

Yes

Technical demonstration should not be limited to technical principles stated in the "Technical Principles for Demonstrating BES Exceptions". Entities should be allowed to do their own demonstration with their own technical arguments. As an example, an Entity could consider a few level of application for the standards. As an example, the level #1 being the most important level, all standards would apply to this level, including more stringent criteria than the TPL standards. This would bring BES level #1 very robust and reliable, ensuring the reliability of the main system. A second BES level #2 could be define for local transmission to which would be applied most standards but excluding some of the C section of TPL. Attention would be given to proper reliable operation of the BES level #2, but with smaller level of investment on the design aspect, those regional

transmission part of the system being able to face higher risk for loss of continuity of service. Finally, for generation or Load Facility that would be excluded from both level of BES, minimum standards would still apply such as in protection or for generation. Through its own technical principles, the Entity could demonstrate that the highest level of BES is more reliable than what is expected by NERC's standard, but that in regional transmission part of the system, the C TPL standard would not apply with the only risk of lower continuity of service.

Yes

No

Yes

However, there is a conflict between the proposed approach and the regulatory framework applicable in the Quebec's Interconnexion or at least there are some important differences between both. Paragraph 95 of FERC Order 743 acknowledged the situation of non-FERC juridiction. As for the Quebec's Interconnexion, the BES definition and exclusion approach shall meet the expectations of Quebec's regulator, the Régie de l'Énergie du Québec, (Quebec Energy Board) which has the responsibility to ensure that electric power transmission in Quebec is carried out according to the reliability standards it adopts. In a recent order (D-2011-068), the Régie de l'Énergie du Québec has recognized several level of application for the Reliability Standards in Québec. It stated specifically that most reliability standards in Québec shall be applied to the Main Transmission System (MTS). One other level of application recognised by this decision is the NPCC Bulk Power System (BPS) to which the standards related to the protection system (PRC-004-1 and PRC-005-1) and those related to the design of the transmission system (TPL 001-0 to TPL-004-0) will be applicable (including the rest of the standards). The Main Transmission System definition is somewhat different than the Bulk Electric System definition. The Main Transmission System includes elements that impact the reliability of the grid, supply-demand balance and interchanges. It can be described as follows : The transmission system comprised of equipments and lines generally carrying large quantities of energy and of generating facilities of 50 MVA or more controlling reliability parameters: • Generation/load balancing • Frequency control • Level of operating reserves • Voltage control of the system and tie lines • Power flows within operating limits • Coordination and monitoring of interchange transactions • Monitoring of special protection systems • System restoration Therefore, it will be necessary to accommodate NERC's proposed definition of BES or the exception process with the Quebec situation where Entities are under a different jurisdiction. These differences include more than one level of application for the reliability standards, the Main Transmission System definition being the main one to which most reliability standards apply.

No

Individual

Eric Lee Christensen

for Snohomish County PUD

No

Snohomish agrees in principle that one characteristic of local distribution systems is that they are usually confined to a relatively limited geographic area, as opposed to transmission systems, which (especially in the West) tend to cover very large distances. We also believe the proximity test may be a sensible way to identify local distribution facilities. However, as explained in more detail in our response to Question 10, we believe that the proximity test may be unnecessary, and if an Element or group of Elements meets the other three tests proposed by the SDT, it should be excluded from the BES, even if it does not meet the proximity test. Further, using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting

transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes

Snohomish agrees conceptually that systems operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. That is because local distribution systems typically operate adjacent to, or at the end of transmission lines, and function operationally to move power from the Transmission Service Provider's point of delivery of bulk power that has moved across the integrated bulk transmission system to end-users located within the local distribution utility's service territory. To be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as a system that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that system is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution systems and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution system interconnected with those relays should not, and cannot legally, be classified as BES.

Yes

Snohomish agrees conceptually that one critical characteristic distinguishing local distribution facilities that must be excluded from the BES from transmission facilities that should be included is the manner in which power flows on those facilities. Power on local distribution systems generally flows only from the interconnected transmission source and across the distribution system for delivery to end-use customers. By contrast, power on transmission systems generally flows in two (or multiple, in networked systems) directions and is delivered in bulk to distribution utilities rather than to end-users. Hence, the SDT has properly identified power flows as one important characteristic that distinguishes BES transmission systems from local distribution systems. Snohomish also agrees conceptually that the fact that power may flow out of a local distribution system onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the system as local distribution. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude local distribution facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a local distribution system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify systems that are not necessary for the operation of the BES under this test, we propose that any system where real power flows into the local distribution system 90 percent of the time or more under normal ("N-0" or All Lines in Service) operating conditions should be held to meet this test. That a system meets this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. In addition, the presence of generation within a local distribution system that only modifies the level of the load served by the bulk system, but does not result in power being injection into the bulk system, does not change the reliability effect of the local network and therefore should not require the local network to be classified as BES.

Yes

Snohomish agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. In fact, we believe this may be the most important and readily identifiable distinction. As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Local distribution systems do not share any of these operational characteristics. Accordingly, Snohomish agrees that if power is not intentionally transported through a particular system, that system is not used for transmission and should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to a particular system will

provide a ready guide to whether power is intentionally scheduled across that system. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test.
Yes
We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with local distribution and not BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we attach to these comments and commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in our White Paper, which is based upon the approach recommended by the WECC BES Task Force.
The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection, such factors have never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, Snohomish suggests that a detailed technical exemption process be allowed on an interconnection- wide basis. The Western Interconnection is a "hub and spoke system" where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of operations. For example, the Western Interconnection uses a rated paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC Order 743-A, Snohomish supports exemption criteria for individual frequency independent regions, or interconnections.
Specific transient voltage dip thresholds are proposed at page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Please see our response to Question 5d.
No
SNPD supports the exemption of generation interconnected to local distribution networks if the generation is less than 300 MW capacity and where the power generated is consumed within the LDN and rarely flows out of the LDN, using the proposed criteria described in our response to question 3. This proposal is consistent with the section III.c.4 [Exclusion] of the NERC Statement of Compliance Registry Criteria as well as the Load modifiers used in the Eastern Interconnection. "Load Modifiers" (small generators that only affect load at the distribution level)."

Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid showing that the Elements contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in our White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.
Please see our response to Question 5b.
Please see our response to Question 5c.
Please see our response to Question 5d.
Please see our response to Question 5d.
No
As discussed on page 12 of our White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.
Yes
As we explained in considerable detail in our response to Question 1 of the Comment Form on the 1st Draft of Definition of BES, filed on May 27, Snohomish believes that the proposed BES Definition could conflict with Section 215 of the Federal Power Act if the Definition, the Exception Process, and the Technical Criteria do not effectively exclude facilities used in local distribution from the BES or if the BES definition does not focus on cascading outages, separation events, and instability on the interconnected bulk system. These statutory limits on the scope of the BES and reliability standards are a minimum that must be met.
Yes
Snohomish County PUD generally supports the approach to the exclusion process proposed by the SDT, which provides two different paths to exclusion, one based on readily-identifiable operational characteristics of a system, and one based on technical reliability analysis. We believe it is important to provide for the first path, based on operational characteristics, so that systems that are marginally disqualified under the BES Definition (because, for example, generation within the system exceeds demand for a few hours a year) can obtain an exclusion without the large investment of resources that otherwise might be required for a full-scale technical analysis. That being said, we question whether the first subsection of the characteristic test, relating to system proximity, is necessary, and we are concerned that the requirement that a system meet all four requirements of the characteristics test may be overly restrictive. For example, it is easy to imagine a distribution system in a rural area that covers a widely dispersed area, so that load is many miles from the relevant generation/transmission source, and that the system therefore does not meet the electrical proximity element, but meets the other three elements of the characteristics test. Such a system should be excluded because it clearly serves a local distribution function, and not a transmission function, as

demonstrated by the fact that the system meets subsections (c) (power flows into the system but rarely flows out) and (d) (power is not intentionally transported over the system). Accordingly, we recommend that the SDT consider eliminating the first test. In the alternative, the SDT should consider allowing exempting a system from the BES if it, for example, meets three of the four criteria rather than all four. We have pasted in the text of our White Paper below. Please contact us for a more readable version of the White Paper. White Paper A Performance-Based Exemption Process to Exclude Local Distribution Facilities from the Bulk Electric System April 2011 This White Paper proposes a transmission planning ("TPL") "performance-based" process to determine the local distribution facilities the North American Electric Reliability Corporation ("NERC") must exclude from the Bulk Electric System ("BES") pursuant to Section 215(a)(1) of the Federal Power Act ("FPA"). This process would apply to those local distribution facilities that are not automatically excluded under a bright-line BES definition. Consistent with Federal Energy Regulatory Commission ("FERC") Order Nos. 743 and 743-A, a performance-based exemption process would be objective, consistent, and transparent, and would adequately differentiate between local distribution and transmission, i.e., BES, facilities. I. What Is Reliability? FPA Section 215 authorizes NERC to promulgate "reliability standards," subject to FERC approval. Section 215 defines "reliability standard" to mean a properly-approved requirement "to provide for the reliable operation of the bulk-power system." The statute, in turn, defines "reliable operation" to mean "operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of sudden disturbances, including . . . unanticipated failure of system elements." II. What Is "Customer Service" or "Level of Service" ("LOS")? Local customer service or LOS relates to service failures on local utility systems that are wholly internalized rather than spilling onto the interconnected regional grid. These types of service failures relate to local customer service and LOS standards. The customers of those utilities will bear the full cost of complying with internal LOS standards and will obtain the full benefit of compliance to the extent that service levels on those systems improve. Accordingly, state public utility commissions (for regulated utilities) and independent boards (for non-regulated utilities) can fully and accurately weigh whether the benefits of compliance with such standards are justified by the costs they will pay. Intervention by NERC and a Regional Entity is not needed because a utility's actions related to level of service on its own system will neither unduly burden the customers of other systems, threaten the reliable delivery of power to those customers, nor create incidental benefits to those remote customers. In the absence of the need to protect customers of systems remote from the consequences of decisions made by an individual utility, there is no warrant for NERC or a Regional Entity to interfere with a utility's internal decision-making about the appropriate LOS to its own customers, and the costs that will be borne by those customers to achieve any particular level of service. In fact, in the "Savings Provisions" of Section 215, Congress specifically included language prohibiting NERC and Regional Entities from enforcing "compliance with standards for adequacy" of electric service. By law, these remain the exclusive province of local decision-makers. III. The Need for a Material Impact Test In Order No. 743-A, FERC clarified that a material impact test is appropriate in the reliability context if the test can be shown to identify facilities needed for reliable operation. The following example of an outage demonstrates the need for an impact test to distinguish between LOS and Reliability, i.e., local distribution facilities and BES facilities. A. Pre-Event Facts Local Utility Administration ("LUA") owns a 115 kV system that moves power from two points of delivery ("POD") and serves 1000 MW of load. A DC battery rack had an unexpected failure a few days after it was routinely inspected and LUA has not implemented Supervisory Control and Data Acquisition ("SCADA") so the DC battery voltage is not continuously monitored. The LUA system interconnects with BES Company's system which consists of 230 kV and 500 kV lines. B. Event Facts A fault occurs and the breakers in substation 2 fail to operate due to a battery failure (Figure 1). This results in an outage for customers served by substations 1, 2, and 3 on the LUA system. Figure 1 C. Post-Event Facts Immediately after the outage, LUA customer service receives numerous customer calls followed by a call from its Public Utility Commission/Local Utility Board ("/PUC/LUB"). LUA dispatches crews immediately after being informed of the outage to identify and resolve the problem. Within 45 minutes, the fault is sectionalized and the all load is restored. The PUC/LUB receives complaints from LUA customers who identify economic and other adverse impacts of the outage. The PUC/LUB demands a report from the LUA that describes the event and restoration, as well as potential solutions. LUA submits a report which finds that the main solution to this problem involves the implementation of a SCADA system. The SCADA system scope of work includes battery voltage telemetry and would have identified the DC system issue and prevented the protection system failure,

resulting in only the loss of substation 3. The SCADA plan cost estimate is $30 million and was presented three years earlier. The PUC/LUB evaluated the costs and benefits of the new SCADA system, but did not approve the project in order to reduce the budget and/or provide rate stability for the struggling local economy. LUA, the PUC/LUB, and customers will re-evaluate the merits of adding SCADA as well as other solutions such as increasing substation inspection runs, updating the batter fleet, and further investigating battery manufacture reliability records. Based on the LUA report, the battery bank failure rate immediately after routine inspections is expected to occur once every 3,500 years. Seventy battery banks are used on the LUA system, so a bank failure should be expected every 50 years. BES Company's neighboring 230kV and 500kV system does not experience an adverse system impact. Subsequently, BES Company identifies that one of its breakers operated at the LUA South POD. BES Company and LUA coordinate a review of the system protection scheme and BES Company determines that it operated correctly. BES Company verifies that the LUA outage did not create any thermal, voltage, or transient stability limit violations on the BES Company system. The Regional Entity, NERC, and FERC treat the outage as a Reliability Standards issue. The LUA System (highlighted in yellow) is considered part of the BES because it meets the "bright line" 20 MVA and 100 kV thresholds under the current BES definition and the NERC Statement of Compliance Registry Criteria ("SCRC"). The event would most likely be considered a TPL-003 category C event specifically C8 SLG Fault, with delayed clearing that may include a stuck breaker or protection system failure. The LUA Substation Department reviews its inspection records and has adequate documentation for the battery banks involved in the outage. As a result, LUA avoids substantial fines. However, during the inspection review, LUA notices that the battery bank in a similar distribution substation inspection schedule was completed three days late. Upon following further internal procedures, LUA finds that the battery bank was inspected three days late due to restorations efforts after a major wind storm. Although there were no LOS impacts, and the inspection schedule was unrelated to the outage, the Reliability Standards triggered a LUA self report to its Regional Entity which ultimately resulted in a $50,000 penalty. D. Summary This example identifies that in addition to a "bright line" BES exclusion process a more refined process such as a "performance based" reliability assessment is needed to distinguish BES facilities from distribution facilities if the NERC Statement of Compliance Registry Criteria ("SCRC") continues to be the benchmark for assessing BES facilities. It is clear from this example that the current 100 kV and 20 MVA thresholds cannot accurately classify what is and is not considered part of the BES. Defining BES facilities is important from the "Reliability Standard" and "LOS" perspectives as well as from a local and regional jurisdictional standpoint. There are multiple agencies identifying and approving what facilities should and should not be built, what programs should and should not be implemented, and if a fine should be paid by customers experiencing an outage without determining if it could have had an adverse impact on neighboring electric systems. Without a performance-based process, many small and medium electric utilities would be unnecessarily burdened. IV. Neighboring System Rule It is important but not always easy to distinguish the difference between "reliability" and "LOS" impacts. One way to resolve this is to use the "neighboring system rule." Simplistically, if events on the host system's facilities can create an "adverse" or "material" impact on a neighboring electric (TO, TOP, BA) system, those facilities should be considered part of the BES as they are creating a reliability impact. If not, these facilities should not be considered part of the BES. V. "Adverse" or "Material" Impact A key question in applying the "neighboring system rule" is what is an "adverse" or "material" impact, and what "performance based" assessment should be used to benchmark adverse or material. Because the electric system within an interconnection is frequency interdependent, theoretically every system change impacts the interconnected system to some degree. Turning on a light-switch that is connected to an operational 20 watt CFL (light bulb) theoretically impacts frequency, although to an undetectable degree. Therefore the term "material" or "adverse" impacts must be defined to distinguish observable impacts that affect reliability from minutia. A number of performance based exclusion examples have been proposed that use, Power Transfer Distribution Factors ("PTDF"), Line Outage Distribution Factors ("LODF"), fault duty or short circuit levels, reactive margin studies (P-V and Q-V), abbreviated or focused powerflow and transient stability analysis, as well as complete TPL assessment using multiple seasonal base cases, loading conditions, transfer levels. These methods demonstrate various metrics, they rank system strength (both real and reactive), the ability of power to flow through system under normal and outage conditions, and they determine steady state, voltage stability and transient (angular) stability performance. Although there may be advantages to a multi-step "performance based" approach that includes the exclusion examples above, this paper proposes a TPL-based assessment that is consistent with BES performance benchmarks used in assessing transmission

system performance in North America. The Western Electricity Coordinating Council ("WECC") BES Exclusion/Inclusion Assessment – 2-16-11 version provides a sound metrics in assessing the performance of a system as well as determining if a system can materially impact a neighboring system (Figure 2). It would be envisioned that each interconnection would develop a "Disturbance Performance Table of Allocable Effects on Other System". This table is necessary because the NERC TPL Performance Table does not provide actual performance details on acceptable transient and post transient voltage perturbations or minimum transient voltage frequencies. Figure 2 show the approved TPL-001 through TPL-004 performance tables. Figure 3 - Table 1 from the NERC TPL Reliability Standards VI. Performance Based Assessment Process The "performance based" methodology below is based on the "neighboring system rule" and the WECC BES Exclusion/Inclusion Assessment – 2-16-11 that was developed by the WECC Bulk Electric System Definition Task Force ("BESDTF"). The process focuses on exclusions rather than inclusion and specific response times, schedules, and process details have been removed as this will likely need to be determined by each, Regional Entity Representing the Interconnection ("RERI") A. Purpose The purpose of this document is to set forth a "performance based" technical process for assessing whether elements with a nominal operating voltage greater than 100 kV and outside the NERC SCRC based excursion process should be excluded from the Bulk Electric System. An element is necessary to reliably operate an interconnected transmission system if it significantly affects neighboring Transmission Owners, Operators, and Balancing Authorities as described in Table 1 below. This paper proposes a method for assessing whether an element is necessary to support the reliability of an interconnected transmission system or if the element is limited to supporting local customer service levels. B. Terms Exclusion Assessment (EA) An assessment of whether a Subject Element or System has a material impact on neighboring Transmission Owners, Operators, and Balancing Authorities as described in Table 1 below and conducted in accordance with the process set forth in this document. EA Base Case The interconnection approved, Base Case as modified to include the Subject Element, used to perform the assessment described in this document. Regional Entity Representing the Interconnection The regional entity representing the interconnection Registered Entity The entity registered to comply with mandatory reliability standards for a Registered Function. Responsible Entity The entity responsible for performing the EA and verifying the results of the EA to the interconnection. Subject System or Element of a System The System or Element of a System that is being examined by the EA. C. Applicability a. An EA may be performed: i. By a registered entity, or by a third party on behalf of a registered entity, to assess whether a Subject Element or system has a material impact on neighboring Transmission Owners, Operators, and Balancing Authorities as described in Table 1 may be excluded from the BES as set forth by the RERI. ii. The RERI, or by a third party on behalf of the RERI, to assess whether a Subject Element or system has a material impact on neighboring Transmission Owners, Operators, and Balancing Authorities as described in Table 1 should be included as part of the BES as set by the RERI. b. Frequency of analysis. The confirmed findings of an EA are valid until reversed by a subsequent EA. A new EA is required if: i. Significant changes are made to the network topology in the vicinity of the Subject Element; or ii. RERI staff requests a new EA. Such request shall be provided in writing and shall include reasonable justification for the request. D. Notifying the RERI of the Responsible Entity's intent to submit an EA finding or to perform an EA. The Responsible Entity shall notify the RERI in writing of its intent to submit such a finding. Such notice shall include: a. A general description of the Subject Element(s); b. One-line diagrams representing the Subject Element and applicable neighboring Elements; and c. A description of the base case that will be used in performing the EA and how that case will be stressed for the analysis. E. Performing the Analysis Base Case The base case(s) used for the studies shall be developed from current interconnection Operating Cases and shall simulate stressed conditions in the area of the element to be analyzed which (1) are reasonably expected to be achieved, consistent with the study period selected (e.g., hydro generation shall reflect seasonal water availability patterns) and (2) are expected to provide "worst-case" results (i.e., the greatest impact on voltage, flow, or transfer capability) during the upcoming operating year. The base case(s) shall be "stressed" by committing or de-committing generating units and adjusting generating unit output to increase the flow on the candidate element and the electrically nearest rated interconnection transfer path to the greatest extent possible, but not beyond their continuous ratings, for the initial set of conditions. To help minimize the possibility of dispute as to whether the base case(s) are suitably stressed, entities are encouraged to solicit input from subregional planning groups or other planning entities as the suitability of the base case(s) before undertaking the analyses described below. i. Non-represented Elements. If the Subject Element is not represented in the EA Base case: 1. The Responsible Entity

shall provide to the RERI a written request to add the Responsible Entities data to the cases: o all data reasonably necessary to accurately and completely model the Subject Element in the EA Base case; and o A one-line diagram showing this element and other nearby Elements. If the nearest connected Element is not found to be necessary for the operation of an interconnected transmission system, the RERI shall notify the Responsible Entity to take no further action. F. Performance Based Methodology The impact an System or Element has on neighboring Transmission Owners, Operators, and Balancing Authorities as described in Table 1 shall be determined by assessing the performance of key measures of BES reliability through power flow, post-transient, and transient stability analysis with (1) the system, and the Subject Element, operating at reasonably stressed conditions that replicate expected system conditions under which the loss of the Subject Element would have the greatest impact on the key measures of reliability, and (2) the Subject Element removed from service, but without allowing for system readjustment. For the purposes of this analysis, "Elements" may be: (1) lines; (2) transformers; (3) buses or bus sections; (4) generating units; (5) shunt devices . i. Simulation 1: Requirement: Meet applicable NERC Reliability Standard (TPL-002 and TPL-003) and the RERI Disturbance Performance Table of Allocable Effects on Other System" Criteria performance for NERC TPL-002 and TPL-003 disturbances. Step 1: Run appropriate TPL-002 (N-1 contingency) studies of elements in the electrical vicinity of and including the Candidate Element (i.e., simulate primary protection operates as intended) Step 2: Run appropriate TPL-003 (N-2 contingency) studies of elements in the electrical vicinity of and including the Candidate Element. This would include both N-2 contingencies in which the Candidate Element would simultaneously be lost as part of a common mode failure, as well as contingencies in which the Candidate Element's primary protection fails. Automatic Remedial Action Schemes ("RAS") or Special Protection Schemes ("SPS") that are fully redundant (i.e., their failure is not credible) may be triggered during this simulation. If the failure of the RAS/SPS is a credible event, it should be considered as part of the N-2 analysis. ii. Simulation 2: Requirement: Remove the Candidate Element. Do not allow for system adjustment, and re-solve the base case. Then conduct applicable NERC Reliability Standard (TPL-002 and TPL-003) contingencies. Step 1: Remove Candidate Element (i.e., simulate unplanned opening of facility). Step 2: Assume no system adjustment. At this point, elements may be loaded above their continuous ratings but may not be loaded above their emergency ratings. Step 3: Perform NERC TPL-002 and TPL-003 (N-1 and N-2 contingency) studies. Step 4: If the analysis demonstrates performance that meets or exceeds that called for in the NERC Reliability Standards and RERI System Performance Criteria, the Candidate Element would be determined to not be necessary for the operation of an interconnected transmission system. Note: Consequential load tripping is allowed, and consequential and out-of-step generation tripping is allowed. Criteria Table 1: RERI Disturbance-Performance Table of Allowable Effects on Other Systems NERC and WECC Categories Outage Frequency Associated with the Performance Category (outage/year) Transient Voltage Dip Standard Minimum Transient Frequency Standard Post Transient Voltage Deviation Standard A System normal Not Applicable Nothing in addition to NERC B One element out-of-service ≥ 0.33 Not to exceed 25% at load busses or 30% at non-load busses. Not to exceed 20% for more than 20 cycles at load busses. Not below 59.6Hz for 6 cycles or more at a load bus. Not to exceed 5% at any bus. C Two or more elements out-of-service 0.033 – 0.33 Not to exceed 30% at any bus. Not to exceed 20% for more than 40 cycles at load busses. Not below 59.0Hz for 6 cycles or more at a load bus. Not to exceed 10% at any bus. D Extreme multiple-element outages < 0.033 Nothing in addition to NERC Figure 1. Voltage Performance Parameters RERI TPL criteria related to reactive power resources: 1. For transfer paths, voltage stability is required with the pre-contingency path flow modeled at a minimum of 105% of the path rating for system normal conditions (Category A) and for single contingencies (Category B). For multiple contingencies (Category C), post-transient voltage stability is required with the pre-contingency transfer path flow modeled at a minimum of 102.5% of the path rating. 2. For load areas, voltage stability is required for the area modeled at a minimum of 105% of the reference load level for system normal conditions (Category A) and for single contingencies (Category B). For multiple contingencies (Category C), post-transient voltage stability is required with the area modeled at a minimum of 102.5% of the reference load level. For this criterion, the reference load level is the maximum established planned load limit for the area under study. 3. Specific requirements that exceed the minimums specified in 1 and 2 may be established, to be adhered to by others, provided that technical justification has been approved by the RERI. 4. Item 3 applies to internal interconnection Systems. Submitting a Proposed Finding of Exclusion to the Regional Entity Information required. Once the analysis has been performed and the Subject Element/System has been determined to not have a material impact on neighboring Transmission Owners, Operators, and

Balancing Authorities as described in Table 1, and is unnecessary for the operation of an interconnected transmission system, the Responsible Entity shall submit the findings to the RERI. RERI Review of Proposed Findings The RERI operational/planning staff with technical expertise in powerflow studies shall review Proposed Findings of Exclusion submittals and shall determine if the assessment is deficient or agrees with the finding of exclusion. The RERI shall exempt the system elements from the BES, if the elements are approved for exclusion. If the exclusion of the BES elements change the Responsible Entities NERC functional registrations the Region shall support the Responsible Entity through the NERC deregistration process. Dispute Resolution A Responsible Entity or Registered Entity or Owner may appeal a Disputed Finding of Exclusion with the RERI to NERC. Ongoing Responsibilities a. Logging. The RERI shall create and maintain a comprehensive list, available for public review, of: i. All Elements with nominal operating voltages at or above 100 KV that have Confirmed Findings of Exclusion, or, through other aspects of the BES definition, have been excluded from the BES including an explanation of how the element was excluded through the definition; ii. All Elements with nominal operating voltages below 100 kV that have Findings of Inclusion; and iii. The status of all EAs in dispute. iv. The Responsible Entity would continue to provide system data to the neighboring Balancing Authorities and Transmission Owners and Operators and if applicable continue to coordinate underfrequency load shed and under voltage load shed scheme information. VII. Conclusion NERC should adopt the TPL-based assessment as proposed herein. A bright-line BES test will not exclude all load distribution facilities as required by the FPA. Further, a performance-based exemption process would be objective, consistent, and transparent, and would adequately differentiate between local distribution and transmission, i.e., BES, facilities.

Individual

Bill Dearing

Northwest Public Power Association (NWPPA)

No

We believe that the proximity test may be unnecessary, and if an Element or group of Elements meets the other three tests proposed by the SDT, it should be excluded from the BES, even if it does not meet the proximity test. Secondly, using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes

NWPPA agrees conceptually that systems operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. That is because local distribution systems typically operate adjacent to, or at the end of transmission lines, and function operationally to move power from the Transmission Service Provider's point of delivery of bulk power that has moved across the integrated bulk transmission system to end-users located within the local distribution utility's service territory. To be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as a system that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that system is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution systems and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution system interconnected with those relays should not.

Yes

NWPPA agrees conceptually that one critical characteristic distinguishing local distribution facilities that must be excluded from the BES from transmission facilities that should be included is the manner in which power flows on those facilities. Power on local distribution systems generally flows only from the interconnected transmission source and across the distribution system for delivery to end-use customers. By contrast, power on transmission systems generally flows in two (or multiple, in networked systems) directions and is delivered in bulk to distribution utilities rather than to end-users. Hence, the SDT has properly identified power flows as one important characteristic that distinguishes BES transmission systems from local distribution systems. In order to identify systems

that are not necessary for the operation of the BES under this text, we propose that any system where real power flows into the local distribution system 90 percent of the time or more under normal operating conditions.
Yes
NWPPA agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. In fact, we believe this may be the most important and readily identifiable distinction. Accordingly, NWPPA agrees that if power is not intentionally transported through a particular system, that system is not used for transmission and should not be considered part of the BES. One exception may be for a small embedded generation unit owned by a different party that may be "scheduled" out of an area, but in reality, does not produce any physical flow. These circumstances should not trigger inclusion.
Yes
We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with local distribution and not BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. NWPPA supports the technical arguments and the White Paper presented by Snohomish County PUD in their comments. We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in the White Paper, which is based upon the approach recommended by the WECC BES Task Force.
The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection.
Specific transient voltage dip thresholds are proposed at page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
See response to 5d
No
None
Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid showing that the Elements contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in the Snohomish PUD White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5.
See exclusion comment
See exclusion comment
See exclusion comment
See exclusion comment
No

As discussed on page 12 of the Snohomish White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant Regional Entity, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data.

No

As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.

Yes

NWPPA generally supports the approach to the exclusion process proposed by the SDT, which provides two different paths to exclusion, one based on readily-identifiable operational characteristics of a system, and one based on technical reliability analysis. We believe it is important to provide for the first path, based on operational characteristics, so that systems that are marginally disqualified under the BES Definition (because, for example, generation within the system exceeds demand for a few hours a year) can obtain an exclusion without the large investment of resources that otherwise might be required for a full-scale technical analysis. That being said, we question whether the first subsection of the characteristic test, relating to system proximity, is necessary, and we are concerned that the requirement that a system meet all four requirements of the characteristics test may be overly restrictive. For example, it is easy to imagine a distribution system in a rural area that covers a widely dispersed area, so that load is many miles from the relevant generation/transmission source, and that the system therefore does not meet the electrical proximity element, but meets the other three elements of the characteristics test. Such a system should be excluded because it clearly serves a local distribution function, and not a transmission function, as demonstrated by the fact that the system meets subsections (c) (power flows into the system but rarely flows out) and (d) (power is not intentionally transported over the system). Accordingly, we recommend that the SDT consider eliminating the first test. In the alternative, the SDT should consider allowing exempting a system from the BES if it, for example, meets three of the four criteria rather than all four.

Individual

Ben Friederichs

Big Bend Electric Cooperative, Inc.

No

We believe that the proximity test may be unnecessary, and if an Element or group of Elements meets the other three tests proposed by the SDT, it should be excluded from the BES, even if it does not meet the proximity test. Secondly, using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Yes

BBEC agrees conceptually that systems operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. That is because local distribution systems typically operate adjacent to, or at the end of transmission lines, and function operationally to move power from the Transmission Service Provider’s point of delivery of bulk power that has moved across the integrated bulk transmission system to end-users located within the local distribution utility’s service territory. To be consistent with the draft BES definition, the term “radial in character” should be explicitly defined as a system that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that system is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution systems and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution system interconnected with those relays should not.

Yes
BBEC agrees conceptually that one critical characteristic distinguishing local distribution facilities that must be excluded from the BES from transmission facilities that should be included is the manner in which power flows on those facilities. Power on local distribution systems generally flows only from the interconnected transmission source and across the distribution system for delivery to end-use customers. By contrast, power on transmission systems generally flows in two (or multiple, in networked systems) directions and is delivered in bulk to distribution utilities rather than to end-users. Hence, the SDT has properly identified power flows as one important characteristic that distinguishes BES transmission systems from local distribution systems. In order to identify systems that are not necessary for the operation of the BES under this text, we propose that any system where real power flows into the local distribution system 90 percent of the time or more under normal operating conditions.
Yes
BBEC agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. In fact, we believe this may be the most important and readily identifiable distinction. Accordingly, BBEC agrees that if power is not intentionally transported through a particular system, that system is not used for transmission and should not be considered part of the BES. One exception may be for a small embedded generation unit owned by a different party that may be "scheduled" out of an area, but in reality, does not produce any physical flow. These circumstances should not trigger inclusion.
Yes
We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with local distribution and not BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. BBEC supports the technical arguments and the White Paper presented by Snohomish County PUD in their comments. We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in the White Paper, which is based upon the approach recommended by the WECC BES Task Force.
The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection.
Specific transient voltage dip thresholds are proposed at page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Please see our response to Question 5d.
No
Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid showing that the Elements contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical

approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in the Snohomish PUD White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5.
See exclusion comment
See exclusion comment
See exclusion comment
See exclusion comment
No
As discussed on page 12 of the Snohomish White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant Regional Entity, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data.
No
As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215
Yes
BBEC generally supports the approach to the exclusion process proposed by the SDT, which provides two different paths to exclusion, one based on readily-identifiable operational characteristics of a system, and one based on technical reliability analysis. We believe it is important to provide for the first path, based on operational characteristics, so that systems that are marginally disqualified under the BES Definition (because, for example, generation within the system exceeds demand for a few hours a year) can obtain an exclusion without the large investment of resources that otherwise might be required for a full-scale technical analysis. That being said, we question whether the first subsection of the characteristic test, relating to system proximity, is necessary, and we are concerned that the requirement that a system meet all four requirements of the characteristics test may be overly restrictive. For example, it is easy to imagine a distribution system in a rural area that covers a widely dispersed area, so that load is many miles from the relevant generation/transmission source, and that the system therefore does not meet the electrical proximity element, but meets the other three elements of the characteristics test. Such a system should be excluded because it clearly serves a local distribution function, and not a transmission function, as demonstrated by the fact that the system meets subsections (c) (power flows into the system but rarely flows out) and (d) (power is not intentionally transported over the system). Accordingly, we recommend that the SDT consider eliminating the first test. In the alternative, the SDT should consider allowing exempting a system from the BES if it, for example, meets three of the four criteria rather than all four.
Group
Transmission Access Policy Study Group
Cynthia S. Bogorad
No
Impedance is a function of a line's length; it does not measure whether a line serves a BES function. A very long line can exist only to serve load, and a short line in an urban area (where the load is physically close to the grid) could be needed for transmission but would have low impedance. This proposed metric is thus both over- and under-inclusive, and should be discarded. Transfer distribution factor is a more appropriate metric, as described in TAPS' response to Question 4. TAPS supports having two paths for exclusions, one that includes extensive technical analysis and another that does not. The path with less technical analysis is appropriate for Elements that a relatively high-level examination shows to be not relevant to the reliability of the grid. This opportunity should be available in the context of exclusions to reduce the burden on small entities. Reliability will not be impaired by this option; all exception requests will be reviewed by NERC, and in any case where NERC is less than certain that an exception is appropriate, NERC can perform any or all of the analyses that would be required for a more technical exclusion or inclusion, and a positive result would be sufficient justification to deny the exclusion request.

No
We believe that this criterion is intended, like those in 1(a) and (d), to determine whether an Element is planned and operated to function as part of the interconnected grid. It is, however, too vague to be useful and should be discarded.
The third item is "power flows into the system, but rarely flows out." This criterion is vague. TAPS suggests instead the following language, which is consistent with TAPS' comments on Exclusion E3 of the BES definition: "Neither the Element, nor any Elements that it connects to the grid (in aggregate), includes more than 75 MVA of generation used to meet the resource-adequacy requirements of electric utilities."
Yes
TAPS supports the criterion in concept, but "intention[]" is a vague term and not relevant to an Element's impact on the grid. We suggest instead that to obtain an exclusion for such a quasi-radial Element, the owner be required to demonstrate that energy transfers subject to NAESB TLR procedures (Interchange Transactions or BES generator to load) have no more than a 5% transfer distribution factor (TDF) on the Element that is a candidate for exception. Transfer distribution factor is a good measure of an Element's impact on the grid and is not subject to varying interpretations.
Yes
TAPS supports including specific technical criteria that Elements must meet to obtain an exclusion through the exception process. This approach will facilitate uniform application of the exception process. TAPS responds to the first five proposed criteria in response to 5b-5e below. The seventh proposed criterion, "No cascading outages," is insufficiently granular and should be discarded. The criteria are intended to measure whether, among other things, a particular Element can cause a cascading outage. They need to set out how decision-makers will determine whether an Element can cause a cascading outage, not simply state that an Element that can cause a cascading outage cannot be excluded from the BES.
The first proposed criterion, "Having a distribution factor of 5% for any other Element," should instead be "Having a distribution factor of 5% for curtailable Interchange Transactions or BES generator to load identified in Transmission Loading Relief stages one through five." An Element with a higher distribution factor only on a non-BES Element should not be considered part of the BES on that account.
The second criterion, "Allowable transient voltage dip – criteria TBD," should specify where the transient voltage dip is, i.e. "Allowable transient voltage dip on another BES Element for events on the Element that is the subject of the Exception Request—criteria TBD."
The third proposed criterion, "Allowable transient frequency excursion – criteria TBD," should be rephrased like the second: "Allowable transient frequency excursion on another BES Element for events on the Element that is the subject of the Exception Request – criteria TBD."
The fourth proposed criterion should be revised in the same way as the second and third: "Voltage deviation on another BES Element for events on the Element that is the subject of the Exception Request – criteria TBD." The fifth proposed criterion should be similarly revised: "Transient Stability on another BES Element for events on the Element that is the subject of the Exception Request – positively damped."
Yes
TAPS proposes a simpler set of exclusion exception criteria: 1. Having a distribution factor of 5% for curtailable Interchange Transactions or BES generator to load identified in Transmission Loading Relief stages one through five; 2. Category B and C contingencies on the Element that is the subject of the Exception Request meet the TPL-002 criteria for other BES Elements. (With the new TPL-001-3 standard recently approved by ballot, Category P0 through P7 contingencies on the Element that is subject of the Exception Request meets the criteria of P0 through P3 for other BES Elements); and 3. The Element that is the subject of the Exception Request is not: (1) part of an IROL, (ii) part of a blackstart or cranking path used in a TOP's restoration plan, or (iii) used in NUC-001 to provide service to a nuclear plant. TAPS believes these three criteria meet the intent of all of the criteria presented by the SDT.
TAPS supports using a uniform set of technical criteria to decide inclusion exceptions. Such an approach will facilitate uniform application of the criteria. It is appropriate for there to be only one path, using technical analysis, for inclusions, because the analysis for inclusions should be performed

by Regional Entities and NERC (see TAPS comments on the BES Exception Process, also submitted today), which have more resources available than do the small entities that TAPS believes are likely to request exclusions based on the path for exclusions that does not include extensive technical analysis. In addition to having clear and uniform criteria, the technical analysis for inclusions and exclusions should use the same criteria (though one should of course be the inverse of the other). We note that the steps laid out for Inclusions do not quite track those in Exclusions 2(a). For example, Inclusions 1(b) states, confusingly, "Monitor the contribution of the disputed Element(s)," but there is no corresponding step in Exclusions 2(a). TAPS suggests that Inclusions 1 be revised to mirror Exclusions 2.
See TAPS comments in response to Question 5.
See TAPS comments in response to Question 5.
See TAPS comments in response to Question 5.
See TAPS comments in response to Question 5.
Yes
The third paragraph of the introduction to the Technical Principles is awkwardly worded and might be misconstrued. TAPS suggests the following rewording: "Entities are not required to seek exceptions under the Exception Procedure to exclude from the BES Element(s) that are already excluded under the BES definition and designations." For the sake of consistency, Exclusions (1) should contain a provision analogous to Exclusions (2)(b) and Inclusions (1)(f) addressing the circumstances under which the ERO can override a demonstration based on these criteria. As noted above, one of those circumstances would be a demonstration by NERC that the Element in question meets the criteria for inclusion in the BES.
Individual
Andrew Z Pusztai
American Transmission Company, LLC
No
ATC believes the relevance and rationale for this criterion is unknown. If this criterion is intended to exempt elements, like circuit switchers, that are part of the distribution transformer circuits operated above 100 kV, and located within a mile of the BES interconnection point, then ATC would expect the wording to be "in close electric proximity to the BES" rather than in "close electric proximity to Load". Otherwise, ATC requests the SDT explain the relevance and rationale for this criterion before agreeing on its inclusion.
No
Radial in Character – ATC proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E1 of the bright-line BES definition.
No
ATC proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the bright-line BES definition.
No
ATC proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the BES definition.
No
ATC proposes that this technical analysis criterion be replaced by criteria that are more closely tied to the Adequate Level of Reliability (ALR) characteristics. The following alternate criteria are offered as possible examples, "(1) the BES can be controlled to stay within acceptable limits following a fault on or loss of the Element; (2) the BES performs acceptably after credible contingences of the Element; (3) the Element does not limit the impact and scope of instability and cascading outages when they occur; (4) BES facilities are protected from unacceptable damage by operating the Element within its ratings; and (5) the BES has the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times, taking into account scheduled or reasonably expected unscheduled outages of the Element. In addition, ATC is not aware of any continent-wide appropriate BES performance measures for voltage dip, frequency excursion, voltage deviation,

stability, etc. and ATC speculates that different values are likely for different regions and system characteristics across the continent. As a result, ATC believes it is not advisable to try to adopt unproven values without reasonable industry investigation and development.
ATC proposes replacing this factor with those cited above in 5a because a distribution factor measurement indicates how much system changes affect the element, not how much a fault or loss of the element would compromise the ALR of the BES. There is no clear correlation between this factor and any of the six characteristics of Adequate Level of Reliability (ALR) of the BES.
ATC proposes replacing this factor with those cited above in 5a because there is presently no established, continent-wide, acceptable transient voltage dip performance level for evaluating whether a fault or loss of the element would not compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
ATC proposes replacing this factor with those cited above in 5a because there are established, continent-wide transient frequency performance levels in the PRC-006-1 standard, but the elements that are applicable to the standard do not have to be BES elements and the transient frequency response requirements are not intended to be a criterion for BES classification.
ATC proposes replacing this factor with those cited above in 5a because there is presently no established, continent-wide, acceptable (steady state) voltage deviation performance level for evaluating whether a fault or loss of the element would not compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
Yes
ATC recommends this process address the five characteristics of the Definition of Adequate Level of Reliability (ALR) as listed in the comments above in Question #5a.
No
ATC proposes that the technical analysis criterion be replaced by criteria that are more closely tied to the Adequate Level of Reliability (ALR) characteristics. The following alternate criteria are offered as possible examples, "(1) the BES cannot be controlled to stay within acceptable limits following a fault on or loss of the Element; (2) the BES does not perform acceptably after credible contingences of the Element; (3) the Element limits the impact and scope of instability and cascading outages when they occur; (4) BES facilities are not protected from unacceptable damage by operating the Element within its ratings; and (5) the BES does not have the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times, taking into account scheduled or reasonably expected unscheduled outages of the Element. In addition, ATC is not aware of any continent-wide appropriate BES performance measures for voltage dip, frequency excursion, voltage deviation, stability, etc. and ATC speculates that different values are likely for different regions and system characteristics across the continent. As a result, ATC believes it is not advisable to try to adopt unproven values without reasonable industry investigation and development.
ATC proposes replacing this factor with those cited above in 7a because a distribution factor measurement indicates how much system changes affect the element, not how a fault or loss of the element would compromise the ALR of the BES. There is no clear correlation between this factor and any of the six characteristics of Adequate Level of Reliability (ALR) of the BES.
ATC proposes replacing this factor with those cited above in 7a because there is presently no established, continent-wide, acceptable transient voltage dip performance level for evaluating whether a fault or loss of the element would compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
ATC proposes replacing this factor with those cited above in 7a because there are established, continent-wide transient frequency performance levels in the PRC-006-1 standard, but the elements that are applicable to the standard do not have to be BES elements and the transient frequency response requirements are not intended to be a criterion for BES classification.
ATC proposes replacing this factor with those cited above in 7a because there is presently no established, continent-wide, acceptable (steady state) voltage deviation performance level for evaluating whether a fault or loss of the element would compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent

No

No

Yes

1. ATC proposes replacing the wording in the Exclusion preface, Exclusion 2 preface, and Inclusion 1 preface of "not necessary to reliably operate the interconnected transmission network" with "necessary to maintain an Adequate Level of Reliability (ALR) of the Bulk Electric System". 2. ATC has reservations on the following statement made in the introduction of this document: " Due to the importance of Blackstart Resources and their designated blackstart Cranking Paths to restoration efforts, no exceptions will be allowed for those items." This does not allow for a provision to exclude any designated Blackstart Cranking Path (at any voltage) even though there may be technical justification for it. 3. The first page states that "Specific content of this application is spelled out elsewhere in this appendix." ATC requests the SDT describe where this appendix will be published. Furthermore, is it a compliance document or just technical "guidance"? 4. Having the following statement included for both exclusions and inclusions will create disagreement: "The ERO can override this criterion but would need to provide additional justification to support their finding." ATC believes any override should have adequate technical justification and not interfere with other statutory requirements. Also, it does not clarify or identify who would make the determination whether NERC has made adequate justification to override the criterion.

Individual

Joe Petaski

Manitoba Hydro

No

The purpose of this exception is unclear. It would be possible that a large transmission station with many network connections, which is close to a load (irrespective of size), would be excluded from the BES definition. Similarly, a reduction of system impedance, by transmission line re-conductoring for example, could remove assets out of the scope of the BES definition. The listed proposed criteria suggest values yet to be determined. It is unclear how this exception would support BES reliability.

No

The proposed criteria to substantiate a request for an exception should be removed as it does not introduce anything different than what is already proposed under the exclusions in the bright line BES definition. Specifically, radial systems are already excluded in the bright line definition E1.

No

Vague language such as "rarely" or "not intentionally" does not support a "bright line" approach, and is not measureable or auditable. Also, the sample evidence should not be included as part of the criteria. In addition, the proposed criteria to substantiate a request for an exception should be removed as it does not introduce anything different than what is already proposed under the exclusions in the bright line BES definition. Specifically, this item is already excluded in the bright line definition E3.

No

Vague language such as "rarely" or "not intentionally" does not support a "bright line" approach, and is not measureable or auditable. Also, the sample evidence should not be included as part of the criteria. In addition, the proposed criteria to substantiate a request for an exception should be removed as it does not introduce anything different than what is already proposed under the exclusions in the bright line BES definition. Specifically, this item is already excluded in the bright line definition E3.

No

Manitoba Hydro does not agree with an impact based approach to establishing BES elements as we believe it will result in regional differences in the application of the BES definition. In addition, the resources required to verify the assumptions made in the models used to substantiate a BES exception would be substantial with no benefit to reliability. As well, this section appears to be an incomplete process. As currently worded, if the model was not updated in step ii, then there is no requirement to run the TPL studies indicated in the remainder of step ii.

No
No
Manitoba Hydro does not agree with an impact based approach to establishing BES elements as we believe it will result in regional differences in the application of the BES definition. In addition, the resources required to verify the assumptions made in the models used to substantiate a BES exception would be substantial with no benefit to reliability.
No
We are concerned however that assumptions could be made to complete the technical analysis to support an exclusion that may not be appropriate.
Yes
Canadian Entities are not under FERC jurisdiction, so the revised BES Definition may not apply. A number of Canadian Entities have the BES defined within their provincial legislation. This may introduce differences and even contradictions between elements that are included in the BES according to provincial legislation and the NERC definition.
Yes
The exception procedure is a complicated and resource intensive process. To be most effective, the BES definition should be a stand-alone 100kV bright line with any exception criteria being specified within the definition. Additionally: -FERC Order 743 directed the revision of the Bulk Electric System (BES) definition to improve clarity, to reduce ambiguity, and to establish consistency across all Regions. The proposed impact based exception procedure undermines all three of these targets. -The Technical Exceptions eliminate the 100kV 'bright-line' definition and introduce regional differences, both of which are contradictory to the goals of the BES revision project. -The commitment for NERC to review and continuously monitor BES exceptions made through this process would be extremely onerous and resource intensive with little benefit to reliability. -To obtain industry consensus on the precise limits to determine if an element has sufficient impact on the BES to be included in the BES is not a reasonable or attainable endeavor.
Group
ISO/RTO Standards Review Committee
Albert DiCaprio
No
The SRC fails to see how electrical proximity to load qualifies an element for exclusion from the BES. Such elements may indeed be involved in serving electricity to those loads. If those loads are critical loads, then why should the element be excluded from the BES?
No
The SRC generally agrees that radial elements likely may be excluded from the BES. However, there is insufficient information given as to what it means to be "not operated as part of the BES with disconnection procedures for when a Disturbance occurs". Further, is it possible that such radial elements are serving a remote "critical" load? One would think that, normally, critical loads would have arrangements for multiple sources, but could those multiple sources be individually considered to be radial?
No
The SRC believes that, if power EVER flows out, then the area is either not radial or it includes generation resources. There is insufficient information to determine whether this "limited quantity of energy" is indeed small. There could be very large amounts of load and generation resources within

that area. Such large quantities could represent a significant potential for sudden increases in load or unexpected energy injections.
No
Hasn't the reliability concern associated with "loop flows" been related to the unintentional flow of power through parts of the system?
Yes
Predictive analysis of an accurate model is useful in determining the importance of various elements of the system.
Distribution factors by themselves are not sufficient evidence that elements are not important to the system. Multiple elements may have significant distribution factors related to various portions of the system, but that doesn't necessarily mean that loss of those elements will result in a reliability risk to the system.
These "transient" and "voltage deviation" analyses are highly dependent upon sound and accurate dynamic system models. Much has been said in recent days about the suspicions that many such models are not truly accurate enough to predict system response that is close to what actually occurs.
See 5c
See 5c
Very small elements may be candidates for exclusion because such a small loss cannot cause reliability risk. An exception to this statement may be that, though small, the element is important to the service of a critical load.
Yes
The SRC generally agrees with the technical analysis approach to determining whether an element should be included in the BES. However, consideration should also be given to valid and supported evidence given by RCs and PCs, and, possibly TOPs and BAs to actual historical events that indicate significant importance of elements which, when lost, have resulted in reliability risk to the system.
Group
New York Power Authority
Randy D. Crissman
No
NYPA does not see a need for this requirement. A radial element that specifically serves a load center will perform that task regardless of the electrical distance from the source to the load. Similarly, any loss of load in the load center will result in a corresponding need to reduce generation in the source system, regardless of the proximity of the load.
Yes
The definition of radial systems needs to be modified to include radials that are connected to a single transmission source by more than one automatic interruption devices, such as occurs with a "breaker and a half" arrangement.
Yes
NYPA generally agrees with this item. However, the term "system" needs to be better defined. It is not clear how power could flow out of a load only system. If reversing power flows on a feeder caused it to fail one of the criteria, could the radial still be excluded, or is it necessary for the Element to pass all requirements? Alternatively, could the entity choose to file for Exclusion of that Element under the technical analysis option? What happens and what are the implications when the two approaches produce different outcomes? An example of revised wording for "iv. The maximum amount of energy flowing out" would be no more than 24 hours of reverse power flows within any rolling 12-month

period. Consider avoiding prescribing values and eliminate bullet (iv). The intended performance outcome should be described, but without setting values. This should not have any impact on the reliability of the transmission network if items 1, 2 and 3 are satisfied.
Yes
NYPA agrees that power flow wheeled through a system indicates that the system potentially has more than one source. Therefore, the element in question is not radial.
Yes
In general, NYPA agrees with this approach except as noted below.
NYPA does not agree with this measurement. Distribution factors are dependent on the number of radial transmission lines that connect a single source to a load. For example, if two lines connect a single source to a load, and one line trips, the distribution factor provides a 100% increase in flow on the remaining line. If three lines connect the source to the load, and one line trips, the distribution factor for the remaining lines would be 50%. The SDT should avoid setting values and instead describe the intended performance outcome from a distribution factor measurement. Note that ultimately NERC as an ERO or relevant regulatory authority will approve the application and can assess the performance outcome in their decision making presented in an entity's application.
Suggest that either the SDT avoid using voltage dip as a criteria, or clearly specify that the transient voltage not exceed the X limit of Y cycles (time). References to relevant industry standards such as IEEE standard 1346-1998 should be made.
Suggest that for assigning a value for transient frequency response, entities conduct and submit to the SDT their quantitative and qualitative technical assessment based on the conditions of the element(s) under the application. Do not establish a fixed binary value within the exception criteria but rather focus on the performance outcome.
Voltage deviation is generally expressed as a percentage, between the voltage at a given instant at a point in the system. Do not establish a fixed binary value within the exception criteria but rather focus on the performance outcome.
No
Yes
In general, NYPA agrees with this approach except as noted below. Inclusions criteria should mirror the Exclusion criteria, and that consistent values should be employed for Inclusions here and for Exclusions above.
NYPA does not agree with this measurement. Distribution factors are dependent on the number of radial transmission lines that connect a single source to a load. For example, if two lines connect a single source to a load, and one line trips, the distribution factor provides a 100% increase in flow on the remaining line. If three lines connect the source to the load, and one line trips, the distribution factor for the remaining lines would be 50%.
Refer to the response to Question 5c.
Refer to the response to Question 5d.
Refer to the response to Question 5e.
No
No
No
Group
Iberdrola USA
John Allen
No
We do not agree with this requirement. These exclusion exception criteria should be deleted in their entirety and replaced with criteria that are objective, specific, and repeatable, or preferably not

replaced at all. Specific problems with the criteria as stated are: 1. A facility is not BES if all of "a" through "d" below apply: a. "System elements" are in "close electrical proximity to load" – this is vague, and a lower impedance between systems is higher likelihood of interaction between systems. Proximity measured in ohms should be related to the load level itself. A pair of values (ohms, load) is necessary for this purpose. Transient stability is affected by this value-pair. For a load pocket, an equivalent impedance (e.g., a sort of Thevenin impedance) between the network source and the load location could be defined. The impedances within the network source can also affect the assessment. Re-evaluation over time would be necessary if this path were adopted. This path of evidence (i.e., the path of engineering judgment) which does not include extensive technical analysis is an attempt to provide a definitive criteria for exception without going through the other path of evidence (i.e., the analytical path) which includes extensive technical analysis. Unless the analytical path has been clearly defined and sufficient data obtained from/on it, the path of engineering judgment could become difficult to establish. System parameters such as proximity to load, radial (or non-radial) configuration, power flow direction over time (either unintended or intended) will directly influence results of technical analysis evaluated for distribution factors, transient voltage dip and frequency excursions, voltage deviations, transient and steady-state stability, and sequence of events following a disturbance (i.e., either a cascading outage or a controlled outage). The two paths of evidence cannot be in conflict with each other.
No
We do not agree with this requirement. These exclusion exception criteria should be deleted in their entirety and replaced with criteria that are objective, specific, and repeatable, or preferably not replaced at all. Specific problems with the criteria as stated are: 1. A facility is not BES if all of "a" through "d" below apply: b. "System elements" are "treated as" radial "in character" – this is also vague, and based on operating procedures… what does "treated" involve? What is "character" in the context of system elements?
No
We do not agree with this requirement. These exclusion exception criteria should be deleted in their entirety and replaced with criteria that are objective, specific, and repeatable, or preferably not replaced at all. Specific problems with the criteria as stated are: 1. A facility is not BES if all of "a" through "d" below apply: c. Power flows into "the system" most of the time – this is vague and covers much of the 115 kV system.
No
We do not agree with this requirement. These exclusion exception criteria should be deleted in their entirety and replaced with criteria that are objective, specific, and repeatable, or preferably not replaced at all. Specific problems with the criteria as stated are: 1. A facility is not BES if all of "a" through "d" below apply: d. Power "entering" "the system" does not "intentionally" flow into another "system" – what does intentionally versus unintentionally mean?
No
A facility is not BES if it is not necessary for reliable system operation, based on a TPL-type analysis similar to NPCC Document A-10 "Classification of Bulk Power System Elements" – this type of analysis was rejected by FERC. Besides, at 115kV, calculated distribution factors for interfaces between areas (where higher voltage lines, e.g., at 230kV and 345kV, are included as part of the interface definition) tend to be small and inaccurate. The method used to calculate distribution factors is an approximate method which must be re-evaluated for small values of distribution factors.
See 5a.
See 5a.
See 5a.
See 5a.
No
No
A facility is BES if it is necessary for reliable system operation, based on a TPL-type analysis similar to NPCC Document A-10 "Classification of Bulk Power System Elements" – this type of analysis was rejected by FERC. In addition, applicable threshold values for these parameters could differ from one system to another, and would require extensive analysis.

See 7a.
See 7a.
See 7a.
See 7a.
No
No
No
Group
Tri-State Generation and Transmission Association
Mark Conner
No
A long radial line with a small transformer could have a relatively high impedance. Proximity to load has no real bearing on this procedure. Requirement 1.(a) should be deleted.
No
While we generally agree, 1.(b) should be changed to "normally radial." "Radial" should not be defined differently in the Rule of Procedure than in the BES Definition.
Yes
It may be more appropriate to use a threshold based on maximum power rather than on an annual energy threshold.
Yes
While we generally agree, "system" needs to be clarified, and should be changed to "transmission system." It may also need to be qualified by indicating a change in ownership of transmission systems. We also wonder if the concept of scheduling should be addressed rather than using the word "intentionally?"
No
This appears very similar to the "material impact" proposal that FERC has previously disallowed, so we recommend removing 2. If retained, remove 2.(b) because allowing the ERO to override the technical justification and analysis devalues such analysis to the point of it being meaningless.
If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.
If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.
If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.
If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.
No
No
This appears very similar to the "material impact" proposal that FERC has previously disallowed, so we recommend removing it, but allowing elements that are included in Regional Entity defined bulk transfer paths that are not already included in the BES definition. If retained, remove 1.(f) because allowing the ERO to override the technical justification and analysis devalues such analysis to the point of it being meaningless.
If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.
If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.

If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.
If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.
Yes
No
Yes
The proposed principles seem preliminary and immature. In addition as noted in earlier comments they are not fully consistent with the proposed BES definition, particularly with respect to radial elements and local distribution networks. Such consistency should be incorporated before the next posting. We further feel that it is very unlikely that the technical evidence path can be placed on a sound technical foundation and matured by the end of this year as directed by the FERC. Key definitions are lacking and should be added to the document. For instance "distribution factor" is not carefully defined even though such factors can be calculated in a variety of ways.
Group
Hydro One
David Curtis
No
We agree with this concept to allow entities to submit an exception application that does not include extensive technical analysis. Such an option will make the process efficient for all stakeholders, such as entities, Regions, NERC and relevant regulatory authority. However, our opinion is that there is no real relationship between reliability and the proximity of load. If impedance is to be used as a measure of electrical proximity, which in turn is a replacement for geographical proximity, then how would the presence of parallel lines, capacitors, phase-angle regulators (PARs), tap-changing transformers, generation and reactors be treated in determining electrical proximity? Consistent with references in the FERC Order, we feel that it is much more important to identify and ensure if the BES element(s) are serving load pockets associated with large metropolitan load centers, loads of significance to national security and/or as identified by relevant Federal, State or Provincial Regulatory Authority. We urge the SDT to clarify the exception criteria for exclusions, based on the following questions: •How does the proximity impedance approach effectively differentiate between transmission and distribution lines of the same voltage and length? •When using impedance, how is "greater than" determined? •What impedance would the SDT apply to a PAR (or tap-changing transformer) and to the overall path if a PAR (or tap-changing transformer) were located in-series with the measured Elements? •What is the meaning of "power flow data" used here and how is the meaning different from the term when used under "1c) Power flows into the system, but rarely flows out"? Should this sentence use the phrase "impedance data extracted from a load flow study" instead? Finally we suggest that entities should be required to identify the significance of the element's physical characteristics. Such identification can be done through a simple checklist along with any relevant comments.
No
Entities should be allowed to demonstrate the radial characteristics to determine if they are permitted for an exception, and demonstrate compliance with radial defining criteria. The term "regional dispatch" is not defined. Therefore we suggest the SDT to provide a definition or reference to clarify regional dispatch in 1 b) II. We recommend adoption of the alternate term "operational control" and suggest that the SDT consider using the terms "under the operational control of a Balancing Authority" (It is instructive that the overarching requirement for a finding of transmission system integration in Mansfield was that the facilities be under operational control of the Independent System Operator.*) * Southern Cal. Edison Co., 92 FERC ¶ 61,070 at 61,255 (2000), reh'g denied 108 FERC ¶ 61,085 (2004).
No
We agree with the criteria set out in 1(c), but suggest the SDT to avoid prescribing values and eliminate bullet (IV). The SDT should also consider allowing: a) Power flow-out up to 20% of the minimum forecasted load for the element(s) over a 12 month period; or b) Maximum amount of

energy flowing out be set to no more than 24 hours of reverse power flows within any rolling 12-month period. The intended performance outcome should be described, but without setting values. This should not have any impact on the reliability of the transmission network if items 1, 2 and 3 are satisfied.

Yes

No

We agree that entities should be given an option to conduct an analysis to demonstrate whether or not an element is necessary for the operation of the transmission network. We also support that NERC should specify the entire relevant criteria category to be listed under exclusion criteria 2 (a). However, we suggest that NERC should avoid prescribing numerical values but establish a range of value (or reference industry standard) that would be consistent with industry/ regional standards or practices without compromising the reliability of the transmission network.

Distribution Factor is an estimate of what feeder power flow participation level material is and what non-material is. While TDF and OTDF analysis is an indication of contributions from the element, hence the SDT should avoid setting values and instead describe the intended performance outcome from a distribution factor measurement. Note that ultimately NERC as an ERO or relevant regulatory authority will approve the application and can assess the performance outcome in their decision making presented in an entity's application.

Voltage dip is specified in terms of duration and retained voltage, usually expressed in percentage. We advise against prescribing limits by the SDT, and instead suggest that either the SDT avoid relating voltage dip altogether or clearly specify that the transient voltage not exceed the X limit of Y cycles (time). We suggest SDT to make references to relevant industry standard such as IEEE standard 1346-1998. For example, a document effective in 2007 titled Ontario Resource and Transmission Assessment Criteria Issue 5.0 mentions that: "The minimum post-fault positive sequence voltage sag must remain above 70% of nominal voltage and must not remain below 80% of nominal voltage for more than 250 milliseconds within 10 seconds following a fault. Specific locations or grandfathered agreements may stipulate minimum post-fault positive sequence voltage sag criteria higher than 80%. IEEE standard 1346-1998 supports these limits."

We suggest that, in terms of assigning a value for transient frequency response, entities conduct and submit to the SDT their quantitative and qualitative technical assessment based on the conditions of the element(s) under the application. We suggest not to establish a fixed binary value within the exception criteria but rather focus on the performance outcome. See 5 (a)

Voltage deviation is generally expressed as a percentage, between the voltage at a given instant at a point in the system. We suggest not to establish a fixed binary value within the exception criteria but rather focus on the performance outcome. Adequate voltage performance does not guarantee system voltage stability. Steady state stability is the ability of the grid to remain in synchronism during relatively slow or normal load or generation changes and to damp out oscillations caused by such changes. We suggest that the requirement should suggest that following checks are carried out to ensure system voltage stability for both the pre-contingency period and the steady state post-contingency period: •Properly converged pre- and post-contingency power flows are to be obtained with the critical parameter increased up to 10% with typical generation as applicable; •All of the properly converged cases obtained must represent stable operating points. This is to be determined for each case by carrying out P-V analysis at all critical buses to verify that for each bus the operating point demonstrates acceptable margin on the power transfer as shown in the following section; and •The damping factor must be acceptable (the real part of the eigen values of the reduced Jacobian matrix are positive).

Yes

Technical Analysis must fundamentally use NERC – TPL methodology and testing requirements. We believe that an element may "not be necessary for the operation of the interconnected transmission system" if the remaining system can be operated without the element(s) for over 30 days and during peak load conditions. This assumption considers that loss of element(s) may result in outage to the connected load or generation during this period but will not have any adverse impact on the operation of the interconnected transmission network. Following are technical assessment categories that entities could be required when filing for exception: 1.Power flow •Primarily unidirectional (less than 20% of min load) 2.TPL Assessment •Load Flows Analysis •Thermal and Voltage Stability •Transient

Stability 3.TDF and OTDF assessment For entities filing an exception: [Step 1] Entities should undertake relevant and detailed technical assessment/analysis and describe their findings under each of the technical categories. Finally, the findings and conclusions should be listed in the form of maximum 6 bullets. [Step 2] Findings and conclusions from each of the technical categories should be presented in a spreadsheet including the categories that may not be relevant to the element(s). If a category is not relevant, it should be explained why. [Step 3] The final conclusion should be presented by taking the overall assessment in Step 2 by assessing contributions of each item and demonstrating that the element(s) is or is not necessary for the operation of interconnected transmission network. We suggest the above method and request entities to complete the table below, as this will allow entities to present their assessment of the element(s) that are under the consideration of exception. Measured Value ========== Load || Critical Load Affected? [yes][No] ---------- •Radial •Local supply, e.g. distribution in nature •Large load center, critical load, national security Generation Characteristics || Critical Load Affected? [yes][No] ---------- •Local load modifier, peak shaver •Behind meter or industrial load displacement •Must Run •Flow contribution outside of the elements under exception Cascading Outage || Critical Load Affected? [yes][No] ---------- Measured Value ========== Max Dip [Voltage] Applicable Industry Practice (IEEE/CSA,Market Rules,etc.) Acceptable Level [in cycles] Assessment Results [in cycles] Does the assessment confirm successful recovery? [Yes] [No] Transient Voltage Dip [voltage] Transient Frequency Excursion [Hertz] Voltage deviation [Voltage] Transient Stability Steady State Stability

No

Inclusions criteria should mirror the Exclusion criteria, and that consistent values should be employed for Inclusions here and for Exclusions above. [See our comments on exclusions]

[See Comment 5b]

[See Comment 5c]

[See comment 5d]

[See comment 5e]

No

Yes

It is imperative to understand that the NERC’s revised definition will have a direct impact on entities across North America and may conflict with regulatory requirements, Codes, and Licenses. FERC in its Order 743 and 743A has directed NERC to address these concerns. As for Ontario System, the BES exception criteria shall meet the expectations of Ontario's regulator (Ontario Energy Board) which has the sole authority and responsibility for the reliability of customer connections and loads within Ontario. Therefore, it will be necessary to accommodate NERC's proposed definition of BES or the exception process with the Ontario situation. We suggest the SDT and RoP teams should: •Modify the exception criteria and procedure to provide regulatory flexibility with requirements to conduct basic technical analysis, to allow entities to consistently present their case to the ERO and/or the regulator for a step by step expedited evaluation. •Include provisions in both the NERC exception criteria and exception process for federal, state and provincial jurisdictions. These provisions should provide clear guidance so that, if and when there are deviations from the exception criteria, they are identified with technical and regulatory justifications ensuring there is no adverse impact on the interconnected transmission network. •Understand that the path to generating facilities need not be always BES contiguous. Generating units can/should be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not always require contiguous paths.

Yes

Exception criteria should be crafted at a high-level with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) that are not necessary for the interconnected transmission network and based on technical assessment, evidence and justification for its unique characteristics, configuration, and utilization. (Also see suggestions/ comments on Question 6)

Group

Alabama Public Service Commission

John Free
Yes
The second paragraph of the proposed Technical Principles states that "[d]ue to the importance of Blackstart Resources and their designated blackstart Cranking Paths to restoration efforts, no exceptions will be allowed for those items." This sentence should be deleted from the technical principles. An unintended consequence of subjecting all blackstart cranking pathways to inclusion in the BES by default would be to cause a Registered Entity, in order to minimize costs, to not declare every possible cranking path but instead limit to the minimum required cranking paths in order to comply with the standards, as opposed to designating multiple pathways. This consequence could be avoided by allowing blackstart cranking pathways to be evaluated for exceptions just like any other element.
Individual
Heather Hunt
NESCOE
No
The New England States Committee on Electricity ("NESCOE") appreciates the work of NERC's standard drafting team as well as the opportunity to provide comments on this matter. NESCOE is New England's Regional State Committee and the comments provided herein reflect the collective views of the six New England states. NESCOE's comments below reflect its general perspective that any new costs imposed as a result of the BES and its implementation, which costs ultimately fall on consumers, should provide meaningful reliability benefits. NESCOE questions the concept as presented and seeks further clarification. As a general matter, NESCOE believes the requirement that a proposed exception must meet all four criteria is overly restrictive and will result in only a narrow category of elements qualifying for exclusion from the BES. NESCOE suggests that a better approach would allow exclusions to be based on one or more criteria, depending on the nature of the element that is the subject of the application. With respect to the proposal, NESCOE does not believe it is possible to obtain agreement on the "proximity to load" criterion for additional exclusions from the BES when the underlying impedance value has not been determined and may be the subject of significant debate. While it is possible that NESCOE could support a single impedance value that would govern exclusion determinations, it notes that a uniform value may not adequately address varying system configurations throughout ISO-New England and neighboring control areas. NESCOE suggests that the standards setting process allow for further deliberation on possible proposed values. Other terms, such as "load center," also need definition.
No
As noted in Response 1, NESCOE believes exclusion determinations should not require a finding that all four proposed criteria are met. In addition, NESCOE believes that the criterion proposed here is

overly complex and that developing the evidence may be overly burdensome to the applicant. Radial paths should have a simple definition related to how the path is connected from a topological perspective. NESCOE suggests that a radial path be defined simply as a path having only one connection point to the BES, thereby presenting no opportunity for power flows parallel to the BES network. Under fault situations, these excluded paths can be isolated from the BES with suitable NERC compliant protection systems. Note the radial path may be comprised of parallel lines that terminate at the BES connection point. In addition, NESCOE believes that a radial path should qualify for exclusion as long as the power flowing into the BES is less than a threshold MVA. NESCOE does not at this point have a recommendation as to this specific threshold but believes it should be developed through the standards-setting process. NESCOE suggests this approach to avoid burdening the development of generation including renewable generation. As New England is working on facilitating the development of renewable resources located in and around the region to serve customers most cost-effectively, this process should take specific care not to impose undue burdens on renewable resources.
No
As noted in Response 1, NESCOE believes exclusion determinations should not require a finding that all four proposed criteria are met. Generally, NESCOE is in agreement with an exception criteria for additional exclusions that takes into account power flows into the system that rarely flows out. However, additional clarity is necessary for criteria 1(c)(i),(ii) and (iv). Specifically, what is meant by "very limited set of conditions" under 1(c)(i) and (ii) and "limited quantity of energy" under 1(c)(i)? Further, is it appropriate to establish a fixed value of X megawatt hours for the maximum amount of energy flowing out of the system? While it is possible that NESCOE could agree upon a uniform value, NESCOE is not in a position to provide specific comment or support when the MWh value is unspecified. In addition, a fixed value may not adequately address varying system configurations throughout ISO-New England and neighboring control areas.
No
As noted in Response 1, NESCOE believes exclusion determinations should not require a finding that all four proposed criteria are met. NESCOE further notes that New England's network has numerous parallel paths operated at voltages less than 200 kV which may parallel 230 kV and 345 kV BES network paths. If flows on a given <200 kV path only exceed 200 MVA under contingency conditions and if these paths are connected to the higher voltage BES elements with suitable NERC compliant protection systems, these paths may be EXCLUDED from the BES. NESCOE suggests the value of 200 MVA based on typical thermal ratings of 115 kV transmission lines but is open to other values that the drafting team may suggest. NESCOE also suggests that the phrase "to some other system" be broadened to include any other higher voltage BES element.
Yes
NESCOE supports the concept of allowing an additional path to justifying an exclusion from the BES. NESCOE could support development of technical criteria such as those proposed, but does not have specific recommendations at this time. As stated earlier, any excluded elements must be connected to the BES using fully NERC compliant protection systems.
Yes
Please refer to comments under item 4., above. If the parallel power flow in a given < 200 kV path only exceed 200 MVA under contingency conditions and if the applicable BES points have fully NERC compliant protection systems, disturbances on this lower voltage path will not adversely affect the reliability of the BES. The exclusion determination process should be flexible enough to recognize that any requirement that may impose substantial new costs on New England transmission owners, and ultimately on consumers, should also provide meaningful reliability benefits

Yes
NESCOE believes that exclusion determinations should be based on clear but flexible criteria that do not result in the unnecessary inclusion of elements into the BES that do not adversely impact the reliability of the BES. The process described here is too limiting in its requirement that an application meet all of those four listed criteria not requiring technical analysis. Applicants and reviewers should have a broader menu of decision criteria available to them. Regarding those criteria related to exclusions based on technical analysis, NESCOE suggests that ranges of values, in recognition of regional differences in network characteristics, be suggested by the drafting team for further consideration. Finally, as discussed above in response to questions 1 through 4, NESCOE believes that additional exclusion determinations should not require a finding that all four proposed criteria are met. Rather, the various criteria set forth under 1(a) through 1(d) should be treated as alternative criteria to qualify for an additional exclusion, and entities seeking additional exclusions to the BES should be allowed to demonstrate that one or more criteria is met, depending on the nature of the element that is the subject of the application.
Individual
Michael Falvo
Independent Electricity System Operator
No
We agree with this concept to allow entities to submit an exception application that does not include extensive technical analysis. Such an option will make the process efficient for all stakeholders, such as entities, Regions, NERC and relevant regulatory authority. However, we believe that an Element's electrical proximity to load is not necessarily a relevant consideration for determining whether the Element is required for reliable operations.
Yes
We agree with this concept. Entities should be allowed to demonstrate the radial characteristics to determine if they are permitted for an exception. However, we believe some further clarification of the meaning of "radial in character" is needed. The example given in (b)I does not clarify the matter. Would a transmission line operated with a normally open point to form two radial lines be considered "radial in character"? Please clarify. The location of the Disturbance needs to be clarified. For example, if the Disturbance (e.g. a fault) occurs at the radial part of the Element, then it is necessary for the Element to have the capability to disconnect itself from the Disturbance to preserve BES reliability but the Element can be by itself a legitimate radial facility that is used solely for supplying load. The phrase "are not included in a regional dispatch" is unclear. We do not understand what this means.
No
There is an inconsistency between the language used in bullet (c) - "rarely flows out", and that used in Exclusion E3(c) of the BES definition – "Power flows only into the LDN". We have commented during the BES Definition comment period that Exclusion E3 needs to be modified to match the Exception Principles. We agree with the criteria set out in 1(c) except for bullets (iv) and (v). We do not believe it is possible to establish a limit on the energy flow out of a system for which an exception has been requested. Further, we suggest that the SDT avoid prescribing set values in the exception criteria since these would only serve to limit the flexibility of the process. As an alternative to the proposed bullet (iv), we suggest that power flow study results could be used to support the exception request. We therefore propose the following wording to replace bullets (iv) and (v). iv. Power flow simulation results to demonstrate that BES reliability is not dependent upon the power flows through the Element(s) for which an exception has been submitted, for the conditions specified in (ii).
Yes
There is an inconsistency between the language used in bullet (c) - "rarely flows out", and that used in Exclusion E3(c) of the BES definition – "Power flows only into the LDN". We have commented during the BES Definition comment period that Exclusion E3 needs to be modified to match the Exception Principles. We agree with the criteria set out in 1(c) except for bullets (iv) and (v). We do not believe it is possible to establish a limit on the energy flow out of a system for which an exception

has been requested. Further, we suggest that the SDT avoid prescribing set values in the exception criteria since these would only serve to limit the flexibility of the process. As an alternative to the proposed bullet (iv), we suggest that power flow study results could be used to support the exception request. We therefore propose the following wording to replace bullets (iv) and (v). iv. Power flow simulation results to demonstrate that BES reliability is not dependent upon the power flows through the Element(s) for which an exception has been submitted, for the conditions specified in (ii).
No
The technical analysis path for exclusions and inclusions allows for override of the listed "criterion". It is not clear what will be the basis for overriding, and what process will be followed? Is the "criterion" meant to be all of (1) to (7) in (a), or is it any one of them? This needs to be clarified. We agree that entities should be given an option to conduct an analysis to demonstrate if an element is or is not necessary for the operation of transmission network. However, consistent with our earlier comments, we suggest that the exception criteria avoid prescribing numerical values. A transmission element is not necessary for the reliable operation of an interconnected electric transmission system, if it can be removed without effecting bulk transfer capabilities. In our view, testing in accordance with the TPL standards should be the basis for establishing this. One way of demonstrating that an element is not required for the transfer of bulk power is to show that with the element out of service (and with all elements that received exemptions in the past also out of service) and at the required power transfers: 1. Pre-contingency and post-contingency loadings on all BES elements are within applicable ratings. 2. Pre-contingency and post-contingency voltages on the BES are within established ratings. 3. All units on the BES remain synchronized following contingencies. 4. All voltage declines on the BES are within established limits (if any limits were defined). 5. All steady-state oscillations and oscillations following a contingency are positively damped. 6. Transient voltage dips do not exceed established limits anywhere on the BES (if any limits were defined). 7. Frequency excursions do not exceed established limits anywhere on the BES (if any limits were defined). Our view is that the exception criteria should NOT specify the voltage decline limits, allowable frequency excursion or the allowable transient voltage dip because every region will have different limits depending on the characteristics of their power system. This would be consistent with Requirement R5 of the recently balloted standard TPL-001-2, which requires each Transmission Planner and Planning Coordinator to have criteria for acceptable System steady state voltage limits, post-Contingency voltage deviations, and the transient voltage response for its System. Required power transfers are the transfers required to meet the "one day in ten year" loss of load expectation criteria. Further, exception criteria for generators must also be defined. A power system is typically planned to be able to service the load under multiple dispatch scenarios and, therefore, multiple generators disconnected from the transmission system will unlikely reduce the ability of the power system to supply the load. In fact, market forces typically determine whether or not a generator is connected. However, transmission lines are built to achieve specific transfer capabilities and, therefore, directly affect the power system's ability to meet the electricity demand. Since, generators and transmission elements contribute to reliability in a very different ways, the criteria exempting generators should be different from the criteria exempting transmission elements.
We do not agree with setting values for this criterion. This should be left to the relevant Transmission Planner and Planning Coordinator. See our comments in response to Q5a.
We do not agree with setting values for this criterion. This should be left to the relevant Transmission Planner and Planning Coordinator. See our comments in response to Q5a.
We do not agree with setting values for this criterion. This should be left to the relevant Transmission Planner and Planning Coordinator. See our comments in response to Q5a.
We do not agree with setting values for this criterion. This should be left to the relevant Transmission Planner and Planning Coordinator. See our comments in response to Q5a. We suggest that the exception criteria could include the following checks to be carried out in the course of the TPL analysis referred to above to ensure system voltage stability for both the pre-contingency period and the steady state post-contingency period: • Properly converged pre- and post-contingency power flows are to be obtained with the critical parameter increased up to 10% with typical generation as applicable; • All of the properly converged cases obtained must represent stable operating points. This is to be determined for each case by carrying out P-V analysis at all critical buses to verify that for each bus the operating point demonstrates acceptable margin on the power transfer as shown in the following section; and • The damping factor must be acceptable (the real part of the eigen values of the reduced Jacobian matrix are positive)."

No
No
We support the concept of technical analysis in support of Inclusions but disagree with the approach that involves setting specific values for criteria. Please refer to our comments on exclusions.
[See Comment 7a]
[See Comment 7a]
[See Comment 7a]
[See Comment 7a]
No
We anticipate that entities would be granted access to any required historical operations records and modeling data after signing of non-disclosure agreements as necessary.
Yes
Similar to the BES Exception Procedure, the document "Technical Principles for Demonstrating BES Exceptions" must explicitly recognize the authority of Canadian and Mexican Governmental Entities to adopt the Technical Principles for Demonstrating BES Exceptions in its entirety or in part with their own deviations, while ensuring there will be no adverse impact on the interconnected transmission system. Footnote 2 of the "Procedure for Requesting and Receiving an Exception from the Application of the NERC Definition of Bulk Electric System" should be repeated in the "Technical Principles" document.
Yes
We hold the view that the path to generating facilities need not be always BES contiguous. Generating units should be required to meet a subset of NERC Standards, but should not always require contiguous BES paths. Finally, we reiterate that exception criteria should be crafted at a high-level with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) that are not necessary for the interconnected transmission network and based on technical assessment, evidence and justification for its unique characteristics, configuration, and utilization.
Group
MRO's NERC Standards Review Forum
Carol Gerou
No
NSRF believes the relevance and rationale for this criterion is unknown. If this criterion is intended to exempt elements, like circuit switchers, that are part of the distribution transformer circuits operated above 100 kV, and located within a mile of the BES interconnection point, then NSRF would expect the wording to be "in close electric proximity to the BES" rather than in "close electric proximity to Load". Otherwise, NSRF requests the SDT explain the relevance and rationale for this criterion before agreeing on its inclusion.
No
Radial in Character – NSRF proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E1 of the bright-line BES definition.
No
NSRF proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the bright-line BES definition.
No
NSRF proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the BES definition.
No
NSRF proposes that this technical analysis criterion be replaced by criteria that are more closely tied to the Adequate Level of Reliability (ALR) characteristics. The following alternate criteria are offered as possible examples, "(1) the BES can be controlled to stay within acceptable limits following a fault on or loss of the Element; (2) the BES performs acceptably after credible contingences of the Element; (3) the Element does not limit the impact and scope of instability and cascading outages

when they occur; (4) BES facilities are protected from unacceptable damage by operating the Element within its ratings; (5) the integrity of the BES can be restored promptly following a fault on or loss of the Element; and (6) the BES has the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times, taking into account scheduled or reasonably expected unscheduled outages of the Element. In addition, NSRF is not aware of any continent-wide appropriate BES performance measures for voltage dip, frequency excursion, voltage deviation, stability, etc. and NSRF speculates that different values are likely for different regions and system characteristics across the continent. As a result, NSRF believes it is not advisable to try to adopt unproven values without reasonable industry investigation and development.
NSRF proposes replacing this factor with those cited above because a distribution factor measurement indicates how much system changes affect the element, not how much a fault or loss of the element would compromise the ALR of the BES. There is no clear correlation between this factor and any of the six characteristics of Adequate Level of Reliability (ALR) of the BES.
NSRF proposes replacing this factor with those cited above because there is presently no established, continent-wide, acceptable transient voltage dip performance level for evaluating whether a fault or loss of the element would not compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
NSRF proposes replacing this factor with those cited above because there are established, continent-wide transient frequency performance levels in the PRC-006-1 standard, but the elements that are applicable to the standard do not have to be BES elements and the transient frequency response requirements are not intended to be a criterion for BES classification.
NSRF proposes replacing this factor with those cited above because there is presently no established, continent-wide, acceptable (steady state) voltage deviation performance level for evaluating whether a fault or loss of the element would not compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
Yes
A. NSRF recommends this process address the six characteristics of the Definition of Adequate Level of Reliability (ALR) as listed in the comments above in Question #5. B. Recommend municipalities and other small entities having transmission systems designed to serve local load, operated below 200 kV and not having any IROL's or SOL's be excluded from the BES definition. Rational: The standards, especially those for Transmission Operators (TO) aren't written for the smaller utilities. A utility may have over 75 MWs of generation and have installed a 115 kV loop around their city that is used primarily to serve load and get forced into significant compliance requirements that don't enhance the reliability of the BES.
No
NSRF proposes that the technical analysis criterion be replaced by criteria that are more closely tied to the Adequate Level of Reliability (ALR) characteristics. The following alternate criteria are offered as possible examples, "(1) the BES cannot be controlled to stay within acceptable limits following a fault on or loss of the Element; (2) the BES does not perform acceptably after credible contingences of the Element; (3) the Element limits the impact and scope of instability and cascading outages when they occur; (4) BES facilities are not protected from unacceptable damage by operating the Element within its ratings; (5) the integrity of the BES cannot be restored promptly following a fault on or loss of the Element; and (6) the BES does not have the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times, taking into account scheduled or reasonably expected unscheduled outages of the Element. In addition, NSRF is not aware of any continent-wide appropriate BES performance measures for voltage dip, frequency excursion, voltage deviation, stability, etc. and NSRF speculates that different values are likely for different regions and system characteristics across the continent. As a result, NSRF believes it is not advisable to try to adopt unproven values without reasonable industry investigation and development.
NSRF proposes replacing this factor with those cited above because a distribution factor measurement indicates how much system changes affect the element, not how a fault or loss of the element would compromise the ALR of the BES. There is no clear correlation between this factor and any of the six characteristics of Adequate Level of Reliability (ALR) of the BES.
NSRF proposes replacing this factor with those cited above because there is presently no established,

continent-wide, acceptable transient voltage dip performance level for evaluating whether a fault or loss of the element would compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
NSRF proposes replacing this factor with those cited above because there are established, continent-wide transient frequency performance levels in the PRC-006-1 standard, but the elements that are applicable to the standard do not have to be BES elements and the transient frequency response requirements are not intended to be a criterion for BES classification.
NSRF proposes replacing this factor with those cited above because there is presently no established, continent-wide, acceptable (steady state) voltage deviation performance level for evaluating whether a fault or loss of the element would compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent
No
No
Yes
1. NSRF proposes replacing the wording in the Exclusion preface, Exclusion 2 preface, and Inclusion 1 preface of "not necessary to reliably operate the interconnected transmission network" with "necessary to maintain an Adequate Level of Reliability (ALR) of the Bulk Electric System". 2. NSRF has reservations on the following statement made in the introduction of this document: " Due to the importance of Blackstart Resources and their designated blackstart Cranking Paths to restoration efforts, no exceptions will be allowed for those items." This does not allow for a provision to exclude any designated Blackstart Cranking Path (at any voltage) even though there may be technical justification for it. 3. The first page states that "Specific content of this application is spelled out elsewhere in this appendix." NSRF requests the SDT describe where this appendix will be published. Furthermore, is it a compliance document or just technical "guidance"? 4. Having the following statement included for both exclusions and inclusions will create disagreement: "The ERO can override this criterion but would need to provide additional justification to support their finding." NSRF believes any override should have adequate technical justification and not interfere with other statutory requirements. Also, it does not clarify or identify who would make the determination whether NERC has made adequate justification to override the criterion. 5. NSRF believes that the "Inclusion" process should be completely removed from BES Definition. We recommend using bright-line criteria indentifying everything 100 kV and above to be BES and then allow for the "Exception" process to take out facilities that do not impact the reliability of the BES. Selecting BES facilities based on a right-line criteria is what FERC requested in its Order regarding BES Definition. This would streamline the process and remove some unnecessary paperwork.
Individual
Shane Sweet
Harney Electric Cooperative, Inc.
Yes
I don't have a suggestion for an appropriate impedance.
Yes
Yes
Yes

No
Individual
David Kahly
Kootenai Electric Cooperative
No
We believe that the proximity test may be unnecessary, and if an Element or group of Elements meets the other three tests proposed by the SDT, it should be excluded from the BES, even if it does not meet the proximity test. Secondly, using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.
Yes
Kootenai agrees conceptually that systems operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. That is because local distribution systems typically operate adjacent to, or at the end of transmission lines, and function operationally to move power from the Transmission Service Provider's point of delivery of bulk power that has moved across the integrated bulk transmission system to end-users located within the local distribution utility's service territory. To be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as a system that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that system is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution systems and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution system interconnected with those relays should not.
Yes
Kootenai agrees conceptually that one critical characteristic distinguishing local distribution facilities that must be excluded from the BES from transmission facilities that should be included is the manner in which power flows on those facilities. Power on local distribution systems generally flows only from the interconnected transmission source and across the distribution system for delivery to end-use customers. By contrast, power on transmission systems generally flows in two (or multiple, in networked systems) directions and is delivered in bulk to distribution utilities rather than to end-users. Hence, the SDT has properly identified power flows as one important characteristic that distinguishes BES transmission systems from local distribution systems. In order to identify systems that are not necessary for the operation of the BES under this text, we propose that any system where real power flows into the local distribution system 90 percent of the time or more under normal operating conditions.
Yes
Kootenai agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. In fact, we believe this may be the most important and readily identifiable distinction. Accordingly, Kootenai agrees that if power is not intentionally transported through a particular system, that

system is not used for transmission and should not be considered part of the BES. One exception may be for a small embedded generation unit owned by a different party that may be "scheduled" out of an area, but in reality, does not produce any physical flow. These circumstances should not trigger inclusion.
Yes
We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with local distribution and not BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Kootenai supports the technical arguments and the White Paper presented by Snohomish County PUD in their comments. We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in the White Paper, which is based upon the approach recommended by the WECC BES Task Force.
The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection.
Specific transient voltage dip thresholds are proposed at page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
[Please see our response to Question 5d.
No
Yes
As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid showing that the Elements contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in the Snohomish PUD White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5.
See Exclusion comment.
See Exclusion comment.
See Exclusion comment.
See Exclusion comment.
No
As discussed on page 12 of the Snohomish White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant Regional Entity, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data.

No
As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
Yes
Kootenai generally supports the approach to the exclusion process proposed by the SDT, which provides two different paths to exclusion, one based on readily-identifiable operational characteristics of a system, and one based on technical reliability analysis. We believe it is important to provide for the first path, based on operational characteristics, so that systems that are marginally disqualified under the BES Definition (because, for example, generation within the system exceeds demand for a few hours a year) can obtain an exclusion without the large investment of resources that otherwise might be required for a full-scale technical analysis. That being said, we question whether the first subsection of the characteristic test, relating to system proximity, is necessary, and we are concerned that the requirement that a system meet all four requirements of the characteristics test may be overly restrictive. For example, it is easy to imagine a distribution system in a rural area that covers a widely dispersed area, so that load is many miles from the relevant generation/transmission source, and that the system therefore does not meet the electrical proximity element, but meets the other three elements of the characteristics test. Such a system should be excluded because it clearly serves a local distribution function, and not a transmission function, as demonstrated by the fact that the system meets subsections (c) (power flows into the system but rarely flows out) and (d) (power is not intentionally transported over the system). Accordingly, we recommend that the SDT consider eliminating the first test. In the alternative, the SDT should consider allowing exempting a system from the BES if it, for example, meets three of the four criteria rather than all four.
Group
Southern Company
Antonio Grayson
No
Yes
We agree with the requirement of an element being radial in character as being a qualifier for exclusion thru the non-technical analysis. However, we recommend tha the term "radial in character" be better defined. Item ii.: The intent of this item is not clear, and the term "regional dispatch" is not defined. Recommend the item be clarified.
Yes
No
No
As written, most of this approach makes no sense. The words imply that if you have planned the system properly, you can exclude it from the BES! In TPL studies you make sure that voltage dips, frequency excursions, voltage deviations are acceptable, oscillations are damped, and no cascading outages occur. So if you meet the performance requirements of TPL studies, you can exclude the element from the BES. What good is this?
This is the only part of this technical analysis that may make sense. If the loss of any element of the BES results in a distribution factor of less than X% on the element being considered for exclusion, then exclude it. We suggest a value of 3% for this, since 3% is the threshold typically used in transfer studies.
As stated above, it does not make sense to use this category.
As stated above, it does not make sense to use this category.
As stated above, it does not make sense to use this category.
Yes
No
Southern Company recommends that applications for inclusion of facilities into the BES should include

justification for doing so. However, there should not necessarily be specific criteria that must be met, but the importance of the facility to the BES should be clearly demonstrated
No
No
Yes
The Technical Principles document suggests that no exceptions be allowed for Blackstart Resources and designated Cranking Paths. Southern Company is concerned with the treatment of these facilities and recommends that certain statements be removed. In Project 2010-17 Definition of the BES, Southern Company commented that the proposed inclusion, Inclusion I4, be removed from the BES Definition because an existing NERC Reliability Standard, EOP-005-2 System Restoration from Blackstart Resources, already addresses these facilities regardless of voltage. Further, the proposed inclusion will expand the applicability of some NERC Reliability Standards to facilities below 100 kV. Southern Company believes this position will unnecessarily cause more facilities to become applicable to reliability standards without any benefit to reliability. Therefore, we recommend the following statement be deleted: "Due to the importance of Blackstart Resources and their designated blackstart Cranking Paths to restoration efforts, no exceptions will be allowed for those items."
Individual
Keith Morisette
Tacoma Power
No
Tacoma Power does not believe that a proximity to Load criteria is useful in BES designation when the other 3 exclusion criteria of this path are applied. However, if the SDT retains this item, we suggest an impedance value of < 0.3 ohms on a 100 MVA base.
Yes
Tacoma Power generally agrees that radial elements should be an item in this path and we suggest that radial element operated at below 300 kV should be excluded from the BES. The 300 kV level is linked with NERC CIP's proposed version 4 definition of critical asset and should be applied here with the BES definition.
Yes
Tacoma Power generally agrees that elements primarily serving load, allowing a limited flow out of the local distribution network, should be excluded from the BES. We support an annual limitation of 219,000 MWhs, equivalent to 25 aMW, since a system of elements that primarily serve load under this limit are insignificant to the BES.
Yes
Tacoma Power generally agrees with fourth item (power transport) when not intentionally transporting power through a system. In development of the supporting evidence for this item, we suggest a demonstration by operating studies or the option to demonstrate the criteria by the use of operational procedures.
Yes
Tacoma Power generally agrees with approach used on the technical analysis path for exclusions.
Tacoma Power generally agrees with the distribution factor measurement in the technical analysis path for exclusions. We suggest adopting a distribution factor not exceeding 30% on an adjacent system.
Tacoma Power generally agrees with allowable transient voltage dip measurement in the technical analysis path for exclusions. We suggest adopting an allowable transient voltage dip not exceeding 20% for more than 20 cycles on an adjacent system's bus.
Tacoma Power generally agrees with the allowable transient frequency response in the technical

analysis path for exclusions. We suggest adopting an allowable transient frequency response of not below 59.6 Hz for up to 6 cycles on an adjacent system's bus.
Tacoma Power generally agrees with the voltage deviation measurement in the technical analysis path for exclusions. We suggest adopting a voltage deviation not exceeding 10% on an adjacent system's bus.
No
Tacoma Power is not suggesting any other methods at this time.
Yes
Tacoma Power generally agrees with approach used on the technical analysis path for inclusions.
Tacoma Power generally agrees with the distribution factor measurement in the technical analysis path for inclusions. We suggest adopting a distribution factor of 30%, or more, on an adjacent system.
Tacoma Power generally agrees with allowable transient voltage dip measurement in the technical analysis path for inclusions. We suggest adopting the criteria that includes a transient voltage dip exceeding 20% for more than 20 cycles on an adjacent system's bus.
Tacoma Power generally agrees with the allowable transient frequency response in the technical analysis path for inclusions. We suggest adopting the criteria that includes a transient frequency response that goes below 59.6 Hz for up to 6 cycles on an adjacent system's bus.
Tacoma Power generally agrees with the voltage deviation measurement in the technical analysis path for inclusions. We suggest adopting a voltage deviation that exceeds 10% on an adjacent system's bus. We have an additional concern with how the language is constructed on items d. and e. The inclusion criteria may work for simply inverting the exclusion language but in this initial draft, it does not appear to work as intended. Our suggestions above are describing criteria for defining elements that can be included in the BES. If that is the result to be adopted by the SDT, items d. and e. must be rewritten to state that elements within such criteria can be included in the BES.
No
Tacoma Power has no comment at this time.
No
Tacoma Power is not aware of any conflicts at this time.
Yes
Tacoma Power supports the SDT's efforts to create an acceptable BES definition directly linked to an exception process. We do have a concerned about the application of the standards to Elements that change status due to the Exception process. Any Elements that are determined to be newly included in the BES should have a 24-month period before the standards will apply as a BES Elements. Conversely, a determination that removes an Element from the BES should apply as soon as practicable. Please be aware that the WECC has a task force, the Bulk Electric System Definition Task Force(BESDTF), which has done some notable work on this task. See WECC BESDTF Proposal 6, Appendix C (http://www.wecc.biz/Standards/Development /BES/default.aspx). The BES definition is very complex and the BESDTF has already addressed many of the tough issues that have yet to be addressed in this process, such as: • Local Distribution Network definition for automatic exemption • Determination of radial facilities • Demarcation of BES and non-BES Elements • Alternate dispute resolution process • Assignment of the burden of proof for the exemption process • Technical approach for the inclusion/exclusion determination Thank you for consideration of our comments.
Individual
Terry Harbour
MidAmerican Energy
No
MidAmerican agrees with the NSRF. The NSRF believes the relevance and rationale for this criterion is unknown. If this criterion is intended to exempt elements, like circuit switchers, that are part of the distribution transformer circuits operated above 100 kV, and located within a mile of the BES interconnection point, then NSRF would expect the wording to be "in close electric proximity to the BES" rather than in "close electric proximity to Load". Otherwise, NSRF requests the SDT explain the relevance and rationale for this criterion before agreeing on its inclusion.
No

MidAmerican supports the NSRF comments. The NSRF proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E1 of the bright-line BES definition. If not eliminated, the IEEE definition of a radial system should be used.
No
MidAmerican supports the NSRF comments. The NSRF proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the bright-line BES definition.
No
MidAmerican support the NSRF comments. The NSRF proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the BES definition.
Yes
The concept of using TPL analyses and normalized Transmission Distribution Factors makes basic sense as a way to determine what elements react to system transfers and what elements react primarily to distribution load. In general all facilities below 100 kV should be exlcuded by default as distribution according to the 2005 Federal Power Act. Transmission Distribution Factors tend to show low bulk power system transfers (less than 2%) based on their inherent high impedance when normalized. Normalizing the transmission impedance means diving the ohmic value by a base impedance which is dominated by a (kV^2) term. Per Unit Impedance = (transmission line ohms / base impedance) where base impedance = (kV^2 / MVA). Using a common MVA base value of 100 MVA, a base impedance at 69kV = 47.6 ohms versus at 161 kV = 259.2 or at 345 kV = 1190.2 ohms. The rapid increase of the denominator as kV goes higher insures that a 69 kV system is high impedance compared to any high kV facilities and therefore nearly insure the 69 kV system is local in nature and reacts primarily to load. Therefore it is distribution. This all supports the conclusion that all facilites below 100 kV should be classified as distribution according to the 2005 FPA and exempted by default. Facilities below 100 kV could be brought into scope if TPL analyses show instability, uncontrolled separation, or cascading as defined in the 2005 FPA.
The Distribution Factor measurement is acceptable and should exclude facilities that show a low distribution factor for bulk power system transfers. An arbitrary low value could be those facilities that show less than a 2% distribution factor.
There isn't a nation wide transient voltage dip measurement.
There isn't a nation wide transient frequency response
Determining a nation wide voltage deviation would be difficult.
Yes
In general all facilities below 100 kV should be exlcuded by default as distribution according to the 2005 Federal Power Act. Transmission Distribution Factors tend to show low bulk power system transfers (less than 2%) based on their inherent high impedance when normalized. Normalizing the transmission impedance means diving the ohmic value by a base impedance which is dominated by a (kV^2) term. Per Unit Impedance = (transmission line ohms / base impedance) where base impedance = (kV^2 / MVA). Using a common MVA base value of 100 MVA, a base impedance at 69kV = 47.6 ohms versus at 161 kV = 259.2 or at 345 kV = 1190.2 ohms. The rapid increase of the denominator as kV goes higher insures that a 69 kV system is high impedance compared to any high kV facilities and therefore nearly insure the 69 kV system is local in nature and reacts primarily to load. Therefore it is distribution. This all supports the conclusion that all facilites below 100 kV should be classified as distribution according to the 2005 FPA and exempted by default. Facilities below 100 kV could be brought into scope if TPL analyses show instability, uncontrolled separation, or cascading as defined in the 2005 FPA.
No
No

No
Yes
MidAmerican supports the NSRF comments.
Group
Bonneville Power Administration
Denise Koehn
Yes
BPA suggests that correlation between the size of the Load and the size of an element is needed. BPA would like the word "close" in the description "close electric proximity to load" to be better defined. For example, a line that carries 600 MWs in close electrical proximity to a 20-MW Load may not meet the intent of this characteristic. In planning models, loads are often aggregated to a higher voltage while, in a distribution system model, the loads are explicitly represented along the distribution feeder. Because of this, the criteria should define where the load is located/represented for the measure of electrical proximity.
No
BPA requests clarification on what the SDT considers radial through additional examples of i "the way the connections to the BES are operated" and ii "the way the Element(s) are treated in operations." BPA emphasizes that this assessment should be conducted using normal system operations.
Yes
BPA generally agrees with the power flow concept, but suggests including language that the assessment should be "based on normal system operating conditions." A MWh value to replace 'TBD' for maximum energy flowing out per year could be determined based on on an annual average MW load level of 25 MW average and below with distribution service of 50MVA and below, because 25MW loads can be served by lines under 100kv. The energy flowing out per year would be limited by the size of the load and the ability to import power to the load area (i.e. the export would never be larger than the initial distribution service minus the local area losses and load). BPA requests that the drafting team perform a cross-walk analysis on each of the 4 items to ensure the consistent application of an existing industry process, practice, or standard.
Yes
BPA suggests that the SDT provide a method for assessing power transport based on intake to serve load versus outflow. BPA requests that the SDT clarify that the qualifying statements i-v for the fourth item are "or" statements.
BPA comments on the technical analysis are as follows: 1. Who is responsible for running these studies (the BA, individual utilities….?). 2. The analysis and criteria need to be better defined for the technical analysis. 3. What did SDT mean by "having a distribution factor of TBD% for any other Element"? This should probably reference a specific PTDF for a path or source/sink group. 4. What contingencies are studied to show the elements meet the transient voltage dip, frequency excursion, etc. (i.e. are they 3 phase delayed cleared faults, single phase faults, etc.)? Furthermore, the exclusion criteria needs to be much more specific about how the study is to be conducted in general – i.e.: Regional Entities have established study guidelines and procedures to determine voltage and frequency criteria. Specifically, is it the intent that the element being proposed for exclusion be opened in the study and then the standard contingency list applied to the rest of the system? Presumably, if there is no difference in system performance with the element in or out, then it could be excluded. Alternatively, is it intended that the contingency to be tested is simply the loss of the element proposed for exclusion? 5. What elements and/or flow gates should be monitored for these analyses? 6. In "Other", the SDT should add "The limiting element for a flow-gate cannot be excluded from the BES". 7. How will the criteria be set? Will they follow current standards? (i.e. TPL-001)? The technical principles must identify what category(ies) of TPL studies must be run. BPA requests clarification on what the values for the threshold criteria and/or disturbances would be?

No
BPA emphasizes that exclusion criteria and analysis should be based on normal operations. An exclusion should not be unavailable based on temporary system configuration such as load service by a different transmission segment temporarily used to mitigate system operations due to planned maintenance outages, i.e. a system that is operated radially over 90% of the time and closed for maintenance outages for safety and/or reliability purposes, etc. BPA recommends that the SDT consider not only the single-phase faults, also the effect of more severe events such as two- or three-phase faults, with delayed clearing and evaluate the necessity of the element in those cases.
No
Please refer to BPA's comments on Question #5.
No
The owner of the asset should have all the data necessary to perform the analysis for an Exclusion. The Exclusion analysis should use the same data request and sharing requirements of other NERC standards and the owner conducting the Exclusion analysis should consult with other entities as necessary.
No
Under NERC Standard IRO-010, the Transmission Operators are required to obtain information relating to the operation of the bulk power system within their respective areas. Transmission Operators may still need information relating to network facilities that ultimately are determined not to be BES facilities. BPA is concerned that an exclusion could eliminate a requirement that such information be provided.
No

Comment Form for 1st Draft of Project 2010-17: Definition of BES (BES) Technical Principles for Demonstrating BES Exceptions – City of Redding - Paul Cummings

Please **DO NOT** use this form. Please use the electronic comment form to submit comments on the first draft of the Project 2010-17: Definition of the Bulk Electric System (BES) Technical Principles for Demonstrating BES Exceptions. **Only** submit comments on the first draft Technical Principles for Demonstrating BES Exceptions. The comments must be submitted by **June 10, 2011.**

If you have questions please contact Ed Dobrowolski at ed.dobrowolski@nerc.net or by telephone at 609-947-3673.

Background Information
Definition of the BES (Project 2010-17)

In parallel with the definition project, another stakeholder team outside the standards development process has been set up to develop a change to the NERC Rules of Procedure (ROP) to allow for entities to apply for excluding Elements from the BES that might otherwise be included according to the proposed definition and designations. This same process would be used by Registered Entities to justify including Elements in the BES that might otherwise be excluded according to the proposed definition and designations. This process would also be utilized for those situations where the core definition and designations do not clearly identify whether an Element is BES or not. The ROP team will develop the process for seeking an exception from the definition and designations, but the Definition of the BES Standards Drafting Team (DBESSDT), through the standards development process, has developed the criteria necessary for applying for an exception.

The exclusion exception process has been set up as a choice between two alternative forms of evidence. The first choice is seen as less onerous in nature as it does not require extensive technical analysis. An entity must choose which path it wants to pursue.

The inclusion exception process requires more detailed analysis and only one choice is provided.

The first draft of the criteria that has been posted contains the evidence that must be presented by an entity seeking an exception as well as specific criteria for how that evidence will be evaluated. The SDT is seeking industry feedback not just on the approach being presented but also on the specific numeric thresholds that will be used. Comments received from this posting will help to determine the final criteria that the industry will be required to adhere to. Therefore, industry feedback is vital to the development process.

It should be noted that the actual application process is described in the Rules of Procedure document that has been posted concurrent with the criteria document.

You do not have to answer all questions. Enter All Comments in Simple Text Format.

Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

1. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. The first item involves proximity to Load and requests industry feedback on how to measure this variable. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. In addition, in the comment field, please provide your thoughts on the appropriate impedance value to replace 'TBD,' including technical rationale for your argument.

   Yes:

   No: x

   Comments: This could serve as one characteristic of a distribution system and is generally a good indicator that the facilities have been installed and are operating to serve a distinct geographical area (the end user). The intent should be changed to indicate it is geographical and not electrical. The electrical reference should be removed from this section and moved to the engineering section.

2. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. The second item involves Element(s) treated as radial. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes: x

   No:

   Comments: The term Radial could cause confusion. Clarification needs to be added to indicate that the system can have more than one connection to the BES.

3. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. The third item involves power flow. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. In addition, in the comment field, please provide your thoughts on the appropriate MWh value to replace 'TBD,' including technical rationale for your argument.

   Yes: x

   No:

Comments: To be consistent with E2 of the proposed BES Definition a distribution system should be allowed to export at least 75 mw. This would be the same as a commercial retail customer can export into the distribution system.

4. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. The fourth item involves power transport. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes: x

   No:

   Comments: The SDT needs to address renewable energy and customer owned generation. If an aggregator adds up one thousand roof top PV units or the power from plugged in electric cars and sells them to an entity outside of this system it should not affect the ability of the distribution system to qualify for this exclusion, especially if the power is consumed inside of the distribution system.

5. Exclusions - The SDT has set up one path for evidence that includes technical analysis. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. In addition, in the comment field, please provide your thoughts on the proposed metrics for analysis and the appropriate values to replace 'TBD,' including technical rationale for your argument.

   Yes: x

   No:

   5a. Comments on approach: It appears the industry experts have a very difficult time identifying any set of measurement factors that can be applied on a consistant basis to any system and produce similar results, therefore there needs to be geographical variation where the experts in the local systems can make a determination.

   5b.Comments on distribution factor measurement:

   5c. Comments on allowable transient voltage dip measurement:

   5d. Comments on allowable transient frequency response:

   5e. Comments on voltage deviation measurement:

6. Exclusions – Do you have other methods that may be appropriate for proving an exclusion claim? Or, other variables/measurements that may be added to the requirements already shown in the posted *Technical Principles for Demonstrating BES Exceptions*? If so, please provide your comments here with technical rationale for why they should be considered.

   Yes:

   No: x

Comments:

7. Inclusions - The SDT has set up only one path for evidence that includes technical analysis. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. In addition, in the comment field, please provide your thoughts on the proposed metrics for analysis and the appropriate values to replace 'TBD,' including technical rationale for your argument.

   Yes: x

   No:

   7a. Comments on approach:

   7b. Comments on distribution factor measurement:

   7c. Comments on allowable transient voltage dip measurement:

   7d. Comments on allowable transient frequency response:

   7e. Comments on voltage deviation measurement:

8. Do you have concerns about an entity's ability to obtain the data they would need to do the indicated technical analyses? If so, please be specific with your concerns so that the SDT can fully understand the problem and address it in future drafts.

   Yes:

   No: x

   Comments:

9. Are you aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? If so, please identify them here and provide suggested language changes that may clarify the issue.

   Yes: x

   No:

   Comments: State and court rulings that have defined Transmission and Distribution. One possible solution is to state that the determination made via this methodology is for reliability purposes only and is not intended to redefine established market and rate determinations.

10. Are there any other concerns with this approach that haven't been covered in previous questions and comments? Please be as specific as possible with your comments.

    Yes: x

    No:

Comments: The SDT is encouraged to address generators installed as load modifiers to distribution load.>>>> As additional evidence of distribution line, if there is not an OATT filed on a line then it is not transmission per FERC rules.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Consideration of Comments on Definition of the Bulk Electric System (BES) Technical Principles for Demonstrating BES Exceptions — Project 2010-17

The Bulk Electric System (BES) Drafting Team thanks all commenters who submitted comments on the first draft of the Project 2010-17: Definition of the Bulk Electric System (BES) Technical Principles for Demonstrating BES Exceptions. These standards were posted for a 30-day public comment period from May 11, 2011 through June 10, 2011. The stakeholders were asked to provide feedback on the standards through a special Electronic Comment Form. There were 91 sets of comments, including comments from approximately 182 different people from approximately 124 companies representing all 10 Industry Segments as shown in the table on the following pages.

http://www.nerc.com/filez/standards/Project2010-17_BES.html

Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.

The SDT is recommending that the project be moved to a parallel 45-day posting and ballot.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 404-443-2560 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

[1] The appeals process is in the Reliability Standards Development Procedures: http://www.nerc.com/standards/newstandardsprocess.html.

Index to Questions, Comments, and Responses

1. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. 14
2. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. 31
3. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. 44
4. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. 58
5. Exclusions - The SDT has set up one path for evidence that includes technical analysis. Do you agree with this requirement? 70
    - 5a. Comments on approach 76
    - 5b. Comments on distribution factor measurement 90
    - 5c. Comments on allowable transient voltage dip measurement 97
    - 5d. Comments on allowable transient frequency response 103
    - 5e. Comments on voltage deviation measurement 108
6. Exclusions – Do you have other methods that may be appropriate for proving an exclusion claim? Or, other variables/measurements that may be added to the requirements already shown in the posted Technical Principles for Demonstrating BES Exceptions? 114
7. Inclusions - The SDT has set up only one path for evidence that includes technical analysis. Do you agree with this requirement?. 126
    - 7a. Comments on approach 133
    - 7b. Comments on distribution factor measurement 142
    - 7c. Comments on allowable transient voltage dip measurement 147
    - 7d. Comments on allowable transient frequency response 151
    - 7e. Comments on voltage deviation measurement 155
8. Do you have concerns about an entity's ability to obtain the data they would need to do the indicated technical analyses?. 159
9. Are you aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? 167
10. Are there any other concerns with this approach that haven't been covered in previous questions and comments? Please be as specific as possible with your comments. 177

The Industry Segments are:

1 — Transmission Owners
2 — RTOs, ISOs
3 — Load-serving Entities
4 — Transmission-dependent Utilities
5 — Electric Generators
6 — Electricity Brokers, Aggregators, and Marketers
7 — Large Electricity End Users
8 — Small Electricity End Users
9 — Federal, State, Provincial Regulatory or other Government Entities
10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Connie Lowe	Electric Market Policy	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Mike Crowley		SERC	1, 3, 5
2.	Mike Garton		MRO	5
3.	Louis Slade		RFC	5, 6
4.	Michael Gildea		NPCC	5

2.	Group	Guy Zito	Northeast Power Coordinating Council										X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Alan Adamson	New York State Reliability Council, LLC	NPCC	10
2.	Gregory Campoli	New York Independent System Operator	NPCC	2
3.	Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC	3
4.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1
5.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC	1
6.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10
7.	Brian Evans-Mongeon	Utility Services	NPCC	8

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10

8.	Mike Garton	Dominion Resources Services, Inc.	NPCC	5
9.	Kathleen Goodman	ISO - New England	NPCC	2
10.	Chantel Haswell	FPL Group, Inc.	NPCC	5
11.	Brian Gooder	Ontario Power Generation Incorporated	NPCC	5
12.	David Kiguel	Hydro One Networks Inc.	NPCC	1
13.	Michael Lombardi	Northeast Utilities	NPCC	1
14.	Randy MacDonald	New Brunswick Power Transmission	NPCC	1
15.	Bruce Metruck	New York Power Authority	NPCC	6
16.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10
17.	Robert Pellegrini	The United Illuminating Company	NPCC	1
18.	Si Truc Phan	Hydro-Quebec TransEnergie	NPCC	1
19.	Saurabh Saksena	National Grid	NPCC	1
20.	Michael Schiavone	National Grid	NPCC	1
21.	Wayne Sipperly	New York Power Authority	NPCC	5
22.	Donald Weaver	New Brunswick System Operator	NPCC	1
23.	Ben Wu	Orange and Rockland Utilities	NPCC	1

3.	Group	Charles W. Long	SERC Planning Standards Subcommittee	X									X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Charles W. Long	Entergy Services, Inc.	SERC	1
2.	Darrin Church	Tennesee Valley Authority	SERC	1
3.	John Sullivan	Ameren Services Co.	SERC	1
4.	James Manning	North Carolina Electric Cooperatives	SERC	1
5.	Bob Jones	Southern Company Services	SERC	1
6.	Phil Kleckley	South Carolina Electric &Gas Co.	SERC	1
7.	Pat Huntley	SERC	SERC	NA

4.	Group	Robert Rhodes	SPP Standards Review Group		X								

	Additional Member	Additional Organization	Region	Segment Selection
1.	Clem Cassmeyer	Western Farmers Electric Cooperative	SPP	1, 3, 5

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
2. John Mason	Independence Power & Light	SPP	1, 3, 5									
3. John Kerr	Southwest Power Pool	SPP	2									
4. Matthew Bordelon	CLECO	SPP	1, 3, 5									
5. Michelle Corley	CLECO	SPP	1, 3, 5									
6. Ron Gunderson	Nebraska Public Power District	MRO	1, 3, 5									
7. Jonathan Hayes	SPP	SPP	2									
8. Sean Simpson	Board of Publlic Utilities, City of McPherson	SPP	1, 3, 5									
9. Tom Hestermann	Sunflower Electric	SPP	1, 3, 5									
10. Tony Eddleman	Nebraska Public Power District	MRO	1, 3, 5									
11. Valerie Pinamonti 12. Doug Callison	American Electric Power Grand River Dam Authority	SPP SPP	1, 3, 5 1, 3, 5									
13. Sean Simpson 14. Tom Hestermann	Board of Public Utilities, City of McPherson Sunflower Electric	SPP SPP	1, 3, 5 1, 3, 5									
5. Group	David Taylor	NERC Staff Technical Review										
No additional members listed.												
6. Group	Mark Gray	Edison Electric Institute										
http://www.eei.org/whoweare/ourmembers/USElectricCompanies/Pages/USMemberCoLinks.aspx												
7. Group	Frank Gaffney	Florida Municipal Power Agency	X		X	X	X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Tim Beyrle	City of New Smyrna Beach	FRCC	4
2.	Jim Howard	Lakeland Electric	FRCC	3
3.	Cairo Vanegas	Fort Pierce Utility Authority	FRCC	4
4.	Lynne Mila	City of Clewiston	FRCC	3
5.	Joe Stonecipher	Beaches Energy Services	FRCC	1

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
6. Randy Hahn	Ocala Electric Utility	FRCC	3									
7. Greg Woessner	Kissimmee Utility Authority	FRCC	3									
8. Group	Cynthia S. Bogorad	Transmission Access Policy Study Group	X		X	X	X	X				
No additional members listed.												
9. Group	Albert DiCaprio	ISO/RTO Standards Review Committee		X								

	Additional Member	Additional Organization	Region	Segment Selection
1.	Terry Bilke	MISO	RFC	2
2.	Patrick Brown	PJM	RFC	2
3.	Greg Campoli	NY ISO	NPCC	2
4.	Kurtis Chong	IESO	NPCC	2
5.	Ben Li	IESO	NPCC	2
6.	Steve Myers	ERCOT	ERCOT	2
7.	Bill Phillips	MISO	RFC	2
8.	Don Weaver	NBSO	NPCC	2
9.	Mark Westendorf	MISO	RFC	2
10.	Charles Yeung	SPP	SPP	2

10. Group	John Allen	Iberdrola USA	X									

	Additional Member	Additional Organization	Region	Segment Selection
1.	Raymond Kinney	New York State Electric & Gas	NPCC	1
2.	Kevin Howes	Central Maine Power	NPCC	1

11. Group	Mark Conner	Tri-State Generation and Transmission Association	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Bill Middaugh	Tri-State Generation and Transmission Association	WECC	1, 3, 5, 6

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
12.	Group	David Curtis	Hydro One	X		X						X	

	Additional Member	Additional Organization	Region	Segment Selection
1.	Ajay Garg	Transmission	NPCC	1
2.	David Kiguel	Distribution	NPCC	2
3.	Oded Hubert	Regulatory Affairs	NPCC	9

13.	Group	Carol Gerou	MRO's NERC Standards Review Forum										X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Mahmood Safi	Omaha Public Utility District	MRO	1, 3, 5, 6
2.	Chuck Lawrence	American Transmission Company	MRO	1
3.	Tom Webb	Wisconsin Public Service Corporation	MRO	3, 4, 5, 6
4.	Jodi Jenson	Western Area Power Administration	MRO	1, 6
5.	Ken Goldsmith	Alliant Energy	MRO	4
6.	Alice Ireland	Xcel Energy	MRO	1, 3, 5, 6
7.	Dave Rudolph	Basin Electric Power Cooperative	MRO	1, 3, 5, 6
8.	Eric Ruskamp	Lincoln Electric System	MRO	1, 3, 5, 6
9.	Joe DePoorter	Madison Gas & Electric	MRO	3, 4, 5, 6
10.	Scott Nickels	Rochester Public Utilties	MRO	4
11.	Terry Harbour	MidAmerican Energy Company	MRO	1, 3, 5, 6
12.	Marie Knox	Midwest ISO Inc.	MRO	2
13.	Lee Kittelson	Otter Tail Power Company	MRO	1, 3, 4, 5
14.	Scott Bos	Muscatine Power and Water	MRO	1, 3, 5, 6
15.	Tony Eddleman	Nebraska Public Power District	MRO	1, 3, 5
16.	Mike Brytowski	Great River Energy	MRO	1, 3, 5, 6
17.	Richard Burt	Minnkota Power Cooperative, Inc.	MRO	1, 3, 5, 6

14.	Group	Denise Koehn	Bonneville Power Administration	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Steve Larson	BPA, Legal Department	WECC	1, 3, 5, 6

Group/Individual		Commenter	Organization			Registered Ballot Body Segment									
						1	2	3	4	5	6	7	8	9	10
2.	Rebecca Berdahl	BPA, Power Services, Long Term Sales and Purchases		WECC	3										
3.	Erika Doot	BPA, Power Services, Generation Support		WECC	3, 5, 6										
4.	Sara Sundborg	BPA, Transmission Technical Operations		WECC	1										
5.	Lorissa Jones	BPA, Transmission Reliability Program		WECC	1										
6.	Fran Halpin	BPA, Power Services, Duty Scheduling		WECC	5										
15.	Individual	Sandra Shaffer	PacifiCorp			X		X		X	X				
16.	Individual	Jim Uhrin	ReliabilityFirst												X
17.	Individual	Richard Dearman	Tennessee Valley Authority			X		X		X	X				
18.	Individual	Richard Malloy	Idaho Falls Power												
19.	Individual	Michelle Mizumori	Western Electricity Coordinating Council												X
20.	Individual	John Cummings	PPL Supply							X	X				
21.	Individual	Roger Clayton	New York State Reliability Council												X
22.	Individual	John P. Hughes	Electricity Consumers Resource Council (ELCON)			X		X		X	X	X			
23.	Individual	Randy D. Crissman	New York Power Authority			X				X	X			X	
24.	Individual	John Free	Alabama Public Service Commission											X	
25.	Individual	Antonio Grayson	Southern Company			X									
26.	Individual	Michael Moltane	ITC			X									

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
27.	Individual	Michael Jones	National Grid	X		X							
28.	Individual	Scott Bos	Muscatine Power and Water	X		X		X	X				
29.	Individual	Bud Tracy	Blachly Lane Electric Cooperative			X							
30.	Individual	RoLynda Shumpert	South Carolina Electric and Gas	X		X		X	X				
31.	Individual	Josh Dellinger	Glacier Electric Cooperative										
32.	Individual	Diane Barney	New York State Department of Public Service									X	
33.	Individual	John Bee	Exelon	X		X		X					
34.	Individual	Bob Casey	Georgia Transmission Corporation	X									
35.	Individual	Chris de Graffenried	Consolidated Edison Co. of NY, Inc.	X		X		X	X				
36.	Individual	Tracy Richardson	Springfield Utility Board			X							
37.	Individual	John Pearson	ISO New England		X								
38.	Individual	Jonathan Appelbaum	The United Illuminating Company	X									
39.	Individual	Neil Phinney	Georgia System Operations Corporation			X							
40.	Individual	Michelle R DAntuono	Occidental Energy Ventures Corp.			X		X		X	X		
41.	Individual	Russ Schneider	Flathead Electric Cooperative, Inc.			X	X						

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
42.	Individual	Ed Davis	Entergy Services	X		X		X	X				
43.	Individual	Jack Stamper	Clark Public Utilities	X									
44.	Individual	Dave Markham	Central Electric Cooperative			X							
45.	Individual	Dave Hagen	Clearwater Power Electric Cooperative			X							
46.	Individual	Roman Gillen	Consumer's Power Inc.			X							
47.	Individual	Roger Meader	Coos-Curry Electric Cooperative			X							
48.	Individual	Dave Sabala	Douglas Electric Cooperative			X							
49.	Individual	Bryan Case	Fall River Electric Cooperative			X							
50.	Individual	Rick Crinklaw	Lane Electric Cooperative			X							
51.	Individual	Michael Henry	Lincoln Electric Cooperative			X							
52.	Individual	Richard Reynolds	Lost River Electric Cooperative			X							
53.	Individual	Annie Terracciano	Northern Lights Electric Cooperative			X							
54.	Individual	Doug Adams	Okanogan Electric Cooperative			X							
55.	Individual	Heber Carpenter	Raft River Rural Electric Cooperative			X							
56.	Individual	Ken Dizes	Salmon River Electric Cooperative			X							

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
57.	Individual	Steve Eldrige	Umatilla Electric Cooperative			X							
58.	Individual	Marc Farmer	West Oregon Electric Cooperative			X							
59.	Individual	Rick Paschall	Pacific Northwest Generating Cooperative			X							
60.	Individual	Aleka Scott	PNGC Power				X						
61.	Individual	Stuart Sloan	Consumer's Power Inc.	X									
62.	Individual	Bill Keagle	BGE	X									
63.	Individual	Rick	Spyker	X									
64.	Individual	Clint Gerkensmeyer	Benton Rural Electric Association			X							
65.	Individual	Robert Ganley	Long Island Power Authority	X									
66.	Individual	Thad Ness	American Electric Power	X		X		X	X				
67.	Individual	David Burke	Orange and Rockland Utilities, Inc.	X		X							
68.	Individual	David Thorne	Pepco Holdings Inc	X		X							
69.	Individual	Paul Titus	Northern Wasco County PUD	X		X							
70.	Individual	Alice Ireland	Xcel Energy	X		X		X	X				
71.	Individual	Jianmei Chai	Consumers Energy Company			X	X	X					

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
72.	Individual	Jo Elg	United Electric Co-op Inc.			X							
73.	Individual	Ned Ratterman	Oregon Trail Electric Cooperative, Inc.	X		X							
74.	Individual	Steve Alexanderson	Central Lincoln			X	X					X	
75.	Individual	Darryl Curtis	Oncor Electric Delivery	X									
76.	Individual	Jerome Murray	Oregon Public Utility Commission Staff									X	
77.	Individual	Anthony Schacher	Salem Electric			X							
78.	Individual	Laura Lee	Duke Energy	X		X		X	X				
79.	Individual	Bill Dearing	Grant County PUD No. 2 (Grant)	X		X	X	X					
80.	Individual	Si Truc PHAN	Hydro-Quebec TransEnergie	X									
81.	Individual	Eric Lee Christensen	for Snohomish County PUD	X		X	X	X					
82.	Individual	Bill Dearing	Northwest Public Power Association (NWPPA)	X		X	X						
83.	Individual	Ben Friederichs	Big Bend Electric Cooperative, Inc.			X							
84.	Individual	Andrew Z Pusztai	American Transmission Company, LLC	X									
85.	Individual	Joe Petaski	Manitoba Hydro	X		X		X	X				
86.	Individual	Heather Hunt	NESCOE									X	

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
87.	Individual	Michael Falvo	Independent Electricity System Operator		X								
88.	Individual	Shane Sweet	Harney Electric Cooperative, Inc.			X							
89.	Individual	David Kahly	Kootenai Electric Cooperative			X							
90.	Individual	Keith Morisette	Tacoma Power	X		X	X	X	X				
91.	Individual	Terry Harbour	MidAmerican Energy	X									

1. **Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. The first item involves proximity to Load and requests industry feedback on how to measure this variable. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. In addition, in the comment field, please provide your thoughts on the appropriate impedance value to replace 'TBD,' including technical rationale for your argument.**

Summary Consideration: A vast majority of the commenters disagreed with, or had significant questions about the validity of using electrical proximity as a metric to reflect the importance of an element or group of elements to the operation of an interconnected transmission network. Commenters pointed out that the proximity, electrical or otherwise, of an element to Load is not a reliable basis to determine functionality of an element, nor its impact upon the interconnected network.

Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 1 Comment
Northeast Power Coordinating Council	No	1.a.i. Electrical Proximity - If impedance is to be used as a measure of electrical proximity, which in turn is a replacement for geographical proximity, then how would the presence of parallel lines, capacitors, phase-angle regulators (PARs), tap-changing transformers, generation and reactors be treated in determining electrical proximity? How does this approach effectively differentiate between transmission and distribution lines of the same voltage and length?

Organization	Yes or No	Question 1 Comment
		When using impedance, how is “greater than” determined? Sum of the Impedances - Would the filing entity simply add up the in-series impedances for each radial Element to demonstrate its electrical proximity? For example, would the sum of the impedances from this radial path example be equal to the sum of the two feeder and transformer impedances, i.e., measured from a 230 kV bus along a 230 kV feeder, through a 230/138 kV step-down transformer, and an in-series 138 kV feeder to a 138/13.8 kV step-down distribution transformer? What impedance would the SDT apply to a PAR (or tap-changing transformer) and to the overall path if a PAR (or tap-changing transformer) were located in-series with the measured Elements? 1.a.ii. Power Flows - What is the meaning of “power flow data” as the term is used here and how is the meaning different from the term when used under 1.c. Power flows into the system, but rarely flows out? Should this sentence use the phrase “impedance data extracted from a load flow study” instead? Entities should be required to identify the significance of the element’s physical characteristics. Such identification can be done through a simple checklist along with any relevant comments. The SDT should revise the exception criteria to seek an alternative language and/or revise exclusion criteria (a), which will require entities to provide the previously stated information for their element.
SERC Planning Standards Subcommittee	No	The PSS disagrees with the assumption that the proximity of a BES facility to Load is indicative of it's importance to BES reliability. Some lower voltage facilities can be quite short and thus have lower impedance but be important to BES reliability. Furthermore, the term "Load centers" is not defined leaving it subject to interpretation. Assuming a load center has many busses, where would the measurement be made - From the most distant load bus in the load center or the nearest? Similarly - does a single facility get measured from it's terminal to the load center or does the presence or lack of breakers need to be considered when selecting the measurement point?
SPP Standards Review Group	No	Physical characteristics as described in 1.a.i. do not capture the true picture of the functionality of an Element. Rather than use impedance perhaps the SDT should use ‘radial’ or ‘having one source’ as the descriptive term.
City of Redding		This could serve as one characteristic of a distribution system and is generally a good indicator that the facilities have been installed and are operating to serve a distinct geographical area (the end user). The intent should be changed to indicate it is geographical and not electrical. The electrical reference should be removed from this section and moved to the engineering section.

Organization	Yes or No	Question 1 Comment
NERC Staff Technical Review	No	Electrical proximity to load is not an informative measure of whether Element(s) are necessary for reliable operation or the potential reliability impact of excluding Element(s) from the BES. Establishing a maximum impedance threshold as proposed would assure only that the excluded Element(s) do not span a large electrical distance. While minimizing impedance may be beneficial for some aspects of reliability, other aspects of BES reliability are improved with higher impedance. For example, higher impedance minimizes through-flow of power and minimizes impacts to BES reliability associated with faults and switching errors.
ISO/RTO Standards Review Committee	No	The SRC fails to see how electrical proximity to load qualifies an element for exclusion from the BES. Such elements may indeed be involved in serving electricity to those loads. If those loads are critical loads, then why should the element be excluded from the BES?
Iberdrola USA	No	We do not agree with this requirement. These exclusion exception criteria should be deleted in their entirety and replaced with criteria that are objective, specific, and repeatable, or preferably not replaced at all. Specific problems with the criteria as stated are: 1. A facility is not BES if all of “a” through “d” below apply: a. “System elements” are in “close electrical proximity to load” - this is vague, and a lower impedance between systems is higher likelihood of interaction between systems. Proximity measured in ohms should be related to the load level itself. A pair of values (ohms, load) is necessary for this purpose. Transient stability is affected by this value-pair. For a load pocket, an equivalent impedance (e.g., a sort of Thevenin impedance) between the network source and the load location could be defined. The impedances within the network source can also affect the assessment. Re-evaluation over time would be necessary if this path were adopted. This path of evidence (i.e., the path of engineering judgment) which does not include extensive technical analysis is an attempt to provide a definitive criteria for exception without going through the other path of evidence (i.e., the analytical path) which includes extensive technical analysis. Unless the analytical path has been clearly defined and sufficient data obtained from/on it, the path of engineering judgment could become difficult to establish. System parameters such as proximity to load, radial (or non-radial) configuration, power flow direction over time (either unintended or intended) will directly influence results of technical analysis evaluated for distribution factors, transient voltage dip and frequency excursions, voltage deviations, transient and steady-state stability, and sequence of events following a disturbance (i.e., either a cascading outage or a controlled outage). The two paths of evidence cannot be in conflict with each other.
Tri-State Generation and Transmission Association	No	A long radial line with a small transformer could have a relatively high impedance. Proximity to load has no real bearing on this procedure. Requirement 1.(a) should be deleted.

Organization	Yes or No	Question 1 Comment
Hydro One	No	We agree with this concept to allow entities to submit an exception application that does not include extensive technical analysis. Such an option will make the process efficient for all stakeholders, such as entities, Regions, NERC and relevant regulatory authority. However, our opinion is that there is no real relationship between reliability and the proximity of load. If impedance is to be used as a measure of electrical proximity, which in turn is a replacement for geographical proximity, then how would the presence of parallel lines, capacitors, phase-angle regulators (PARs), tap-changing transformers, generation and reactors be treated in determining electrical proximity? Consistent with references in the FERC Order, we feel that it is much more important to identify and ensure if the BES element(s) are serving load pockets associated with large metropolitan load centers, loads of significance to national security and/or as identified by relevant Federal, State or Provincial Regulatory Authority. We urge the SDT to clarify the exception criteria for exclusions, based on the following questions: oHow does the proximity impedance approach effectively differentiate between transmission and distribution lines of the same voltage and length? oWhen using impedance, how is “greater than” determined? oWhat impedance would the SDT apply to a PAR (or tap-changing transformer) and to the overall path if a PAR (or tap-changing transformer) were located in-series with the measured Elements? oWhat is the meaning of “power flow data” used here and how is the meaning different from the term when used under “1c) Power flows into the system, but rarely flows out”? Should this sentence use the phrase “impedance data extracted from a load flow study” instead? Finally we suggest that entities should be required to identify the significance of the element’s physical characteristics. Such identification can be done through a simple checklist along with any relevant comments.
MRO's NERC Standards Review Forum MidAmerican Energy Muscatine Power and Water	No	NSRF believes the relevance and rationale for this criterion is unknown. If this criterion is intended to exempt elements, like circuit switchers, that are part of the distribution transformer circuits operated above 100 kV, and located within a mile of the BES interconnection point, then NSRF would expect the wording to be “in close electric proximity to the BES” rather than in “close electric proximity to Load”. Otherwise, NSRF requests the SDT explain the relevance and rationale for this criterion before agreeing on its inclusion.
ReliabilityFirst	No	it is far too complicated for the smaller entities
New York State Reliability	No	NERC’s Glossary definition of Load is “An end-use device or customer that receives power from the electric

Organization	Yes or No	Question 1 Comment
Council		system." which is not specific enough to permit the definition of an appropriate impedance value. It is not clear from the proposed wording whether the exception applies to the Loads or the electrically close System Elements or both. In any case, the concept of a single impedance value as a metric is flawed because it could be a low impedance breaker or a relatively high impedance transformer connecting the BES to a "radial" Load center. This exclusion is superfluous given the radial test in item 2. Suggest dropping this exclusion test. N.B. The proposed criteria in items 1 - 4 must all be met in order for an element to qualify for an exclusion.
New York Power Authority	No	NYPA does not see a need for this requirement. A radial element that specifically serves a load center will perform that task regardless of the electrical distance from the source to the load. Similarly, any loss of load in the load center will result in a corresponding need to reduce generation in the source system, regardless of the proximity of the load.
ITC	No	Please explain the rationale to require electrical proximity. Is it to limit fault exposure? Perhaps 2 miles of line could be shown to typically have few faults, thus limiting the number of voltage sags to nearby buses. At approximately 0.7 ohms per mile 1.5 ohms (for overhead) might be a reasonable number. Does it make a difference if the load is connected via underground cable?
South Carolina Electric and Gas Georgia Transmission Corporation	No	SCE&G disagrees with the assumption that the proximity of a BES facility to Load is indicative of it's importance to BES reliability. Some lower voltage facilities can be quite short and thus have lower impedance but be important to BES reliability. Furthermore, the term "Load centers" is not defined leaving it subject to interpretation. Assuming a load center has many busses, where would the measurement be made - From the most distant load bus in the load center or the nearest? Similarly - does a single facility get measured from it's terminal to the load center or does the presence or lack of breakers need to be considered when selecting the measurement point?
Glacier Electric Cooperative	No	I do not think that the proximity to load should be a factor in determining whether or not an element should be included in the BES. Rather, the purpose of the element should be the important factor. If an element only serves load, then that should be the most important factor and the proximity (electrical or physical) to that load should not matter.
Consolidated Edison Co. of NY, Inc.	No	We generally support this exclusion option concept, to the extent that it is fashioned after the FERC Seven Factor test. However, we have a number of questions as to how it might work in practice.1.a.i. Electrical Proximity - If impedance is to be used as a measure of electrical proximity, which in turn is a replacement for

Organization	Yes or No	Question 1 Comment
		geographical proximity, then how would the presence of parallel lines, capacitors, phase-angle regulators (PARs), tap-changing transformers, generation and reactors be treated in determining electrical proximity? How does this approach effectively differentiate between transmission and distribution lines of the same voltage and length? When using impedance, how is "greater than" determined? Sum of the Impedances - Would the filing entity simply add up the in-series impedances for each radial Element to demonstrate its electrical proximity? For example, would the sum of the impedances from this example radial path be equal to the sum of the two feeder and transformer impedances, i.e., measured from a 230 kV bus along a 230 kV feeder, through a 230/138 kV step-down transformer, and an in-series 138 kV feeder to a 138/13.8 kV step-down distribution transformer? What impedance would the SDT apply to a PAR (or tap-changing transformer) and to the overall path if a PAR (or tap-changing transformer) were located in-series with the measured Elements? 1.a.ii. Power Flows - What is the meaning of "power flow data" as the term is used here and how is the meaning different from the term when used under 1.c. Power flows into the system, but rarely flows out? Should this sentence use the phrase "impedance data extracted from a load flow study" instead?
ISO New England	No	We disagree with this exception and believe that Section 1.a. should be deleted in it's entirety and replaced with a definition that excludes remote areas of a generally lesser overall value to reliability and includes areas that are heavily networked serving large loads. The premise of the existing section 1.a. seems at odds with overall system reliability and possibly removes large metropolitan areas from the BES definition. How is close electrical proximity to load defined? A maximum number of Ohms? Heavily networked areas will have lower impedance and are more likely to serve larger amounts of demand and are therefore more likely to be impactful on the overall integrity of the BES.
Flathead Electric Cooperative, Inc.	No	agree in principle that one characteristic of local distribution systems is that they are usually confined to a relatively limited geographic area, as opposed to transmission systems, which (especially in the West) tend to cover very large distances. We also believe the proximity test may be a sensible way to identify local distribution facilities. However, we believe that the proximity test may be unnecessary, and if an Element or group of Elements meets other tests proposed by the SDT, it should be excluded from the BES, even if it does not meet the proximity test.
Entergy Services	No	Entergy does not agree with the assumption that the proximity of a BES facility to Load is indicative of it's importance to BES reliability. Some lower voltage facilities can be quite short and thus have lower impedance but be important to BES reliability. Likewise some facilites remote from load centers may have virtually no

Organization	Yes or No	Question 1 Comment
		impact on BES reliability. There is also insufficient information as to how the impedance would be measured (locations of measurements within and outside of the "Load pockets". This Exemption Criteria should be removed. The term "Load centers" is not defined leaving it subject to interpretation. "Loads" are not BES Elements and therefore can not be exempted from being considered BES Elements. Item 1.a.i - "Loads within the system seeking exception are in close electrical proximity if they are separated by an impedance of no greater than TBD." This sentence needs to be deleted.
BGE	No	BGE is not clear as to why “close electrical proximity to load” is appropriate to use as a factor in determining exclusion.
Spyker	No	We agree with this concept to allow entities to submit an exception application that does not include extensive technical analysis. Such an option will make the process efficient for all stakeholders, such as entities, Regions, NERC and relevant regulatory authority. However, our opinion is that there is no real relation between reliability and the proximity of load. Consistent with references in the FERC Order, we feel that it is much more important to identify and ensure if the element(s) are serving load pockets associated with large metropolitan load centers (e.g. New York City, Washington DC, Toronto), loads of significance to national security and/or as identified by relevant Federal, State or Provincial Regulatory Authority. We believe that entities should be required to identify the significance of the elements’ physical characteristics, such as the proximity of element or, being served or impacted by the element to a load of significant interest. Such identification can be done through a simple checklist along with any relevant comments. Therefore, we suggest the SDT to revise the exception criteria to seek an alternative language and/or re-craft exclusion criteria (a), which will require entities to provide the previously stated information for their element.
Benton Rural Electric Association Northern Wasco County PUD United Electric Co-op Inc Oregon Trail Electric Cooperative, Inc.	No	We believe that the proximity test may be unnecessary, and if an Element or group of Elements meets the other three tests proposed by the SDT, it should be excluded from the BES, even if it does not meet the proximity test. Secondly, using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.

Organization	Yes or No	Question 1 Comment
Salem Electric Grant County PUD No. 2 (Grant) Big Bend Electric Cooperative, Inc. Big Bend Electric Cooperative, Inc. Kootenai Electric Cooperative		
Orange and Rockland Utilities, Inc.	No	The approach does not differentiate between transmission and distribution. There is no direct relation between impedance and load. A study of the particular system should be performed to assess impact on BES.
Pepco Holdings Inc	No	A specific impedance value would not be appropriate for all regions and all configurations.
Consumers Energy Company	No	Consumers Energy Company (CECo) proposes that this criterion be eliminated, as it is not a definitive BES criterion. There is no correlation between the proximity of Elements that are 100kV and above to load.
Central Lincoln	No	Central Lincoln agrees in principle that one characteristic of local distribution systems is that they are usually confined to a relatively limited geographic area, as opposed to transmission systems, which (especially in the West) tend to cover very large distances. We also believe the proximity test may be a sensible way to identify local distribution facilities. However, as explained in more detail in our response to Question 10, we believe that the proximity test may be unnecessary, and if an Element or group of Elements meets the other three tests proposed by the SDT, it should be excluded from the BES, even if it does not meet the proximity test. Secondly, using impedance to benchmark system load proximity would likely not yield consistent demarcations. High voltage relative or per-unit impedances are typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance. Central Lincoln proposes that “proximity” be determined in the dictionary manner with units of distance.
Duke Energy	No	Duke Energy does not agree that this characteristic materially demonstrates that an Element is not necessary for operating an interconnected electric transmission network. There is no correlation between the electrical proximity of an element to load and its necessity for operating an interconnected transmission network. In general, the path that does not include extensive technical analysis is not adequate to distinguish between the

Organization	Yes or No	Question 1 Comment
		Elements that are and that are not necessary for said operation.
Hydro-Quebec TransEnergie	No	Close electrical proximity to load does not appear to be an appropriate criteria. There is no reason that this criteria would prevent exclusion of a radial system with long lines feeding far away loads. Instead of considering proximity to load, it would be better to consider the way the Element is connected to the BES and the function of the excluded part of the system, mainly to deserve loads or integrate some generation, but not to transfer power to another Balancing Authority. Those are covered by criteria b., c. and d., so we believe that criteria a. should not be maintained.
American Transmission Company, LLC	No	ATC believes the relevance and rationale for this criterion is unknown. If this criterion is intended to exempt elements, like circuit switchers, that are part of the distribution transformer circuits operated above 100 kV, and located within a mile of the BES interconnection point, then ATC would expect the wording to be "in close electric proximity to the BES" rather than in "close electric proximity to Load". Otherwise, ATC requests the SDT explain the relevance and rationale for this criterion before agreeing on its inclusion.
Manitoba Hydro	No	The purpose of this exception is unclear. It would be possible that a large transmission station with many network connections, which is close to a load (irrespective of size), would be excluded from the BES definition. Similarly, a reduction of system impedance, by transmission line re-conductoring for example, could remove assets out of the scope of the BES definition. The listed proposed criteria suggest values yet to be determined. It is unclear how this exception would support BES reliability.
NESCOE	No	The New England States Committee on Electricity ("NESCOE") appreciates the work of NERC's standard drafting team as well as the opportunity to provide comments on this matter. NESCOE is New England's Regional State Committee and the comments provided herein reflect the collective views of the six New England states. NESCOE's comments below reflect its general perspective that any new costs imposed as a result of the BES and its implementation, which costs ultimately fall on consumers, should provide meaningful reliability benefits. NESCOE questions the concept as presented and seeks further clarification. As a general matter, NESCOE believes the requirement that a proposed exception must meet all four criteria is overly restrictive and will result in only a narrow category of elements qualifying for exclusion from the BES. NESCOE suggests that a better approach would allow exclusions to be based on one or more criteria, depending on the nature of the element that is the subject of the application. With respect to the proposal, NESCOE does not believe it is possible to obtain agreement on the "proximity to load" criterion for additional exclusions from the BES when the underlying impedance value has not been determined and may be the subject of significant debate.

Organization	Yes or No	Question 1 Comment
		While it is possible that NESCOE could support a single impedance value that would govern exclusion determinations, it notes that a uniform value may not adequately address varying system configurations throughout ISO-New England and neighboring control areas. NESCOE suggests that the standards setting process allow for further deliberation on possible proposed values. Other terms, such as "load center," also need definition.
Independent Electricity System Operator	No	We agree with this concept to allow entities to submit an exception application that does not include extensive technical analysis. Such an option will make the process efficient for all stakeholders, such as entities, Regions, NERC and relevant regulatory authority. However, we believe that an Element's electrical proximity to load is not necessarily a relevant consideration for determining whether the Element is required for reliable operations.
Tacoma Power	No	Tacoma Power does not believe that a proximity to Load criteria is useful in BES designation when the other 3 exclusion criteria of this path are applied. However, if the SDT retains this item, we suggest an impedance value of < 0.3 ohms on a 100 MVA base.
Georgia System Operations Corporation		The concept of "Load centers" is vague and needs more specificity for this to be clear.
ACES	Yes	This seems like a reasonable approach although we have no recommendations for impedance thresholds. Some analysis of various load pockets might provide data to consider for the threshold.
Clark Public Utilities	Yes	Clark believes the proximity test should be considered be a valid factor in determining whether a facility is part of the BES or not. Just as this factor is used in the consideration on whether a facility is part of a Local Distribution Network. Clark is not convinced that "proximity" and "impedance" are interchangeable. While impedance will be lower for shorter distances it will also be affected by other factors that are not indicative of close proximity. Distance seems more appropriate to use since it would complement a literal interpretation of the term proximity.
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Electric	Yes	First, thank you for the opportunity to comment on the Technical Principles for Demonstrating BES Exceptions. We appreciate the work that NERC has done on these principles and the other related efforts to revise the definition of the BES. In response to question #1, we note only that using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage

Organization	Yes or No	Question 1 Comment
Cooperative Consumer's Power Inc. Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Pacific Northwest Generating Cooperative		lines, which offer the lowest impedance.
Long Island Power Authority	Yes	Agree with close proximity to load concept but further direction (define suggested methodology) is required for how to calculate impedance value. In addition to impedance value suggest consideration of adding mileage or relative phase angle differences between locations be also an allowable criteria.
American Electric Power	Yes	Using “proximity to load” is a reasonable metric, but would require further consideration given the impedance value eventually chosen to replace “TBD”.

Organization	Yes or No	Question 1 Comment
Oregon Public Utility Commission Staff	Yes	Use of the 100 kV brightline and the core BES definition as proposed is an overreach into local distribution systems and an overreach of FERC's authority as set out in the FPA 215. A full engineering technical analysis - required every 2 years - is too onerous and not necessary for identifying most local distribution elements miss-identified as BES Elements. A simple screening methodology consistent with the 7-Factor Test (from FERC Order 888) is needed as the first stage of the exception process.
Harney Electric Cooperative, Inc.	Yes	I don't have a suggestion for an appropriate impedance.
Bonneville Power Administration	Yes	BPA suggests that correlation between the size of the Load and the size of an element is needed. BPA would like the word "close" in the description "close electric proximity to load" to be better defined. For example, a line that carries 600 MWs in close electrical proximity to a 20-MW Load may not meet the intent of this characteristic. In planning models, loads are often aggregated to a higher voltage while, in a distribution system model, the loads are explicitly represented along the distribution feeder. Because of this, the criteria should define where the load is located/represented for the measure of electrical proximity.
Western Electricity Coordinating Council	Yes	As long as this remains an "AND" statement, WECC supports this concept. It helps to support the concept that the element is used as distribution to serve Load, rather than to transfer bulk power. However, some correlation between the size of the Load and the size of an element may be needed. For example, a line that can carry 600 MW in close electrical proximity a 20-MW Load may not meet the intent of this characteristic. Furthermore, the criteria must define where the load is located for the measure of electrical proximity. In planning models, loads are often aggregated to a higher voltage substation bus, while in a distribution system model they are typically modeled along a distribution feeder. The SDT should clarify how it intends for the load to be modeled for this analysis of close proximity.
Electricity Consumers Resource Council (ELCON)	Yes	We recommend that this item be added to the BES definition.
Occidental Energy Ventures Corp.	Yes	
Xcel Energy	Yes	
Oncor Electric Delivery	Yes	Oncor Electric Delivery agrees with the proposed language as it is stated, related to load proximity.

Organization	Yes or No	Question 1 Comment
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language for the characteristic associated with the system Element being located in close electrical proximity of Load and the use of impedance as qualifying criteria. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		
Edison Electric Institute	No	We do not believe that a meaningful "not to exceed" impedance value can be proffered which would be appropriately useful across all regions. EEI recommends that Exclusion benchmarks should directly correlate to the BES definition exclusions as written. Although the "4 Item" approach was obviously intended to provide a simple approach, the outcome suggested in the draft was less than satisfactory and we submit it does not hold true to the exclusions provided by the Drafting Committee in their proposed BES Definition. (see additional comments provided at the end of the Comment form)
PacifiCorp	No	All of PacifiCorp's responses are based on the application of these items to a given interconnection and not on a continental basis. See comments on question 10. Setting a standard for close electrical proximity using an impedance measurement does not address a proper measurement in all interconnections. A better, more accurate measurement would be to utilize fault duty. Low fault duties provide a good measurement of impact on the BES. Fault Duty at adjacent BES substations should not exceed 5,000 MVA.
for Snohomish County PUD	No	Snohomish agrees in principle that one characteristic of local distribution systems is that they are usually confined to a relatively limited geographic area, as opposed to transmission systems, which (especially in the West) tend to cover very large distances. We also believe the proximity test may be a sensible way to identify local distribution facilities. However, as explained in more detail in our response to Question 10, we believe that the proximity test may be unnecessary, and if an Element or group of Elements meets the other three tests proposed by the SDT, it should be excluded from the BES, even if it does not meet the proximity test. Further, using impedance to benchmark system load proximity would likely not yield clear demarcations. High voltage relative or per-unit impedances are considered typically much lower than low voltage impedances. Hence, in the absence of phase shifting transformers, service compensation, or other mitigation factors, power typically flows over the highest voltage lines, which offer the lowest impedance.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language for the characteristic associated with the		

Organization	Yes or No	Question 1 Comment
system Element being located in close electrical proximity of Load and the use of impedance as qualifying criteria. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure. Also see response to Question 10.		
Florida Municipal Power Agency Transmission Access Policy Study Group	No	Impedance is a function of a line's length; it does not measure whether a line serves a BES function. A very long line can exist only to serve load, and a short line in an urban area (where the load is physically close to the grid) could be needed for transmission but would have low impedance. This proposed metric is thus both over- and under-inclusive, and should be discarded. Transfer distribution factor is a more appropriate metric, as described in FMPA' response to Question 4. FMPA supports having two paths for exclusions, one that includes extensive technical analysis and another that does not. The path with less technical analysis is appropriate for Elements that a relatively high-level examination shows to be not relevant to the reliability of the grid. This opportunity should be available in the context of exclusions to reduce the burden on small entities. Reliability will not be impaired by this option; all exception requests will be reviewed by NERC, and in any case where NERC is less than certain that an exception is appropriate, NERC can perform any or all of the analyses that would be required for a more technical exclusion or inclusion, and a positive result on any one of the analyses would be sufficient justification to deny the exclusion request.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language for the characteristic associated with the system Element being located in close electrical proximity of Load and the use of impedance as qualifying criteria. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		

Organization	Yes or No	Question 1 Comment
Also see response to Question 4. In regards to a two-path approach, the SDT has broadened the exception methodology to allow an entity to submit the characteristics of the Facilities in question without supplying engineering evidence if they feel there is ample supporting documentation for the exception being sought.		
Idaho Falls Power	No	We do not agree that all four criteria under exclusion #1 need be applied in combination to an element to determine its material impact. Assets satisfying all four defining criteria would seem exceedingly small and likely already excluded by the BES definition. This exception criteria appears redundant to, and shadows the NERC BES definition draft's language excluding radial elements and local distribution networks, and as such add little value to the exclusions built into the BES definitions. Further, the language of the exception criteria addresses transmission elements and doesn't provide exclusion criteria for generation assets. We would hope that NERC could develop criteria to exempt certain generation, especially those small resources on local distribution networks wherein the generation is completely allocated to local load. Language in section 215 of the FPA excludes distribution "elements." We assert that generation on a distribution network serving only load on that network is an "element" of the network and deserves exclusionary defining criteria.
Response: The SDT appreciates the comments associated with the Element characteristics and the suggestions for language or clarifications to the proposed language for technical exception criterion associated with generation. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure. The SDT has responded to comments on the BES definition in the Consideration of Comments form for the BES definition posting.		
PPL Supply	No	See comments in Questions 9 and 10
Response: See response to Q9 & 10.		
Southern Company	No	

Organization	Yes or No	Question 1 Comment
The United Illuminating Company	No	
Response: Thank you for your response but without specific comments there is nothing that the SDT can do to address your opinion. However, based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES.. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		
National Grid	No	We feel that there is no relation between the proximity to load and system reliability. The impedance is technically irrelevant, and we suggest that this criteria be dropped. If the criteria is not dropped, there should be clarification on what is meant by "Load". For instance are you really referring to "major load centers"? In many areas of the country Load is connected all along a 100kV line and hence much of a line is in close proximity to Load - but it could be small industrial loads and not significant load centers. If significant Load Centers is what the drafting team was driving at then, we believe it should be explicit. We also believe that if the drafting team is defining some technical criteria, then it should not be in the exception process. It should be included as part of the core definition. The exception process should be strictly limited to the procedures for application and approval and should not include substantive elements.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language for the characteristic associated with the system Element being located in close electrical proximity of Load and the use of impedance as qualifying criteria. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure. The technical criteria are being developed through the Standards Development Process, consistent with the directives in Order 743 and 743A. The scope of the		

Organization	Yes or No	Question 1 Comment
Rules of Procedure is strictly focused on the process that entities shall use to seek and be granted or denied exceptions.		
Exelon	No	The term “close proximity” is ambiguous and open ended. Exelon believes that all facilities used in local distribution of electric energy that are presently under state jurisdiction should be excluded from the BES regardless of system impedance.
Response: The SDT appreciates your comments. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity’s characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure. In regards to the facilities used in local distribution that are presently under state jurisdiction the SDT has added language to the core BES definition that addresses the exclusion of distribution facilities.		

2. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. The second item involves Element(s) treated as radial. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: A significant portion of the comments disagreed with, or had significant concerns about using various undefined terms such as "regional dispatch", "disconnection procedures", and "radial in character". Comments also indicated that the example was not clear and many comments indicated that the entire wording of this exception should be abandoned. Several comments indicated that assessments, studies, and drawings/diagrams should be allowed as evidence to provide the validity of the exception.

Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	The term "regional dispatch" is not defined. Provide a definition or reference to a definition to be used in making this determination. Recommend adoption of the alternate term "operational control." 1.b.ii, Operational Control - The SDT should consider using the terms "under the operational control of a Balancing Authority." It is instructive that the overarching requirement for a finding of transmission system integration in Mansfield was that the facilities be under operational control of the Independent System Operator (ISO).** Southern Cal. Edison Co., 92 FERC Â¶ 61,070 at 61,255 (2000), reh'g denied 108 FERC Â¶ 61,085 (2004). Replace the example in 1.b.i. with a clearer example. Entities should be allowed to demonstrate the radial characteristics to determine if they are permitted for an exception, and demonstrate compliance with radial defining criteria.

Organization	Yes or No	Question 2 Comment
SPP Standards Review Group	No	Could the SDT clarify what is meant by 'disconnection procedures' in 1.b.ii? It appears that the SDT is okay with excluding an element that can be switched out of service without removing another element. How are automatic breaker operations or manual switching factored into disconnection procedures? We need clarification on this. More and better examples, including the type of connectivity to the grid, would be helpful.
Transmission Access Policy Study Group	No	We believe that this criterion is intended, like those in 1(a) and (d), to determine whether an Element is planned and operated to function as part of the interconnected grid. It is, however, too vague to be useful and should be discarded.
Florida Municipal Power Agency		We believe that this criterion is intended, like those in 1(a) and (d), to determine whether an Element is planned and operated to function as part of the interconnected grid. It is, however, too vague to be useful and should be discarded.
ISO/RTO Standards Review Committee	No	The SRC generally agrees that radial elements likely may be excluded from the BES. However, there is insufficient information given as to what it means to be "not operated as part of the BES with disconnection procedures for when a Disturbance occurs". Further, is it possible that such radial elements are serving a remote "critical" load? One would think that, normally, critical loads would have arrangements for multiple sources, but could those multiple sources be individually considered to be radial?
Iberdrola USA	No	We do not agree with this requirement. These exclusion exception criteria should be deleted in their entirety and replaced with criteria that are objective, specific, and repeatable, or preferably not replaced at all. Specific problems with the criteria as stated are: 1. A facility is not BES if all of "a" through "d" below apply: b. "System elements" are "treated as" radial "in character" - this is also vague, and based on operating procedures... what does "treated" involve? What is "character" in the context of system elements?
Tri-State Generation and Transmission Association	No	While we generally agree, 1.(b) should be changed to "normally radial." "Radial" should not be defined differently in the Rule of Procedure than in the BES Definition.
Hydro One	No	Entities should be allowed to demonstrate the radial characteristics to determine if they are permitted for an exception, and demonstrate compliance with radial defining criteria.

Organization	Yes or No	Question 2 Comment
		The term “regional dispatch” is not defined. Therefore we suggest the SDT to provide a definition or reference to clarify regional dispatch in 1 b) II. We recommend adoption of the alternate term “operational control” and suggest that the SDT consider using the terms “under the operational control of a Balancing Authority” (It is instructive that the overarching requirement for a finding of transmission system integration in Mansfield was that the facilities be under operational control of the Independent System Operator.*)* Southern Cal. Edison Co., 92 FERC Â¶ 61,070 at 61,255 (2000), reh'g denied 108 FERC Â¶ 61,085 (2004).
MRO's NERC Standards Review Forum	No	Radial in Character - NSRF proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E1 of the bright-line BES definition.
MidAmerican Energy	No	MidAmerican supports the NSRF comments. The NSRF proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E1 of the bright-line BES definition. If not eliminated, the IEEE definition of a radial system should be used.
Bonneville Power Administration	No	BPA requests clarification on what the SDT considers radial through additional examples of i “the way the connections to the BES are operated” and ii “the way the Element(s) are treated in operations.” BPA emphasizes that this assessment should be conducted using normal system operations.
Muscatine Power and Water	No	Radial in Character -propose that this criterion be removed for the reason that it does not illustrate any materially different characteristics beyond Exclusion E1 of the bright-line BES definition.
Exelon	No	The term “rarely” is ambiguous and should be removed or quantified. Furthermore, the requirement for power flow analysis will be viewed by many entities as extensive technical analysis.
Consolidated Edison Co. of NY, Inc.	No	We generally support this exclusion option concept, to the extent that it is fashioned after the FERC Seven Factor test. However, we have a number of questions as to how it might work in practice. For example, the term “regional dispatch” is not defined. Please provide a definition or reference to a definition to be used in making this determination. Below we recommend adoption of the alternate term “operational control.”1.b.ii, Operational Control - The SDT should consider using the terms “under the operational control of a Balancing Authority.” It is instructive that the overarching requirement for a finding of transmission system integration in Mansfield was that the

Organization	Yes or No	Question 2 Comment
		facilities be under operational control of the Independent System Operator (ISO).** Southern Cal. Edison Co., 92 FERC Â¶ 61,070 at 61,255 (2000), reh'g denied 108 FERC Â¶ 61,085 (2004). Replace the example in 1.b.i. with a clearer example.
ISO New England	No	This three part definition of radial presented in section 1.b. appears cumbersome and requires more definition. With regard to b.i - Where is the disturbance? Is sending a person to the field to perform manual disconnection a requirement of this exception? This item is so vague that we have difficulty providing replacement language as we do not understand its intent. With regard to b.ii - Elements (Excluding generators) are not dispatched in operations. If this approach were to be taken, what would be the criteria for the way the Element is treated in Operations? Again, this item is so vague that we have difficulty providing replacement language. The existing definition appears to require a good deal of technical scrutiny and be at odds with the goal of having a path for evidence that does not include extensive technical analysis. Overall it seems simpler to replace section b with a simpler definition of radial such as - all load served from a single substation at a single voltage level.
The United Illuminating Company	No	
Pepco Holdings Inc	No	Radial system is already an explicit Exclusion by definition (E1). Does this imply that ALL radial systems require a request to be submitted for the RE and NERC approval that the elements are in fact radial? There may not be internal written procedures describing the radial system operation. The evidence that an entity can provide should include a description or justification of the radial operation and non impact to the BES.
Duke Energy	No	This second characteristic does not add clarity to the E1 Exclusion in the proposed BES definition. And in general, the path that does not include extensive technical analysis is not adequate to distinguish between the Elements that are and that are not necessary for operating an interconnected electric transmission network.
American Transmission Company, LLC	No	Radial in Character - ATC proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E1 of the bright-line BES definition.

Organization	Yes or No	Question 2 Comment
Manitoba Hydro	No	The proposed criteria to substantiate a request for an exception should be removed as it does not introduce anything different than what is already proposed under the exclusions in the bright line BES definition. Specifically, radial systems are already excluded in the bright line definition E1.
NESCOE	No	As noted in Response 1, NESCOE believes exclusion determinations should not require a finding that all four proposed criteria are met. In addition, NESCOE believes that the criterion proposed here is overly complex and that developing the evidence may be overly burdensome to the applicant. Radial paths should have a simple definition related to how the path is connected from a topological perspective. NESCOE suggests that a radial path be defined simply as a path having only one connection point to the BES, thereby presenting no opportunity for power flows parallel to the BES network. Under fault situations, these excluded paths can be isolated from the BES with suitable NERC compliant protection systems. Note the radial path may be comprised of parallel lines that terminate at the BES connection point. In addition, NESCOE believes that a radial path should qualify for exclusion as long as the power flowing into the BES is less than a threshold MVA. NESCOE does not at this point have a recommendation as to this specific threshold but believes it should be developed through the standards-setting process. NESCOE suggests this approach to avoid burdening the development of generation including renewable generation. As New England is working on facilitating the development of renewable resources located in and around the region to serve customers most cost-effectively, this process should take specific care not to impose undue burdens on renewable resources.
Idaho Falls Power		Using these criteria assumes that every asset must be radial in nature in order to receive consideration that it may not be material to the BES. This then implies that the BES is a contiguous connected system as only radial off-shoots could receive exemption consideration. We disagree. Our assertion is that the BES is comprised of assets that due to their size or location are vital to a sound BES but may or may not necessarily be connected to each other. This defining criteria in the exception could be a stand-alone criteria or stricken.
Blachly Lane Electric Cooperative Flathead Electric Cooperative, Inc. Central Electric Cooperative Clearwater Power Electric	Yes	We agree conceptually that facilities operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. However, to be consistent with the draft BES definition, the term “radial in character” should be explicitly defined as facilities that may include one or more lines into a load area or referenced as a local distribution network. In addition, we agree that the manner in which a system is operated during BES disturbances may be an indication of whether that facility is radial in character. That being said, we are concerned that, to the extent

Organization	Yes or No	Question 2 Comment
Cooperative Consumer's Power Inc. Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Pacific Northwest Generating Cooperative Consumer's Power Inc.		the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution facilities and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution facilities interconnected with those relays should not, and cannot legally, be classified as BES.
South Carolina Electric and Gas Georgia Transmission Corporation	Yes	SCE&G agrees with the requirement of an element being radial in character as being a qualifier for exclusion thru the non-technical analysis. However, we recommend that the term "radial in character" be better defined. In addition, the language is confusing and we would like to recommend the following: i.: suggest replacing

Organization	Yes or No	Question 2 Comment
		"disconnection procedures" with "automatic disconnection devices" ii.: The intent of this item is not clear, and the term "regional dispatch" is not defined. Recommend the item be clarified or deleted.
Springfield Utility Board	Yes	SUB agrees with providing an exclusion exception for System Elements that are treated as "radial in character", but feels this should be part of the core definition in NERC's Proposed Continent-wide Definition of Bulk Electric System rather than requiring an exclusion/exemption application process. In SUB's May 27, 2011 BES definition comments SUB expressed concern that there still appears to be inconsistencies in both definition and application of "radial." SUB encourages NERC to develop a concise definition. For example, if a system is normally operated as radial, but could be operated closed (for example, by manually closing a breaker), would it be considered a radial or close-looped system?
Entergy Services	Yes	Entergy agrees that radial facilities should be excluded directly. However, the "radial in character" language is nebulous. A simpler approach could be to allow exceptions for facilities which become radial as a consequence of a normal system response to a disturbance (breakers opening during normal clearing of a fault).
Clark Public Utilities Benton Rural Electric Association Northern Wasco County PUD United Electric Co-op Inc Oregon Trail Electric Cooperative, Inc. Central Lincoln Salem Electric Grant County PUD No. 2 (Grant) for Snohomish County PUD Northwest Public Power Association (NWPPA) Big Bend Electric Cooperative,	Yes	Clark agrees conceptually that systems operating as radials rather than as integrated portions of the integrated bulk transmission system should be excluded from the BES definition. That is because local distribution systems typically operate adjacent to, or at the end of transmission lines, and function operationally to move power from the Transmission Service Provider's point of delivery of bulk power that has moved across the integrated bulk transmission system to end-users located within the local distribution utility's service territory. To be consistent with the draft BES definition, the term "radial in character" should be explicitly defined as a system that may include one or more lines into a load area or referenced as a local distribution network. In addition, Clark agrees that the manner in which a system is operated during BES disturbances may be an indication of whether that system is radial in character. That being said, we are concerned that, to the extent the SDT considers regional disconnect procedures, it should be careful to note that UFLS and UVLS relays are often embedded within local distribution systems and, while it is necessary for the UFLS and UVLS relays to be properly armed to protect the BES in the event of a severe system disturbance, the local distribution system interconnected with those relays should not.

Organization	Yes or No	Question 2 Comment
Inc. Kootenai Electric Cooperative		
Oregon Public Utility Commission Staff	Yes	Use of the 100 kV brightline and the core BES definition as proposed is an overreach into local distribution systems and an overreach of FERC's authority as set out in the FPA 215. A full engineering technical analysis - required every 2 years - is too onerous and not necessary for identifying most local distribution elements miss-identified as BES Elements. A simple screening methodology consistent with the 7-Factor Test (from FERC Order 888) is needed as the first stage of the exception process.
Hydro-Quebec TransEnergie	Yes	However, the point B.i. is hard to understand and would need clarification. Here is a proposal: "For an Element to be excluded from BES, its should be demonstrated that there are a proper disconnection procedure when facing a disturbance that would prevent this Element to impact the BES" ?. The point should be to make sure a fault on the Element will be isolated effectively without adverse impact on the BES, even when we have a second transmission source for the syb system seeking exclusion. Also, for point B. ii., it should be explained what is meant by the expression "regional dispatch". Is it an alternate way of transfer of power outside the Balancing Authority ?
PacifiCorp	Yes	All of PacifiCorp's responses are based on the application of these items to a given interconnection and not on a continental basis. See comments on question 10. If this requirement is added to the four requirements to capture local distribution networks, which are often operated in a looped configuration, which may still be included in the BES by the proposed BES bright-line due to generator inclusions, then this requirement has merit. Otherwise, exclusion E1 in the proposed BES bright-line definition already covers this item and it becomes redundant.
Independent Electricity System Operator	Yes	We agree with this concept. Entities should be allowed to demonstrate the radial characteristics to determine if they are permitted for an exception. However, we believe some further clarification of the meaning of "radial in character" is needed. The example given in (b)I does not clarify the matter. Would a transmission line operated with a normally open point to form two radial lines be considered "radial in character"? Please clarify. The location of the Disturbance needs to be clarified. For example, if the Disturbance (e.g. a fault) occurs at the radial part of the Element, then it is necessary for the Element to have the capability to disconnect itself from the Disturbance to preserve BES reliability but the Element can be by itself a legitimate radial facility that

Organization	Yes or No	Question 2 Comment
		is used solely for supplying load. The phrase “are not included in a regional dispatch” is unclear. We do not understand what this means.
Tacoma Power	Yes	Tacoma Power generally agrees that radial elements should be an item in this path and we suggest that radial element operated at below 300 kV should be excluded from the BES. The 300 kV level is linked with NERC CIP’s proposed version 4 definition of critical asset and should be applied here with the BES definition.
SERC Planning Standards Subcommittee	Yes	The PSS agrees with the requirement of an element being radial in character as being a qualifier for exclusion thru the non-technical analysis. However, the PSS recommends that the term "radial in character" needs to be better defined. In addition, the language is confusing and the PSS would like to recommend the following:i.: suggest replacing “disconnection procedures” with “automatic disconnection devices”ii.: The intent of this item is not clear, and the term "regional dispatch" is not defined. Recommend the item be clarified or deleted.
Tennessee Valley Authority	Yes	We agree with the requirement of an element being radial in character as being a qualifier for exclusion thru the non-technical analysis. However, we recommend that the term "radial in character" needs to be better defined. In addition, the language is confusing and we recommend the following:i.: suggest replacing “disconnection procedures” with “automatic disconnection devices” ii.: The intent of this item is not clear, and the term "regional dispatch" is not defined. Recommend the item be clarified or deleted.
New York State Reliability Council	Yes	It should be clarified that radial Element(s) include all system elements in load pockets.
Electricity Consumers Resource Council (ELCON)	Yes	We recommend that that the item be added to the BES definition.
New York Power Authority	Yes	The definition of radial systems needs to be modified to include radials that are connected to a single transmission source by more than one automatic interruption devices, such as occurs with a “breaker and a half” arrangement.
Southern Company	Yes	We agree with the requirement of an element being radial in character as being a qualifier for exclusion thru

Organization	Yes or No	Question 2 Comment
		the non-technical analysis. However, we recommend tha the term "radial in character" be better defined. Item ii.: The intent of this item is not clear, and the term "regional dispatch" is not defined. Recommend the item be clarified.
ITC	Yes	ITC is in agreement if we are correct in assuming that any one of the three ways (i, ii, or iii) can be used to satisfy the exclusion. We would also like to request additional clarification as to what "disconnection procedures" would be valid for consideration in this requirement.
National Grid	Yes	We agree that elements that are treated as radial should be allowed to request an exception. We would like more clarification about what is meant by “regional dispatch”. To the extent definitions of terms such as “regional dispatch” are necessary; they should be addressed in the core definition development process. The exception process should be strictly limited to the procedures for application and approval and should not include substantive elements. We would also like clarification on whether all three criteria under bullet b are required to show if the element is treated as radial, or if meeting one is enough.
Harney Electric Cooperative, Inc.	Yes	
Oncor Electric Delivery	Yes	Oncor Electric Delivery agrees with the proposed language that describes the exclusion criteria for system Elements that are radial in character.
Xcel Energy	Yes	
Consumers Energy Company	Yes	
Long Island Power Authority	Yes	Elements could be included in a regional dispatch such as a large regional ISO, but still serve only local load and therefore should still be treated as radial.
American Electric Power	Yes	Considering whether or not the element is treated as radial is a reasonable approach.
Orange and Rockland Utilities, Inc.	Yes	

Organization	Yes or No	Question 2 Comment
BGE	Yes	No comment.
Spyker	Yes	We agree with this concept. Entities should be allowed to demonstrate the radial characteristics to determine if they are permitted for an exception.
Occidental Energy Ventures Corp.	Yes	
ReliabilityFirst	Yes	yes only true radial without any impact should be excluded otherwise include it
Electric Market Policy	Yes	
ACES	Yes	We agree with this path.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language for the characteristic associated with the system Element being treated as radial in character as qualifying criteria. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		
NERC Staff Technical Review	No	We believe that restating this measure as "System performance impacts are similar to radial systems" would be more in-line with the SDT intent and a better measure of whether Element(s) are necessary for reliable operation. We also believe that the best measure of whether Element(s) affect system performance in a manner similar to radial systems is through distribution factor analysis. Such analysis, when limited to this purpose, does not require extensive technical analysis. Analysis for a limited number of stressed transfer conditions, and contingencies involving the Element(s) under consideration and in the area of the Element(s) under consideration, is sufficient to demonstrate whether the system performance impacts are similar to radial systems.

Organization	Yes or No	Question 2 Comment
Western Electricity Coordinating Council	No	This characteristic is vague and subjective. It is unclear what "radial in character" means, and the methods for demonstration do not appropriately clarify the meaning. WECC recommends that the SDT determine what it is looking for to show "radial in character" and clearly identify that concept in the methods for demonstration. It is not clear how Operating Procedures can demonstrate that an element is "radial in character" nor is it clear how a re-evaluation might be processed if such Operating Procedures, ownership, or operations change. WECC believes that BES inclusion or exclusion should be based on physical, technical characteristics of the element, and requests a justification for use of procedural or contractual documentation as evidence of a technical principle.
Edison Electric Institute	Yes	The verbiage used in the BES Principles document does not closely match the verbiage used in the NERC Bright-line Exclusion. For that reason, we submit the following alternative language. System Elements and Facilities treated in total as a radial system shall have the following characteristics:1. Shall be separated from the BES with an Automatic Interrupting Device, AND2. Only load serving and must be isolated from other radial systems through a normally open switching device, OR3. Only include generation resources but cannot include any of the Inclusions (i.e., I2, I3, I4 and I5) identified in the BES Definition, OR4. Is a combination of Load and Generation but cannot include any of the Inclusions (i.e., I2, I3, I4 and I5) identified in the BES DefinitionEvidences to be supplied shall include: o One-line Diagram clearly showing all demarcations between BES Facilities and the Radial System (including the Automatic Interrupting Device, AND o Operating procedures or interconnection agreements that indicate Generating Units contained within the Radial System are not dispatchable (if applicable), AND/OR o Operating procedures that show that the Radial System is not operated as part of the BES

Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language for the characteristic associated with the system Element being treated as radial in character as qualifying criteria.

The new proposed process allows an entity to submit a specified and consistent list of studies that should support the entity's request and that can then be utilized by the ERO panel judging the request in making their decision.

Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support

Organization	Yes or No	Question 2 Comment
the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		
PPL Supply	No	See comments in Questions 9 and 10
Response: See response to Q9 & Q10.		
Glacier Electric Cooperative	No	I do agree that radial elements should definitely be excluded. However, I believe that non-radial elements should be able to be excluded by Path 1 as well. If a small local distribution system is operated non-radially for the purpose of improving reliability for its loads, then that system should be eligible for exclusion from the BES. I also believe that language needs to be included that makes the provision for radial elements that can be temporarily and briefly looped together during switching to prevent an outage (e.g. for transformer maintenance) to also be excluded from the BES.
City of Redding	Yes	The term Radial could cause confusion. Clarification needs to be added to indicate that the system can have more than one connection to the BES.
Response: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted. Exclusion E1 of the definition allows normally open switches and Exclusion E3 can be used for systems that support load with multiple connections to the BES.		

3. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. The third item involves power flow. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. In addition, in the comment field, please provide your thoughts on the appropriate MWh value to replace 'TBD,' including technical rationale for your argument.

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.

Organization	Yes or No	Question 3 Comment
Northeast Power Coordinating Council	No	If an entity provides hourly MWh power flow data on a radial for a 12-month period (under v.) showing no power flow reversals, would transaction data (under i. through iv.) still be required? Could the entity just say "no transactional records?" If there were power flow reversals, wouldn't the power flow data (provided under v.) also show those, e.g., the amount and duration? Isn't this request redundant? If reversing power flows on a feeder caused it to fail one of the criteria, could the radial still be excluded, or is it necessary for the Element to pass all requirements? Alternatively, could the entity choose to file for Exclusion of that Element under the technical analysis option? What happens and what are the implications when the two approaches produce different outcomes?

Organization	Yes or No	Question 3 Comment
		Recommend that "iv. The maximum amount of energy flowing out" limit be set to no more than 24 hours of reverse power flows within any rolling 12-month period. Consider avoiding prescribing values and eliminate bullet (iv). The intended performance outcome should be described, but without setting values. This should not have any impact on the reliability of the transmission network if items 1, 2 and 3 are satisfied.
SPP Standards Review Group	No	Rather than combining two conflicting criterion - 'rarely' and the number of MHh of backflow allowed annually - we would suggest the following. 1) That the maximum outflow doesn't create an issue on the BES. This would be determined by study of the system and conditions. Or 2) when the condition exists, be able to mitigate the condition within a prescribed time relevant to the prevailing system conditions.
NERC Staff Technical Review	No	Requiring that power flows into, and rarely out of, the Element(s) considered for exclusion is an appropriate measure, as is requiring an entity to define the conditions under which power will flow out. In addition to information such as specified contingencies in item (ii), details on the conditions should include other relevant information such as the system load level, generation dispatch, system transfer levels, etc., and the number of hours per year these conditions are expected. An exception request also should include the maximum flow expected. E.g., the following information would be useful in evaluating a request for exception: "Power will flow out only when line A is out of service, system load is at or below X percent of peak load, and generator B is on-line; based on the load duration curve for this area and the number of hours generator B is dispatched at these load levels, the exposure to power flow out for this contingency is limited to N hours per year and the maximum flow if the contingency occurred during these hours would be Y MW." This type of information will be far more informative than a pass/fail test as to whether a MWh threshold is expected to be exceeded. While a MWh threshold may be useful for evaluating requests, it is unlikely that a one-size-fits-all threshold could be established for evaluating exception requests.
ISO/RTO Standards Review Committee	No	The SRC believes that, if power EVER flows out, then the area is either not radial or it includes generation resources. There is insufficient information to determine whether this "limited quantity of energy" is indeed small. There could be very large amounts of load and generation resources within that area. Such large quantities could represent a significant potential for sudden increases in load or unexpected energy injections.
Iberdrola USA	No	We do not agree with this requirement. These exclusion exception criteria should be deleted in their entirety and replaced with criteria that are objective, specific, and repeatable, or preferably not replaced at all.

Organization	Yes or No	Question 3 Comment
		Specific problems with the criteria as stated are: 1. A facility is not BES if all of "a" through "d" below apply: c. Power flows into "the system" most of the time - this is vague and covers much of the 115 kV system.
Hydro One	No	We agree with the criteria set out in 1(c), but suggest the SDT to avoid prescribing values and eliminate bullet (IV). The SDT should also consider allowing: a) Power flow-out up to 20% of the minimum forecasted load for the element(s) over a 12 month period; or b) Maximum amount of energy flowing out be set to no more than 24 hours of reverse power flows within any rolling 12-month period. The intended performance outcome should be described, but without setting values. This should not have any impact on the reliability of the transmission network if items 1, 2 and 3 are satisfied.
MRO's NERC Standards Review Forum	No	NSRF proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the bright-line BES definition.
MidAmerican Energy	No	MidAmerican supports the NSRF comments. The NSRF proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the bright-line BES definition.
ReliabilityFirst	No	All power flow studies can be don eto show a small impact, this is how the system is planned. This will only cause more confusion and debate between the FERC, NERC the Regions and registered entities
Idaho Falls Power	No	We agree in general, however believe there is little distinction between the defining criteria in this exception and the local distribution network exclusion already provided for in the BES definition. We would like to see added language that provides an exclusion for all elements on such a system, to include generation regardless of MVA rating, wherein the power flows are generally into the system. We would agree that a number of MWh of annual outflow needs to be established as a limitation to the size and amount of generation under consideration. This exclusion should be geared towards smaller municipal or like sized systems having no material impact upon a BA much less the region.
Muscatine Power and Water	No	Proposing that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the bright-line BES definition.
Glacier Electric Cooperative	No	Regarding using power flow into and out of a system as a criterion fro BES exclusion, I do not think that

Organization	Yes or No	Question 3 Comment
		establishing a hard MWh per year is the proper approach to take. Once again, I believe that the purpose of the system should be the most important factor. If the purpose of a system is to serve load or transport non-essential generation (i.e. wind power), then that system should be able to be exluded.
Consolidated Edison Co. of NY, Inc.	No	We generally support this exclusion option concept, to the extent that it is fashioned after the FERC Seven Factor test. However, we have a number of questions as to how it might work in practice. For example: o If an entity provides hourly MWh power flow data on a radial for a 12-month period (under v.) showing no power flow reversals, would transaction data (under i. through iv.) still be required? Couldn't the entity just say "no operating records?" o If there were power flow reversals, wouldn't the power flow data (provided under v.) also show those, e.g., the amount and duration? Isn't this request redundant? If not, why not? Please explain. o If reversing power flows on a feeder caused it to fail one of the criteria, could the radial still be excluded, or is it necessary for the Element to pass all requirements? Alternatively, could the entity choose to file for Exclusion of that Element under the technical analysis option? What happens and what are the implications when the two approaches produce different outcomes? We recommend that "iv. The maximum amount of energy flowing out" limit be set to no more than 24 hours of reverse power flows within any rolling 12-month period.Replace "transactional records" with "operating records."
ISO New England	No	Section 1.c again appears to allow the exclusion of large portions of the system in metropolitan areas. How does this differ from the LDN exclusion already presented in the definition? Section c should simply be deleted.
The United Illuminating Company	No	What does rarely mean? How is maintenance conditions considered? This is simply worded but conceptually extremely complicated.
Entergy Services	No	Power flows into or out of a portion of the BES may characterize BES facilities less important to BES reliability but without limits to the size of the area, it would be difficult to show compliance. An entire state could be excluded from the BES. Additionally, there is no process specified to review the characteristics as transmission topology and resources change over time.
BGE	No	BGE is generally opposed to this requirement because the MWh factor is too variable and/or may be utilized

Organization	Yes or No	Question 3 Comment
		in a way contrary to reliable system operation.
Pepco Holdings Inc	No	The characteristic statement should be reworded to say: "Power flow is generally load serving."The criteria as written have very burdensome MWh record requirements. Yearly totals for flows in and out and an overall description or justification for this exception should be allowable.
Duke Energy	No	This third characteristic does not add clarity to the E3 Exclusion in the proposed BES definition. And in general, the path that does not include extensive technical analysis is not adequate to distinguish between the Elements that are and that are not necessary for operating an interconnected electric transmission network.
American Transmission Company, LLC	No	ATC proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the bright-line BES definition.
Manitoba Hydro	No	Vague language such as "rarely" or "not intentionally" does not support a "bright line" approach, and is not measureable or auditable. Also, the sample evidence should not be included as part of the criteria.In addition, the proposed criteria to substantiate a request for an exception should be removed as it does not introduce anything different than what is already proposed under the exclusions in the bright line BES definition. Specifically, this item is already excluded in the bright line definition E3.
NESCOE	No	As noted in Response 1, NESCOE believes exclusion determinations should not require a finding that all four proposed criteria are met. Generally, NESCOE is in agreement with an exception criteria for additional exclusions that takes into account power flows into the system that rarely flows out. However, additional clarity is necessary for criteria 1(c)(i),(ii) and (iv). Specifically, what is meant by "very limited set of conditions" under 1(c)(i) and (ii) and "limited quantity of energy" under 1(c)(i)? Further, is it appropriate to establish a fixed value of X megawatt hours for the maximum amount of energy flowing out of the system? While it is possible that NESCOE could agree upon a uniform value, NESCOE is not in a position to provide specific comment or support when the MWh value is unspecified. In addition, a fixed value may not adequately address varying system configurations throughout ISO-New England and neighboring control areas.
Independent Electricity System Operator	No	There is an inconsistency between the language used in bullet (c) - "rarely flows out", and that used in Exclusion E3(c) of the BES definition - "Power flows only into the LDN". We have commented during the BES Definition comment period that Exclusion E3 needs to be modified to match the Exception Principles.

Organization	Yes or No	Question 3 Comment
		We agree with the criteria set out in 1(c) except for bullets (iv) and (v). We do not believe it is possible to establish a limit on the energy flow out of a system for which an exception has been requested. Further, we suggest that the SDT avoid prescribing set values in the exception criteria since these would only serve to limit the flexibility of the process. As an alternative to the proposed bullet (iv), we suggest that power flow study results could be used to support the exception request. We therefore propose the following wording to replace bullets (iv) and (v).iv. Power flow simulation results to demonstrate that BES reliability is not dependent upon the power flows through the Element(s) for which an exception has been submitted, for the conditions specified in (ii).
Georgia System Operations Corporation		If the BES Definition itself is clarified to allow for some de minimis amount of power flow out of a customarily radial line that is excluded by definition, this justification for an exclusion may not be necessary. We encourage the Drafting Team to pursue that approach because we believe it is technically justified and could significantly reduce the need for exceptions.
Florida Municipal Power Agency Transmission Access Policy Study Group		The third item is “power flows into the system, but rarely flows out.” This criterion is vague. FMPA suggests instead the following language, which is consistent with FMPA’ comments on Exclusion E3 of the BES definition: “Neither the Element, nor any Elements that it connects to the grid (in aggregate), includes more than 75 MVA of generation used to meet the resource-adequacy requirements of electric utilities.”
ACES	Yes	We agree with this path although iii and v may be in conflict. One requires 24 months data and the other requires 12 months of data.
National Grid	Yes	We agree with this requirement, but feel that assigning a specific value to the energy flowing out of the system in MWh is unnecessary. The energy flowing out of a system depends on the size of the area, and thus could vary widely. Another concern is about non-wires alternatives (NWA). One type of non-wires alternative that is considered during planning studies is to reduce the amount of load on our system by paying customers to not operate during peak hours. One scenario to consider is a generator connected on a radial line that qualifies as BES, and will need upgrades if the generator runs frequently. If this generator produces power close to the MWh threshold in the specified time frame per NERC criteria, does it mean the utility company will have to consider paying the *generator* owner money to shut down in order to keep total MWh generation below the threshold and avoid BES criteria required radial line upgrades? This is another reason assigning a specific value to the energy flowing out of the system is unnecessary. We would like clarification on whether all criteria (i,ii,iii,iv,v) need to be met, or if just meeting one criteria is

Organization	Yes or No	Question 3 Comment
		sufficient. We feel that meeting criteria 1.c.1, 1.c.ii OR 1.c.iii is sufficient in showing that power rarely flows out of the system. Criteria 1.c.iv and 1.c.v should be removed. The exception process should be strictly limited to the procedures for application and approval and should not include substantive elements.
Blachly Lane Electric Cooperative Flathead Electric Cooperative, Inc Central Electric Cooperative Clearwater Power Electric Cooperative Consumer's Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric	Yes	We agree conceptually that one critical characteristic distinguishing facilities that must be excluded from the BES from facilities that should be included is the manner in which power flows on those facilities. Hence, the SDT has properly identified power flows as one important characteristic that identifies BES facilities. We also agrees conceptually that the fact that power may flow out of facilities onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the facilities in question as excluded from the BES. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify facilities that are not necessary for the operation of the BES under this text, we propose that any facility where real power flows in 90 percent of the time or more under normal (“N-0” or All Lines in Service) operating conditions should be held to meet this test. That facilities meet this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. While we agree with the SDT’s view that power should flow predominantly in the direction of load for excluded facilities, we are concerned that this characteristic may no longer be a defining characteristic as the electric industry evolves in the future. If distributed generation becomes the future norm for new power generation facilities, it may no longer make sense to look at power flow as a defining characteristic. That is, even if a sufficient number of small distributed generation facilities were constructed on certain facilities to cause power to flow out of those facilities more than ten percent of the time, the fundamental character of those facilities will not have changed. Finally, we believe that power flow analysis under this item should consider actual power flow, not scheduled power flow.

Organization	Yes or No	Question 3 Comment
Cooperative Pacific Northwest Generating Cooperative		
Clark Public Utilities Benton Rural Electric Association Northern Wasco County PUD United Electric Co-op Inc Oregon Trail Electric Cooperative, Inc. Salem Electric Grant County PUD No. 2 (Grant) Northwest Public Power Association (NWPPA) Big Bend Electric Cooperative, Inc Kootenai Electric Cooperative	Yes	Clark agrees conceptually that one critical characteristic distinguishing local distribution facilities that must be excluded from the BES from transmission facilities that should be included is the manner in which power flows on those facilities. Power on local distribution systems generally flows only from the interconnected transmission source and across the distribution system for delivery to end-use customers. By contrast, power on transmission systems generally flows in two (or multiple, in networked systems) directions and is delivered in bulk to distribution utilities rather than to end-users. Hence, the SDT has properly identified power flows as one important characteristic that distinguishes BES transmission systems from local distribution systems. In order to identify systems that are not necessary for the operation of the BES under this text, we propose that any system where real power flows into the local distribution system 90 percent of the time or more under normal operating conditions.
Spyker	Yes	We agree with the criteria set out in 1(c), but suggest the SDT to avoid prescribing values and eliminate bullet (iv). The SDT should describe the intended performance outcome but avoid setting values. This should have little, if any impact on reliability of the transmission network if the items 1, 2 and 3 are satisfied.
American Electric Power	Yes	Requiring that “power flows into the system, but rarely flows out” is a reasonable approach, but would require further consideration given the MWh value eventually chosen to replace “TBD”.
Orange and Rockland Utilities, Inc.	Yes	The “TBD” value should be reasonable and well justified.

Organization	Yes or No	Question 3 Comment
Central Lincoln	Yes	Central Lincoln agrees that one critical characteristic distinguishing local distribution facilities that must be excluded from the BES from transmission facilities that should be included is the manner in which power flows on those facilities. Power on local distribution systems generally flows only from the interconnected transmission source and across the distribution system for delivery to end-use customers. By contrast, power on transmission systems generally flows in two (or multiple, in networked systems) directions and is delivered in bulk to distribution utilities rather than to end-users. Hence, the SDT has properly identified power flows as one important characteristic that distinguishes BES transmission systems from local distribution systems. Central Lincoln also agrees that the fact that power may flow out of a local distribution system onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the system as local distribution. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude local distribution facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a local distribution system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify systems that are not necessary for the operation of the BES under this test, we propose that any system where real power flows into the local distribution system 90 percent of the time or more under normal (“N-0” or All Lines in Service) operating conditions should be held to meet this test. That a system meets this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course of two years. In addition, the presence of generation within a local distribution system that only modifies the level of the load served by the bulk system, but does not result in power being injection into the bulk system, does not change the reliability effect of the local network and therefore should not require the local network to be classified as BES.
Oregon Public Utility Commission Staff	Yes	Use of the 100 kV brightline and the core BES definition as proposed is an overreach into local distribution systems and an overreach of FERC’s authority as set out in the FPA 215. A full engineering technical analysis - required every 2 years - is too onerous and not necessary for identifying most local distribution elements miss-identified as BES Elements. A simple screening methodology consistent with the 7-Factor Test (from FERC Order 888) is needed as the first stage of the exception process.
Hydro-Quebec TransEnergie	Yes	However, this is only part of an exclusion. The point c. iv and v, MWh is not relevant for real-time operation. It would be more simple to put a time reference, such as a total number of days or a % of the time.

Organization	Yes or No	Question 3 Comment
		In number iii, do you mean the first self certification ? In fact, the evidence for exclusion will be done once, but ROP suppose that the self certification will be done many times (every two years).
for Snohomish County PUD	Yes	Snohomish agrees conceptually that one critical characteristic distinguishing local distribution facilities that must be excluded from the BES from transmission facilities that should be included is the manner in which power flows on those facilities. Power on local distribution systems generally flows only from the interconnected transmission source and across the distribution system for delivery to end-use customers. By contrast, power on transmission systems generally flows in two (or multiple, in networked systems) directions and is delivered in bulk to distribution utilities rather than to end-users. Hence, the SDT has properly identified power flows as one important characteristic that distinguishes BES transmission systems from local distribution systems. Snohomish also agrees conceptually that the fact that power may flow out of a local distribution system onto the grid during a few hours in a year or during extreme contingencies should not change the characterization of the system as local distribution. Accordingly, we support inclusion of power flow analysis as one element of characteristics that can be used to exclude local distribution facilities from the BES even if the facilities do not pass each of the bright-line thresholds laid down in the BES definition. We also agree that transactional and hourly generation records are an appropriate basis for making the determination since these can be used to demonstrate that demand within a local distribution system exceeds generation within that system in most hours and that power therefore does not flow onto the grid, and also to determine the number of hours where this is not the case and the amount by which generation within the system exceeds demand. In order to identify systems that are not necessary for the operation of the BES under this test, we propose that any system where real power flows into the local distribution system 90 percent of the time or more under normal (“N-0” or All Lines in Service) operating conditions should be held to meet this test. That a system meets this test could be demonstrated using metering or supervisory control and data acquisition ("SCADA") data records over the course on two years. In addition, the presence of generation within a local distribution system that only modifies the level of the load served by the bulk system, but does not result in power being injection into the bulk system, does not change the reliability effect of the local network and therefore should not require the local network to be classified as BES.
New York Power Authority	Yes	NYPA generally agrees with this item. However, the term “system” needs to be better defined. It is not clear how power could flow out of a load only system. If reversing power flows on a feeder caused it to fail one of the criteria, could the radial still be excluded, or is it necessary for the Element to pass all requirements? Alternatively, could the entity choose to file for Exclusion of that Element under the technical

Organization	Yes or No	Question 3 Comment
		analysis option? What happens and what are the implications when the two approaches produce different outcomes? An example of revised wording for "iv. The maximum amount of energy flowing out" would be no more than 24 hours of reverse power flows within any rolling 12-month period. Consider avoiding prescribing values and eliminate bullet (iv). The intended performance outcome should be described, but without setting values. This should not have any impact on the reliability of the transmission network if items 1, 2 and 3 are satisfied.
New York State Reliability Council	Yes	It should be clarified that this exclusion should not apply to inter-regional transfers, which clearly are candidates for inclusion as BES.
Western Electricity Coordinating Council	Yes	WECC agrees in concept with this characteristic, but it needs to be clarified whether the items i-v are "AND" statements WECC also suggests that i and ii be switched and re-worded. Suggested language for ii would be "A limited set of conditions where power flows out must be identified; for example, only under specified Contingency events." Then i can become a sub-bullet of ii. It must also be clarified that the specified conditions must have a technical justification to show that the element is not "necessary for reliable operation." Otherwise it is not clear that the "limited conditions" are truly a justification for exclusion. Any non-zero MWh limit must have a technical justification, otherwise zero should be used. In addition to the imports/exports from the system, the size of the system (in MW) should also be defined.
Bonneville Power Administration	Yes	BPA generally agrees with the power flow concept, but suggests including language that the assessment should be "based on normal system operating conditions." A MWh value to replace 'TBD' for maximum energy flowing out per year could be determined based on on an annual average MW load level of 25 MW average and below with distribution service of 50MVA and below, because 25MW loads can be served by lines under 100kv. The energy flowing out per year would be limited by the size of the load and the ability to import power to the load area (i.e. the export would never be larger than the initial distribution service minus the local area losses and load). BPA requests that the drafting team perform a cross-walk analysis on each of the 4 items to ensure the consistent application of an existing industry process, practice, or standard.
Tri-State Generation and	Yes	It may be more appropriate to use a threshold based on maximum power rather than on an annual energy

Organization	Yes or No	Question 3 Comment
Transmission Association		threshold.
Electric Market Policy	Yes	The word rarely should be struck from this item. It is meaningless in the context for which it is used and offers little to characterize an element or connection since it does not contain a measure.
Harney Electric Cooperative, Inc.	Yes	
Oncor Electric Delivery	Yes	Oncor Electric Delivery agrees with the proposed language that describes the exclusion criteria based upon power flows.
Southern Company	Yes	
Occidental Energy Ventures Corp.	Yes	
Consumers Energy Company	Yes	
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language for the characteristic associated with the magnitude, direction and time duration of power flow on a system Element as qualifying criterion. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		
Edison Electric Institute	Yes	Although EEI agrees in principle to the exclusion, we feel the current language has some problems which need to be addresses. Note the following:The word "rarely should be struck. It is meaningless in the context for which it is used and offers little to characterize an element or connection since it does not contain a measure. A more appropriate statement to broadly characterize a Non-BES element or connection would be the following:"Power flows are broadly characterized as Load Serving." Items i. and iii. are excessive requirements which do not aide in defining what is "necessary for operating an interconnected electric transmission network". What might be more a more useful measure is a comparison of total MW hours of load consumed vs. MW hours fed back into the BES as measured on an annual

Organization	Yes or No	Question 3 Comment
		basis.Item v. - Hourly energy data (MWh) for the most recent 12 month period for every excluded BES element is an excessive requirement. Annual records indicating that MW hours consumed annually verses MW hours that flow through the non-BES element would be a better indicator in line with the definition.
SERC Planning Standards Subcommittee Tennessee Valley Authority	Yes	One possible starting point for selecting a MWh threshold: Generators of 20 MVA or less are typically exempt from detailed modeling requirements. Suggest that reverse flows of this level or less, for a period of 24 hours or less would be an acceptable threshold. Therefore, this would provide a basis for selecting a threshold MWh level for reverse flows into the system under part iv. of 20 MW x 24 hours = 480 MWh per year.
Response: The SDT appreciates your comments and your suggestions for the amount of power flow allowed to still be eligible for an exclusion. However, based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		
PPL Supply	No	See comments in Questions 9 and 10
Response: See responses to Q9 & Q10.		
City of Redding	Yes	To be consistent with E2 of the proposed BES Definition a distribution system should be allowed to export at least 75 mw. This would be the same as a commercial retail customer can export into the distribution system.
Electricity Consumers Resource Council (ELCON)	Yes	The thresholds for power flows out of the system should be made consistent with Exclusion E2 in the definition.We recommend that this item be added to the BES definition.
Response: The SDT has responded to comments on the BES definition in the Consideration of Comments form for the BES definition posting.		
South Carolina Electric and Gas Georgia Transmission Corporation	Yes	One possible starting point for selecting a MWh threshold: Generators of 20 MVA or less are typically exempt from detailed modeling requirements. Suggest that reverse flows of this level or less, for a period of 24 hours or less would be an acceptable threshold. Therefore, this would provide a basis for selecting a threshold MWh level for reverse flows into the

Organization	Yes or No	Question 3 Comment
		system under part iv. of 20 MW x 24 hours = 480 MWh per year
Long Island Power Authority	Yes	Item iv. The maximum amount of energy flowing out is (TBD-1,752,000) MWh per year. Another measure that may be more appropriate is a percent % of total energy requirements in the area.
Xcel Energy	Yes	Regarding the question on MWH, one possible approach is to use 175,000 MWH/ year which would be just under the annual hourly output from the smallest generator (not at a plant) that must be registered under the registry criteria.
Tacoma Power	Yes	Tacoma Power generally agrees that elements primarily serving load, allowing a limited flow out of the local distribution network, should be excluded from the BES. We support an annual limitation of 219,000 MWhs, equivalent to 25 aMW, since a system of elements that primarily serve load under this limit are insignificant to the BES.
PacifiCorp	Yes	All of PacifiCorp's responses are based on the application of these items to a given interconnection and not on a continental basis. See comments on question 10. This criterion is very similar to a part of exclusion 3 of the proposed bright-line, which requires that power flows into the system. If the intent of this requirement is to capture local distribution networks that may be included under the proposed bright-line definition, then this requirement has merit. PacifiCorp proposes that instead of using a measure of energy, that the SDT utilize a measure of time and recommends that flow out of the system be limited to 15% on an annual basis. PacifiCorp does not have a technical justification for 15%, nor does it believe that a technical justification can be provided for any reasonable percent of time used, or MWh used to be applied equally to all interconnections.
Response: The SDT appreciates your comments and your suggestions to fill in some of the gaps in the first posting. However, based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		

4. Exclusions - The SDT has set up one path for evidence that does not include extensive technical analysis. It consists of 4 items, all of which must be addressed in order to submit a completed request for exclusion. The fourth item involves power transport. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.

Organization	Yes or No	Question 4 Comment
SERC Planning Standards Subcommittee Tennessee Valley Authority	No	There is not sufficient evidence provided by the SDT to distinguish between this fourth item for exclusion and the third item for exclusion. They both seem to fall in line with what is excluded per the bright line exclusion E3 (or Local Distribution Networks), but as written, it would be difficult to measure what is meant by "is not intentionally transported through" in this fourth item just as it would be difficult to measure what's meant by "flows into the system, but rarely flows out" for the third item. Such an exclusion should be required to include some technical analysis, but not extensive technical analysis (at least the inclusion of power flow base case as a minimum).
SPP Standards Review Group	No	It may be better to focus on the purpose, or need, of a facility, the functionality of the facility, rather than how electric flows impacted the facility during a given situation. Therefore, we would suggest moving away from the term 'intent'.
NERC Staff Technical Review	No	Limitations on through-flow of power is an appropriate consideration; however, whether the power flow is intentional should not be a primary consideration. Intent is not measurable and most major disturbances are the result of unintentionally placing the system in an unreliable operating condition. The main clause in item

Organization	Yes or No	Question 4 Comment
		(d) should be modified to reflect that transporting power to another system through the Element(s) to be excluded is prevented (such as by system configuration and/or impedance) or restricted (such as by Operating Procedures). Sub-items (i) and (ii) already are consistent with this revision to the main clause.
ISO/RTO Standards Review Committee	No	Hasn't the reliability concern associated with "loop flows" been related to the unintentional flow of power through parts of the system?
Iberdrola USA	No	We do not agree with this requirement. These exclusion exception criteria should be deleted in their entirety and replaced with criteria that are objective, specific, and repeatable, or preferably not replaced at all. Specific problems with the criteria as stated are: 1. A facility is not BES if all of "a" through "d" below apply: d. Power "entering" "the system" does not "intentionally" flow into another "system" - what does intentionally versus unintentionally mean?
MRO's NERC Standards Review Forum Muscatine Power and Water	No	NSRF proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the BES definition.
MidAmerican Energy	No	MidAmerican support the NSRF comments. The NSRF proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the BES definition.
ReliabilityFirst	No	no one knows when some event will occur, putting this limitation will only cause debate. Any impact is an impact and should be included
Idaho Falls Power	No	We generally agree with this requirement. If a system has redundant transmission to move power that is normally wheeled through, the question of materiality could be addressed by technical analysis.
Southern Company	No	
National Grid	No	We feel that this requirement is not specific enough. "System" is too general. It should be clear what is intended by "system". Also, we would like more clarification about what is meant by "intentionally transport". Is the intent to mean there is a contract between a generator and load? The exception process should be strictly limited to the procedures for application and approval and should not include substantive elements.

Organization	Yes or No	Question 4 Comment
South Carolina Electric and Gas	No	There is not sufficient evidence provided by the SDT to distinguish between this fourth item for exclusion and the third item for exclusion. They both seem to fall in line with what is excluded per the bright line exclusion E3 (or Local Distribution Networks), but as written, it would be difficult to measure what is meant by "is not intentionally transported through" in this fourth item just as it would be difficult to measure what's meant by "flows into the system, but rarely flows out" for the third item. Such an exclusion should be required to include some technical analysis, but not extensive technical analysis (at least the inclusion of power flow base case as a minimum).
Glacier Electric Cooperative	No	I believe that there should be a provision for systems that intentionally transport variable, non-essential generation (such as systems that transport wind power) to be excluded from the BES. By nature, these types of systems cannot be essential to the BES due to the variability of the generation, and, therefore, should be able to be excluded from the BES.
Springfield Utility Board	No	NERC's Proposed Continent-wide Definition of Bulk Electric System contains Exclusion E3 (LDNs) as part of the BES core definition. Why would this fourth item be necessary in demonstrating BES Exceptions if LDNs are already excluded as part of NERC's core BES definition?
ISO New England	No	This appears to be the same as section 1.c and again possibly allows for the exclusion of large portions of the system in metropolitan areas. Section 1.d. should simply be deleted.
The United Illuminating Company	No	The wording is ambiguous. What is meant by system? Different voltage levels, Owners?
Entergy Services	No	There is not sufficient evidence provided by the SDT to distinguish between this fourth item for exclusion and the third item for exclusion. They both seem to fall in line with what is excluded per the bright line exclusion E3 (or Local Distribution Networks), but as written, it would be difficult to measure what is meant by "is not intentionally transported through" in this fourth item just as it would be difficult to measure what's meant by "flows into the system, but rarely flows out" for the third item. Such an exclusion should be required to include some technical analysis, but not extensive technical analysis (at least the inclusion of power flow base case as a minimum).
Pepco Holdings Inc	No	This criterion is very similar to the third item. Written operating procedures may not exist. The entity should be allowed to summit a description and justification.

Organization	Yes or No	Question 4 Comment
Central Lincoln	No	Central Lincoln agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. In fact, we believe this may be the most important and readily identifiable distinction. As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Local distribution systems do not share any of these operational characteristics. Accordingly, Central Lincoln agrees that if power is not intentionally transported through a particular system, that system is not used for transmission and should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to a particular system will provide a ready guide to whether power is intentionally scheduled across that system. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test.
Duke Energy	No	This fourth characteristic does not add clarity to the E3 Exclusion in the proposed BES definition. And in general, the path that does not include extensive technical analysis is not adequate to distinguish between the Elements that are and that are not necessary for operating an interconnected electric transmission network.
American Transmission Company, LLC	No	ATC proposes that this criterion be eliminated because it does not describe any materially different characteristics beyond Exclusion E3 of the BES definition.
Manitoba Hydro	No	Vague language such as "rarely" or "not intentionally" does not support a "bright line" approach, and is not measureable or auditable. Also, the sample evidence should not be included as part of the criteria. In addition, the proposed criteria to substantiate a request for an exception should be removed as it does not introduce anything different than what is already proposed under the exclusions in the bright line BES definition. Specifically, this item is already excluded in the bright line definition E3.
NESCOE	No	As noted in Response 1, NESCOE believes exclusion determinations should not require a finding that all four proposed criteria are met. NESCOE further notes that New England's network has numerous parallel paths operated at voltages less than 200 kV which may parallel 230 kV and 345 kV BES network paths. If flows on

Organization	Yes or No	Question 4 Comment
		a given <200 kV path only exceed 200 MVA under contingency conditions and if these paths are connected to the higher voltage BES elements with suitable NERC compliant protection systems, these paths may be EXCLUDED from the BES. NESCOE suggests the value of 200 MVA based on typical thermal ratings of 115 kV transmission lines but is open to other values that the drafting team may suggest. NESCOE also suggests that the phrase "to some other system" be broadened to include any other higher voltage BES element.
City of Redding	Yes	The SDT needs to address renewable energy and customer owned generation. If an aggregator adds up one thousand roof top PV units or the power from plugged in electric cars and sells them to an entity outside of this system it should not affect the ability of the distribution system to qualify for this exclusion, especially if the power is consumed inside of the distribution system.
Blachly Lane Electric Cooperative Flathead Electric Cooperative, Inc. Central Electric Cooperative Clearwater Power Electric Cooperative Consumer's Power Inc. Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric	Yes	As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Facilities that do not share any of these operational characteristics should not be part of the BES. Accordingly, we agree that if power is not intentionally transported through particular facilities, those facilities should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to particular facilities will provide a ready guide to whether power is intentionally scheduled across those facilities. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test. Finally, as noted in our answer to Question 3, we are concerned that, if distributed generation advances significantly, power transport may cease to be a meaningful measure for determining whether a facility is part of the BES, and we believe that power flow analysis should consider actual power flow, not scheduled power flow.

Organization	Yes or No	Question 4 Comment
Cooperative Salmon River Electric Umatilla Electric Cooperative West Oregon Electric Cooperative Pacific Northwest Generating Cooperative Consumer's Power Inc		
Clark Public Utilities	Yes	Clark agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. Clark believes this may be the most important and readily identifiable distinction. Accordingly, Clark agrees that if power is not intentionally transported through a particular system, that system is not used for transmission and should not be considered part of the BES.
BGE	Yes	BGE generally agrees with this requirement, but believes that the term "system" should be clarified.
Benton Rural Electric Association Northern Wasco County PUD United Electric Co-op Inc. Oregon Trail Electric Salem Electric Grant County PUD No. 2 (Grant) Northwest Public Power Association (NWPPA) Big Bend Electric Cooperative, Inc Kootenai Electric Cooperative	Yes	Benton REA agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. In fact, we believe this may be the most important and readily identifiable distinction. Accordingly, Benton REA agrees that if power is not intentionally transported through a particular system, that system is not used for transmission and should not be considered part of the BES. One exception may be for a small embedded generation unit owned by a different party that may be "scheduled" out of an area, but in reality, does not produce any physical flow. These circumstances should not trigger inclusion.

Organization	Yes or No	Question 4 Comment
Long Island Power Authority	Yes	In addition to Operating Procedures, electrical elements that restrict or control flow over the line should be allowed to be used as evidence.
Xcel Energy	Yes	It is not clear what 'some other system' would be. Is this another point on the BES in general?
for Snohomish County PUD	Yes	Snohomish agrees that the SDT's fourth test, which asks whether power is intentionally transported through a system, identifies a key characteristic of local distribution facilities that distinguishes such facilities from interconnect bulk transmission facilities that are properly considered part of the BES. In fact, we believe this may be the most important and readily identifiable distinction. As a matter of operation, power is scheduled across transmission lines. Further, transmission lines in the Western Interconnection (either individually or as part of a transmission path) are rated for total transmission capacity and available transmission capacity, and transmission rights can be purchased on such lines, if available, on an OASIS. Local distribution systems do not share any of these operational characteristics. Accordingly, Snohomish agrees that if power is not intentionally transported through a particular system, that system is not used for transmission and should not be considered part of the BES. We also agree that examining the Operating Procedures applicable to a particular system will provide a ready guide to whether power is intentionally scheduled across that system. We suggest, however, that the SDT look beyond those protocols that fall within the NERC Glossary's definition of Operating Procedure. For example, in the West, transmission paths are almost all listed in the WECC Path Rating Catalog. Similarly, it is not clear whether scheduling protocols, OASIS operations, and the other factors listed above qualify as Operating Procedures. Hence, we urge the SDT to list such specific operational characteristics as part of this test.
Independent Electricity System Operator	Yes	There is an inconsistency between the language used in bullet (c) - "rarely flows out", and that used in Exclusion E3(c) of the BES definition - "Power flows only into the LDN". We have commented during the BES Definition comment period that Exclusion E3 needs to be modified to match the Exception Principles. We agree with the criteria set out in 1(c) except for bullets (iv) and (v). We do not believe it is possible to establish a limit on the energy flow out of a system for which an exception has been requested. Further, we suggest that the SDT avoid prescribing set values in the exception criteria since these would only serve to limit the flexibility of the process. As an alternative to the proposed bullet (iv), we suggest that power flow study results could be used to support the exception request. We therefore propose the following wording to replace bullets (iv) and (v).iv. Power flow simulation results to demonstrate that BES reliability is not dependent upon the power flows

Organization	Yes or No	Question 4 Comment
		through the Element(s) for which an exception has been submitted, for the conditions specified in (ii).
Tacoma Power	Yes	Tacoma Power generally agrees with fourth item (power transport) when not intentionally transporting power through a system. In development of the supporting evidence for this item, we suggest a demonstration by operating studies or the option to demonstrate the criteria by the use of operational procedures.
Tri-State Generation and Transmission Association	Yes	While we generally agree, "system" needs to be clarified, and should be changed to "transmission system." It may also need to be qualified by indicating a change in ownership of transmission systems. We also wonder if the concept of scheduling should be addressed rather than using the word "intentionally?"
Florida Municipal Power Agency	Yes	FMPA supports the criterion in concept, but “intention[]” is a vague term and not relevant to an Element’s impact on the grid. We suggest instead that to obtain an exclusion for such a quasi-radial Element, the owner be required to demonstrate that the Element has no more than a 5% transfer distribution factor on any BES Element for transfers that could be curtailed through the NAESB TLR procedure (e.g., interchange transactions, or generator to load distribution factors (GLDF) for BES generators). Transfer distribution factor (or GLDF) is a good measure of an Element’s impact on the grid and is not subject to varying interpretations. In addition, NAESB standards are also approved by FERC and mandatory to jurisdictional entities. Hence, the 5% TDF “Curtailment Threshold” has already been approved by FERC as indicating an insufficient impact on the BES to be considered for TLR. And, it shows consistency between NERC and NEASB standards.
Transmission Access Policy Study Group	Yes	TAPS supports the criterion in concept, but “intention[]” is a vague term and not relevant to an Element’s impact on the grid. We suggest instead that to obtain an exclusion for such a quasi-radial Element, the owner be required to demonstrate that energy transfers subject to NAESB TLR procedures (Interchange Transactions or BES generator to load) have no more than a 5% transfer distribution factor (TDF) on the Element that is a candidate for exception. Transfer distribution factor is a good measure of an Element’s impact on the grid and is not subject to varying interpretations.
Edison Electric Institute	Yes	A radial system by definition transports power from the BES System to a Distribution System, similarly an LDN operates in a like manner. A strict reading of the above criteria would exclude both from consideration yet the definition allows both. We believe that in an attempt to develop a set of criteria useful for all situations, the outcome has weakened the original intent as set in the Definition. Although much of the criteria used is largely appropriate, a stricter adherence to the BES definition criteria would substantially help to avoid confusion between what was developed as principles and what was developed as the BES Definition.
Bonneville Power Administration	Yes	BPA suggests that the SDT provide a method for assessing power transport based on intake to serve load

Organization	Yes or No	Question 4 Comment
		versus outflow. BPA requests that the SDT clarify that the qualifying statements i-v for the fourth item are "or" statements.
PacifiCorp	Yes	All of PacifiCorp's responses are based on the application of these items to a given interconnection and not on a continental basis. See comments on question 10. This criterion is very similar to parts of exclusion 3 of the proposed bright-line, which states "d) Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and e) Not part of a Flowgate or transfer path: The LDN does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL)."If the intent of this requirement is to capture local distribution networks that may be included under the proposed bright-line definition, then this requirement has merit.
Western Electricity Coordinating Council	Yes	WECC agrees in concept with this characteristic, but believes that there needs to be more clarity of what constitutes the evidence. Since flow data is used for characteristic c, it seems that the same sort of data (but separated into hourly flow in and hourly flow out) could be used to demonstrate this. Otherwise, a simple procedure that claims "power entering this system is not intentionally transported through the system to some other system" would meet the letter of the law, but gives no description of how this is achieved. If Operating Procedures are allowed, more clarity must be provided on what those procedures must entail.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language for the characteristic associated with the unintentional transporting of power through a system Element with delivery to another system Element as qualifying criterion. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		
Electricity Consumers Resource Council (ELCON)	Yes	This requirement should be further relaxed to allow for intentional flows that are provided as a courtesy to the local distribution company. In such cases, private, customer-owned facilities may be used to deliver power from a DP to a small number of the DP's retail customers who are unaffiliated with the owner/operator of the private network. These flows are generally de minimis.

Organization	Yes or No	Question 4 Comment
		We also recommend that this item (with our qualification) be added to the BES definition.
Oregon Public Utility Commission Staff	Yes	Use of the 100 kV brightline and the core BES definition as proposed is an overreach into local distribution systems and an overreach of FERC's authority as set out in the FPA 215. A full engineering technical analysis - required every 2 years - is too onerous and not necessary for identifying most local distribution elements miss-identified as BES Elements. A simple screening methodology consistent with the 7-Factor Test (from FERC Order 888) is needed as the first stage of the exception process.
Response: The SDT has responded to comments on the BES definition in the Consideration of Comments form for the BES definition posting. The SDT appreciates your comments. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		
Georgia System Operations Corporation		The concept of "intentional" transport of power is vague and needs more specificity for this to be clear. Also, it would help to have more information about the sort of "operational procedures" that would be acceptable as evidence.
Response: The SDT has responded to comments on the BES definition in the Consideration of Comments form for the BES definition posting.		
PPL Supply	No	See comments in Questions 9 and 10
Response: See response to Q9 & Q10.		
Harney Electric Cooperative, Inc.	Yes	
Hydro-Quebec TransEnergie	Yes	
Oncor Electric Delivery	Yes	Oncor Electric Delivery agrees with the proposed language that describes the exclusion criteria based upon the non - intentional flow of power through the system to some other system.

Organization	Yes or No	Question 4 Comment
Consumers Energy Company	Yes	
American Electric Power	Yes	Requiring that "power entering the system is not intentionally transported through the system to some other system" is a reasonable approach.
Orange and Rockland Utilities, Inc.	Yes	
Spyker	Yes	
Occidental Energy Ventures Corp.	Yes	
Consolidated Edison Co. of NY, Inc.	Yes	
New York Power Authority	Yes	NYPA agrees that power flow wheeled through a system indicates that the system potentially has more than one source. Therefore, the element in question is not radial.
New York State Reliability Council	Yes	
Hydro One	Yes	
Electric Market Policy	Yes	
Northeast Power Coordinating Council	Yes	
ACES	Yes	We agree with this path.
Response: Thank you for your support. However, based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or		

Organization	Yes or No	Question 4 Comment
limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		

5. Exclusions - The SDT has set up one path for evidence that includes technical analysis. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. In addition, in the comment field, please provide your thoughts on the proposed metrics for analysis and the appropriate values to replace 'TBD,' including technical rationale for your argument.

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 5 Comment
Northeast Power Coordinating Council	No	
SERC Planning Standards Subcommittee	No	
SPP Standards Review Group	No	
NERC Staff Technical Review	No	
Iberdrola USA	No	
Tri-State Generation and Transmission Association	No	

Organization	Yes or No	Question 5 Comment
Hydro One	No	
MRO's NERC Standards Review Forum	No	
PacifiCorp	No	
ReliabilityFirst	No	
Tennessee Valley Authority	No	
PPL Supply	No	
Southern Company	No	
Muscatine Power and Water	No	
South Carolina Electric and Gas	No	
Glacier Electric Cooperative	No	
Exelon	No	
Georgia Transmission Corporation	No	
Consolidated Edison Co. of NY, Inc.	No	
ISO New England	No	
The United Illuminating Company	No	

Organization	Yes or No	Question 5 Comment
Entergy Services	No	
Orange and Rockland Utilities, Inc.	No	
Pepco Holdings Inc	No	
American Transmission Company, LLC	No	
Consumers Energy Company	No	
Independent Electricity System Operator	No	
United Electric Co-op Inc.	Yes	
Oregon Trail Electric Cooperative, Inc.	Yes	
Central Lincoln	Yes	
Oncor Electric Delivery	Yes	
Salem Electric	Yes	
Duke Energy	Yes	
Grant County PUD No. 2 (Grant)	Yes	
Hydro-Quebec TransEnergie	Yes	
for Snohomish County PUD	Yes	

Organization	Yes or No	Question 5 Comment
Northwest Public Power Association (NWPPA)	Yes	
Big Bend Electric Cooperative, Inc.	Yes	
NESCOE	Yes	
Kootenai Electric Cooperative	Yes	
Tacoma Power	Yes	
MidAmerican Energy	Yes	
Edison Electric Institute	Yes	
Florida Municipal Power Agency	Yes	
Transmission Access Policy Study Group	Yes	
ISO/RTO Standards Review Committee	Yes	
Western Electricity Coordinating Council	Yes	
New York State Reliability Council	Yes	
Electricity Consumers Resource Council (ELCON)	Yes	
New York Power Authority	Yes	

Organization	Yes or No	Question 5 Comment
Blachly Lane Electric Cooperative	Yes	
Springfield Utility Board	Yes	
Flathead Electric Cooperative, Inc.	Yes	
Clark Public Utilities	Yes	
Central Electric Cooperative	Yes	
Clearwater Power Electric Cooperative	Yes	
Consumer's Power Inc.	Yes	
Coos-Curry Electric Cooperative	Yes	
Douglas Electric Cooperative	Yes	
Fall River Electric Cooperative	Yes	
Lane Electric Cooperative	Yes	
Lincoln Electric Cooperative	Yes	
Lost River Electric Cooperative	Yes	
Northern Lights Electric Cooperative	Yes	
Okanogan Electric Cooperative	Yes	

Organization	Yes or No	Question 5 Comment
Raft River Rural Electric Cooperative	Yes	
Salmon River Electric Cooperative	Yes	
West Oregon Electric Cooperative	Yes	
Pacific Northwest Generating Cooperative	Yes	
Umatilla Electric Cooperative	Yes	
Consumer's Power Inc.	Yes	
BGE	Yes	
Spyker	Yes	
Benton Rural Electric Association	Yes	
American Electric Power	Yes	
Northern Wasco County PUD	Yes	
Xcel Energy	Yes	
Response: Thank you for your response.		

5a. Comments on approach:

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 5a Comment
Northeast Power Coordinating Council		This method may allow an entity to exclude Elements which perform a transmission function, but that are not the most limiting Element. " Not being necessary for reliability operation" needs definition. The SDT should consider developing a Guidance Document to provide examples and insights to guide prospective filing entities. The TPL Reliability Standards already describe the full set of requirements for a reliable system. Why are added requirements necessary? Why would any such added criteria not conflict with the TPL Reliability Standards to the extent that they were either more or less restrictive? Entities should be given an option to conduct an analysis to demonstrate if an element is necessary for the operation of a transmission network. NERC should specify all the relevant criteria categories to be listed as under 2 (a). NERC should avoid prescribing numerical values, but instead establish a range of values (or reference industry standards) that would be consistent with industry/ regional standards or practices without compromising the reliability of the transmission network.
SERC Planning Standards Subcommittee Tennessee Valley Authority Southern Company		As written, most of this approach makes no sense. The words imply that if you have planned the system properly, you can exclude it from the BES! In TPL studies you make sure that voltage dips, frequency excursions, voltage deviations are acceptable, oscillations are damped, and no cascading outages occur. So if you meet the performance requirements of TPL studies, you can exclude the element from the BES. What good is this?

Organization	Yes or No	Question 5a Comment
Georgia Transmission Corporation		
City of Redding		It appears the industry experts have a very difficult time identifying any set of measurement factors that can be applied on a consistant basis to any system and produce similar results, therefore there needs to be geographical variation where the experts in the local systems can make a determination.
NERC Staff Technical Review		NERC staff is not opposed to development of evidence based on technical analysis; however, the type of analysis included in this exception criterion requires extensive resources and lacks sufficient detail to allow for consistent and repeatable application. Concerns with this approach include (1) the ability to provide sufficient guidance on the system conditions and contingencies necessary to support an exception request, (2) difficulty with identifying thresholds for items iv-1 through iv-4, and (3) the ability to address interdependencies among exception requests. These concerns can be addressed by deleting this second path for evidence and including technical analysis on a limited basis to assess performance as described in our response to Question 2. If the SDT elects to retain this second path for evidence, then our three concerns must be addressed. In particular with regard to our third concern, the ERO must be able to deny requests for exception based on the cumulative impact of all previously approved exceptions.
ACES		Overall, the approach is reasonable. However, we disgree with 2.b which states that the ERO can override the criteria. Once criteria is established, the ERO should not be able to override the determination. The ability of the ERO to override implies the criteria is not sufficient and needs to be modified. Rather than override, the ERO should seek to modify the criteria if it is not sufficient.
Edison Electric Institute		In general, we agree that an alternative path allowing a technical analysis to demonstrate that a Facility (or Element) should not be considered part of the BES is appropriate. However, we disagree with the measures offered and suggest an alignment with efforts already being developed within NERC's Event Analysis Working Group.EEI proposes that the technical analysis criterion which has been proposed is too complicated, inconsistent with what is currently being done across the regions and submits that a better approach would be to align reliability impacts with the Event Analysis Criteria being developed by NERC's EAWG. These criteria would be a better benchmark as to whether a Facility or Element should be excluded from the BES. The proposed alternate criteria are as follows:(1) The loss of the Facility (or Element) would not interfere or negatively impact the BES from staying within acceptable limits (i.e., frequency, voltage and

Organization	Yes or No	Question 5a Comment
		System Operating limits) following a fault on or loss of that Facility (or Element); (2) The loss of the Facility (or Element) would not interfere or negatively impact the BES from performing acceptably after credible contingences; (3) Facility (or Element) faults, failures, or trips do not push the system to a point of Instability or otherwise initiate cascading outages; (4) BES facilities are protected from unacceptable damage by operating the Facility (or Element) within its ratings; and (5) The unexpected loss of the Facility (or Element) does not negatively impact the BES from achieving its mission of to supply the aggregate electric power and energy requirements of its customers.
Florida Municipal Power Agency		FMPA supports including specific technical criteria that Elements must meet to obtain an exclusion through the exception process. This approach will facilitate uniform application of the exception process. FMPA responds to the first five proposed criteria in response to 5b-5e below. In the sixth proposed criterion, "steady state stability" is ambiguous, does the SDT mean voltage stability, power angle curve stability, or small signal stability? The seventh proposed criterion, "No cascading outages," is insufficiently granular and should be discarded. The criteria are intended to measure whether, among other things, a particular Element can cause a cascading outage. They need to set out how decision-makers will determine whether an Element can cause a cascading outage, not simply state that an Element that can cause a cascading outage cannot be excluded from the BES.
Transmission Access Policy Study Group		TAPS supports including specific technical criteria that Elements must meet to obtain an exclusion through the exception process. This approach will facilitate uniform application of the exception process. TAPS responds to the first five proposed criteria in response to 5b-5e below. The seventh proposed criterion, "No cascading outages," is insufficiently granular and should be discarded. The criteria are intended to measure whether, among other things, a particular Element can cause a cascading outage. They need to set out how decision-makers will determine whether an Element can cause a cascading outage, not simply state that an Element that can cause a cascading outage cannot be excluded from the BES.
ISO/RTO Standards Review Committee		Predictive analysis of an accurate model is useful in determining the importance of various elements of the system.
Iberdrola USA		A facility is not BES if it is not necessary for reliable system operation, based on a TPL-type analysis similar to

Organization	Yes or No	Question 5a Comment
		NPCC Document A-10 “Classification of Bulk Power System Elements” - this type of analysis was rejected by FERC. Besides, at 115kV, calculated distribution factors for interfaces between areas (where higher voltage lines, e.g., at 230kV and 345kV, are included as part of the interface definition) tend to be small and inaccurate. The method used to calculate distribution factors is an approximate method which must be re-evaluated for small values of distribution factors.
Tri-State Generation and Transmission Association		This appears very similar to the “material impact” proposal that FERC has previously disallowed, so we recommend removing 2. If retained, remove 2.(b) because allowing the ERO to override the technical justification and analysis devalues such analysis to the point of it being meaningless.
Hydro One		We agree that entities should be given an option to conduct an analysis to demonstrate whether or not an element is necessary for the operation of the transmission network. We also support that NERC should specify the entire relevant criteria category to be listed under exclusion criteria 2 (a). However, we suggest that NERC should avoid prescribing numerical values but establish a range of value (or reference industry standard) that would be consistent with industry/ regional standards or practices without compromising the reliability of the transmission network.
MRO's NERC Standards Review Forum		NSRF proposes that this technical analysis criterion be replaced by criteria that are more closely tied to the Adequate Level of Reliability (ALR) characteristics. The following alternate criteria are offered as possible examples, “(1) the BES can be controlled to stay within acceptable limits following a fault on or loss of the Element; (2) the BES performs acceptably after credible contingences of the Element; (3) the Element does not limit the impact and scope of instability and cascading outages when they occur; (4) BES facilities are protected from unacceptable damage by operating the Element within its ratings; (5) the integrity of the BES can be restored promptly following a fault on or loss of the Element; and (6) the BES has the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times, taking into account scheduled or reasonably expected unscheduled outages of the Element. In addition, NSRF is not aware of any continent-wide appropriate BES performance measures for voltage dip, frequency excursion, voltage deviation, stability, etc. and NSRF speculates that different values are likely for different regions and system characteristics across the continent. As a result, NSRF believes it is not advisable to try to adopt unproven values without reasonable industry investigation and development.

Organization	Yes or No	Question 5a Comment
Bonneville Power Administration		BPA comments on the technical analysis are as follows:1. Who is responsible for running these studies (the BA, individual utilities....?) .2. The analysis and criteria need to be better defined for the technical analysis. 3. What did SDT mean by "having a distribution factor of TBD% for any other Element"? This should probably reference a specific PTDF for a path or source/sink group. 4. What contingencies are studied to show the elements meet the transient voltage dip, frequency excursion, etc. (i.e. are they 3 phase delayed cleared faults, single phase faults, etc.)? Furthermore, the exclusion criteria needs to be much more specific about how the study is to be conducted in general - i.e.: Regional Entities have established study guidelines and procedures to determine voltage and frequency criteria. Specifically, is it the intent that the element being proposed for exclusion be opened in the study and then the standard contingency list applied to the rest of the system? Presumably, if there is no difference in system performance with the element in or out, then it could be excluded. Alternatively, is it intended that the contingency to be tested is simply the loss of the element proposed for exclusion? 5. What elements and/or flow gates should be monitored for these analyses? 6. In "Other", the SDT should add "The limiting element for a flow-gate cannot be excluded from the BES". 7. How will the criteria be set? Will they follow current standards? (i.e. TPL-001)? The technical principles must identify what category(ies) of TPL studies must be run. BPA requests clarification on what the values for the threshold criteria and/or disturbances would be?
PacifiCorp		5a. Comments on approach: All of PacifiCorp's responses are based on a given interconnection and not on a continental basis. See comments on question 10. Using any technical criteria will allow many elements to be excluded from the BES regardless of the element's criticality to the interconnected system. Whatever technical criteria is established should only be applied to elements under 200 kV and any radial elements above 200 kV
ReliabilityFirst		to complicated and will only raise debate between FERC, NERC, the Regions and the Registered Entities
Western Electricity Coordinating Council		WECC agrees in concept that a technical analysis can be used and should be allowed to show that an element is not necessary for reliable operation. However, the technical analysis must be based on sound reasoning and a justification must be given as to why the analysis makes a showing that the element is not necessary for reliable operation. Furthermore, the technical principles must identify what category(ies) of TPL

Organization	Yes or No	Question 5a Comment
		studies must be run. Finally, the values used for the threshold criteria and/or disturbances must be more stringent than the applicable TPL criteria/disturbances. Otherwise the argument becomes circular because all BES elements must meet the TPL criteria, so by meeting them all elements could be excluded.
New York State Reliability Council		A single threshold value for performance based testing does not recognize differences in regional system characteristics. Therefore, regional approaches for at least generation exclusions should be used, like NPCC's A-10 criterion.
National Grid		We do not agree with all the criteria listed in point 2.a.iv. For example we believe that the term in 2.a.vi.6 “Steady-state Stability - positively damped” does not relate to the concept of steady-state stability. We believe an acceptable measure of steady-state stability would be an angle difference across the transmission line. That difference can vary depending on the line; however, a rule of thumb is typically 45 degrees which provides a 30% steady state stability margin. As mentioned previously, the exception process should be strictly limited to the procedures for application and approval and should not include substantive elements.
Muscatine Power and Water		Would like to propose that this technical analysis criterion be changed to criteria that are more closely tied to the Adequate Level of Reliability (ALR) characteristics. Would like to offer the following alternate criteria as possible examples, “(1) the BES can be controlled to stay within acceptable limits following a fault on or loss of the Element; (2) the BES performs acceptably subsequent to credible contingences of the Element; (3) the Element does not limit the impact and scope of instability and cascading outages once they occur; (4) BES Facilities are protected from undesirable damage by operating the Element within its ratings; (5) the reliability of the BES can be restored promptly subsequent to a fault on or loss of the Element; and (6) the BES has the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times, taking into account scheduled or reasonably expected unscheduled outages of the Element. Currently not aware of any continent-wide appropriate BES performance metrics for voltage dip, frequency excursion, voltage deviation, stability, etc. and would speculate that different values are likely for the different regions and system characteristics across the continent. Thus, it is not advisable to try to adopt unproven values without reasonable industry investigation and development.

Organization	Yes or No	Question 5a Comment
Blachly Lane Electric Cooperative Flathead Electric Cooperative, Inc United Electric Co-op Inc. Oregon Trail Electric Cooperative, Inc. Central Lincoln Salem Electric Grant County PUD No. 2 (Grant) for Snohomish County PUD Northwest Public Power Association (NWPPA) Big Bend Electric Cooperative, Inc. Kootenai Electric Cooperative		We agree conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with non-BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Snohomish Public Utility District has prepared a White Paper proposing a performance-based approach to support the technical determination whether Elements should be excluded from the BES, which we commend to the SDT for study. We also commend the work of the WECC BES Task Force and the WECC Technical Studies Subcommittee, both of which have devoted substantial time and resources to developing a workable and technically defensible process for excluding Elements classified as BES based upon their electrical characteristics. See WECC BES Task Force Proposal 6, App. A at 3-9 & App. B at pp. B-4 to B-7 (posted Feb. 18, 2011) (available at: http://www.wecc.biz/Standards/Development/BES/default.aspx). We recommend that the SDT modify its approach to the technical exclusion process to match the approach advocated in Snohomish's White Paper, which is based upon the approach recommended by the WECC BES Task Force.
South Carolina Electric and Gas		As written, most of this approach makes no sense. The words imply that if you have planned the system properly, you can exclude it from the BES! In TPL studies you make sure that voltage dips, frequency excursions, voltage deviations are acceptable, oscillations are damped, and no cascading outages occur. So if you meet the performance requirements of TPL studies, you can exclude the element from the BES. This does not seem to be what was intended.
Glacier Electric Cooperative		I strongly agree that there should be a way for elements to be excluded from the BES based on a technical analysis. However, the current approach only provides one technical avenue for exclusion and that is through a transmission planning study. Performing and analyzing such a study could be very, very difficult for a small entity to do. If this is the approach that NERC continues with, then I believe there needs to be some extra language outlining who is responsible for performing and analyzing these transmission planning studies. The question is should the RRO (WECC, etc.) be responsible for performing the study and determining through the technical criteria what elements are included and excluded in the BES, or should that resposiblity fall on

Organization	Yes or No	Question 5a Comment
		control area operators within an RRO, or should that responsibility fall on individual entities? I believe it should fall on either the RROs or the control area operators within the RROs. Perhaps an alternative approach could be to establish a few techincal checks that could be evaluated first before a transmission planning study is required. For example, a max fault MVA value could be established and if the available fault MVA at an element is less than the established value, then that element and could be excluded without having to go through a transmission planning study. If the available fault MVA at the element is above the established value, then the study would have to be done for determination.
Exelon		This item calls for the use of criteria in order to prove that a facility should be excluded the BES. First of all, the items 5b - 5e do indeed require extensive technical analysis which will be outside of the capabilities of many users of the BES. Furthermore, it is not clear who's criteria will be used? The user's? The Transmission Owner's? The Planning Authority's? This question of ownership needs to be resolved and in itself poses a problem for this process. If differing criteria levels are used across the continent, there remains the possibility that similarly-situated facilities in different Regions will not be treated consistently.
Consolidated Edison Co. of NY, Inc.		The technical analysis approach may have merit. However, we have a number of questions about how it would be implemented in practice. We are concerned that this method may allow an entity to exclude Elements simply because they are not the most limiting Element in a particular TPL analysis. What does "not being necessary for reliability operation" mean? Please define. The SDT should consider developing a Guidance Document to provide examples and insights to guide prospective filing entities. The TPL Reliability Standards already describe the full set of requirements for a reliable system. Why are added requirements necessary? Why would any such added criteria not conflict with the TPL Reliability Standards to the extent that they were either more or less restrictive?
ISO New England		The use of distribution factors is a significant concern. The term distribution factor is used a number of ways in the industry. Is this determined using the percentage pickup on the element in question following the loss of another element, or is this the percentage of a transfer that is picked up on the element in question, or a combination of both? Item 2.a.ii states that the TPL studies have to be run if the model is updated. The distribution factor is not required to be calculated as part of the TPLs and therefore will require additional analysis in all circumstances, not just when the model is updated.

Organization	Yes or No	Question 5a Comment
The United Illuminating Company		This is not very different from trying to demonstrate no adverse impact outide the local area.
Georgia System Operations Corporation		It would be helpful to specify which TPL Standard(s) the referenced studies are usually prescribed for.
Entergy Services		The entire approach seems overly complex and difficult to document.
Clark Public Utilities Central Electric Cooperative Clearwater Power Electric Cooperative Consumer's Power Inc. Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost Rive Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric		Clark agrees conceptually with the idea that two different paths to exclusion should be adopted, one relying upon readily identifiable characteristics that are ordinarily associated with local distribution and not BES transmission facilities, and one relying on technical analysis to determine whether or not an Element or group of Elements has a measurable impact on the threat of cascading outages, separation events, or instability on the interconnected bulk system. If technical analysis demonstrates that Elements create no material threat of such reliability events, they should properly be excluded from the BES. Clark supports the technical arguments and the White Paper presented by Snohomish County PUD in their comments. Clark recommends that the SDT modify its approach to the technical exclusion process to match the approach advocated in the White Paper, which is based upon the approach recommended by the WECC BES Task Force.

Organization	Yes or No	Question 5a Comment
Cooperative Pacific Northwest Generating Cooperative Consumer's Power Inc Benton Rural Electric Association Northern Wasco County PUD		
BGE		BGE believes that there is value in allowing for exclusions through a technical analysis path. Because multiple entities may perform "planning assessments" using different models, the phrase, "*the* most recent *applicable* planning assessment" should be clarified to avoid ambiguity as to which model(s) are acceptable. It may be useful to designate the models used in the Planning Authority analyses as acceptable.
Spyker		We agree that entities should be given an option to conduct an analysis to demonstrate if an element is necessary or not for the operation of transmission network. We also support that NERC should specify all the relevant criteria category to be listed as under 2 (a). However, we suggest that NERC should avoid prescribing numerical values but establish a range of value (or reference industry standard) that would be consistent with industry/ regional standards or practices without compromising the reliability of transmission network.
Long Island Power Authority		Exclusion under this criteria would require that the analysis be performed by the registered TP. Criteria identified is based on interconnection to neighboring utilities.
Orange and Rockland Utilities, Inc.		This approach is not necessary since NERC TPL Reliability Standards already addressed how to maintain a reliable electric system.
Pepco Holdings Inc		Generally agree that a specific technical analysis approach (power flow studies) showing no impact on BES is appropriate, but don't know how to define specific criteria on which to base decision.
Duke Energy		Duke Energy agrees with the approach of using a technical analysis based on transmission system modeling but the specific criteria do not need to be specified here - they should be consistent with the latest revision of

Organization	Yes or No	Question 5a Comment
		the TPL-001. R5 of TPL-001-2, Transmission System Planning Performance Requirements states that each Transmission Planner and Planning Coordinator shall have criteria for acceptable System steady state voltage limits, post-Contingency voltage deviations, and the transient voltage response for its System. The technical analysis required for exclusion of an Element from the BES should evaluate the loss of the Element against a more conservative set of criteria than that specified by the Transmission Planner and Planning Coordinator responsible for that Element. There are currently no continent-wide performance levels defined for these evaluations, and there is no technical basis for developing performance levels that would be applicable continent wide.
American Transmission Company, LLC		ATC proposes that this technical analysis criterion be replaced by criteria that are more closely tied to the Adequate Level of Reliability (ALR) characteristics. The following alternate criteria are offered as possible examples, "(1) the BES can be controlled to stay within acceptable limits following a fault on or loss of the Element; (2) the BES performs acceptably after credible contingences of the Element; (3) the Element does not limit the impact and scope of instability and cascading outages when they occur; (4) BES facilities are protected from unacceptable damage by operating the Element within its ratings; and (5) the BES has the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times, taking into account scheduled or reasonably expected unscheduled outages of the Element. In addition, ATC is not aware of any continent-wide appropriate BES performance measures for voltage dip, frequency excursion, voltage deviation, stability, etc. and ATC speculates that different values are likely for different regions and system characteristics across the continent. As a result, ATC believes it is not advisable to try to adopt unproven values without reasonable industry investigation and development.
Manitoba Hydro		Manitoba Hydro does not agree with an impact based approach to establishing BES elements as we believe it will result in regional differences in the application of the BES definition. In addition, the resources required to verify the assumptions made in the models used to substantiate a BES exception would be substantial with no benefit to reliability. As well, this section appears to be an incomplete process. As currently worded, if the model was not updated in step ii, then there is no requirement to run the TPL studies indicated in the remainder of step ii.
NESCOE		NESCOE supports the concept of allowing an additional path to justifying an exclusion from the BES.

Organization	Yes or No	Question 5a Comment
		NESCOE could support development of technical criteria such as those proposed, but does not have specific recommendations at this time. As stated earlier, any excluded elements must be connected to the BES using fully NERC compliant protection systems.
Independent Electricity System Operator		The technical analysis path for exclusions and inclusions allows for override of the listed "criterion". It is not clear what will be the basis for overriding, and what process will be followed? Is the "criterion" meant to be all of (1) to (7) in (a), or is it any one of them? This needs to be clarified. We agree that entities should be given an option to conduct an analysis to demonstrate if an element is or is not necessary for the operation of transmission network. However, consistent with our earlier comments, we suggest that the exception criteria avoid prescribing numerical values. A transmission element is not necessary for the reliable operation of an interconnected electric transmission system, if it can be removed without effecting bulk transfer capabilities. In our view, testing in accordance with the TPL standards should be the basis for establishing this. One way of demonstrating that an element is not required for the transfer of bulk power is to show that with the element out of service (and with all elements that received exemptions in the past also out of service) and at the required power transfers:1. Pre-contingency and post-contingency loadings on all BES elements are within applicable ratings.2. Pre-contingency and post-contingency voltages on the BES are within established ratings.3. All units on the BES remain synchronized following contingencies.4. All voltage declines on the BES are within established limits (if any limits were defined).5. All steady-state oscillations and oscillations following a contingency are positively damped.6. Transient voltage dips do not exceed established limits anywhere on the BES (if any limits were defined).7. Frequency excursions do not exceed established limits anywhere on the BES (if any limits were defined). Our view is that the exception criteria should NOT specify the voltage decline limits, allowable frequency excursion or the allowable transient voltage dip because every region will have different limits depending on the characteristics of their power system. This would be consistent with Requirement R5 of the recently balloted standard TPL-001-2, which requires each Transmission Planner and Planning Coordinator to have criteria for acceptable System steady state voltage limits, post-Contingency voltage deviations, and the transient voltage response for its System. Required power transfers are the transfers required to meet the "one day in ten year" loss of load expectation criteria. Further, exception criteria for generators must also be defined. A power system is typically planned to be able to service the load under multiple dispatch scenarios and, therefore, multiple generators disconnected from the transmission system will unlikely reduce the ability of the power system to supply the load. In fact, market forces typically determine whether or not a generator is connected. However, transmission lines are built to achieve specific transfer capabilities and, therefore, directly affect the power system's ability to meet the

Organization	Yes or No	Question 5a Comment
		electricity demand. Since, generators and transmission elements contribute to reliability in a very different ways, the criteria exempting generators should be different from the criteria exempting transmission elements.
MidAmerican Energy		The concept of using TPL analyses and normalized Transmission Distribution Factors makes basic sense as a way to determine what elements react to system transfers and what elements react primarily to distribution load.In general all facilities below 100 kV should be exlcuded by default as distribution according to the 2005 Federal Power Act. Transmission Distribution Factors tend to show low bulk power system transfers (less than 2%) based on their inherent high impedance when normalized. Normalizing the transmission impedance means diving the ohmic value by a base impedance which is dominated by a (kV^2) term. Per Unit Impedance = (transmission line ohms / base impedance) where base impedance = (kV^2 / MVA). Using a common MVA base value of 100 MVA, a base impedance at 69kV = 47.6 ohms versus at 161 kV = 259.2 or at 345 kV = 1190.2 ohms. The rapid increase of the denominator as kV goes higher insures that a 69 kV system is high impedance compared to any high kV facilities and therefore nearly insure the 69 kV system is local in nature and reacts primarily to load. Therefore it is distribution. This all supports the conclusion that all facilites below 100 kV should be classified as distribution according to the 2005 FPA and exempted by default. Facilities below 100 kV could be brought into scope if TPL analyses show instability, uncontrolled separation, or cascading as defined in the 2005 FPA.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential exclusion from the BES. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		
PPL Supply		See comments in Questions 9 and 10
Response: See response to Q9 & Q10.		
Tacoma Power		Tacoma Power generally agrees with approach used on the technical analysis path for exclusions.

Organization	Yes or No	Question 5a Comment
Idaho Falls Power		We generally agree with having two paths towards exclusion.
New York Power Authority		In general, NYPA agrees with this approach except as noted below.
Springfield Utility Board		In general, SUB supports a technical analysis approach as a secondary/ alternative option for qualifying to apply for BES Element exclusions.
Consumers Energy Company		Generally, this approach seems sound.
Oncor Electric Delivery		Oncor Electric Delivery agrees with the proposed language that describes the exclusion criteria based technical analysis.

Response: The SDT appreciates your support. However, based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

5b. Comments on distribution factor measurement:

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 5b Comment
Northeast Power Coordinating Council		2.a. The term "Planning Assessment" is not a defined term in the NERC Glossary of Terms Used and should not be capitalized, or it should be defined. 2.a.iv.1. Distribution Factor - This is a judgment of what feeder power flow participation level is material and what is non-material. While TDF and OTDF analysis is an indication of contributions from the element, the SDT should avoid setting values and instead describe the intended performance outcome from a distribution factor measurement. Note that ultimately NERC as an ERO or relevant regulatory authority will approve the application and can assess the performance outcome in their decision making presented in an entity's application.
SERC Planning Standards Subcommittee Tennessee Valley Authority Southern Company South Carolina Electric and Gas Georgia Transmission Corporation		This is the only part of this technical analysis that may make sense. If the loss of any element of the BES results in a distribution factor of less than X% on the element being considered for exclusion, then exclude it. We suggest a value of 3% for this, since 3% is the threshold typically used in transfer studies.
SPP Standards Review Group		There are situations where setting a minimum TDF will not work due to the nature of the TDF. For example, a radial line connected to a bus with two networked lines. The radial line serves only load and would normally

Organization	Yes or No	Question 5b Comment
		be excluded from the BES. However, if we use the TDF as a factor the radial line would be included in the BES since the TDFs would be high.
Edison Electric Institute		In general, we do not agree this is a relevant factor for consideration and should be excluded.
Florida Municipal Power Agency		The first proposed criterion, "Having a distribution factor of 5% for any other Element," should instead be "Having a distribution factor of 5% for Interchange Transactions or BES generator to load curtailable in Transmission Loading Relief stages one through five."
Transmission Access Policy Study Group		The first proposed criterion, "Having a distribution factor of 5% for any other Element," should instead be "Having a distribution factor of 5% for curtailable Interchange Transactions or BES generator to load identified in Transmission Loading Relief stages one through five." An Element with a higher distribution factor only on a non-BES Element should not be considered part of the BES on that account.
ACES	Yes	The IDC uses 5% as a distribution factor cutoff so this might be a reasonable value. "Transmission Transfer Capability" which was published by NERC in 1995 recommends using 3% on page 18 for transfer capability studies.
ISO/RTO Standards Review Committee		Distribution factors by themselves are not sufficient evidence that elements are not important to the system. Multiple elements may have significant distribution factors related to various portions of the system, but that doesn't necessarily mean that loss of those elements will result in a reliability risk to the system.
Tri-State Generation and Transmission Association		If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.
Hydro One		Distribution Factor is an estimate of what feeder power flow participation level material is and what non-material is.While TDF and OTDF analysis is an indication of contributions from the element, hence the SDT should avoid setting values and instead describe the intended performance outcome from a distribution factor measurement. Note that ultimately NERC as an ERO or relevant regulatory authority will approve the application and can assess the performance outcome in their decision making presented in an entity's application.
MRO's NERC Standards Review		NSRF proposes replacing this factor with those cited above because a distribution factor measurement indicates how much system changes affect the element, not how much a fault or loss of the element would

Organization	Yes or No	Question 5b Comment
Forum		compromise the ALR of the BES. There is no clear correlation between this factor and any of the six characteristics of Adequate Level of Reliability (ALR) of the BES.
PacifiCorp		5b.Comments on distribution factor measurement: All of PacifiCorp's responses are based on a given interconnection and not on a continental basis. See comments on question 10. Distribution factor has little to no bearing on entities in the Western Interconnection.
ReliabilityFirst		any impact is an impact, even generation is re-dispatched at 0% in some cases.
New York Power Authority		NYPA does not agree with this measurement. Distribution factors are dependent on the number of radial transmission lines that connect a single source to a load. For example, if two lines connect a single source to a load, and one line trips, the distribution factor provides a 100% increase in flow on the remaining line. If three lines connect the source to the load, and one line trips, the distribution factor for the remaining lines would be 50%. The SDT should avoid setting values and instead describe the intended performance outcome from a distribution factor measurement. Note that ultimately NERC as an ERO or relevant regulatory authority will approve the application and can assess the performance outcome in their decision making presented in an entity's application.
National Grid		We don't think this measurement is necessarily relevant in determining whether an element is necessary to system reliability. This criterion can be removed from the list. The exception process should be strictly limited to the procedures for application and approval and should not include substantive elements.
Muscatine Power and Water		Suggest replacing this aspect with those cited above because a distribution factor measurement indicates how much system changes influence the element, not how much a loss of the element would compromise the ALR of the BES. Currently unable to establish a clear correlation between this factor and any of the six characteristics of Adequate Level of Reliability (ALR) of the BES.
Blachly Lane Electric Cooperative Flathead Electric Cooperative, Inc		The use of distribution factors, such as Power Transfer Distribution Factors ("PTDF") and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the

Organization	Yes or No	Question 5b Comment
Central Electric Cooperative Clearwater Power Electric Cooperative Consumer's Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Pacific Northwest Generating Cooperative Consumer's Power Inc. Central Lincoln for Snohomish County PUD		Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection. Based on the significant differences between the four major interconnections in North America, we suggest that a detailed technical exemption process be allowed on an interconnections wide basis. The Western Interconnection is a “hub and spoke system” where loads are very remote from large generation plants, with margins that are based on stability limits. By contrast, the Eastern Interconnection is a tightly meshed system with loads and generation in close proximity, often creating margins that are based on thermal limitations. These differences manifest themselves in a variety of ways for various operations. For example, the Western Interconnection uses a rated-paths methodology while the Eastern Interconnection uses transmission load relief mechanisms. Consistent with FERC order 743-A, we support exemption criteria for individual frequency independent regions, or interconnections.

Organization	Yes or No	Question 5b Comment
Consolidated Edison Co. of NY, Inc.		2.a. The term “Planning Assessment” is not a defined term in the NERC Glossary of Terms Used and should not be capitalized, or alternatively it should be defined. 2.a.iv.1. Distribution Factor - The issue comes down to a judgment call concerning what feeder power flow participation level is material and what is non-material. In New York, the NYISO has traditionally used a 1% power transfer distribution factor (power TDF) cut-off. Feeders showing less than a 1% power transfer in a study are not materially participating in transmission.
ISO New England		The use of distribution factors is a significant concern. The term distribution factor is used a number of ways in the industry. Is this determined using the percentage pickup on the element in question following the loss of another element, or is this the percentage of a transfer that is picked up on the element in question, or a combination of both? Item 2.a.ii states that the TPL studies have to be run if the model is updated. The distribution factor is not required to be calculated as part of the TPLs and therefore will require additional analysis in all circumstances, not just when the model is updated.
The United Illuminating Company		Distribution factor requires a definition.
Clark Public Utilities Benton Rural Electric Association Northern Wasco County PUD United Electric Co-op Inc. Oregon Trail Electric Cooperative, Inc. Salem Electric Grant County PUD No. 2 (Grant) Northwest Public Power Association (NWPPA) Big Bend Electric Cooperative, Inc.		The use of distribution factors, such as Power Transfer Distribution Factors (“PTDF”) and Outage Transfer Distribution Factor ("OTDF") provide insight into the relative impedance of neighboring systems. However in the Western Interconnection it has never been a definitive indicator of whether a system fault with delayed clearing would impact a neighboring electric system. While we understand that many entities from the Eastern Interconnection support the use of such factors, we believe the approach is unlikely to work in the Western Interconnection.

Organization	Yes or No	Question 5b Comment
Kootenai Electric Cooperative		
BGE		BGE requests that it be made clear that the 2(a) iv.1 criteria refers to the of the distribution factor for the loss of any other facility on the subject Element, whereas criteria 2 through 7 refer to the performance following the loss of the subject Element.
Spyker		The SDT should avoid setting values and instead describe the intended performance outcomes from the measurement
Consumers Energy Company		This criterion raises concerns. If based on transfer distribution factor it may have some merit, depending on the TBD value. However, the criteria should not be based on outage transfer distribution factor, as Draft 1 implies, since loss of certain local distribution facilities can result in local distribution load being transferred to other local distribution facilities. Distribution facilities should not be prevented from exclusion from BES.
Duke Energy		This should be removed - there is no correlation between distribution factor and whether or not an element is necessary for reliable operation of the interconnected transmission network.
Hydro-Quebec TransEnergie		Comments on distribution factor measurement: The choice of the maximum distribution factor could be difficult to establish. For this point, the comparison of the distribution factor prior and after the events could be considered.
American Transmission Company, LLC		ATC proposes replacing this factor with those cited above in 5a because a distribution factor measurement indicates how much system changes affect the element, not how much a fault or loss of the element would compromise the ALR of the BES. There is no clear correlation between this factor and any of the six characteristics of Adequate Level of Reliability (ALR) of the BES.
Independent Electricity System Operator		We do not agree with setting values for this criterion. This should be left to the relevant Transmission Planner and Planning Coordinator. See our comments in response to Q5a.
Tacoma Power		Tacoma Power generally agrees with the distribution factor measurement in the technical analysis path for exclusions. We suggest adopting a distribution factor not exceeding 30% on an adjacent system.
MidAmerican Energy		The Distribution Factor measurement is acceptable and should exclude facilities that show a low distribution factor for bulk power system transfers. An arbitrary low value could be those facilities that show less than a 2% distribution factor.

Organization	Yes or No	Question 5b Comment
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential exclusion from the BES. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		
Iberdrola USA		See 5a.
Response: See response to Q5a.		

5c. Comments on allowable transient voltage dip measurement:

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 5c Comment
Northeast Power Coordinating Council		Voltage dip is specified in terms of duration and retained voltage, usually expressed in percentage. Suggest that either the SDT avoid using voltage dip as a criteria, or clearly specify that the transient voltage not exceed the X limit of Y cycles (time). References to relevant industry standards such as IEEE standard 1346-1998 should be made.
SERC Planning Standards Subcommittee Tennessee Valley Authority Southern Company South Carolina Electric and Gas Georgia Transmission Corporation		As stated above, it does not make sense to use this category.
Edison Electric Institute		Presently no regional standards exist for allowable transient voltage dip beyond WECC. It is also doubtful a useful standard could be developed for all regions or interconnections.
Florida Municipal Power Agency Transmission Access Policy		The second criterion, “Allowable transient voltage dip - criteria TBD,” should specify where the transient voltage dip is, i.e. “Allowable transient voltage dip on another BES Element for events on the Element that is a candidate of the Exception Request-criteria TBD.”

Organization	Yes or No	Question 5c Comment
Study Group		
ISO/RTO Standards Review Committee		These “transient” and “voltage deviation” analyses are highly dependent upon sound and accurate dynamic system models. Much has been said in recent days about the suspicions that many such models are not truly accurate enough to predict system response that is close to what actually occurs.
Tri-State Generation and Transmission Association		If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.
Hydro One		Voltage dip is specified in terms of duration and retained voltage, usually expressed in percentage. We advise against prescribing limits by the SDT, and instead suggest that either the SDT avoid relating voltage dip altogether or clearly specify that the transient voltage not exceed the X limit of Y cycles (time). We suggest SDT to make references to relevant industry standard such as IEEE standard 1346-1998.For example, a document effective in 2007 titled Ontario Resource and Transmission Assessment Criteria Issue 5.0 mentions that: “The minimum post-fault positive sequence voltage sag must remain above 70% of nominal voltage and must not remain below 80% of nominal voltage for more than 250 milliseconds within 10 seconds following a fault. Specific locations or grandfathered agreements may stipulate minimum post-fault positive sequence voltage sag criteria higher than 80%. IEEE standard 1346-1998 supports these limits.”
MRO's NERC Standards Review Forum		NSRF proposes replacing this factor with those cited above because there is presently no established, continent-wide, acceptable transient voltage dip performance level for evaluating whether a fault or loss of the element would not compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
ReliabilityFirst		any impact is an impact, planning criteria between 3 & 5 % is often used and not allowed, why inject this into what define the BES. the criteria is applied it should be included
New York Power Authority		Suggest that either the SDT avoid using voltage dip as a criteria, or clearly specify that the transient voltage not exceed the X limit of Y cycles (time). References to relevant industry standards such as IEEE standard 1346-1998 should be made.
Muscatine Power and Water		Suggest replacing this factor with those cited above because there is presently no established, continent-wide, acceptable transient voltage dip performance level for evaluating whether a fault or loss of the element

Organization	Yes or No	Question 5c Comment
		would not compromise the ALR of the BES. In addition, the appropriate performance level for this factor may be different in other areas and system characteristics across the continent.
Blachly Lane Electric Cooperative Flathead Electric Cooperative, Inc. Clark Public Utilities Central Electric Cooperative Clearwater Power Electric Cooperative Consumer's Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric		Specific transient voltage dip thresholds are proposed on page 15 of Snohomish's White Paper. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should produce no more than a 20% voltage drop for no more than 20 cycles in a Category B contingency and no more than a 20% drop for 40 cycles in a Category C contingency. Technical justification for these thresholds is provided on pages 12-16 of Snohomish's White Paper.

Organization	Yes or No	Question 5c Comment
Cooperative Pacific Northwest Generating Cooperative Consumer's Power Inc Benton Rural Electric Association Northern Wasco County PUD United Electric Co-op Inc Oregon Trail Electric Cooperative, Inc. Salem Electric Grant County PUD No. 2 (Grant) for Snohomish County PUD Northwest Public Power Association (NWPPA) Big Bend Electric Cooperative, Inc. Kootenai Electric Cooperative		
ISO New England		Is the requirement to evaluate the voltage dip on the element or is the test to evaluate the voltage dip on the BES due to a contingency on the element? Under the draft TPL standards, this will have to be tested and investigated anyway, so it is unclear as to what is being added or evaluated here.
The United Illuminating Company		Measured where on the BES?
BGE		For PJM members, this figure is set at 5%. BGE suggests a lower figure such as 2-3%.
Spyker		We suggest SDT to make references to relevant industry standard such as IEEE standards

Organization	Yes or No	Question 5c Comment
Consumers Energy Company		The criterion related to Transient Voltage Deviations should be removed. This criterion, regardless of value TBD, would be impossible to achieve, and would render this process meaningless.A fault on non-BES elements will cause significant transient voltage dips on nearby BES elements until the fault is cleared. If the non-BES element is at the same voltage level, the dip will result in near-zero voltages; if at different voltage levels, the dip magnitude will be determined by the ratio of the system ThÃ©vinen impedance at the BES to the intervening transformer impedance - if the system ThÃ©vinen impedance is 2% and the transformer impedance is 18%, the voltage on the BES will dip to 10%.
Central Lincoln		Fault induced transient voltage measurements will always be low if taken at a point electrically close to the fault during the fault. The question should be about voltage recovery following the clearing of the fault as in the TPL standards. The Technical Principles do not make this distinction, and the resulting effect would be the exclusion of elements that should be included and the inclusion of elements that should be excluded.
Duke Energy		See general comment on approach.
Hydro-Quebec TransEnergie		Comments on allowable transient voltage dip measurement: The TPL-001 to 004 do not specify any reference measurement for stability (such as Allowable transient voltage, frequency excursion, voltage deviation, etc.). Instead, it request that the system shall remain stable, without cascading or uncontrolled islanding. Also, it is requested that the Planning Entities shall define and document the criteria or methodology used in the analysis to identify System instability for conditions such as Cascading, voltage instability, or uncontrolled islanding. This is exactly what should be requested in the analysis and demonstration of Element seeking exclusion from BES. The analysis and burden of proof should be left to the Entity as is done in the TPL, considering that there are no common values with the different interconnection.
American Transmission Company, LLC		ATC proposes replacing this factor with those cited above in 5a because there is presently no established, continent-wide, acceptable transient voltage dip performance level for evaluating whether a fault or loss of the element would not compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
Independent Electricity System Operator		We do not agree with setting values for this criterion. This should be left to the relevant Transmission Planner and Planning Coordinator. See our comments in response to Q5a.
Tacoma Power		Tacoma Power generally agrees with allowable transient voltage dip measurement in the technical analysis

Organization	Yes or No	Question 5c Comment
		path for exclusions. We suggest adopting an allowable transient voltage dip not exceeding 20% for more than 20 cycles on an adjacent system's bus.
MidAmerican Energy		There isn't a nation wide transient voltage dip measurement.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential exclusion from the BES. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		
Iberdrola USA		See 5a.
Response: See response to Q5a.		

5d. Comments on allowable transient frequency response:

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 5d Comment
ISO/RTO Standards Review Committee		See 5c
Response: see response to 5c.		
Iberdrola USA		See 5a.
Response: see response to 5a.		
Northeast Power Coordinating Council		Suggest that for assigning a value for transient frequency response, entities conduct and submit to the SDT their quantitative and qualitative technical assessment based on the conditions of the element(s) under the application. Do not establish a fixed binary value within the exception criteria but rather focus on the performance outcome. See 5 (a) above.
SERC Planning Standards Subcommittee Tennessee Valley Authority Southern Company South Carolina Electric and Gas		As stated above, it does not make sense to use this category.

Organization	Yes or No	Question 5d Comment
Georgia Transmission Corporation		
Edison Electric Institute		Presently no regional standards exist for allowable transient frequency response beyond WECC. It is also doubtful a useful standard could be developed for all regions or interconnections.
Florida Municipal Power Agency Transmission Access Policy Study Group		The third proposed criterion, "Allowable transient frequency excursion - criteria TBD," should be rephrased like the second: "Allowable transient frequency excursion on another BES Element for events on the Element that is a candidate of the Exception Request - criteria TBD."
Tri-State Generation and Transmission Association		If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.
Hydro One		We suggest that, in terms of assigning a value for transient frequency response, entities conduct and submit to the SDT their quantitative and qualitative technical assessment based on the conditions of the element(s) under the application. We suggest not to establish a fixed binary value within the exception criteria but rather focus on the performance outcome. See 5 (a)
MRO's NERC Standards Review Forum		NSRF proposes replacing this factor with those cited above because there are established, continent-wide transient frequency performance levels in the PRC-006-1 standard, but the elements that are applicable to the standard do not have to be BES elements and the transient frequency response requirements are not intended to be a criterion for BES classification.
ReliabilityFirst		any impact is an impact, planning criteria between 5 & 10 % is often used and restricted to guard against these changes, why inject this into what define the BES. the criteria is applied it should be included
New York Power Authority		Suggest that for assigning a value for transient frequency response, entities conduct and submit to the SDT their quantitative and qualitative technical assessment based on the conditions of the element(s) under the application. Do not establish a fixed binary value within the exception criteria but rather focus on the performance outcome.

Organization	Yes or No	Question 5d Comment
Muscatine Power and Water		Suggest replacing this factor with those cited above. There are recognized, continent-wide transient frequency performance levels in the PRC-006-1 standard; however, the elements that are applicable to this standard are not necessarily BES elements and the transient frequency response requirements are not intended to be a criterion for BES classification.
Blachly Lane Electric Cooperative Flathead Electric Cooperative, Inc Clark Public Utilities Central Electric Cooperative Clearwater Power Electric Cooperative Consumer's Power Inc. Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative		Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided on pages 12-16 of the White Paper.

Organization	Yes or No	Question 5d Comment
West Oregon Electric Cooperative Pacific Northwest Generating Cooperative Consumer's Power Inc. Benton Rural Electric Association Northern Wasco County PUD United Electric Co-op Inc Oregon Trail Electric Cooperative, Inc. Central Lincoln Salem Electric Grant County PUD No. 2 (Grant) for Snohomish County PUD Northwest Public Power Association (NWPPA) Big Bend Electric Cooperative, Inc Kootenai Electric Cooperative		
Spyker		The SDT should avoid setting values and instead describe the intended performance outcomes from the measurement
Consumers Energy Company		The criterion relative to frequency response should be removed. Frequency deviations can result from large changes in distribution load. Distribution facilities should not be prevented from being excluded from BES.
Duke Energy		See general comment on approach.

Organization	Yes or No	Question 5d Comment
American Transmission Company, LLC		ATC proposes replacing this factor with those cited above in 5a because there are established, continent-wide transient frequency performance levels in the PRC-006-1 standard, but the elements that are applicable to the standard do not have to be BES elements and the transient frequency response requirements are not intended to be a criterion for BES classification.
Independent Electricity System Operator		We do not agree with setting values for this criterion. This should be left to the relevant Transmission Planner and Planning Coordinator. See our comments in response to Q5a.
Tacoma Power		Tacoma Power generally agrees with the allowable transient frequency response in the technical analysis path for exclusions. We suggest adopting an allowable transient frequency response of not below 59.6 Hz for up to 6 cycles on an adjacent system's bus.
MidAmerican Energy		There isn't a nation wide transient frequency response

Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential exclusion from the BES.. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

5e. Comments on voltage deviation measurement:

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 5e Comment
ISO/RTO Standards Review Committee		See 5c
Response: See response to 5c.		
Iberdrola USA		See 5a.
Response: See response to 5a.		
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Electric Cooperative Consumer's Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative		Please see our response to Question 5d.

Organization	Yes or No	Question 5e Comment
Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Pacific Northwest Generating Cooperative Consumer's Power Inc Benton Rural Electric Association United Electric Co-op Inc Oregon Trail Electric Cooperative, Inc Central Lincoln Salem Electric Grant County PUD No. 2 (Grant) for Snohomish County PUD Northwest Public Power Association (NWPPA)		

Organization	Yes or No	Question 5e Comment
Big Bend Electric Cooperative, Inc. Kootenai Electric Cooperative		
Response: See response to 5d.		
Clark Public Utilities		See Clark's comments on 5c and 5d.
Response: See responses to 5c and 5d.		
Northeast Power Coordinating Council Hydro One		Voltage deviation is generally expressed as a percentage, between the voltage at a given instant at a point in the system. Do not establish a fixed binary value within the exception criteria but rather focus on the performance outcome. Adequate voltage performance does not guarantee system voltage stability. Steady state stability is the ability of the grid to remain in synchronism during relatively slow or normal load or generation changes, and to damp out oscillations caused by such changes. The requirement should suggest that following checks are carried out to ensure system voltage stability for both the pre-contingency period and the steady state post-contingency period: o Properly converged pre- and post-contingency power flows are to be obtained with the critical parameter increased up to 10% with typical generation as applicable; o All of the properly converged cases obtained must represent stable operating points. This is to be determined for each case by carrying out P-V analysis at all critical buses to verify that for each bus the operating point demonstrates acceptable margin on the power transfer; and o The damping factor must be acceptable (the real part of the eigen values of the reduced Jacobian matrix are positive).
SERC Planning Standards Subcommittee Tennessee Valley Authority Southern Company South Carolina Electric and Gas Georgia Transmission		As stated above, it does not make sense to use this category.

Organization	Yes or No	Question 5e Comment
Corporation		
Edison Electric Institute		Presently no regional standards exist for allowable voltage deviation beyond WECC. It is also doubtful a useful standard could be developed for all regions or interconnections.
Florida Municipal Power Agency Transmission Access Policy Study Group		The fourth proposed criterion should be revised in the same way as the second and third: "Voltage deviation on another BES Element for events on the Element that is a candidate of the Exception Request - criteria TBD."The fifth proposed criterion should be similarly revised: "Transient Stability on another BES Element for events on the Element that is a candidate of the Exception Request - positively damped."
Tri-State Generation and Transmission Association		If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.
MRO's NERC Standards Review Forum		NSRF proposes replacing this factor with those cited above because there is presently no established, continent-wide, acceptable (steady state) voltage deviation performance level for evaluating whether a fault or loss of the element would not compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
ReliabilityFirst		any impact is an impact, planning criteria is often used and restricted to guard against these changes, why inject this into what define the BES. If the criteria is applied to the facility as a BES element it should be included
New York Power Authority		Voltage deviation is generally expressed as a percentage, between the voltage at a given instant at a point in the system. Do not establish a fixed binary value within the exception criteria but rather focus on the performance outcome.
Muscatine Power and Water		Requesting the STD replace this factor with those cited above. At this time there is no established, continent-wide, acceptable (steady state) voltage deviation performance level for evaluating whether a fault or loss of the element would not compromise the ALR of the BES. Moreover, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
Consolidated Edison Co. of NY,		The NYISO uses a 0.95 to 1.05 p.u. as the acceptable range for post-transient system conditions.

Organization	Yes or No	Question 5e Comment
Inc.		
ISO New England		Is the requirement to evaluate the voltage dip on the element or is the test to evaluate the voltage dip on the BES due to a contingency on the element? Under the draft TPL standards, this will have to be tested and investigated anyway, so it is unclear as to what is being added or evaluated here.
The United Illuminating Company		Measured where on BES?
BGE		BGE believe the loss of the facility in question should cause only a small voltage deviation to the BES (on the order of 1%).
Spyker		The SDT should avoid setting values and instead describe the intended performance outcomes from the measurement
Northern Wasco County PUD		Page 15 of Snohomish's White Paper also sets forth recommended thresholds for transient frequency response. For example, we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more. Technical justification for these thresholds is provided at pages 12-16 of the White Paper.
Flathead Electric Cooperative, Inc.		we propose that, if an Element is to be excluded from the BES, removal of that Element should not cause any load bus to drop below 59.6 Hz for 6 cycles or more.
Consumers Energy Company		This criterion may be reasonable, depending on the TBD value. The TBD value may need to vary for different voltage levels or system configurations. The criteriona needs to recognize that loss of multiple capacitors at the distribution level could result in significant voltage deviation at the BES and this must not prevent distribution facilities from being excluded from BES.
Duke Energy		See general comment on approach.
American Transmission Company, LLC		ATC proposes replacing this factor with those cited above in 5a because there is presently no established, continent-wide, acceptable (steady state) voltage deviation performance level for evaluating whether a fault or loss of the element would not compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.

Organization	Yes or No	Question 5e Comment
Independent Electricity System Operator		We do not agree with setting values for this criterion. This should be left to the relevant Transmission Planner and Planning Coordinator. See our comments in response to Q5a. We suggest that the exception criteria could include the following checks to be carried out in the course of the TPL analysis referred to above to ensure system voltage stability for both the pre-contingency period and the steady state post-contingency period: o Properly converged pre- and post-contingency power flows are to be obtained with the critical parameter increased up to 10% with typical generation as applicable; o All of the properly converged cases obtained must represent stable operating points. This is to be determined for each case by carrying out P-V analysis at all critical buses to verify that for each bus the operating point demonstrates acceptable margin on the power transfer as shown in the following section; and o The damping factor must be acceptable (the real part of the eigen values of the reduced Jacobian matrix are positive)."
Tacoma Power		Tacoma Power generally agrees with the voltage deviation measurement in the technical analysis path for exclusions. We suggest adopting a voltage deviation not exceeding 10% on an adjacent system's bus.
MidAmerican Energy		Determining a nation wide voltage deviation would be difficult.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential exclusion from the BES. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		

6. Exclusions – Do you have other methods that may be appropriate for proving an exclusion claim? Or, other variables/measurements that may be added to the requirements already shown in the posted Technical Principles for Demonstrating BES Exceptions? If so, please provide your comments here with technical rationale for why they should be considered.

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.

Organization	Yes or No	Question 6 Comment
NERC Staff Technical Review	No	
Edison Electric Institute	No	None beyond what was offered under question 5
Iberdrola USA	No	
Tri-State Generation and Transmission Association	No	
ReliabilityFirst	No	
Idaho Falls Power	No	No comments
New York Power Authority	No	

Organization	Yes or No	Question 6 Comment
Blachly Lane Electric Cooperative	No	
Clark Public Utilities	No	
Central Electric Cooperative	No	
Clearwater Power Electric Cooperative	No	
Consumer's Power Inc.	No	
Coos-Curry Electric Cooperative	No	
Douglas Electric Cooperative	No	
Fall River Electric Cooperative	No	
Lane Electric Cooperative	No	
Lincoln Electric Cooperative	No	
Lost River Electric Cooperative	No	
Northern Lights Electric Cooperative	No	
Okanogan Electric Cooperative	No	
Raft River Rural Electric Cooperative	No	
Salmon River Electric Cooperative	No	

Organization	Yes or No	Question 6 Comment
Umatilla Electric Cooperative	No	
West Oregon Electric Cooperative	No	
Pacific Northwest Generating Cooperative	No	
Long Island Power Authority	No	
American Electric Power	No	
PNGC Power	No	
Consumer's Power Inc.	No	
BGE	No	No comment.
Pepco Holdings Inc	No	
Northern Wasco County PUD	No	
United Electric Co-op Inc.	No	
Oregon Trail Electric Cooperative, Inc.	No	
Central Lincoln	No	
Oncor Electric Delivery	No	
Salem Electric	No	

Organization	Yes or No	Question 6 Comment
Duke Energy	No	
Grant County PUD No. 2 (Grant)	No	No comments
Northwest Public Power Association (NWPPA)	No	None
Big Bend Electric Cooperative, Inc.	No	
Manitoba Hydro	No	
Independent Electricity System Operator	No	
Harney Electric Cooperative, Inc.	No	
Kootenai Electric Cooperative	No	
Tacoma Power	No	Tacoma Power is not suggesting any other methods at this time.
ISO New England	No	
Southern Company	Yes	
Response: Thank you for your response.		
Flathead Electric Cooperative, Inc. for Snohomish County PUD	No	supports the exemption of generation interconnected to local distribution networks if the generation is less than 300 MW capacity and where the power generated is consumed within the LDN and rarely flows out of the LDN consistent with the section III.c.4 [Exclusion] of the NERC Statement of Compliance Registry Criteria as well as the Load modifiers used in the Eastern Interconnection. "Load Modifiers" (small generators that only affect load at the distribution level).”
Response: The SDT has responded to comments on the BES definition in the Consideration of Comments form for the BES definition posting.		

Organization	Yes or No	Question 6 Comment
The United Illuminating Company	No	Procees is complicated and fraught with interpretations.
Bonneville Power Administration	No	BPA emphasizes that exclusion criteria and analysis should be based on normal operations. An exclusion should not be unavailable based on temporary system configuration such as load service by a different transmission segment temporarily used to mitigate system operations due to planned maintenance outages, i.e. a system that is operated radially over 90% of the time and closed for maintenance outages for safety and/or reliability purposes, etc. BPA recommends that the SDT consider not only the single-phase faults, also the effect of more severe events such as two- or three-phase faults, with delayed clearing and evaluate the necessity of the element in those cases.
ISO/RTO Standards Review Committee		Very small elements may be candidates for exclusion because such a small loss cannot cause reliability risk. An exception to this statement may be that, though small, the element is important to the service of a critical load.
SERC Planning Standards Subcommittee Tennessee Valley Authority South Carolina Electric and Gas Georgia Transmission Corporation Entergy Services	Yes	Revise second paragraph to read “Due to the importance of designated Blackstart Resources and their Cranking Paths to restore efforts, no exceptions will be allowed for those items that are included in a system restoration plan.”Technical rationale: Multiple Blackstart Resources and Cranking Paths are frequently available but are not included in a system restoration plan. System restoration plans describe the Blackstart resources and cranking paths thar are deemed to be necessary for system restoration. Section “Exception Criteria - Exclusions”:Add 1.e. “Generation that is inoperable and not planned to be placed back into service but not yet officially decommissioned.”Technical rationale: These facilities are not relied on to insure the reliability of the BES.
Florida Municipal Power Agency Transmission Access Policy Study Group	Yes	TAPS proposes a simpler set of exclusion exception criteria:1. Having a distribution factor of 5% for curtailable Interchange Transactions or BES generator - load identified in Transmission Loading Relief stages one through five, and 2. Category B and C contingencies on the Element that is the subject of the Exception Request meet the TPL-002 criteria for other BES Elements. (With the new TPL-001-3 standard recently approved by ballot, Category P0 through P7 contingencies on the Element that is subject of the Exception Request meets the criteria of P0 through P3 for other BES Elements) 3. The Element that is the subject of the Exception Request is not: (1) part of an IROL, (ii) part of a blackstart or cranking path used in a TOP’s restoration plan, and (iii) is not used in NUC-001 to provide service to a

Organization	Yes or No	Question 6 Comment
		nuclear plant.TAPS believes these three criteria meet the intent of all of the criteria presented by the SDT.
Hydro One	Yes	Technical Analysis must fundamentally use NERC - TPL methodology and testing requirements. We believe that an element may “not be necessary for the operation of the interconnected transmission system” if the remaining system can be operated without the element(s) for over 30 days and during peak load conditions. This assumption considers that loss of element(s) may result in outage to the connected load or generation during this period but will not have any adverse impact on the operation of the interconnected transmission network. Following are technical assessment categories that entities could be required when filing for exception:1.Power flow oPrimarily unidirectional (less than 20% of min load)2.TPL Assessment oLoad Flows Analysis oThermal and Voltage Stability oTransient Stability3.TDF and OTDF assessment For entities filing an exception:[Step 1]Entities should undertake relevant and detailed technical assessment/analysis and describe their findings under each of the technical categories. Finally, the findings and conclusions should be listed in the form of maximum 6 bullets. [Step 2]Findings and conclusions from each of the technical categories should be presented in a spreadsheet including the categories that may not be relevant to the element(s). If a category is not relevant, it should be explained why. [Step 3]The final conclusion should be presented by taking the overall assessment in Step 2 by assessing contributions of each item and demonstrating that the element(s) is or is not necessary for the operation of interconnected transmission network. We suggest the above method and request entities to complete the table below, as this will allow entities to present their assessment of the element(s) that are under the consideration of exception. Measured Value========== Load || Critical Load Affected? [yes][No]---------- oRadial oLocal supply, e.g. distribution in nature oLarge load center, critical load, national security Generation Characteristics || Critical Load Affected? [yes][No]---------- oLocal load modifier, peak shaver oBehind meter or industrial load displacement oMust Run

Organization	Yes or No	Question 6 Comment
		oFlow contribution outside of the elements under exception Cascading Outage || Critical Load Affected? [yes][No]---------- Measured Value ==========Max Dip [Voltage] Applicable Industry Practice (IEEE/CSA,Market Rules,etc.)Acceptable Level [in cycles] Assessment Results [in cycles]Does the assessment confirm successful recovery? [Yes] [No] Transient Voltage Dip [voltage] Transient Frequency Excursion [Hertz]Voltage deviation [Voltage] Transient Stability Steady State Stability
MRO's NERC Standards Review Forum	Yes	A. NSRF recommends this process address the six characteristics of the Definition of Adequate Level of Reliability (ALR) as listed in the comments above in Question #5. B. Recommend municipalities and other small entities having transmission systems designed to serve local load, operated below 200 kV and not having any IROL's or SOL's be excluded from the BES definition. Rational: The standards, especially those for Transmission Operators (TO) aren't written for the smaller utilities. A utility may have over 75 MWs of generation and have installed a 115 kV loop around their city that is used primarily to serve load and get forced into significant compliance requirements that don't enhance the reliability of the BES.
PacifiCorp	Yes	All of PacifiCorp's responses are based on a given interconnection and not on a continental basis. Fault duty may be appropriate for certain interconnections only.
Western Electricity Coordinating Council	Yes	WECC recommends that the SDT consider not only the single-phase faults used in the TPL standards, but also the effect of more severe events such as two- or three-phase faults, with delayed clearing and the necessity of the element in those cases.
Electricity Consumers Resource Council (ELCON)	Yes	We recommend an additional method (or alternatively this be added to the BES Definition Exception E1): System Elements are part of facilities, generally radial in nature, supplying a retail customers from the point of delivery to the load regardless of voltage. Evidence to support this position could be an interconnection agreement indicating the point of delivery, a one-line diagram showing the point of delivery and load etc. The technical rationale is that protection of the BES for facilities serving load is the responsibility of the service

Organization	Yes or No	Question 6 Comment
		provider (e.g., TO/TOP). These facilities are distribution facilities and are not now part of the BPS.
National Grid	Yes	The NERC process could potentially by very lengthy and could interfere with the timely completion of our studies. In the technical paths for exclusions, bullet v states "If within the criteria in all cases, then the Elements can be excluded." This could lead to a very high number of studies that need to be done to prove an element should be excluded. For this reason, National Grid endorses a more streamlined process. We propose a process where entities would only need to submit a short form that briefly describes what they would like to exempt and the reason why, along with a one-line diagram. The entity who is requesting the exception would have to maintain records that show why the elements can be exempted until NERC performs an audit. At the audit, the entity can show the proof of why the element should be granted an exception. This process also allows for the application to remain public and reduces documentation burdens, because the non-public, CEII, or NERC CIP protected supporting documentation is maintained by the applicant.In this process, the entity first submits the application to their RE, and if approved by the RE, the application is submitted to NERC. The entity should be able to appeal if either the RE or NERC denies the application; however, it should be clear that for the second appeal to NERC, the decision is made by a different group than whoever decided on the first appeal. The appeal process in this exception procedure could be similar to the appeal process set by CMEP (compliance, monitoring and enforcement program).For entities that don't wish to wait until the next audit, there can be an optional process by which the proposed exception can be reviewed to provide an immediate ruling. Also, there should be a grace period after the audit is performed if audit staff concludes that an exception or inclusion granted by the initial application is not supported by adequate evidence. NERC's approval of an exception during this initial application process should stand until an Entity is audited and a final audit report is issued. There should also be an implementation period included in the audit report for the entity to come into compliance if the audit report disagrees with the initial exception approval. Absent evidence of fraud or intentional misrepresentation by the entity, there should be no non-compliance assessed for the period from initial exception approval to the final audit report. This process would need to allow participation or comments by Regional Entities, Reliability Coordinators, and/or Balancing Authorities in the application process, but should not allow participation by other third parties.
Muscatine Power and Water	Yes	Recommending that this process address the six characteristics of the Definition of Adequate Level of Reliability (ALR) as listed in the comments above in Question #5. Also recommend that municipalities and other small entities having transmission systems designed to serve local load only, operated below 200 kV and not having any IROL's or SOL's be excluded from the BES definition. Rationale: this could affect smaller registered entities within a BA. The standards, especially those for Transmission Operators, aren't written for the smaller utilities. A small, municipal utility could have 75 MW of generation and operate a 115 kV looped system around their service area that is used primarily to serve their own load. Subsequently, they get forced into significant compliance requirements that does not enhance

Organization	Yes or No	Question 6 Comment
		the reliability of the BES whatsoever.
Glacier Electric Cooperative	Yes	Perhaps using an element's available fault MVA as a "quick screening" method to quickly determine if an element should be included or excluded. If an element's available fault MVA exceeds a properly established value, then a more detailed technical analysis can be done to determine whether or not the element truly should be included in the BES. But if the elemet's available fault MVA is less than the established value, then that element could quickly be excluded.
Orange and Rockland Utilities, Inc.	Yes	FERC Order No. 888 - Seven Factor Test.
Xcel Energy	Yes	Xcel Energy would like the SDT to consider a Capacity Factor exclusion for generating resources that are rarely used. For example, at least two standards that are currently being drafted exempt generators that have an average Capacity Factor of 5% or less over a three year period.
American Transmission Company, LLC	Yes	ATC recommends this process address the five characteristics of the Definition of Adequate Level of Reliability (ALR) as listed in the comments above in Question #5a.
NESCOE	Yes	Please refer to comments under item 4., above. If the parallel power flow in a given < 200 kV path only exceed 200 MVA under contingency conditions and if the applicable BES points have fully NERC compliant protection systems, disturbances on this lower voltage path will not adversely affect the reliability of the BES. The exclusion determination process should be flexible enough to recognize that any requirement that may impose substantial new costs on New England transmission owners, and ultimately on consumers, should also provide meaningful reliability benefits
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language for the technical exception criterion. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		
Northeast Power Coordinating	Yes	An impact-based method should be available for entities seeking Exclusions and Inclusions. The method

Organization	Yes or No	Question 6 Comment
Council		should not allow excess regional discretion and unintended continent-wide variation. Recommend the power Transfer Distribution Factor (power TDF) approach mentioned in the reply to Question 5 above. If the Transmission Planner (TP) or Planning Authority (PA), were tasked with performing such analyses using standardized assumptions, then regional discretion could be minimized. Technical Analysis must fundamentally use NERC - TPL methodology and testing requirements.
Consolidated Edison Co. of NY, Inc.	Yes	An impact-based method should be available for entities seeking Exclusions and Inclusions. The method should not allow excess regional discretion and unintended continent-wide variation. We recommend the power Transfer Distribution Factor (power TDF) approach mentioned in the reply to Question 6 above. If the Transmission Planner (TP) or Planning Authority (PA), e.g., the NYISO, were tasked with performing such analyses, using standardized assumptions, then regional discretion could be minimized.
Spyker	Yes	Technical Analysis must fundamentally use NERC - TPL methodology and testing requirements.
Hydro-Quebec TransEnergie	Yes	Technical demonstration should not be limited to technical principles stated in the "Technical Principles for Demonstrating BES Exceptions". Entities should be allowed to do their own demonstration with their own technical arguments. As an example, an Entity could consider a few level of application for the standards. As an example, the level #1 being the most important level, all standards would apply to this level, including more stringent criteria than the TPL standards. This would bring BES level #1 very robust and reliable, ensuring the reliability of the main system. A second BES level #2 could be define for local transmission to which would be applied most standards but excluding some of the C section of TPL. Attention would be given to proper reliable operation of the BES level #2, but with smaller level of investment on the design aspect, those regional transmission part of the system being able to face higher risk for loss of continuity of service. Finally, for generation or Load Facility that would be excluded from both level of BES, minimum standards would still apply such as in protection or for generation. Through its own technical principles, the Entity could demonstrate that the highest level of BES is more reliable than what is expected by NERC's standard, but that in regional transmission part of the system, the C TPL standard would not apply with the only risk of lower continuity of service.
Response: The SDT appreciates your comments. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the		

Organization	Yes or No	Question 6 Comment
submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted. Your specific concerns will be accommodated under the revised process.		
SPP Standards Review Group	Yes	We would suggest that the SDT consider an exclusion for networked municipal systems operating below 200kV which have more than 75 MVA of generation and whose systems do not include flowgates or IROLs.
Response: The SDT has responded to comments on the BES definition in the Consideration of Comments form for the BES definition posting.		
PPL Supply	Yes	See comments in Questions 9 and 10
Response: See response to Q9 & Q10.		
New York State Reliability Council	Yes	See answer to 5a.
Response: See response to 5a.		
Occidental Energy Ventures Corp.	Yes	Suggested additional method. The Element(s) meet all the following characteristics: 1) generally radial in nature, and 2) used to supply a retail customer from the point of delivery to the load regardless of voltage. Evidence to support this position could be an interconnection agreement indicating the point of delivery, a one-line diagram showing the point of delivery and load, etc. The technical rationale is that protection of the BES for facilities serving a retail customer is the responsibility of the service provider (e.g., transmission owner/operator). These facilities are distribution facilities and are not now part of the BPS. Alternatively, this could be an Exclusion in the BES Definition as it is in the current definition.
MidAmerican Energy	Yes	In general all facilities below 100 kV should be exlcuded by default as distribution according to the 2005 Federal Power Act. Transmission Distribution Factors tend to show low bulk power system transfers (less than 2%) based on their inherent high impedance when normalized. Normalizing the transmission impedance means diving the ohmic value by a base impedance which is dominated by a (kV^2) term. Per Unit Impedance = (transmission line ohms / base impedance) where base impedance = (kV^2 / MVA). Using a common MVA base value of 100 MVA, a base impedance at 69kV = 47.6 ohms versus at 161 kV = 259.2 or at 345 kV = 1190.2 ohms. The rapid increase of the denominator as kV goes higher insures that a 69 kV

Organization	Yes or No	Question 6 Comment
		system is high impedance compared to any high kV facilities and therefore nearly insure the 69 kV system is local in nature and reacts primarily to load. Therefore it is distribution. This all supports the conclusion that all facilites below 100 kV should be classified as distribution according to the 2005 FPA and exempted by default. Facilities below 100 kV could be brought into scope if TPL analyses show instability, uncontrolled separation, or cascading as defined in the 2005 FPA.

Response: The SDT appreciates your comments. Your specific concerns will be accommodated under the revised process.

Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.

The SDT has responded to comments on the BES definition in the Consideration of Comments form for the BES definition posting.

7. Inclusions - The SDT has set up only one path for evidence that includes technical analysis. Do you agree with this requirement? If you do not support this requirement or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. In addition, in the comment field, please provide your thoughts on the proposed metrics for analysis and the appropriate values to replace 'TBD,' including technical rationale for your argument.

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 7 Comment
Northeast Power Coordinating Council	No	
SERC Planning Standards Subcommittee	No	
SPP Standards Review Group	No	
NERC Staff Technical Review	No	
Iberdrola USA	No	
Tri-State Generation and Transmission Association	No	
Hydro One	No	

Organization	Yes or No	Question 7 Comment
MRO's NERC Standards Review Forum	No	
Bonneville Power Administration	No	
ReliabilityFirst	No	
Tennessee Valley Authority	No	
PPL Supply	No	
Southern Company	No	
Muscatine Power and Water	No	
South Carolina Electric and Gas	No	
Exelon	No	
Georgia Transmission Corporation	No	
Consolidated Edison Co. of NY, Inc.	No	
Springfield Utility Board	No	
ISO New England	No	
The United Illuminating Company	No	
Entergy Services	No	

Organization	Yes or No	Question 7 Comment
American Electric Power	No	
Orange and Rockland Utilities, Inc.	No	
Pepco Holdings Inc	No	
Consumers Energy Company	No	
American Transmission Company, LLC	No	
Manitoba Hydro	No	
Independent Electricity System Operator	No	
MidAmerican Energy	No	
New York Power Authority	Yes	
Blachly Lane Electric Cooperative	Yes	
Glacier Electric Cooperative	Yes	
Flathead Electric Cooperative, Inc.	Yes	
Clark Public Utilities	Yes	
Central Electric Cooperative	Yes	
Consumer's Power Inc.	Yes	

Organization	Yes or No	Question 7 Comment
Coos-Curry Electric Cooperative	Yes	
Douglas Electric Cooperative	Yes	
Fall River Electric Cooperative	Yes	
Lane Electric Cooperative	Yes	
Lincoln Electric Cooperative	Yes	
Lost River Electric Cooperative	Yes	
Northern Lights Electric Cooperative	Yes	
Okanogan Electric Cooperative	Yes	
Raft River Rural Electric Cooperative	Yes	
Salmon River Electric Cooperative	Yes	
Umatilla Electric Cooperative	Yes	
West Oregon Electric Cooperative	Yes	
Pacific Northwest Generating Cooperative	Yes	
PNGC Power	Yes	

Organization	Yes or No	Question 7 Comment
Consumer's Power Inc.	Yes	
BGE	Yes	
Spyker	Yes	
Benton Rural Electric Association	Yes	
Clearwater Power Electric Cooperative	Yes	
Long Island Power Authority	Yes	
Northern Wasco County PUD	Yes	
Xcel Energy	Yes	
United Electric Co-op Inc.	Yes	
Oregon Trail Electric Cooperative, Inc.	Yes	
Central Lincoln	Yes	
Oncor Electric Delivery	Yes	
Salem Electric	Yes	
Duke Energy	Yes	
Grant County PUD No. 2 (Grant)	Yes	
Hydro-Quebec TransEnergie	Yes	

Organization	Yes or No	Question 7 Comment
for Snohomish County PUD	Yes	
Northwest Public Power Association (NWPPA)	Yes	
Big Bend Electric Cooperative, Inc.	Yes	
Kootenai Electric Cooperative	Yes	
Tacoma Power	Yes	
Edison Electric Institute	Yes	
ISO/RTO Standards Review Committee	Yes	
PacifiCorp	Yes	
Idaho Falls Power	Yes	
Western Electricity Coordinating Council	Yes	
New York State Reliability Council	Yes	
Electric Market Policy	Yes	
Response: Thank you for your response. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or		

Organization	Yes or No	Question 7 Comment
inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		

7a. Comments on approach:

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 7a Comment
Northeast Power Coordinating Council		Inclusions criteria should mirror the Exclusion criteria, and that consistent values should be employed for Inclusions here and for Exclusions above. That is, for example, if 0.95 to 1.05 (+/- 5%) p.u. is adopted as an acceptable voltage deviation range for Exclusions, then Elements resulting in post-transient system voltage deviations outside that range should be candidates for Inclusion. Further, all assumptions should also be fully documented for any proposed Inclusions. Also refer to comments on exclusions.
SERC Planning Standards Subcommittee Tennessee Valley Authority Southern Company South Carolina Electric and Gas Georgia Transmission Corporation		The PSS recommends that applications for inclusion of facilities into the BES should include justification for doing so. However, there should not necessarily be specific criteria that must be met, but the importance of the facility to the BES should be clearly demonstrated.
NERC Staff Technical Review		NERC staff is not opposed to development of evidence based on technical analysis; however, we have the same concerns with the exception criterion for including Element(s) as with exception criterion 1 for excluding Element(s). The type of analysis included in this exception criterion requires extensive resources and lacks sufficient detail to allow for consistent and repeatable application. Additional concerns with this approach include (1) the ability to provide sufficient guidance on the system

Organization	Yes or No	Question 7a Comment
		conditions and contingencies necessary to support an exception request, (2) difficulty with identifying thresholds for items iv-1 through iv-4, and (3) the ability to address interdependencies among exception requests.
Independent Electricity System Operator		We support the concept of technical analysis in support of Inclusions but disagree with the approach that involves setting specific values for criteria. Please refer to our comments on exclusions.
Florida Municipal Power Agency		FMPA supports using a uniform set of technical criteria to decide inclusion exceptions. Such an approach will facilitate uniform application of the criteria. In addition to having clear and uniform criteria, the technical analysis for inclusions and exclusions should use the same criteria (though one should of course be the inverse of the other). We note that the steps laid out for Inclusions do not quite track those in Exclusions 2(a). For example, Inclusions 1(b) states, confusingly, "Monitor the contribution of the disputed Element(s)," but there is no corresponding step in Exclusions 2(a). FMPA suggests that Inclusions 1 be revised to mirror Exclusions 2.
Transmission Access Policy Study Group		TAPS supports using a uniform set of technical criteria to decide inclusion exceptions. Such an approach will facilitate uniform application of the criteria. It is appropriate for there to be only one path, using technical analysis, for inclusions, because the analysis for inclusions should be performed by Regional Entities and NERC (see TAPS comments on the BES Exception Process, also submitted today), which have more resources available than do the small entities that TAPS believes are likely to request exclusions based on the path for exclusions that does not include extensive technical analysis.In addition to having clear and uniform criteria, the technical analysis for inclusions and exclusions should use the same criteria (though one should of course be the inverse of the other). We note that the steps laid out for Inclusions do not quite track those in Exclusions 2(a). For example, Inclusions 1(b) states, confusingly, "Monitor the contribution of the disputed Element(s)," but there is no corresponding step in Exclusions 2(a). TAPS suggests that Inclusions 1 be revised to mirror Exclusions 2.
ISO/RTO Standards Review Committee		The SRC generally agrees with the technical analysis approach to determining whether an element should be included in the BES. However, consideration should also be given to valid and supported evidence given by RCs and PCs, and, possibly TOPs and BAs to actual historical events that indicate significant importance of elements which, when lost, have resulted in reliability risk to the system.
Iberdrola USA		A facility is BES if it is necessary for reliable system operation, based on a TPL-type analysis similar to NPCC Document A-10 "Classification of Bulk Power System Elements" - this type of analysis was rejected by FERC. In addition, applicable threshold values for these parameters could differ from one system to another, and

Organization	Yes or No	Question 7a Comment
		would require extensive analysis.
Tri-State Generation and Transmission Association		This appears very similar to the "material impact" proposal that FERC has previously disallowed, so we recommend removing it, but allowing elements that are included in Regional Entity defined bulk transfer paths that are not already included in the BES definition. If retained, remove 1.(f) because allowing the ERO to override the technical justification and analysis devalues such analysis to the point of it being meaningless.
Hydro One		Inclusions criteria should mirror the Exclusion criteria, and that consistent values should be employed for Inclusions here and for Exclusions above. [See our comments on exclusions]
MRO's NERC Standards Review Forum		NSRF proposes that the technical analysis criterion be replaced by criteria that are more closely tied to the Adequate Level of Reliability (ALR) characteristics. The following alternate criteria are offered as possible examples, "(1) the BES cannot be controlled to stay within acceptable limits following a fault on or loss of the Element; (2) the BES does not perform acceptably after credible contingences of the Element; (3) the Element limits the impact and scope of instability and cascading outages when they occur; (4) BES facilities are not protected from unacceptable damage by operating the Element within its ratings; (5) the integrity of the BES cannot be restored promptly following a fault on or loss of the Element; and (6) the BES does not have the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times, taking into account scheduled or reasonably expected unscheduled outages of the Element. In addition, NSRF is not aware of any continent-wide appropriate BES performance measures for voltage dip, frequency excursion, voltage deviation, stability, etc. and NSRF speculates that different values are likely for different regions and system characteristics across the continent. As a result, NSRF believes it is not advisable to try to adopt unproven values without reasonable industry investigation and development.
ReliabilityFirst		to complicated and will only raise debate between FERC, NERC, the Regions and the Registered Entities
New York Power Authority		In general, NYPA agrees with this approach except as noted below. Inclusions criteria should mirror the Exclusion criteria, and that consistent values should be employed for Inclusions here and for Exclusions

Organization	Yes or No	Question 7a Comment
		above.
National Grid		There should be a non-technical process for inclusions similar to the exclusions process.
Muscatine Power and Water		Would like to propose that the technical analysis criterion be replaced by criteria that are more closely tied to the Adequate Level of Reliability (ALR) characteristics. The following alternate criteria are offered as possible examples, "(1) the BES cannot be controlled to stay within acceptable limits following a fault on or loss of the Element; (2) the BES does not perform acceptably after credible contingences of the Element; (3) the Element limits the impact and scope of instability and cascading outages when they occur; (4) BES facilities are not protected from unacceptable damage by operating the Element within its ratings; (5) the integrity of the BES cannot be restored promptly following a fault on or loss of the Element; and (6) the BES does not have the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times, taking into account scheduled or reasonably expected unscheduled outages of the Element. Currently not aware of any continent-wide appropriate BES performance measures for voltage dip, frequency excursion, voltage deviation, stability, etc. and would speculate that different values are likely for different regions and system characteristics across the continent. Therefore, would like to state that it is not advisable to try to adopt unproven values without reasonable industry investigation and development.
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Electric Cooperative Consumer's Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative		As a general matter, we agree with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid justification showing that the Elements in question contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. We also agree that the SDT has, in general, identified the correct technical approach, although we recommend that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in Snohomish's White Paper, in the WECC BES Task Force Proposal 6, and in our answer to Question 5. While we support the SDT's overall approach, we believe subsection (f) of the proposed inclusion criteria, which would allow NERC to "override this criterion" if it provides "additional justification" for doing so is both unnecessary and creates confusion and uncertainty in what is otherwise a clear and concise process. Subsection (f) is unnecessary because if the technical process laid out in subsections (a) through (e) fails to provide any evidence that the contested Element(s) create a material impact on the reliability of the bulk

Organization	Yes or No	Question 7a Comment
Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Pacific Northwest Generating Cooperative Consumer's Power Inc. Central Lincoln for Snohomish County PUD		interconnected transmission network, there is no reason to classify those Element(s) as BES, and that should be the end of the question. Subsection (f) creates needless uncertainly because it allows NERC to override the technical criteria laid out in subsections (a) through (e) if "additional justification" is provided, but there is no suggestion as to what this additional justification might be. Nor is there any explanation as to why additional justification might be necessary after the criteria in subsections (a) through (e) have been exhausted.
Glacier Electric Cooperative		I do strongly agree that there should be an avenue for elements to be included or excluded from the BES based on technical analysis. I do believe who's responsibility it will be to perform and analyze the transmission planning studies needs to be clarified.
Exelon		: Exelon points out that most of the Regions don't have Region-wide criteria for distribution factor measurement, voltage excursions, or transient frequency response for use in this proposed Inclusion Process. In addition, most of the Regions do not have region-wide criteria developed for these attributes. If differing criteria levels are used across the continent, there remains the possibility that similarly-situated facilities in different Regions will not be treated consistently.

Organization	Yes or No	Question 7a Comment
Consolidated Edison Co. of NY, Inc.		We believe that Inclusions criteria should mirror the Exclusion criteria, and that consistent values should be employed for Inclusions here and for Exclusions above. That is, for example, if 0.95 to 1.05 (+/- 5%) p.u. is adopted as an acceptable voltage deviation range for Exclusions, then Elements resulting in post-transient system voltage deviations outside that range should be candidates for Inclusion. Further, all assumptions should also be fully documented for any proposed Inclusions.
Springfield Utility Board		NERC's Exception Criteria for Inclusions states that, "Entities can submit an application to see an exception for an inclusion in the BES...", but SUB would ask NERC to clarify whether an entity can 1) seek an inclusion exception for them only, or 2) can an entity seek an inclusion exception for another entity? SUB would not support another entity having the ability to file for another entity.
Flathead Electric Cooperative, Inc.		Elements otherwise excluded from the BES should be included only upon a technically valid showing that the Elements contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system.
Entergy Services		It is unclear why an inclusion process should be necessary. Including facilities not otherwise included in the basic definition should be at the discretion of the TO.
Clark Public Utilities Benton Rural Electric Association Northern Wasco County PUD United Electric Co-op Inc Oregon Trail Electric Cooperative, Inc Salem Electric Grant County PUD No. 2 (Grant) Northwest Public Power Association (NWPPA) Big Bend Electric Cooperative,		As a general matter, Clark agrees with the SDT that Elements otherwise excluded from the BES should be included only upon a technically valid showing that the Elements contribute substantially to the potential for cascading outages, separation events, or instability on the interconnection bulk transmission system. Clark also agrees that the SDT has, in general, identified the correct technical approach, although Clark recommends that the inclusion analysis (which mirrors the technical exclusion analysis) be modified as discussed in the Snohomish PUD White Paper, in the WECC BES Task Force Proposal 6, and in Clark's answer to Question 5.

Organization	Yes or No	Question 7a Comment
Inc Kootenai Electric Cooperative		
BGE		BGE believes that there is a value in allowing for inclusions through a technical analysis path; however, it is critical that such a path does not allow for unreasonable inclusion of facilities that do not warrant BES status.
Spyker		We agree that entities should be allowed to conduct an analysis to demonstrate if an element is necessary or not for the operation of transmission network. We also support that NERC should specify all the relevant criteria category to be listed as under 2 (a). However, we suggest that NERC should avoid prescribing numerical values but establish a range of value (or reference industry standard) that would be consistent with industry/ regional standards or practices without compromising the reliability of transmission network.
Consumers Energy Company		We believe all of the Inclusion criteria should be replaced by a single criterion, which would include any element that could cause cascading outages of greater than 1,000 MW.
Oncor Electric Delivery		Oncor Electric Delivery agrees with the proposed language that describes the inclusion criteria based technical analysis.
Tacoma Power		Tacoma Power generally agrees with approach used on the technical analysis path for inclusions.
Duke Energy		The approach and evaluation values should be consistent with those for the Exclusions.
American Transmission Company, LLC		ATC proposes that the technical analysis criterion be replaced by criteria that are more closely tied to the Adequate Level of Reliability (ALR) characteristics. The following alternate criteria are offered as possible examples, “(1) the BES cannot be controlled to stay within acceptable limits following a fault on or loss of the Element; (2) the BES does not perform acceptably after credible contingences of the Element; (3) the Element limits the impact and scope of instability and cascading outages when they occur; (4) BES facilities are not protected from unacceptable damage by operating the Element within its ratings; and (5) the BES does not have the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times, taking into account scheduled or reasonably expected unscheduled outages of the Element.

Organization	Yes or No	Question 7a Comment
		In addition, ATC is not aware of any continent-wide appropriate BES performance measures for voltage dip, frequency excursion, voltage deviation, stability, etc. and ATC speculates that different values are likely for different regions and system characteristics across the continent. As a result, ATC believes it is not advisable to try to adopt unproven values without reasonable industry investigation and development.
Manitoba Hydro		Manitoba Hydro does not agree with an impact based approach to establishing BES elements as we believe it will result in regional differences in the application of the BES definition. In addition, the resources required to verify the assumptions made in the models used to substantiate a BES exception would be substantial with no benefit to reliability.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential inclusion in the BES. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		
New York State Reliability Council		See answer to 5a.
Response: See response to Q5a.		
PPL Supply		See comments in Questions 9 and 10
Response: See response to Q9 & Q10.		
PacifiCorp		Please refer to additional comments in question 13 regarding a contiguous BES.
Response: See response to Q13.		
Edison Electric Institute		See comments for Question 5 above

Organization	Yes or No	Question 7a Comment
Bonneville Power Administration		Please refer to BPA's comments on Question #5.
Orange and Rockland Utilities, Inc.		The Inclusion criteria should mirror Exclusion criteria. See comments 5.
Pepco Holdings Inc		Same comments as question #5
Response: See response to Q5.		

7b. Comments on distribution factor measurement:

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 7b Comment
Northeast Power Coordinating Council		See reply to Questions 5b and 6 above.
Response: See response to Q5b and Q6.		
Consolidated Edison Co. of NY, Inc.		See reply to Question 6.
Response: See response to Q6.		
SPP Standards Review Group		Please see our comment in 5b above.
Hydro One		[See Comment 5b]
Central Lincoln		Please see 5b.
for Snohomish County PUD		Please see our response to Question 5b.
Response: See response to Q5b.		
Edison Electric Institute		See comments for Question 5 above

Organization	Yes or No	Question 7b Comment
Florida Municipal Power Agency		See FMPA comments in response to Question 5.
Transmission Access Policy Study Group		See TAPS comments in response to Question 5.
Blachly Lane Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Clark Public Utilities		See comments in 5.
Central Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Clearwater Power Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Consumer's Power Inc.		Please see our corresponding answers to Question 5 for 7b-7e.
Coos-Curry Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Douglas Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Fall River Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Lane Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Lincoln Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Lost River Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Northern Lights Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Okanogan Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.

Organization	Yes or No	Question 7b Comment
Raft River Rural Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Salmon River Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Umatilla Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
West Oregon Electric Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Pacific Northwest Generating Cooperative		Please see our corresponding answers to Question 5 for 7b-7e.
Consumer's Power Inc.		Please see our corresponding answers to Question 5 for 7b-7e.
Spyker		See comments in section 5
Benton Rural Electric Association		See exclusion comments Question 5
United Electric Co-op Inc.		See exclusion comment.
Oregon Trail Electric Cooperative, Inc.		See exclusion comment
Salem Electric		See exclusion comment
Grant County PUD No. 2 (Grant)		See exclusion comment
Northwest Public Power Association (NWPPA)		See exclusion comment
Big Bend Electric Cooperative, Inc.		See exclusion comment

Organization	Yes or No	Question 7b Comment
Kootenai Electric Cooperative		See Exclusion comment.
Response: See response to Q5.		
Iberdrola USA		See 7a.
Independent Electricity System Operator		[See Comment 7a]
Response: See response to Q7a.		
Tri-State Generation and Transmission Association		If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.
MRO's NERC Standards Review Forum		NSRF proposes replacing this factor with those cited above because a distribution factor measurement indicates how much system changes affect the element, not how a fault or loss of the element would compromise the ALR of the BES. There is no clear correlation between this factor and any of the six characteristics of Adequate Level of Reliability (ALR) of the BES.
ReliabilityFirst		any impact is an impact, even generation is re-dispatched at 0% in some cases
New York Power Authority		NYPA does not agree with this measurement. Distribution factors are dependent on the number of radial transmission lines that connect a single source to a load. For example, if two lines connect a single source to a load, and one line trips, the distribution factor provides a 100% increase in flow on the remaining line. If three lines connect the source to the load, and one line trips, the distribution factor for the remaining lines would be 50%.
Muscatine Power and Water		Proposing to replace this factor with those cited above because a distribution factor measurement indicates how much system changes affect the element, not how a fault or loss of the element would compromise the ALR of the BES. There is no clear correlation between this factor and any of the six characteristics of Adequate Level of Reliability (ALR) of the BES.
Consumers Energy Company		If our suggestion in 7a is not adopted, we propose the following: If based on transfer distribution factor this criterion may have some merit, depending on the TBD value. However, the criterion should not be based on

Organization	Yes or No	Question 7b Comment
		outage transfer distribution factor, as Draft 1 implies since loss of certain distribution facilities can result in distribution load being transferred to other interconnection points. Distribution facilities should not be classified as BES.
American Transmission Company, LLC		ATC proposes replacing this factor with those cited above in 7a because a distribution factor measurement indicates how much system changes affect the element, not how a fault or loss of the element would compromise the ALR of the BES. There is no clear correlation between this factor and any of the six characteristics of Adequate Level of Reliability (ALR) of the BES.
Tacoma Power		Tacoma Power generally agrees with the distribution factor measurement in the technical analysis path for inclusions. We suggest adopting a distribution factor of 30%, or more, on an adjacent system.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential inclusion in the BES. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		

7c. Comments on allowable transient voltage dip measurement:

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 7c Comment
Northeast Power Coordinating Council		Refer to the response to Question 5c
Hydro One		[See Comment 5c]
New York Power Authority		Refer to the response to Question 5c.
Central Lincoln		Please see 5c.
for Snohomish County PUD		Please see our response to Question 5c.
Response: See response to Q5c.		
Edison Electric Institute		See comments for Question 5 above
Florida Municipal Power Agency		See FMPA comments in response to Question 5.
Transmission Access Policy Study Group		See TAPS comments in response to Question 5.
Clark Public Utilities		See comments in 5.

Organization	Yes or No	Question 7c Comment
Spyker		See comments in section 5
Benton Rural Electric Association		See exclusion comments Question 5
United Electric Co-op Inc.		See exclusion comment.
Oregon Trail Electric Cooperative, Inc.		See exclusion comment
Salem Electric		See exclusion comment
Grant County PUD No. 2 (Grant)		See exclusion comment
Northwest Public Power Association (NWPPA)		See exclusion comment
Big Bend Electric Cooperative, Inc.		See exclusion comment
Kootenai Electric Cooperative		See Exclusion comment.
Response: See response to Q5.		
Iberdrola USA		See 7a.
Independent Electricity System Operator		[See Comment 7a]
Response: See response to Q7a.		
Tri-State Generation and Transmission Association		If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.

Organization	Yes or No	Question 7c Comment
MRO's NERC Standards Review Forum		NSRF proposes replacing this factor with those cited above because there is presently no established, continent-wide, acceptable transient voltage dip performance level for evaluating whether a fault or loss of the element would compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential inclusion in the BES. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		
ReliabilityFirst		any impact is an impact, planning criteria between 3 & 5 % is often used and not allowed, why inject this into what define the BES. the criteria is applied it should be included
Muscatine Power and Water		Propose replacing this factor with those cited above because there is presently no established, continent-wide, acceptable transient voltage dip performance level for evaluating whether a fault or loss of the element would compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
Consumers Energy Company		If our suggestion in 7a is not adopted, we propose the following: The criterion related to Transient Voltage Deviations should be removed from the Inclusion Process. This criterion, regardless of value TBD, would cause any element, perhaps even including radial Primary Distribution Facilities (8.2 kV, etc.) to be sequentially included as BES.A fault on non-BES elements will cause significant transient voltage dips on nearby BES elements until the fault is cleared. If the non-BES element is at the same voltage level, the dip will result in near-zero voltages; if at different voltage levels, the dip magnitude will be determined by the ratio of the system ThÃ©vinen impedance at the BES to the intervening transformer impedance - if the system ThÃ©vinen impedance is 2% and the transformer impedance is 18%, the voltage on the BES will dip to 10%.
American Transmission Company, LLC		ATC proposes replacing this factor with those cited above in 7a because there is presently no established, continent-wide, acceptable transient voltage dip performance level for evaluating whether a fault or loss of the element would compromise the ALR of the BES. In addition, the appropriate performance level for this factor

Organization	Yes or No	Question 7c Comment
		may vary for different areas and system characteristics across the continent.
Tacoma Power		Tacoma Power generally agrees with allowable transient voltage dip measurement in the technical analysis path for inclusions. We suggest adopting the criteria that includes a transient voltage dip exceeding 20% for more than 20 cycles on an adjacent system's bus.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential inclusion in the BES. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		

7d. Comments on allowable transient frequency response:

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 7d Comment
Northeast Power Coordinating Council		Refer to the response to Question 5d
Hydro One		[See comment 5d]
New York Power Authority		Refer to the response to Question 5d.
Central Lincoln		Please see 5d.
for Snohomish County PUD		Please see our response to Question 5d.
Response: See response to Q5d.		
Edison Electric Institute		See comments for Question 5 above
Florida Municipal Power Agency		See FMPA comments in response to Question 5.
Transmission Access Policy Study Group		See TAPS comments in response to Question 5.

Organization	Yes or No	Question 7d Comment
Clark Public Utilities		See comments in 5.
Spyker		See comments in section 5
Benton Rural Electric Association		See exclusion comments Question 5
United Electric Co-op Inc.		See exclusion comment.
Oregon Trail Electric Cooperative, Inc.		See exclusion comment
Salem Electric		See exclusion comment
Grant County PUD No. 2 (Grant)		See exclusion comment
Northwest Public Power Association (NWPPA)		See exclusion comment
Big Bend Electric Cooperative, Inc.		See exclusion comment
Kootenai Electric Cooperative		See Exclusion comment.
Response: See response to Q5.		
Iberdrola USA		See 7a.
Independent Electricity System Operator		[See Comment 7a]
Response: See response to Q7a.		
Tri-State Generation and		If this approach is used, then there needs to be a clear technical rationale for defining the metric and for

Organization	Yes or No	Question 7d Comment
Transmission Association		determining the threshold value.
MRO's NERC Standards Review Forum		NSRF proposes replacing this factor with those cited above because there are established, continent-wide transient frequency performance levels in the PRC-006-1 standard, but the elements that are applicable to the standard do not have to be BES elements and the transient frequency response requirements are not intended to be a criterion for BES classification.
ReliabilityFirst		any impact is an impact, stability and planning criteria are often used and restricted and guard against these changes, why inject this into what define the BES. if the criteria is applied it should be included
Muscatine Power and Water		Propose replacing this factor with those cited above because there are established, continent-wide transient frequency performance levels in the PRC-006-1 standard, but the elements that are applicable to the standard do not have to be BES elements and the transient frequency response requirements are not intended to be a criterion for BES classification.
Consumers Energy Company		If our suggestion in 7a is not adopted, we propose the following: The criterion relative to frequency response should be removed. Frequency deviations can result from large changes in distribution load. Distribution facilities should not be classified as BES.
American Transmission Company, LLC		ATC proposes replacing this factor with those cited above in 7a because there are established, continent-wide transient frequency performance levels in the PRC-006-1 standard, but the elements that are applicable to the standard do not have to be BES elements and the transient frequency response requirements are not intended to be a criterion for BES classification.
Tacoma Power		Tacoma Power generally agrees with the allowable transient frequency response in the technical analysis path for inclusions. We suggest adopting the criteria that includes a transient frequency response that goes below 59.6 Hz for up to 6 cycles on an adjacent system's bus.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential inclusion in the BES. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft		

Organization	Yes or No	Question 7d Comment
Rules of Procedure.		

7e. Comments on voltage deviation measurement:

Summary Consideration: The SDT appreciates your comments. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.

Organization	Yes or No	Question 7e Comment
Northeast Power Coordinating Council		See reply to Questions 5e and 6 above.
Response: See response to Q5e and Q6.		
Consolidated Edison Co. of NY, Inc.		See reply to Question 6.
Response: See response to Q6.		
Hydro One		[See comment 5e]
New York Power Authority		Refer to the response to Question 5e.
Central Lincoln		Please see 5e.
Response: See response to Q5e.		
Edison Electric Institute		See comments for Question 5 above

Organization	Yes or No	Question 7e Comment
Florida Municipal Power Agency		See FMPA comments in response to Question 5.
Transmission Access Policy Study Group		See TAPS comments in response to Question 5.
Clark Public Utilities		See comments in 5.
Spyker		See comments in section 5
Benton Rural Electric Association		See exclusion comments Question 5
United Electric Co-op Inc.		See exclusion comment.
Oregon Trail Electric Cooperative, Inc.		See exclusion comment
Salem Electric		See exclusion comment
Grant County PUD No. 2 (Grant)		See exclusion comment
Northwest Public Power Association (NWPPA)		See exclusion comment
Big Bend Electric Cooperative, Inc.		See exclusion comment
Kootenai Electric Cooperative		See Exclusion comment.
Response: See response to Q5.		
Iberdrola USA		See 7a.
Independent Electricity System		[See Comment 7a]

Organization	Yes or No	Question 7e Comment
Operator		
Response: See response to Q7a.		
Tri-State Generation and Transmission Association		If this approach is used, then there needs to be a clear technical rationale for defining the metric and for determining the threshold value.
MRO's NERC Standards Review Forum		NSRF proposes replacing this factor with those cited above because there is presently no established, continent-wide, acceptable (steady state) voltage deviation performance level for evaluating whether a fault or loss of the element would compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent
ReliabilityFirst		any impact is an impact, planning criteria is often used and restricted to guard against these changes, why inject this into what define the BES. the criteria is applied to the facility as a BES element it should be included
Muscatine Power and Water		Propose replacing this factor with those cited above because there is presently no established, continent-wide, acceptable (steady state) voltage deviation performance level for evaluating whether a fault or loss of the element would compromise the ALR of the BES. In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent.
Consumers Energy Company		If our suggestion in 7a is not adopted, we propose the following: This criterion may be reasonable, depending on the TBD value. The TBD value may need to vary for different voltage levels or system configurations. Loss of multiple capacitors at the distribution level could result in significant voltage deviation at the BES and the criterion should be developed so as not to result in Distribution facilities being classified as BES.
for Snohomish County PUD		Please see our response to Question 5d.
Response: See response to Q5d.		
American Transmission Company, LLC		ATC proposes replacing this factor with those cited above in 7a because there is presently no established, continent-wide, acceptable (steady state) voltage deviation performance level for evaluating whether a fault or loss of the element would compromise the ALR of the BES.

Organization	Yes or No	Question 7e Comment
		In addition, the appropriate performance level for this factor may vary for different areas and system characteristics across the continent
Tacoma Power		Tacoma Power generally agrees with the voltage deviation measurement in the technical analysis path for inclusions. We suggest adopting a voltage deviation that exceeds 10% on an adjacent system's bus. We have an additional concern with how the language is constructed on items d. and e. The inclusion criteria may work for simply inverting the exclusion language but in this initial draft, it does not appear to work as intended. Our suggestions above are describing criteria for defining elements that can be included in the BES. If that is the result to be adopted by the SDT, items d. and e. must be rewritten to state that elements within such criteria can be included in the BES.
Response: The SDT appreciates the suggestions for alternate language or clarifications to the proposed language and application of the study parameters utilized to analyze system Elements for potential inclusion in the BES. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		

8. Do you have concerns about an entity's ability to obtain the data they would need to do the indicated technical analyses? If so, please be specific with your concerns so that the SDT can fully understand the problem and address it in future drafts.

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.

Organization	Yes or No	Question 8 Comment
Northeast Power Coordinating Council	No	
SERC Planning Standards Subcommittee	No	
NERC Staff Technical Review	No	
Iberdrola USA	No	
Hydro One	No	
MRO's NERC Standards Review Forum	No	

Organization	Yes or No	Question 8 Comment
Bonneville Power Administration	No	The owner of the asset should have all the data necessary to perform the analysis for an Exclusion. The Exclusion analysis should use the same data request and sharing requirements of other NERC standards and the owner conducting the Exclusion analysis should consult with other entities as necessary.
PacifiCorp	No	
Tennessee Valley Authority	No	
Idaho Falls Power	No	No comments
New York State Reliability Council	No	NPCC A-10 criteria data is freely available.
New York Power Authority	No	
Southern Company	No	
National Grid	No	
Muscatine Power and Water	No	
South Carolina Electric and Gas	No	
Georgia Transmission Corporation	No	
ISO New England	No	
The United Illuminating Company	No	NERC modeling Standards should be sufficient
Entergy Services	No	
BGE	No	No comment.

Organization	Yes or No	Question 8 Comment
Spyker	No	
Orange and Rockland Utilities, Inc.	No	
Xcel Energy	No	
Oncor Electric Delivery	No	
Duke Energy	No	
Hydro-Quebec TransEnergie	No	
American Transmission Company, LLC	No	
Tacoma Power	No	Tacoma Power has no comment at this time.
MidAmerican Energy	No	
American Electric Power	Yes	Each criterion specified would not be able to be provided, or even applicable, for each exclusion requested. If the criteria provided may be selected from as necessary for each request, then we have no concerns on our ability to provide the data. Our only concern would be if the intent is that each and every criterion specified must be provided for each request made.
Pepco Holdings Inc	Yes	The entity may not have the tools, model or resources to do a full transmission planning study
Flathead Electric Cooperative, Inc.	Yes	Obtaining data creates a cost and should be minimized as possible.
Exelon	Yes	As mentioned above, this process will require extensive technical analysis from users, owners, operators and the Regions. In many cases, the Principles anticipate the use of criteria that is not in existence today. Rather than reinforcing the bright line approach, these Principles have the potential to create processes that will result in high costs with little to no corresponding benefits to reliability.

Organization	Yes or No	Question 8 Comment
Glacier Electric Cooperative	Yes	It could be very, very difficult and costly for small utilities to perform the necessary transmission planning studies described in the proposal. I think there needs to be language clarifying how smaller utilities should be able to obtain this data.
Electricity Consumers Resource Council (ELCON)	Yes	NERC (and the BES SDT) should not assume that data pursuant to Large Generator Interconnection Agreements (LGIA) or the Large Generator Interconnection Procedures (LGIP) will be forthcoming on a timely basis for the purpose of demonstrating BES exceptions. While such information is generally available from ISOs and RTOs, it is not so forthcoming from vertically-integrated utilities in regions of the country not served by ISOs or RTOs because such utilities are generally hostile to third-party generation in their service territory. They are capable of delaying or otherwise obstructing requests for data and information. We recommend that NERC or the SDT identify mechanisms for requesting and getting the necessary data and information. This process should be included in the NERC Rules of Procedure.
Western Electricity Coordinating Council	Yes	The Owner should have all of the data to perform this analysis for an Exclusion; however, an Inclusion would likely be sought by an entity other than the Owner (i.e., Regional Entity, RC, BA, TOP) that may not have sufficient data. It should be clarified in the Rules of Procedure that such an entity has the right to request such data and that the Owner must provide such data.
ReliabilityFirst	Yes	many smaller entities would require assistance and or consultants to perform this analysis and some data many not be available or be shared etc.
Edison Electric Institute	Yes	Method 2 is largely based on System Planning Criteria developed by WECC. At the present time, we do not believe that any of the other regions have similar planning criteria for which they could use or could easily integrate similar criteria into useable Planning Standards which could be applied in useful manner across all regions. For this reason, it is recommended that a separate Design Committee be created which would include representatives from all regions. It is expected that this effort may be substantial but is necessary before Method 2 or the Inclusion Process as written could be used. We would further caution the use or imposition of such a process since some transmission owners may not have the necessary skills or tools required to conduct studies of this type (in-house) and imposing this level of evidence will likely cause many who cannot meet this requirement to include unnecessary elements diluting the BES as defined and negating the value of the exclusion process.
Electric Market Policy	Yes	Generation Owners and Generation Operators are typically not given access to non-public transmission information, especially that where a NDA or CEII signature is required. It would be virtually impossible for a GO to refute proposed inclusion of an Element owned by the GO unless they procure the services of a

Organization	Yes or No	Question 8 Comment
		consulting firm with access to the data. And, even then, the consultant couldn't provide specifics of the evaluation only their findings.
Tri-State Generation and Transmission Association	Yes	
Response: The SDT appreciates the comments concerning an entity's ability to obtain the required information and technical analysis to meet the requirements of the technical exception criterion. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Electric Cooperative Consumer's Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative	No	As discussed on page 12 of Snohomish's White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis we recommend is the current base case operated by the relevant RE, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data, although we propose that the relevant owner or operator be relieved of this burden if it can be demonstrated that the nearest electrically interconnected Element has no material impact on the bulk system.

Organization	Yes or No	Question 8 Comment
Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Pacific Northwest Generating Cooperative Consumer's Power Inc Central Lincoln		
Clark Public Utilities Benton Rural Electric Association Northern Wasco County PUD United Electric Co-op Inc. Oregon Trail Electric Cooperative, Inc Salem Electric Grant County PUD No. 2 (Grant) for Snohomish County PUD Northwest Public Power Association (NWPPA) Big Bend Electric Cooperative, Inc. Kootenai Electric Cooperative	No	As discussed on page 12 of the Snohomish White Paper, there may be a few isolated cases where additional data will need to be provided to run a valid technical analysis under the criteria set forth in the Exception Procedure. These cases should be exceedingly rare, however, because the starting point for the technical analysis Clark recommends is the current base case operated by the relevant Regional Entity, and in nearly every case, the base case can be expected to model any Element that conceivably has a material impact on the reliable operation of the bulk system. In those rare cases where it does not, we believe the owner or operator of the subject Element should be able to provide the needed data.
Response: The SDT believes that the technical criteria represent a base line of information to be presented for justification of the exception. If the applicant		

Organization	Yes or No	Question 8 Comment
believes that additional information is needed to justify their request, the SDT agrees that the entity should be able to provide any additional information it believes necessary. The SDT disagrees that the Regional Entity should assess the adequacy of the application. In order to ensure consistency and uniformity across the continent, the ERO, not the Regional Entity, can be the only institution to conduct this analysis. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is impossible to establish values and/or limits that would be valid across all regions and systems. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the draft Rules of Procedure.		
Manitoba Hydro	No	We are concerned however that assumptions could be made to complete the technical analysis to support an exclusion that may not be appropriate.
Response: The SDT believes that unwarranted assumptions will be identified in the process and such information will be made available to the industry to prevent others from utilizing similar assumptions.		
Independent Electricity System Operator	No	We anticipate that entities would be granted access to any required historical operations records and modeling data after signing of non-disclosure agreements as necessary.
Response: Thank you for your comment.		
Consumers Energy Company	Yes	CECo is not able to formulate detailed comments at this time, as the criteria have not been finalized. There are a number of items that are somewhat open ended, i.e. TBD and Other. Once those gray areas are filled in, we will have a better idea of our ability to obtain the necessary data.
Response: The SDT looks forward to your future comments.		
Long Island Power Authority	Yes	The Reliability Coordinator would be required to provide much of the data needed to perform the technical analyses.
Response: The SDT believes that the burden of proof for the exception is on the applying entity. The applying entity can utilize any resource including other Registered Entities in presenting their case to the ERO.		

Organization	Yes or No	Question 8 Comment
PPL Supply	Yes	See comments in Questions 9 and 10
Response: See response to Q9 & Q10.		

9. Are you aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? If so, please identify them here and provide suggested language changes that may clarify the issue.

Summary Consideration: Most of the commenters expressed that they were not aware of specific conflicts associated with the BES exception technical principles and regulatory/jurisdictional matters. However, a substantial number of commenters answering "no" and "yes" raised concerns that the BES Definition and the Exception Technical Principles should respect FPA Section 215 authority limitations. Commenters to this question did not provide suggestions for addressing this concern.

Based on the extensive comments received by entities about FPA Section 215 authority excluding local distribution systems, the SDT modified the BES definition to provide additional clarity in this regard. Specifically, the SDT inserted language into the core of the revised BES definition.

WECC and another commenter brought up concerns associated with the applicability of a specific NERC reliability standard (i.e., IRO-010). ReliabilityFirst expressed concerns about the proposed BES definition changing the NERC Statement of Compliance Registry Criteria (SCRC). It should be emphasized that the goal of the SDT is to provide clarity to the BES definition and the technical principles for the NERC Rules of Procedure (RoP) exception process. The SDT's scope of work does not include potential changes to the SCRC. The SDT has debated this matter extensively and believes that NERC reliability standards may be applied to non-BES Elements.

A few commenters brought up concerns about specific unique situations (e.g., black start Cranking Paths in local distribution systems). The SDT cannot address each and every unique regulatory situation in the BES definition and technical principles for the Rules of Procedure (RoP) exception process. Entities would need to submit relevant regulatory evidence on a case by case basis using the RoP exception process. However, the SDT did delete the reference to Cranking Paths.

Bulk Electric System (BES): Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. This does not include facilities used in the local distribution of electric energy.

I3 - Blackstart Resources identified in the Transmission Operator's restoration plan.

Organization	Yes or No	Question 9 Comment
Bonneville Power Administration	No	Under NERC Standard IRO-010, the Transmission Operators are required to obtain information relating to the operation of the bulk power system within their respective areas. Transmission Operators may still need information relating to network facilities that ultimately are determined not to be BES facilities. BPA is concerned that an exclusion could eliminate a requirement that such information be provided.
ReliabilityFirst	Yes	FERC stated that entities registered were not to be taken off the registry without sound reasons and the definition sole intent was not to restrict or remove entities, but put in place a sound definition that everyone

Organization	Yes or No	Question 9 Comment
		can use. I do not think this is a help, it is very detailed and allot of entities will be confused and lost
Western Electricity Coordinating Council	Yes	It must be clear that under NERC Standard IRO-010, the Reliability Coordinators are required to obtain information relating to the operation of the bulk power system within their respective areas. In light of this requirement, Reliability Coordinators may request the submittal of information for network facilities that ultimately are not determined to be BES facilities. It would be reasonable to also include a requirement that Reliability Coordination staff will explain why they require the requested information from non-BES facilities when seeking such information.
Response: The goal of the SDT is to provide clarity to the BES Definition and the technical principles for the Rules of Procedure exception process not to address the NERC Statement of Compliance Criteria Registry (SCRC) and the applicability of specific reliability standards. NERC reliability standards may be applied to non-BES Elements that are necessary for operating the interconnected transmission network.		
City of Redding	Yes	State and court rulings that have defined Transmission and Distribution. One possible solution is to state that the determination made via this methodology is for reliability purposes only and is not intended to redefine established market and rate determinations.
Northeast Power Coordinating Council Hydro One Spyker	Yes	It is imperative to understand that the NERC's revised definition will have a direct impact on entities across North America and may conflict with regulatory requirements, Codes, and Licenses. FERC in its Orders 743 and 743A has directed NERC to address these concerns. For Ontario, the BES exception criteria shall meet the expectations of Ontario's regulator (Ontario Energy Board) which has the sole authority and responsibility for the reliability of customer connections and loads within Ontario. Therefore, it will be necessary to accommodate NERC's proposed definition of BES or the exception process with the Ontario situation. The SDT and RoP teams should: o Modify the exception criteria and procedure to provide regulatory flexibility with requirements to conduct basic technical analysis , to allow entities to consistently present their case to the ERO and/or the regulator for a step by step expedited evaluation. o Include provisions in both the NERC exception criteria and exception process for federal, state and provincial jurisdictions. These provisions should provide clear guidance so that, if and when there are deviations from the exception criteria, they are identified with technical and regulatory justifications ensuring there is no adverse impact on the interconnected transmission network. o Understand that the path to generating facilities need not be always BES contiguous. Generating units can/should be required to be planned, designed, and operated in accordance with a subset of NERC Standards, but should not always require contiguous paths.

Organization	Yes or No	Question 9 Comment
Edison Electric Institute	Yes	EEI is concerned that under the technical principles, some facilities that are local distribution facilities may be included the BES. This is in conflict with the definition of the Bulk Power System in Section 215 which excludes facilities used in local distribution. In particular, EEI is concerned that the provision of the technical principles prohibiting the seeking an Exclusion for a cranking path will include local distribution within the definition of BES.
Consolidated Edison Co. of NY, Inc.	Yes	See the EEI reply to BES Definition and Designations Question 11.
PacifiCorp	Yes	The SDT proposal combined with the ROP proposal may be in conflict with Section 215 of the Federal Power Act, which requires "facilities used in the local distribution of electric energy" be excluded. The processes proposed may be over inclusive and by default require several elements which are not required for the reliable operation of the BES to in fact be included in the definition of "BES."
Flathead Electric Cooperative, Inc.	No	the proposed BES Definition could conflict with Section 215 of the Federal Power Act if the Definition, the Exception Process, and the Technical Criteria do not effectively exclude facilities used in local distribution from the BES or if the BES definition does not focus on cascading outages, separation events, and instability on the interconnected bulk system. These statutory limits on the scope of the BES and reliability standards are a minimum that must be met.
Electricity Consumers Resource Council (ELCON)	Yes	The proposed technical principles violate the exemption in FPA section 215 against the inclusion in the BES of facilities used in the local distribution of electric energy, given that the BES is a subset of the BPS.
Exelon	Yes	To the extent facilities used in local distribution of electric energy may be included in the BES, the proposed principles are in conflict with the Federal Power Act.
Occidental Energy Ventures Corp.	Yes	The proposed technical principles seem to be in contradiction to the exemption in FPA Section 215 against the inclusion in the BES of facilities used in the local distribution of electric energy.
Central Lincoln for Snohomish County PUD	No	As we explained in our response to Question 1 of the Comment Form on the 1st Draft of Definition of BES, filed on May 27, Central Lincoln believes that the proposed BES Definition could conflict with Section 215 of the Federal Power Act if the Definition, the Exception Process, and the Technical Criteria do not effectively exclude facilities used in local distribution from the BES or if the BES definition does not focus on cascading outages, separation events, and instability on the interconnected bulk system. These statutory limits on the

Organization	Yes or No	Question 9 Comment
		scope of the BES and reliability standards are a minimum that must be met.
The United Illuminating Company	Yes	under the technical principles, some facilities that are local distribution facilities may be included the BES. This is in conflict with the definition of the Bulk Power System in Section 215 which excludes facilities used in local distribution. In particular, Local distribution facilities can not be included in the BES even if they are part of a cranking path.
Pepco Holdings Inc	Yes	Facilities defined as local distribution facilities should not be forced into BES classification due to this new bright line definition.
Consumers Energy Company	Yes	The Technical Principles for Demonstrating BES Exceptions should not conflict with the seven-factor test provisions of FERC Order 888. In particular, provisions should not be established by the Standard Drafting Team that contradict prior Commission rulings associated with seven-factor test provisions.
Hydro-Quebec TransEnergie	Yes	However, there is a conflict between the proposed approach and the regulatory framework applicable in the Quebec's Interconnexion or at least there are some important differences between both. Paragraph 95 of FERC Order 743 acknowledged the situation of non-FERC juridiction. As for the Quebec's Interconnexion, the BES definition and exclusion approach shall meet the expectations of Quebec's regulator, the RÃ©gie de l'Ã‰nergie du QuÃ©bec, (Quebec Energy Board) which has the responsibility to ensure that electric power transmission in Quebec is carried out according to the reliability standards it adopts. In a recent order (D-2011-068), the RÃ©gie de l'Ã‰nergie du QuÃ©bec has recognized several level of application for the Reliability Standards in QuÃ©bec. It stated specifically that most reliability standards in QuÃ©bec shall be applied to the Main Transmission System (MTS). One other level of application recognised by this decision is the NPCC Bulk Power System (BPS) to which the standards related to the protection system (PRC-004-1 and PRC-005-1) and those related to the design of the transmission system (TPL 001-0 to TPL-004-0) will be applicable (including the rest of the standards). The Main Transmission System definition is somewhat different than the Bulk Electric System definition. The Main Transmission System includes elements that impact the reliability of the grid, supply-demand balance and interchanges. It can be described as follows :The transmission system comprised of equipments and lines generally carrying large quantities of energy and of generating facilities of 50 MVA or more controlling reliability parameters: o Generation/load balancing o Frequency control o Level of operating reserves o Voltage control of the system and tie lines o Power flows within operating limits o Coordination and monitoring of interchange transactions o Monitoring of special protection systems o System restoration Therefore, it will be necessary to accommodate NERC's proposed definition of BES or the exception process with the Quebec situation where Entities are under a different jurisdiction. These differences include more

Organization	Yes or No	Question 9 Comment
		than one level of application for the reliability standards, the Main Transmission System definition being the main one to which most reliability standards apply.
Manitoba Hydro	Yes	Canadian Entities are not under FERC jurisdiction, so the revised BES Definition may not apply. A number of Canadian Entities have the BES defined within their provincial legislation. This may introduce differences and even contradictions between elements that are included in the BES according to provincial legislation and the NERC definition.
Independent Electricity System Operator	Yes	Similar to the BES Exception Procedure, the document "Technical Principles for Demonstrating BES Exceptions" must explicitly recognize the authority of Canadian and Mexican Governmental Entities to adopt the Technical Principles for Demonstrating BES Exceptions in its entirety or in part with their own deviations, while ensuring there will be no adverse impact on the interconnected transmission system. Footnote 2 of the "Procedure for Requesting and Receiving an Exception from the Application of the NERC Definition of Bulk Electric System" should be repeated in the "Technical Principles" document.
Response: The SDT has clarified this position. **Bulk Electric System (BES):** Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. This does not include facilities used in the local distribution of electric energy.		
Electric Market Policy	Yes	Dominion is concerned that the provision of the proposed technical principles prohibiting the seeking of an exclusion for a cranking path for blackstart resources will include local distribution facilities within the definition of the BES. This conflicts with the definition of "Bulk Power System" in Section 215 of the Federal Power Act, which excludes facilities used in local distribution.
Response: The SDT has deleted the reference to Cranking Paths. **I3** - Blackstart Resources identified in the Transmission Operator's restoration plan.		
PPL Supply	Yes	Based on FERC Order 743 paragraph 120, radial and local distribution facilities should be excluded from the definition of the Bulk Electric System (BES). The exclusion of non-networked facilities such as radial lines is further re-enforced with Order 743 paragraph 73 which describes the characteristics of a network and does not include most generator interconnection facilities. In that order, FERC justified its bright-line, 100 kV threshold, explaining that "many facilities operated at 100 kV and above have a significant effect on the overall functioning of the grid" because they share the following characteristics: 1. "operate in parallel with other high voltage and extra high voltage facilities"i. The "bright line" at 100 kV recognizes many 100 kV lines

Organization	Yes or No	Question 9 Comment
		parallel other HV/EHV lines and can be significantly loaded by failure of the HV/EHV lines. This does not apply to radial lines, even at 100 kV and above.2. "interconnect significant amounts of generation sources" (emphasis added)3. "operate as part of a defined flow gate"4. have a "parallel nature" and are capable of "caus[ing] or contribute[ing] to significant bulk system disturbances".i. Radial lines cannot cause significant BES disturbances since the outage of a radial line is studied in all N-1 planning studies and if the TPL standards are followed, an N-1 should not cause such disturbances.Excluding generator lead lines is very practical because the physical reality of a radial generator lead line is that it cannot be overloaded by outages on parallel paths because there are no parallel paths. Further, the MW flow on a radial line is well known and limited to a known maximum (limited to the larger of the generation or load on the end of the line); clearly these are reasons for excluding radial lines. When and if a generator lead line is tapped by another generator or load, it is possible that the line between the tap point and the original point of interconnection might need to be rolled into the electrical network. However, at that time, it might also be possible for the transmission owner to purchase the line and make the tap point the new point of interconnection.
Response: The SDT cannot address each and every unique situation in the technical principles for the Rules of Procedure (RoP) exception process. Entities would need to bring relevant evidence on a case by case basis using the RoP exception process.		
Springfield Utility Board	Yes	o The four characteristics defined in the "Exception Criteria - Exclusions" portion of Technical Principles for Demonstrating BES Exceptions appears to be in conflict with, rather than in parallel to, the exceptions which are part of the proposed "core definition" in the Proposed Continent-wide Definition of Bulk Electric System. SUB proposes that NERC postpone work related to Technical Principles for Demonstrating BES Exceptions until a continent-wide BES definition is approved. o FERC Order No. 743 states, "We believe that it would be worthwhile for NERC to consider formalizing the criteria for inclusion of critical facilities operated below 100 kV in developing the exemption process". However, there is no mention of critical facilities operated below 100 kV in NERC's Exception Criteria. SUB would encourage NERC to include critical facilities consideration in their exception criteria.
Response: The SDT is responsible for completing NERC Project 2010-17 (related to the BES Definition process and the exception technical principles process) before year-end. The SDT does not have sufficient time to bifurcate the two processes. The technical principles for the Rules of Procedure exception process as proposed by the SDT allows for presenting exception evidence for including critical Elements energized below 100 kV into the Bulk Electric System.		
SERC Planning Standards Subcommittee	No	

Organization	Yes or No	Question 9 Comment
SPP Standards Review Group	No	
NERC Staff Technical Review	No	
Iberdrola USA	No	
Tri-State Generation and Transmission Association	No	
MRO's NERC Standards Review Forum	No	
Idaho Falls Power	No	We believe that the final drafts of the definition and exemptions should comport to the legal requirements of Section 215.
New York Power Authority	No	
Southern Company	No	
ITC	No	
National Grid	No	Insufficient time was provided to fully undertake this inquiry.
Muscatine Power and Water	No	
Blachly Lane Electric Cooperative	No	
South Carolina Electric and Gas	No	
Glacier Electric Cooperative	No	
Georgia Transmission Corporation	No	

Organization	Yes or No	Question 9 Comment
Entergy Services	No	
Clark Public Utilities	No	
Central Electric Cooperative	No	
Clearwater Power Electric Cooperative	No	
Consumer's Power Inc.	No	
Coos-Curry Electric Cooperative	No	
Douglas Electric Cooperative	No	
Fall River Electric Cooperative	No	
Lane Electric Cooperative	No	
Lincoln Electric Cooperative	No	
Lost River Electric Cooperative	No	
Northern Lights Electric Cooperative	No	
Okanogan Electric Cooperative	No	
Raft River Rural Electric Cooperative	No	
Salmon River Electric Cooperative	No	

Organization	Yes or No	Question 9 Comment
Umatilla Electric Cooperative	No	
West Oregon Electric Cooperative	No	
Pacific Northwest Generating Cooperative	No	
PNGC Power	No	
Consumer's Power Inc.	No	
Benton Rural Electric Association	No	As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
American Electric Power	No	AEP is not aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue.
Orange and Rockland Utilities, Inc.	No	
BGE	No	No comment.
Northern Wasco County PUD	No	As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
Xcel Energy	No	
United Electric Co-op Inc.	No	As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
Oregon Trail Electric Cooperative, Inc.	No	As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.

Organization	Yes or No	Question 9 Comment
Oncor Electric Delivery	No	
Salem Electric	No	As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
Duke Energy	No	
Grant County PUD No. 2 (Grant)	No	As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
Northwest Public Power Association (NWPPA)	No	As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
Big Bend Electric Cooperative, Inc.	No	As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215
American Transmission Company, LLC	No	
Kootenai Electric Cooperative	No	As properly constructed Definition and Exceptions process should meet the legal requirements of Section 215.
Tacoma Power	No	Tacoma Power is not aware of any conflicts at this time.
MidAmerican Energy	No	
ACES	No	
Response: Thank you for your response.		

10. Are there any other concerns with this approach that haven't been covered in previous questions and comments? Please be as specific as possible with your comments.

Summary Consideration: Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.

Organization	Yes or No	Question 10 Comment
SERC Planning Standards Subcommittee	No	The comments expressed herein represent a consensus of the views of the above-named members of the SERC EC Planning Standards Subcommittee only and should not be construed as the position of SERC Reliability Corporation, its board, or its officers.
Iberdrola USA	No	
Bonneville Power Administration	No	
ReliabilityFirst	No	
Tennessee Valley Authority	No	
Idaho Falls Power	No	No comments
New York State Reliability Council	No	

Organization	Yes or No	Question 10 Comment
South Carolina Electric and Gas	No	
Glacier Electric Cooperative	No	
Exelon	No	
Georgia Transmission Corporation	No	
Consolidated Edison Co. of NY, Inc.	No	
Entergy Services	No	
Clark Public Utilities	No	
Orange and Rockland Utilities, Inc.	No	
Xcel Energy	No	
Duke Energy	No	
Hydro-Quebec TransEnergie	No	
New York Power Authority	No	

Response: Thank you for your response. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO

Organization	Yes or No	Question 10 Comment
as established in the Rules of Procedure as presently being drafted.		
BGE	No	It is important to consider that the Technical Principles for Demonstrating BES Exceptions is only one part of the BES definition project. The Technical Principles and the Rule of Procedure Process must be evaluated together with the BES Definition to sufficiently understand the revisions. In the end, the Technical Principles and the BES Definition must coalesce and be clearly coordinated and understood. The BES Definition language must include reference to the role of the associated defining documents. One unambiguous document must not be made ambiguous by an associated document or process. We appreciate the work of the drafting team and support the goal to produce clear definition language so that upwards of 95% of the assets are clearly distinguished as either included or excluded from the BES. We are particularly sensitive to the potential for burdensome processes (e.g. TFEs) to be added to reliability compliance. We appeal to the team for continued, vigilant consideration of the arduousness of the BES determination process.
Response: The upcoming posting of the BES definition and the technical principals will be posted simultaneously in order for industry to adequately evaluate the two documents and their relationship to each other.		
Oncor Electric Delivery	No	Although Oncor Electric Delivery understands the need for the ERO to be in a position to override the inclusion criterion, Oncor desires more clarity on what factors contribute to an overriding action.
ACES	Yes	The term interconnected transmission network is used throughout this document. Bulk Electric System should be used in its place. The purpose of the technical principles is to determine if an Element is needed to support the operation of the Bulk Electric System. Using interconnected transmission network adds more uncertainty to the document.
Northeast Power Coordinating Council	Yes	Exception criteria should be crafted at a high-level with key menu items of assessment that can be followed continent-wide by entities to put forward their exception(s) for element(s) that are not necessary for the interconnected transmission network based on technical assessment, evidence and justification for unique characteristics, configuration, and utilization. (Also see suggestions/ comments in Question 6)
SPP Standards Review Group	Yes	In Question 5 regarding the Transient and Steady State Stability criteria, we would suggest establishing criteria for the damping such that the time required to return to normal is limited. Damping in 1-5% range may be sufficient to accomplish this.

Organization	Yes or No	Question 10 Comment
		Also, delete 2.a.iv.8. in the Exclusion Criteria and 1.c.8. in the Inclusion Criteria.
NERC Staff Technical Review	Yes	A criterion should be added for supporting a request for inclusion of an Element. If an Element has been identified as causal or contributory to a Category 2 or higher event as defined in the ERO Event Analysis Process, that should be sufficient evidence that it is necessary for the Element to be planned, designed, maintained, and operated in accordance with NERC Reliability Standards. An assessment of the Element should include consideration of any corrective actions that have been implemented to prevent a reoccurrence. The Exception criteria also should include a list of characteristics of Elements that will not be considered for exclusion, on the basis that this list of characteristics already identifies the importance of such Elements to reliable operation of the interconnected transmission network. Characteristics should include: (1) Elements that are relied on in the determination of an Interconnection Reliability Operating Limit (IROL); (2) Blackstart resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage, (3) Elements subject to Nuclear Plant Interface Requirements (NPIRs) as agreed to by a Nuclear Plant Generator Operator and a Transmission Entity defined in NUC-001, and (4) Elements identified as required to comply with a NERC Reliability Standard by application of criteria defined within the standard (e.g., the test defined in PRC-023 to identify sub-200 kV Elements to which the standard is applicable.)
Florida Municipal Power Agency Transmission Access Policy Study Group	Yes	The third paragraph of the introduction to the Technical Principles is awkwardly worded and might be misconstrued. FMPA suggests the following rewording: "Entities are not required to seek exceptions under the Exception Procedure to exclude from the BES Element(s) that are already excluded under the BES definition and designations."For the sake of consistency, Exclusions (1) should contain a provision analogous to Exclusions (2)(b) and Inclusions (1)(f) addressing the circumstances under which the ERO can override a demonstration based on these criteria. As noted above, one of those circumstances would be a demonstration by NERC that the Element in question meets the criteria for inclusion in the BES.
Tri-State Generation and Transmission Association	Yes	The proposed principles seem preliminary and immature. In addition as noted in earlier comments they are not fully consistent with the proposed BES definition, particularly with respect to radial elements and local distribution networks. Such consistency should be incorporated before the next posting. We further feel that it is very unlikely that the technical evidence path can be placed on a sound technical foundation and matured by the end of this year as directed by the FERC. Key definitions are lacking and should be added to the document. For instance "distribution factor" is not carefully defined even though such factors can be calculated in a variety of ways.

Organization	Yes or No	Question 10 Comment
Hydro One	Yes	Exception criteria should be crafted at a high-level with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) that are not necessary for the interconnected transmission network and based on technical assessment, evidence and justification for its unique characteristics, configuration, and utilization. (Also see suggestions/ comments on Question 6)
MRO's NERC Standards Review Forum	Yes	1. NSRF proposes replacing the wording in the Exclusion preface, Exclusion 2 preface, and Inclusion 1 preface of “not necessary to reliably operate the interconnected transmission network” with “necessary to maintain an Adequate Level of Reliability (ALR) of the Bulk Electric System”. 2. NSRF has reservations on the following statement made in the introduction of this document:” Due to the importance of Blackstart Resources and their designated blackstart Cranking Paths to restoration efforts, no exceptions will be allowed for those items.” This does not allow for a provision to exclude any designated Blackstart Cranking Path (at any voltage) even though there may be technical justification for it. 3. The first page states that “Specific content of this application is spelled out elsewhere in this appendix.” NSRF requests the SDT describe where this appendix will be published. Furthermore, is it a compliance document or just technical “guidance”? 4. Having the following statement included for both exclusions and inclusions will create disagreement:”The ERO can override this criterion but would need to provide additional justification to support their finding.” NSRF believes any override should have adequate technical justification and not interfere with other statutory requirements. Also, it does not clarify or identify who would make the determination whether NERC has made adequate justification to override the criterion. 5. NSRF believes that the “Inclusion” process should be completely removed from BES Definition. We recommend using bright-line criteria indentifying everything 100 kV and above to be BES and then allow for the “Exception” process to take out facilities that do not impact the reliability of the BES. Selecting BES facilities based on a right-line criteria is what FERC requested in its Order regarding BES Definition. This would streamline the process and remove some unnecessary paperwork.
MidAmerican Energy	Yes	MidAmerican supports the NSRF comments.
PacifiCorp	Yes	The SDT has proposed several technical criteria to be used to determine if an element has an impact on the reliability of the BES. PacifiCorp believes that the majority of non-BES elements can be excluded using a modified proposed bright-line and/or using the non-technical approach. However, in the event an entity requires additional justification to remove non-BES elements from the BES, then PacifiCorp feels the technical criteria should be established on an interconnection basis, not on a continent-wide basis. Because

Organization	Yes or No	Question 10 Comment
		of the number of operating and geographic differences among the interconnections, to try to establish technical criteria on a continental basis would introduce confusion. PacifiCorp believes it is impossible to establish technical criteria that will allow unique interconnections to be treated in a comparable manner.
Western Electricity Coordinating Council	Yes	The biggest concern is that the Technical Principles and the reasoning behind them need to be fully explained. The SDT has mentioned on calls the possibility of a white paper or resource document, and WECC fully supports the creation of such a document. This white paper should describe the rationale for the criteria as well as how that indicates that the element is necessary for reliable operation. Also, the justification for the ERO to override these criteria should be clarified. It should be clear that the ERO's ability to override these criteria is on a case-by-case basis.
Electricity Consumers Resource Council (ELCON)	Yes	The bright-line tests used in the revised BES definition and technical principles may capture the facilities of hundreds of entities that may not know that NERC exists or the enforceability of NERC Reliability Standards. The technical principles should be supplemented with a technical guide or appendix that provides examples of the steps that may be necessary to demonstrate BES exceptions.
Alabama Public Service Commission	Yes	The second paragraph of the proposed Technical Principles states that "[d]ue to the importance of Blackstart Resources and their designated blackstart Cranking Paths to restoration efforts, no exceptions will be allowed for those items." This sentence should be deleted from the technical principles. An unintended consequence of subjecting all blackstart cranking pathways to inclusion in the BES by default would be to cause a Registered Entity, in order to minimize costs, to not declare every possible cranking path but instead limit to the minimum required cranking paths in order to comply with the standards, as opposed to designating multiple pathways. This consequence could be avoided by allowing blackstart cranking pathways to be evaluated for exceptions just like any other element.
Southern Company	Yes	The Technical Principles document suggests that no exceptions be allowed for Blackstart Resources and designated Cranking Paths. Southern Company is concerned with the treatment of these facilities and recommends that certain statements be removed. In Project 2010-17 Definition of the BES, Southern Company commented that the proposed inclusion, Inclusion I4, be removed from the BES Definition because an existing NERC Reliability Standard, EOP-005-2 System Restoration from Blackstart Resources, already addresses these facilities regardless of voltage. Further, the proposed inclusion will expand the applicability of some NERC Reliability Standards to facilities below 100 kV. Southern Company believes this position will unnecessarily cause more facilities to become applicable to reliability standards without any benefit to reliability. Therefore, we recommend the following statement be deleted: "Due to the importance of Blackstart Resources and their designated blackstart

Organization	Yes or No	Question 10 Comment
		Cranking Paths to restoration efforts, no exceptions will be allowed for those items."
National Grid	Yes	The exception process should be strictly limited to the procedures for application and approval and should not include substantive elements.
Muscatine Power and Water	Yes	1. Propose replacing the wording in the Exclusion preface, Exclusion 2 preface, and Inclusion 1 preface of "not necessary to reliably operate the interconnected transmission network" with "necessary to maintain an Adequate Level of Reliability (ALR) of the Bulk Electric System". 2. Currently having reservations concerning the following statement made in the introduction of this document:" Due to the importance of Blackstart Resources and their designated blackstart Cranking Paths to restoration efforts, no exceptions will be allowed for those items." This does not allow for a provision to exclude any designated Blackstart Cranking Path (at any voltage) even though there may be technical justification for it. 3. The first page states that "Specific content of this application is spelled out elsewhere in this appendix." Request the SDT describe where this appendix will be published and indicate if this is a compliance document or just technical "guidance"? 4. By having the following statement included for both exclusions and inclusions will lead to disagreement:"The ERO can override this criterion but would need to provide additional justification to support their finding." Suggesting that any override should include adequate technical justification and not interfere with other statutory requirements. Also, it does not clarify or identify who would make the determination whether NERC has made adequate justification to override the criterion. 5. Do not believe that the "Inclusion" process should be completely removed from BES Definition. Would like to recommend using bright-line criteria indentifying everything 100 kV and above to be considered BES and then allow for the "Exception" process to take out Facilities that do not have an impact on the reliability of the BES. Selecting BES Facilities based on bright-line criteria is what FERC requested in its Order regarding BES Definition. This would streamline and simplify the process by removing a large quantity of exceedingly unnecessary paperwork.
Blachly Lane Electric Cooperative Central Electric Cooperative Clearwater Power Electric	Yes	In general, , as we discuss above, the Technical Principles for Demonstrating BES Exceptions present a reasonable approach to resolving questions of inclusion and exclusion in the BES that the BES definition itself does not clearly resolve. However, we caution that these principles for demonstrating exceptions cannot, and must not, take the place of a consideration of, and criteria under whether, any specific piece of equipment is subject to FERC, the ERO, and Regional Entity jurisdiction in the first instance. Section 215 of the Federal power Act (FPA) sets out clear limits of jurisdiction of FERC, the ERO, and Regional Entities for purposes of

Organization	Yes or No	Question 10 Comment
Cooperative Consumer's Power Inc Coos-Curry Electric Cooperative Douglas Electric Cooperative Fall River Electric Cooperative Lane Electric Cooperative Lincoln Electric Cooperative Lost River Electric Cooperative Northern Lights Electric Cooperative Okanogan Electric Cooperative Raft River Rural Electric Cooperative Salmon River Electric Cooperative Umatilla Electric Cooperative West Oregon Electric Cooperative Pacific Northwest Generating Cooperative Consumer's Power Inc		developing and enforcing reliability standards. Specifically, Section 215(i) provides that the ERO "shall have authority to develop and enforce compliance with reliability standards for only the Bulk-Power System." 16 U.S.C. Â§ 824o(a)(1) (emphasis added). Section 215(a)(1) of the statute defines the term "Bulk-Power System" or "BPS" as: (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy." Id. As we have explained in our comments on the BES definition, that definition should expressly account for these jurisdictional limitations up front. This would allow for the jurisdictional limitation consideration as the very first step in determining whether or not a particular piece of equipment is part of the BES. The Technical Principles for Demonstrating BES Exceptions, on the other hand, provides a completely separate set of criteria for exclusion from the BES and would come into play only after application of the full BES definition to a particular piece of equipment and determination that the BES definition does not provide a satisfactory answer as to whether that piece of equipment is or is not part of the BES. This is acceptable insofar as it goes, but, because (1) the criteria in the Technical Principles are distinct from the jurisdictional limits of Section 215 of the FPA, and (2) consideration of the Technical Principles would essentially be the last, or one of the last, steps in the process, the Technical Principles cannot substitute for, in any way, consideration of the jurisdictional limitations of the FPA. Again, we cannot overemphasize enough how important it is to have the jurisdictional consideration be the very first step in the process of determining whether a particular piece of equipment is or is not part of the BES. Again, thank you for the opportunity to comment. We look forward to continuing to work with NERC and stakeholders to develop a BES definition that is both workable and lawful.
New York State Department of Public Service		The core BES definition based on a 100 kV brightline is an overreach of bulk system designation under the provisions of the Federal Power Act; a properly specified BES core definition would avoid the extensive analysis required under the exceptions procedure. That said, the proposed principles for use in the exceptions process are consistent with previous FERC efforts to distinguish between transmission and local distribution. The upfront exclusion of applying the proposed principles to blackstart cranking path facilities is a potential

Organization	Yes or No	Question 10 Comment
		overreach into the local distribution system and can be counter productive reliability. Mandating compliance of NERC standards to cranking paths will result in the specification of only one cranking path by host utilities to minimize costs, where designating multiple paths in restoration paths would provide the flexibility needed to minimize customer outage duration.
Springfield Utility Board	Yes	SUB has the following concerns regarding NERC's Technical Principles for Demonstrating BES Exceptions: o Clear Definition of Radial - As previously addressed in our BES Definition comments, SUB would encourage a more clear definition of a "radial" versus "closed-loop" system. Because there still appears to be inconsistencies in both definition and application, SUB encourages NERC to develop a concise definition of a radial system. For example, if a system is normally operated as radial, but could be operated as closed (by manually closing a breaker), would it be considered a radial or close-looped system? If the answer is close-looped, then is this in all cases, or are there exceptions? o Approval of Exceptions - SUB would like for NERC to clarify the process for receiving, reviewing, and accepting or rejecting exception applications. The Technical Principles for Demonstrating BES Exceptions states that, "...will be subject to review and remand by the ERO itself, or by any agency having regulatory or statutory oversight of NERC as the ERO." During NERC's presentation at APPA's BES Definition webinar, it was explained that the exception process would look like the following:1. Entity applies for expemption,2. Region receives application, verifies received, and forward to NERC with recommendation(s), and 3. NERC makes final determination (decision is appealable by entity).For consistent application of the expemption procedure, SUB would encourage NERC to adopt the process as it was communicated during the APPA webinar, with regions making recommendations, but NERC making the final decision. o Duration of Approved Exclusions/Inclusions - The Technical Principles for Demonstrating BES Exceptions does not indicate the duration for approved exclusions or inclusions. How long are granted exclusions/inclusions? Permanent? Annual? Other? o Publication of Exceptions - For consistent application, as well as transparency and accountability, SUB would request that all exceptions be published ; those applied for, as well as whether they were rejected or accepted, as well as decision rationale.
ISO New England	Yes	Any generator that is studied individually will not be shown as material since the electric system is designed to allow the outage of any individual generator. Generators must be studied within the context of the electric system to assess materiality. The generator and its interconnecting transmission facilities would likely be able to be excluded based on this process although they meet the Registry Criteria thresholds requiring inclusion.
The United Illuminating	Yes	UI is concerned that the method used to characterize exclusions in Method 1 did not follow the proposed BES

Organization	Yes or No	Question 10 Comment
Company		Definition and believe the process developed for Method 2 (and reused for Sub-100kV Inclusions) is overly complicated, lacks necessary regional standards to support the process and may prove too difficult for some companies to fully comply with thereby discouraging a consistent and uniform application of the definition across all regions and affected BES element owners. These Principles are not technical Principles. Further the use of these Planning criteria and impact assessments is not very different from the NPCC functional test that drew the ire of FERC. The Drafting Team is attempting to develop definitions and identifiers for the fringes of the bulk power system, but they are replacing one set of ambiguities with a set of technical ambiguity. This product is poor because given the very first term, that is the first principle to be met, is those facilities necessary for the reliable operation of an interconnected transmission system, is full of undefined concepts such that anything attempting to define it in a subtle manner is immediately lost in the ether. Recognizing that these technical principles will be permanent, UI suggests excluding them and sticking with the bright line exclusions and inclusions in the proposed definition.
Occidental Energy Ventures Corp.	Yes	The Technical Principles and the new BES Definition seem to include a significant number of retail customers as proposed. Surely this is not the intent of these changes. There should be an exclusion along the lines of Comment 6.
Flathead Electric Cooperative, Inc. Benton Rural Electric Association Northern Wasco County PUD United Electric Co-op Inc Oregon Trail Electric Cooperative, Inc Central Lincoln Salem Electric Grant County PUD No. 2 (Grant) Big Bend Electric Cooperative,	Yes	supports the approach to the exclusion process proposed by the SDT, which provides two different paths to exclusion, one based on readily-identifiable operational characteristics of a system, and one based on technical reliability analysis. We believe it is important to provide for the first path, based on operational characteristics, so that systems that are marginally disqualified under the BES Definition (because, for example, generation within the system exceeds demand for a few hours a year) can obtain an exclusion without the large investment of resources that otherwise might be required for a full-scale technical analysis. we question whether the first subsection of the characteristic test, relating to system proximity, is necessary, and we are concerned that the requirement that a system meet all four requirements of the characteristics test may be overly restrictive. For example, it is easy to imagine a distribution system in a rural area that covers a widely dispersed area, so that load is many miles from the relevant generation/transmission source, and that the system therefore does not meet the electrical proximity element, but meets the other three elements of the characteristics test. Such a system should be excluded because it clearly serves a local distribution function, and not a transmission function, as demonstrated by the fact that the system meets subsections (c) (power flows into the system but rarely flows out) and (d) (power is not intentionally transported over the system). Accordingly, we recommend that the SDT consider eliminating the first test. In the alternative, the SDT should consider allowing exempting a system from the BES if it, for example,

Organization	Yes or No	Question 10 Comment
Inc Northwest Public Power Association (NWPPA) Kootenai Electric Cooperative		meets three of the four criteria rather than all four.
Spyker	Yes	Exception criteria should be crafted at a high-level with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) that are not necessary for the interconnected transmission network and based on technical assessment, evidence and justification for its unique characteristics, configuration, and utilization.
American Electric Power	Yes	AEP appreciates the work that the drafting teams have done within the various deliverables related to the BES definition, technical principles for demonstrating BES exceptions, and the BES definition exception process. AEP acknowledges the benefits of agreeing to a BES definition and exception process, and appreciates the drafting teams' requests for industry involvement. Due to the interrelated nature of the deliverables currently out for review regarding the BES definition and exception processes, it is difficult if not impossible, to comment "in isolation" on any individual facet of the project. For example, there needs to be a defined relationship between an approved definition of BES, the technical principles for demonstrating BES exception, and the exception process itself. When closely related projects such as these are done simultaneously, no individual deliverable can rely on the completed work of another. As a result, we risk having conflicting decision making across these projects. As a result, AEP is not in the position to make further comments at this time beyond those recently and concurrently made regarding the BES definition and technical principles for demonstrating BES exceptions. We suggest that further work on these efforts, when appropriate, become more consolidated and that care be taken to not undertake concurrent efforts before sufficient progress has been made on important aspects of the project. AEP appreciates the drafting teams' requests for industry input, and looks forward to its future involvement after additional progress has been made on these issues.
Consumers Energy Company	Yes	In addition to the owner, only those with jurisdictional authority, such as the ERO and RRO, should be permitted to register Exception Requests. A third party may have a business reason for wishing to encumber another entity with regulatory compliance risk and responsibility. In addition, this could create an additional strain on the Exception Request process due to an excessive number of requests from third parties. We do want to ensure that the term "Other", used in Exclusion Section 2.a.iv.8., and Inclusion Section 1.c.8., not remain in the final Technical Principles document.

Organization	Yes or No	Question 10 Comment
for Snohomish County PUD	Yes	Snohomish County PUD generally supports the approach to the exclusion process proposed by the SDT, which provides two different paths to exclusion, one based on readily-identifiable operational characteristics of a system, and one based on technical reliability analysis. We believe it is important to provide for the first path, based on operational characteristics, so that systems that are marginally disqualified under the BES Definition (because, for example, generation within the system exceeds demand for a few hours a year) can obtain an exclusion without the large investment of resources that otherwise might be required for a full-scale technical analysis. That being said, we question whether the first subsection of the characteristic test, relating to system proximity, is necessary, and we are concerned that the requirement that a system meet all four requirements of the characteristics test may be overly restrictive. For example, it is easy to imagine a distribution system in a rural area that covers a widely dispersed area, so that load is many miles from the relevant generation/transmission source, and that the system therefore does not meet the electrical proximity element, but meets the other three elements of the characteristics test. Such a system should be excluded because it clearly serves a local distribution function, and not a transmission function, as demonstrated by the fact that the system meets subsections (c) (power flows into the system but rarely flows out) and (d) (power is not intentionally transported over the system). Accordingly, we recommend that the SDT consider eliminating the first test. In the alternative, the SDT should consider allowing exempting a system from the BES if it, for example, meets three of the four criteria rather than all four.We have pasted in the text of our White Paper below. Please contact us for a more readable version of the White Paper.White PaperA Performance-Based Exemption Process to Exclude Local Distribution Facilities from the Bulk Electric System April 2011 This White Paper proposes a transmission planning ("TPL") "performance-based" process to determine the local distribution facilities the North American Electric Reliability Corporation ("NERC") must exclude from the Bulk Electric System ("BES") pursuant to Section 215(a)(1) of the Federal Power Act ("FPA"). This process would apply to those local distribution facilities that are not automatically excluded under a bright-line BES definition. Consistent with Federal Energy Regulatory Commission ("FERC") Order Nos. 743 and 743-A, a performance-based exemption process would be objective, consistent, and transparent, and would adequately differentiate between local distribution and transmission, i.e., BES, facilities. I. What Is Reliability? FPA Section 215 authorizes NERC to promulgate "reliability standards," subject to FERC approval. Section 215 defines "reliability standard" to mean a properly-approved requirement "to provide for the reliable operation of the bulk-power system." The statute, in turn, defines "reliable operation" to mean "operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will

Organization	Yes or No	Question 10 Comment
		not occur as a result of sudden disturbances, including . . . unanticipated failure of system elements." II. What Is "Customer Service" or "Level of Service" ("LOS")? Local customer service or LOS relates to service failures on local utility systems that are wholly internalized rather than spilling onto the interconnected regional grid. These types of service failures relate to local customer service and LOS standards. The customers of those utilities will bear the full cost of complying with internal LOS standards and will obtain the full benefit of compliance to the extent that service levels on those systems improve. Accordingly, state public utility commissions (for regulated utilities) and independent boards (for non-regulated utilities) can fully and accurately weigh whether the benefits of compliance with such standards are justified by the costs they will pay. Intervention by NERC and a Regional Entity is not needed because a utility's actions related to level of service on its own system will neither unduly burden the customers of other systems, threaten the reliable delivery of power to those customers, nor create incidental benefits to those remote customers. In the absence of the need to protect customers of systems remote from the consequences of decisions made by an individual utility, there is no warrant for NERC or a Regional Entity to interfere with a utility's internal decision-making about the appropriate LOS to its own customers, and the costs that will be borne by those customers to achieve any particular level of service. In fact, in the "Savings Provisions" of Section 215, Congress specifically included language prohibiting NERC and Regional Entities from enforcing "compliance with standards for adequacy" of electric service. By law, these remain the exclusive province of local decision-makers. III. The Need for a Material Impact Test In Order No. 743-A, FERC clarified that a material impact test is appropriate in the reliability context if the test can be shown to identify facilities needed for reliable operation. The following example of an outage demonstrates the need for an impact test to distinguish between LOS and Reliability, i.e., local distribution facilities and BES facilities. A. Pre-Event Facts Local Utility Administration ("LUA") owns a 115 kV system that moves power from two points of delivery ("POD") and serves 1000 MW of load. A DC battery rack had an unexpected failure a few days after it was routinely inspected and LUA has not implemented Supervisory Control and Data Acquisition ("SCADA") so the DC battery voltage is not continuously monitored. The LUA system interconnects with BES Company's system which consists of 230 kV and 500 kV lines. B. Event Facts A fault occurs and the breakers in substation 2 fail to operate due to a battery failure (Figure 1). This results in an outage for customers served by substations 1, 2, and 3 on the LUA system. Figure 1 C. Post-Event Facts Immediately after the outage, LUA customer service receives numerous customer calls followed by a call from its Public Utility Commission/Local Utility Board ("/PUC/LUB"). LUA dispatches crews immediately after being informed of the outage to identify and resolve the problem. Within 45 minutes, the fault is sectionalized and the all load is restored. The PUC/LUB receives complaints from LUA customers who identify economic and other adverse impacts of the outage. The PUC/LUB demands a report from the

Organization	Yes or No	Question 10 Comment
		LUA that describes the event and restoration, as well as potential solutions. LUA submits a report which finds that the main solution to this problem involves the implementation of a SCADA system. The SCADA system scope of work includes battery voltage telemetry and would have identified the DC system issue and prevented the protection system failure, resulting in only the loss of substation 3. The SCADA plan cost estimate is $30 million and was presented three years earlier. The PUC/LUB evaluated the costs and benefits of the new SCADA system, but did not approve the project in order to reduce the budget and/or provide rate stability for the struggling local economy. LUA, the PUC/LUB, and customers will re-evaluate the merits of adding SCADA as well as other solutions such as increasing substation inspection runs, updating the batter fleet, and further investigating battery manufacture reliability records. Based on the LUA report, the battery bank failure rate immediately after routine inspections is expected to occur once every 3,500 years. Seventy battery banks are used on the LUA system, so a bank failure should be expected every 50 years. BES Company's neighboring 230kV and 500kV system does not experience an adverse system impact. Subsequently, BES Company identifies that one of its breakers operated at the LUA South POD. BES Company and LUA coordinate a review of the system protection scheme and BES Company determines that it operated correctly. BES Company verifies that the LUA outage did not create any thermal, voltage, or transient stability limit violations on the BES Company system. The Regional Entity, NERC, and FERC treat the outage as a Reliability Standards issue. The LUA System (highlighted in yellow) is considered part of the BES because it meets the "bright line" 20 MVA and 100 kV thresholds under the current BES definition and the NERC Statement of Compliance Registry Criteria ("SCRC"). The event would most likely be considered a TPL-003 category C event specifically C8 SLG Fault, with delayed clearing that may include a stuck breaker or protection system failure. The LUA Substation Department reviews its inspection records and has adequate documentation for the battery banks involved in the outage. As a result, LUA avoids substantial fines. However, during the inspection review, LUA notices that the battery bank in a similar distribution substation inspection schedule was completed three days late. Upon following further internal procedures, LUA finds that the battery bank was inspected three days late due to restorations efforts after a major wind storm. Although there were no LOS impacts, and the inspection schedule was unrelated to the outage, the Reliability Standards triggered a LUA self report to its Regional Entity which ultimately resulted in a $50,000 penalty. D. Summary This example identifies that in addition to a "bright line" BES exclusion process a more refined process such as a "performance based" reliability assessment is needed to distinguish BES facilities from distribution facilities if the NERC Statement of Compliance Registry Criteria ("SCRC") continues to be the benchmark for assessing BES facilities. It is clear from this example that the current 100 kV and 20 MVA thresholds cannot accurately classify what is and is not considered part of the BES. Defining BES facilities is important from the "Reliability Standard" and "LOS" perspectives as well as from a local and regional jurisdictional standpoint. There are multiple agencies identifying and approving what facilities should and should not be built, what programs should and should not be implemented, and if a fine should be paid by

Organization	Yes or No	Question 10 Comment
		customers experiencing an outage without determining if it could have had an adverse impact on neighboring electric systems. Without a performance-based process, many small and medium electric utilities would be unnecessarily burdened. â€ƒ IV. Neighboring System Rule It is important but not always easy to distinguish the difference between "reliability" and "LOS" impacts. One way to resolve this is to use the "neighboring system rule." Simplistically, if events on the host system's facilities can create an "adverse" or "material" impact on a neighboring electric (TO, TOP, BA) system, those facilities should be considered part of the BES as they are creating a reliability impact. If not, these facilities should not be considered part of the BES. V. "Adverse" or "Material" Impact A key question in applying the "neighboring system rule" is what is an "adverse" or "material" impact, and what "performance based" assessment should be used to benchmark adverse or material. Because the electric system within an interconnection is frequency interdependent, theoretically every system change impacts the interconnected system to some degree. Turning on a light-switch that is connected to an operational 20 watt CFL (light bulb) theoretically impacts frequency, although to an undetectable degree. Therefore the term "material" or "adverse" impacts must be defined to distinguish observable impacts that affect reliability from minutia. A number of performance based exclusion examples have been proposed that use, Power Transfer Distribution Factors ("PTDF"), Line Outage Distribution Factors ("LODF"), fault duty or short circuit levels, reactive margin studies (P-V and Q-V), abbreviated or focused powerflow and transient stability analysis, as well as complete TPL assessment using multiple seasonal base cases, loading conditions, transfer levels. These methods demonstrate various metrics, they rank system strength (both real and reactive), the ability of power to flow through system under normal and outage conditions, and they determine steady state, voltage stability and transient (angular) stability performance. Although there may be advantages to a multi-step "performance based" approach that includes the exclusion examples above, this paper proposes a TPL-based assessment that is consistent with BES performance benchmarks used in assessing transmission system performance in North America. The Western Electricity Coordinating Council ("WECC") BES Exclusion/Inclusion Assessment - 2-16-11 version provides a sound metrics in assessing the performance of a system as well as determining if a system can materially impact a neighboring system (Figure 2). It would be envisioned that each interconnection would develop a "Disturbance Performance Table of Allocable Effects on Other System". This table is necessary because the NERC TPL Performance Table does not provide actual performance details on acceptable transient and post transient voltage perturbations or minimum transient voltage frequencies. Figure 2 show the approved TPL-001 through TPL-004 performance tables.Figure 3 - Table 1 from the NERC TPL Reliability Standardsâ€ƒ VI. Performance Based Assessment Process The "performance based" methodology below is based on the "neighboring system rule" and the WECC BES Exclusion/Inclusion Assessment - 2-16-11 that was developed by the WECC Bulk Electric System Definition Task Force ("BESDTF"). The process focuses on exclusions rather than inclusion and specific response times, schedules, and process details have been removed as this

Organization	Yes or No	Question 10 Comment
		will likely need to be determined by each, Regional Entity Representing the Interconnection ("RERI") A. Purpose The purpose of this document is to set forth a "performance based" technical process for assessing whether elements with a nominal operating voltage greater than 100 kV and outside the NERC SCRC based excursion process should be excluded from the Bulk Electric System. An element is necessary to reliably operate an interconnected transmission system if it significantly affects neighboring Transmission Owners, Operators, and Balancing Authorities as described in Table 1 below. This paper proposes a method for assessing whether an element is necessary to support the reliability of an interconnected transmission system or if the element is limited to supporting local customer service levels. B. TermsExclusion Assessment (EA) An assessment of whether a Subject Element or System has a material impact on neighboring Transmission Owners, Operators, and Balancing Authorities as described in Table 1 below and conducted in accordance with the process set forth in this document.EA Base Case The interconnection approved, Base Case as modified to include the Subject Element, used to perform the assessment described in this document.Regional Entity Representing the Interconnection The regional entity representing the interconnectionRegistered Entity The entity registered to comply with mandatory reliability standards for a Registered Function.Responsible Entity The entity responsible for performing the EA and verifying the results of the EA to the interconnection.Subject System or Element of a System The System or Element of a System that is being examined by the EA. C. Applicabilitya. An EA may be performed:i. By a registered entity, or by a third party on behalf of a registered entity, to assess whether a Subject Element or system has a material impact on neighboring Transmission Owners, Operators, and Balancing Authorities as described in Table 1 may be excluded from the BES as set forth by the RERI. ii. The RERI, or by a third party on behalf of the RERI, to assess whether a Subject Element or system has a material impact on neighboring Transmission Owners, Operators, and Balancing Authorities as described in Table 1 should be included as part of the BES as set by the RERI.b. Frequency of analysis. The confirmed findings of an EA are valid until reversed by a subsequent EA. A new EA is required if:i. Significant changes are made to the network topology in the vicinity of the Subject Element; orii. RERI staff requests a new EA. Such request shall be provided in writing and shall include reasonable justification for the request. D. Notifying the RERI of the Responsible Entity's intent to submit an EA finding or to perform an EA.The Responsible Entity shall notify the RERI in writing of its intent to submit such a finding. Such notice shall include:a. A general description of the Subject Element(s);b. One-line diagrams representing the Subject Element and applicable neighboring Elements; andc. A description of the base case that will be used in performing the EA and how that case will be stressed for the analysis. E. Performing the Analysis Base Case The base case(s) used for the studies shall be developed from current interconnection Operating Cases and shall simulate stressed conditions in the area of the element to be

Organization	Yes or No	Question 10 Comment
		analyzed which (1) are reasonably expected to be achieved, consistent with the study period selected (e.g., hydro generation shall reflect seasonal water availability patterns) and (2) are expected to provide "worst-case" results (i.e., the greatest impact on voltage, flow, or transfer capability) during the upcoming operating year. The base case(s) shall be "stressed" by committing or de-committing generating units and adjusting generating unit output to increase the flow on the candidate element and the electrically nearest rated interconnection transfer path to the greatest extent possible, but not beyond their continuous ratings, for the initial set of conditions. To help minimize the possibility of dispute as to whether the base case(s) are suitably stressed, entities are encouraged to solicit input from subregional planning groups or other planning entities as the suitability of the base case(s) before undertaking the analyses described below.i. Non-represented Elements. If the Subject Element is not represented in the EA Base case:1. The Responsible Entity shall provide to the RERI a written request to add the Responsible Entities data to the cases:o all data reasonably necessary to accurately and completely model the Subject Element in the EA Base case; ando A one-line diagram showing this element and other nearby Elements. If the nearest connected Element is not found to be necessary for the operation of an interconnected transmission system, the RERI shall notify the Responsible Entity to take no further action. F. Performance Based Methodology The impact an System or Element has on neighboring Transmission Owners, Operators, and Balancing Authorities as described in Table 1 shall be determined by assessing the performance of key measures of BES reliability through power flow, post-transient, and transient stability analysis with (1) the system, and the Subject Element, operating at reasonably stressed conditions that replicate expected system conditions under which the loss of the Subject Element would have the greatest impact on the key measures of reliability, and (2) the Subject Element removed from service, but without allowing for system readjustment. For the purposes of this analysis, "Elements" may be: (1) lines; (2) transformers; (3) buses or bus sections; (4) generating units; (5) shunt devices . i. Simulation 1: Requirement: Meet applicable NERC Reliability Standard (TPL-002 and TPL-003) and the RERI Disturbance Performance Table of Allocable Effects on Other System" Criteria performance for NERC TPL-002 and TPL-003 disturbances.Step 1: Run appropriate TPL-002 (N-1 contingency) studies of elements in the electrical vicinity of and including the Candidate Element (i.e., simulate primary protection operates as intended)Step 2: Run appropriate TPL-003 (N-2 contingency) studies of elements in the electrical vicinity of and including the Candidate Element. This would include both N-2 contingencies in which the Candidate Element would simultaneously be lost as part of a common mode failure, as well as contingencies in which the Candidate Element's primary protection fails.Automatic Remedial Action Schemes ("RAS") or Special Protection Schemes ("SPS") that are fully redundant (i.e., their failure is not credible) may be triggered during this simulation. If the failure of the RAS/SPS is a credible event, it should be considered as part of the N-2 analysis. ii. Simulation 2:Requirement: Remove the Candidate Element. Do not allow for system adjustment, and re-solve the base case. Then conduct applicable NERC Reliability Standard (TPL-002 and TPL-003) contingencies. Step 1: Remove Candidate Element (i.e., simulate unplanned opening of

Organization	Yes or No	Question 10 Comment
		facility).Step 2: Assume no system adjustment. At this point, elements may be loaded above their continuous ratings but may not be loaded above their emergency ratings. Step 3: Perform NERC TPL-002 and TPL-003 (N-1 and N-2 contingency) studies.Step 4: If the analysis demonstrates performance that meets or exceeds that called for in the NERC Reliability Standards and RERI System Performance Criteria, the Candidate Element would be determined to not be necessary for the operation of an interconnected transmission system. Note: Consequential load tripping is allowed, and consequential and out-of-step generation tripping is allowed.CriteriaTable 1: RERI Disturbance-Performance Table of Allowable Effects on Other SystemsNERC and WECC Categories Outage Frequency Associated with the Performance Category (outage/year) Transient Voltage Dip Standard Minimum Transient Frequency Standard Post Transient Voltage Deviation StandardASystem normal Not Applicable Nothing in addition to NERCBOne elementout-of-service ï‚³ 0.33 Not to exceed 25% at load busses or 30% at non-load busses.Not to exceed 20% for more than 20 cycles at load busses. Not below 59.6Hz for 6 cycles or more at a load bus. Not to exceed 5% at any bus.CTwo or more elementsout-of-service 0.033 - 0.33 Not to exceed 30% at any bus.Not to exceed 20% for more than 40 cycles at load busses. Not below 59.0Hz for 6 cycles or more at a load bus. Not to exceed 10% at any bus.DExtreme multiple-element outages < 0.033 Nothing in addition to NERC Figure 1. Voltage Performance Parameters RERI TPL criteria related to reactive power resources:1. For transfer paths, voltage stability is required with the pre-contingency path flow modeled at a minimum of 105% of the path rating for system normal conditions (Category A) and for single contingencies (Category B). For multiple contingencies (Category C), post-transient voltage stability is required with the pre-contingency transfer path flow modeled at a minimum of 102.5% of the path rating.2. For load areas, voltage stability is required for the area modeled at a minimum of 105% of the reference load level for system normal conditions (Category A) and for single contingencies (Category B). For multiple contingencies (Category C), post-transient voltage stability is required with the area modeled at a minimum of 102.5% of the reference load level. For this criterion, the reference load level is the maximum established planned load limit for the area under study.3. Specific requirements that exceed the minimums specified in 1 and 2 may be established, to be adhered to by others, provided that technical justification has been approved by the RERI.4. Item 3 applies to internal interconnection Systems.Submitting a Proposed Finding of Exclusion to the Regional EntityInformation required. Once the analysis has been performed and the Subject Element/System has been determined to not have a material impact on neighboring Transmission Owners, Operators, and Balancing Authorities as described in Table 1, and is unnecessary for the operation of an interconnected transmission system, the Responsible Entity shall submit the findings to the RERI.RERI Review of Proposed Findings The RERI operational/planning staff with technical expertise in powerflow studies shall review Proposed Findings of Exclusion submittals and shall determine if the assessment is deficient or agrees with the finding of exclusion. The RERI shall exempt the system elements from the BES, if the elements are approved for exclusion. If the exclusion of the BES elements change the Responsible Entities NERC functional registrations the Region shall support the Responsible Entity through the NERC deregistration process.

Organization	Yes or No	Question 10 Comment
		Dispute Resolution A Responsible Entity or Registered Entity or Owner may appeal a Disputed Finding of Exclusion with the RERI to NERC. Ongoing Responsibilitiesa. Logging. The RERI shall create and maintain a comprehensive list, available for public review, of:i. All Elements with nominal operating voltages at or above 100 KV that have Confirmed Findings of Exclusion, or, through other aspects of the BES definition, have been excluded from the BES including an explanation of how the element was excluded through the definition;ii. All Elements with nominal operating voltages below 100 kV that have Findings of Inclusion; andiii. The status of all EAs in dispute.iv. The Responsible Entity would continue to provide system data to the neighboring Balancing Authorities and Transmission Owners and Operators and if applicable continue to coordinate underfrequency load shed and under voltage load shed scheme information.VII. Conclusion NERC should adopt the TPL-based assessment as proposed herein. A bright-line BES test will not exclude all load distribution facilities as required by the FPA. Further, a performance-based exemption process would be objective, consistent, and transparent, and would adequately differentiate between local distribution and transmission, i.e., BES, facilities.
American Transmission Company, LLC	Yes	1. ATC proposes replacing the wording in the Exclusion preface, Exclusion 2 preface, and Inclusion 1 preface of “not necessary to reliably operate the interconnected transmission network” with “necessary to maintain an Adequate Level of Reliability (ALR) of the Bulk Electric System”. 2. ATC has reservations on the following statement made in the introduction of this document:” Due to the importance of Blackstart Resources and their designated blackstart Cranking Paths to restoration efforts, no exceptions will be allowed for those items.” This does not allow for a provision to exclude any designated Blackstart Cranking Path (at any voltage) even though there may be technical justification for it. 3. The first page states that “Specific content of this application is spelled out elsewhere in this appendix.” ATC requests the SDT describe where this appendix will be published. Furthermore, is it a compliance document or just technical “guidance”? 4. Having the following statement included for both exclusions and inclusions will create disagreement:”The ERO can override this criterion but would need to provide additional justification to support their finding.” ATC believes any override should have adequate technical justification and not interfere with other statutory requirements. Also, it does not clarify or identify who would make the determination whether NERC has made adequate justification to override the criterion.
Manitoba Hydro	Yes	The exception procedure is a complicated and resource intensive process. To be most effective, the BES definition should be a stand-alone 100kV bright line with any exception criteria being specified within the definition. Additionally:-FERC Order 743 directed the revision of the Bulk Electric System (BES) definition to improve clarity, to reduce ambiguity, and to establish consistency across all Regions. The proposed impact

Organization	Yes or No	Question 10 Comment
		based exception procedure undermines all three of these targets. -The Technical Exceptions eliminate the 100kV 'bright-line' definition and introduce regional differences, both of which are contradictory to the goals of the BES revision project. -The commitment for NERC to review and continuously monitor BES exceptions made through this process would be extremely onerous and resource intensive with little benefit to reliability. -To obtain industry consensus on the precise limits to determine if an element has sufficient impact on the BES to be included in the BES is not a reasonable or attainable endeavor.
NESCOE	Yes	NESCOE believes that exclusion determinations should be based on clear but flexible criteria that do not result in the unnecessary inclusion of elements into the BES that do not adversely impact the reliability of the BES. The process described here is too limiting in its requirement that an application meet all of those four listed criteria not requiring technical analysis. Applicants and reviewers should have a broader menu of decision criteria available to them. Regarding those criteria related to exclusions based on technical analysis, NESCOE suggests that ranges of values, in recognition of regional differences in network characteristics, be suggested by the drafting team for further consideration. Finally, as discussed above in response to questions 1 through 4, NESCOE believes that additional exclusion determinations should not require a finding that all four proposed criteria are met. Rather, the various criteria set forth under 1(a) through 1(d) should be treated as alternative criteria to qualify for an additional exclusion, and entities seeking additional exclusions to the BES should be allowed to demonstrate that one or more criteria is met, depending on the nature of the element that is the subject of the application.
Response: The SDT appreciates your comments. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		
Edison Electric Institute	Yes	We are concerned that the method used to characterize exclusions in Method 1 did not follow the proposed BES Definition and believe the process developed for Method 2 (and reused for Sub-100kV Inclusions) is overly complicated, lacks necessary regional standards to support the process and may prove too difficult for some companies to fully comply with thereby discouraging a consistent and uniform application of the

Organization	Yes or No	Question 10 Comment
		definition across all regions and affected BES element owners. In the proposed (BES) definition and accompanying Inclusions and Exclusions, the Drafting Committee went to some effort to clearly and methodically define what was included and what was permissible to exclude. Unfortunately the NERC proposed "Technical Principles for Demonstrating BES Exceptions" did not follow that same clear and concise manner adding some confusion which could lead to inconsistent application of the Exclusion (and Inclusion) Criteria. For example, at no point did the "Principles" ever identify Inclusions I2 through I5 which were liberally used in the exclusion criteria within the BES definition. Additionally within the body of the Proposed BES definition, there are three (3) approved Exclusions (E1 - Radial System; E2 - Small Customer Generator/Generation System and E3 - Local Distribution Networks). Each of the Exclusions have its own set of criteria used to define and characterize the methodology necessary to meet each exclusion, however, the "Principles" contained in this document only loosely follow the criteria provided and in some cases miss that criteria all together. We refer the SDT to the EEI comments previously submitted on the BES Definition regarding the relationship of the BES definition to the statutory exclusion of local distribution facilites.
PPL Supply	Yes	General PPL Supply concerns with draft Technical Principles for exclusion/inclusion:1. It may be premature to work on an exclusion/exemption/inclusion process since the BES definition is not established yet. A lot of work could be done on the Exclusion/Inclusion that is meaningless because there is some chance the exclusion/inclusion process will not complement or might duplicate the BES definition. 2. The proposal will result in inclusion of generation facilities that are not significant to BES reliability. 3. The exclusion/inclusion drafting team does not appear to have considered the FERC assessment in Order 743-A (17-Mar-11) that "material impact assessments" cannot be unduly subjective and must be technically based as stated in paragraph 47. a. For the material impact tests in the Exclusion/Inclusion Technical Principles to be technically based, it is important that the tests actually measure what FERC states are the characteristics of the BES (see Order 743 paragraph 73), namely 1) operate in parallel, 2) carry significant amounts of generation, 3) operate as part of a defined flowgate, 4) are parallel in nature and 5) are capable of causing or contributing to significant disturbances. The proposed tests do not make these measurements. b. Further, since all facilities already meet the technically based NERC planning and operating standards, any additional measure beyond these standards such as those created by the BES Exclusion/Inclusion drafting team will be unduly subjective, as these new measures go beyond the technical basis of the NERC standards.

Organization	Yes or No	Question 10 Comment
		4. It is unclear how the exclusion/inclusion drafting team considered FERC's concerns with the use of "material impact assessments," as described in Order 743, paragraph 85 ("no grounds on which to reasonably assume that the results of the material impact assessment are accurate, consistent, and comprehensive"). Specific comments on Technical Principles paper from NERC DT 20110510A. Please add wording to make complete sentences as needed in order to clarify whether facilities meeting these criteria are included or excluded. For example, the clarifying words are added to the following Exclusion 1 to help the reader better understand the meaning. 1. "The elements that meet all of the following characteristics are not necessary for the reliable operation of the grid and are thus excluded:"a. System elements that are located in close electrical proximity to Load are exempt from inclusion in the BES.B. Notwithstanding the need for complete sentences to assure proper interpretation, the following comments should be considered by the drafting team: o Exclusion 1 a) uses an unduly subjective, non-technically based material impact test. o Exclusion 1 b) i and ii attempts to introduce disconnect procedures in the classification as "radial" which may hurt reliability by disconnecting radial equipment that could provide voltage support. The exclusion also introduces commercial (dispatch) considerations which may not be appropriate in a reliability-based document. o Exclusion 1 c) assuming "system" is short for "system elements", this requirement for exclusion is overly discriminatory to generators which flow power out. o Exclusion 1 d) is too vague to be useful because "system" seems to have more than one meaning in this requirement. o Exclusion 2 and Inclusion 1 in their entirety are unduly subjective, non-technically based material impact tests.We are concerned that the proposed inclusion and exclusion procedures could result in not only significant generation interconnection facilities being included in the BES - but also less significant generation interconnection facilities. Such a result would be inconsistent with FERC Order 743. Accordingly, PPL Supply respectfully requests NERC to:o Exclude radial facilities less than 100 kV and not black start (these facilities are excluded in the latest definition of the BES). o Exclude radial facilities greater than 100 kV but less than 200 MVA (proposed BES now includes generators over 20 MVA)o Exclude local distribution networks (LDNs) with flow into network up to 200 MVA o Currently, LDNs are excluded if they only absorb (not produce) net power (Technical Principles Exclusion 1-c). It is also appropriate to exclude LDNs with less than net 200 MVA flow into the BES electrical network. o Inclusion efforts should not consider such issues as proximity to markets, proximity to load or nuclear facilities, or length of generator lead line.

Organization	Yes or No	Question 10 Comment
Independent Electricity System Operator	Yes	We hold the view that the path to generating facilities need not be always BES contiguous. Generating units should be required to meet a subset of NERC Standards, but should not always require contiguous BES paths. Finally, we reiterate that exception criteria should be crafted at a high-level with key menu items of assessment that can be followed continent-wide by entities to put forward their exception for element(s) that are not necessary for the interconnected transmission network and based on technical assessment, evidence and justification for its unique characteristics, configuration, and utilization.
Response: The SDT has responded to comments on the BES definition in the Consideration of Comments form for the BES definition posting. The SDT appreciates the comments and suggestions for the technical exception criterion. Based on industry response and further analysis, the SDT has abandoned the initial exclusion criteria and developed a new methodology is intended to clarify the technical and operational characteristics that are to be considered in identifying exceptions, and provide greater continuity with the existing definition of BES. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. It has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of an exception request form along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted.		
Electric Market Policy	Yes	Although Dominion didn't see a specific form to address comments on Appendix 5B to the NERC ROP, Dominion would like to point out a particular area of concern with that Appendix. Dominion requests that NERC include explicit language stating that exclusion or inclusion of an element (for compliance purposes) begins only after approval/disapproval and any associated appeal has been reviewed and a final decision reached. Dominion would also like to point out that it assisted in the preparation of the Edison Electric Institute's comments and therefore agrees with the comments raised by EEI.
Response: The SDT has forwarded your comments to the RoP team for their consideration.		
Pepco Holdings Inc	Yes	Concern that as this proposal is written such that each exclusion in the BES definition (E1, E2 and E3) will require a submittal to approve that is an exclusion.
City of Redding	Yes	The SDT is encouraged to address generators installed as load modifiers to distribution load.>>>> As additional evidence of distribution line, if there is not an OATT filed on a line then it is not transmission per FERC rules.

Organization	Yes or No	Question 10 Comment
Tacoma Power	Yes	Tacoma Power supports the SDT's efforts to create an acceptable BES definition directly linked to an exception process. We do have a concerned about the application of the standards to Elements that change status due to the Exception process. Any Elements that are determined to be newly included in the BES should have a 24-month period before the standards will apply as a BES Elements. Conversely, a determination that removes an Element from the BES should apply as soon as practicable. Please be aware that the WECC has a task force, the Bulk Electric System Definition Task Force(BESDTF), which has done some notable work on this task. See WECC BESDTF Proposal 6, Appendix C (http://www.wecc.biz/Standards/Development/BES/default.aspx). The BES definition is very complex and the BESDTF has already addressed many of the tough issues that have yet to be addressed in this process, such as: o Local Distribution Network definition for automatic exemption o Determination of radial facilities o Demarcation of BES and non-BES Elements o Alternate dispute resolution process o Assignment of the burden of proof for the exemption process o Technical approach for the inclusion/exclusion determination Thank you for consideration of our comments.
Response: The SDT has addressed comments on the BES definition under the Consideration of Comments form for the BES definition posting.		

END OF REPORT

Detailed Information to Support an Exception Request

Entities that have Element(s) designated as excluded, under the BES definition and designations, do not have to seek exception for those Elements under the Exception Procedure.

General Instructions:

A one-line breaker diagram identifying the facility for which the exception is requested must be supplied with every application. The diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested.

Entities are required to supply the data and studies needed to support their submittal. Studies should:

- Be based on an Interconnection-wide base case that is suitably complete and detailed to reflect the facility's electrical characteristics and system topology
- Clearly document all assumptions used
- Address key performance measures of BES reliability through steady-state power flow, and transient stability analysis as necessary to support the entity's application, consistent with the methodologies described in the Transmission Planning (TPL) standard and commensurate with the scope of the request

Supporting statements for your position from other entities are encouraged.

List any attached supporting documents:

DRAFT

Detailed Information to Support an Exception Request

For Transmission Facilities:

1. Is there generation connected to the facility?

   ☐ Yes ☐ No

   If yes, what are the individual gross nameplate values of each unit?

   Description/Comments:

2. How does the facility impact permanent Flowgates in the Eastern Interconnection, major transfer paths within the Western Interconnection, or a comparable monitored facility in the ERCOT Interconnection or the Quebec Interconnection?

   Please list the Flowgates or paths considered in your analysis along with any studies or assessments that illustrate the degree of impact:

3. Is the facility included in an Interconnection Reliability Operating Limit (IROL) in the Eastern Interconnection, ERCOT Interconnection, or Quebec Interconnection or a major transfer path rating in the Western Interconnection?

   ☐ Yes ☐ No

   Please provide the appropriate list for your operating area:

4. How does an outage of the facility impact the over-all reliability of the BES? Please provide study results that demonstrate the most severe system impact of the outage of the facility and the rationale for your response:

DRAFT

Detailed Information to Support an Exception Request

5. Is the facility used for off-site power supply to a nuclear power plant as designated in a mutually agreed upon Nuclear Plant Interface Requirement (NPIR)?

   ☐ Yes ☐ No

   Description/Comments:

6. Is the facility part of a Cranking Path associated with a Blackstart Resource?

   ☐ Yes ☐ No

   Description/Comments:

7. Does power flow through this facility into the BES?

   ☐ Yes ☐ No

   If yes, ☐ under 10% of the calendar year ☐ 10% - 25% of the calendar year
   ☐ 25% - 50% of the calendar year ☐ More than 50% of the calendar year

   If yes, then using metered or SCADA data for the most recent consecutive two calendar year period, what is the minimum and maximum magnitude of the power flow out of the facility and describe the conditions when this could occur?

DRAFT

Detailed Information to Support an Exception Request

For Generation Facilities:

1. What is the MW value of the host Balancing Authority's most severe single Contingency and what is the generator's, or generator facility's, percent of this value?

   Please provide the values and a reference to supporting documents:

2. Is the generator or generator facility used to provide Ancillary Services?

   ☐ Yes ☐ No

   Describe what Ancillary Services the generator or generator facility is supplying:

3. Is the generator designated as a must run unit?

   ☐ Yes ☐ No

   Please provide the appropriate reference for your operating area:

4. How does an outage of the generator impact the over-all reliability of the BES? Please provide study results that demonstrate the most severe system impact of the outage of the generator and the rationale for your response:

5. Does the generator use the BES to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load?

   ☐ Yes ☐ No

   Description/Comments:

DRAFT

Comment Form for 2nd Draft of Project 2010-17: Definition of BES (BES) Technical Principles for Demonstrating BES Exceptions

Please **DO NOT** use this form to submit comments on the second draft of the Project 2010-17: Definition of the Bulk Electric System (BES) Exception Criteria. Use the electronic comment form **only** to submit comments on the second draft Exception Criteria. Comments must be submitted by **October 10, 2011.**

If you have questions please contact Ed Dobrowolski at ed.dobrowolski@nerc.net or by telephone at 609-947-3673.

Background Information
Definition of the BES (Project 2010-17)
Technical Principles for Demonstrating BES Exceptions

In parallel with the definition project, another stakeholder team outside the standards development process has been set up to develop a change to the NERC Rules of Procedure (RoP) to allow for entities to apply for excluding Elements from the BES that might otherwise be included according to the proposed definition and designations. This same process would be used by Registered Entities to justify including Elements in the BES that might otherwise be excluded according to the proposed definition and designations. The RoP team will develop the process for seeking an exception from the definition and designations, but the Definition of the BES Standards Drafting Team (DBESSDT), through the standards development process, has developed the criteria necessary for applying for an exception.

The exception process has been set up as a checklist of items that an entity requesting an exception should supply to the Regional Entity as the first step in the process described in the Rules of Procedure. The same checklist will be utilized for exceptions dealing with inclusions or exclusions. The intent of the SDT is to standardize the types of information that must be supplied when seeking an exception to the extent possible. This will allow for the Regional Entities to process the requests based on standardized evidence and for the ERO to make the eventual decision on the request based on this standardized evidence. This is a significant departure from the first posting on this topic. Based on industry response from that posting and further analysis the SDT has abandoned the initial exclusion criteria and developed this new methodology that it believes will provide more clarity and continuity to the process. The initial proposal was dependent on a comparison of an entity's characteristics to a defined value and/or limit. However, it has become apparent that it is not feasible to establish continent-wide values and/or limits due to differences in operational characteristics. The new process requires an entity to clarify the characteristics of the facilities in question and to document the operational performance as appropriate through submittal of the Detailed Information to Support an Exception Request along with any other supporting documentation for the exception being sought. The appropriate Regional Entity will review the submittal to validate information, make a recommendation of whether or not to support the exclusion or inclusion, and then file the request and recommendation with the ERO as established in the Rules of Procedure as presently being drafted and posted for comment. An ERO panel as described in the Rules of Procedure presently being drafted and posted for comment will then make the decision on the exception. At this point, the engineering judgment of the ERO panel will be utilized. Using the request document to dictate the type of supporting material that needs to be supplied plus having a common panel perform the evaluations will result in an open, transparent, and consistent process.

Technical Principles for Demonstrating BES Exceptions

The SDT is seeking industry feedback on the approach being presented. Comments received from this posting will help to determine the final criteria that the industry will be required to adhere to. Therefore, industry feedback is vital to the development process.

It should be noted that the actual application process is described in the Rules of Procedure document that will be posted separately from the exception criteria document.

Comment Form for 2nd Draft of Project 2010-17: Definition of BES (BES)
Technical Principles for Demonstrating BES Exceptions

You do not have to answer all questions. Enter all comments in simple text format.

Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

1. Page one of the 'Detailed Information to Support an Exception Request' contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one that is missing? Please be as specific as possible with your comments.

   Yes:

   No:

   Comments:

2. Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there information that you believe needs to be on page two or three that is missing? Please be as specific as possible with your comments.

   Yes:

   No:

   Comments:

3. Page four of the 'Detailed Information to Support an Exception Request' contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four that is missing? Please be as specific as possible with your comments.

   Yes:

   No:

   Comments:

4. Do you have concerns about an entity's ability to obtain the data they would need to file the 'Detailed Information to Support an Exception Request'? If so, please be specific with your concerns so that the SDT can fully understand the problem.

   Yes:

   No:

   Comments:

5. Are there other specific characteristics that you feel would be important for presenting a case and which are generic enough that they belong in the request? If so, please identify them here and provide suggested language that could be added to the document.

   Yes:

   No:

   Comments:

6. Are you aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? If so, please identify them here and provide suggested language changes that may clarify the issue.

   Yes:

   No:

   Comments:

7. Are there any other concerns with the proposed approach for demonstrating BES Exceptions that haven't been covered in previous questions and comments (bearing in mind that the definition itself and the proposed Rules of Procedure changes are posted separately for comments)? Please be as specific as possible with your comments.

   Yes:

   No:

   Comments:

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standards Announcement

Project 2010-17 BES Definition
Two Ballot Pool Windows Open August 26 – September 26, 2011
Two Formal Comment Periods Open August 26 – October 10, 2011
Two Ballot Windows Open September 30 – October 10, 2011

Available tomorrow at: https://standards.nerc.net/BallotPool.aspx

The Definition of Bulk Electric System Standard Drafting Team (DBES SDT) has posted a second draft of the Definition of Bulk Electric System (BES) and associated implementation plan for a formal 45-day comment period, through **8 p.m. Eastern on Monday, October 10, 2011**.

The Definition of Bulk Electric System Standard Drafting Team (DBES SDT) has also posted a draft application form titled *Detailed Information to Support an Exception Request* referenced in the Rules of Procedure Exception Process for a formal 45-day comment period, through **8 p.m. Eastern on Monday, October 10, 2011**. (Note that the information contained in this draft form includes revisions made to the *Technical Principles for Supporting BES Exceptions* that was posted for comment in May and June 2011.)

A separate team is working with NERC to draft a new Appendix 5C to NERC's Rules of Procedure to address the process for requesting BES exceptions. This team will be posting the Rules of Procedure changes for stakeholder comment in September. The comment period for the Rules of Procedure changes will overlap the comment period for the definition and application form, to provide an opportunity for stakeholders to review all three documents to understand how they will work together.

Clean and redline versions of the definition and associated implementation plan, along with a technical justification for the Local Network exclusion and a clean version of the application form titled *Detailed Information to Support an Exception Request* have been posted on the project page at: http://www.nerc.com/filez/standards/Project2010-17_BES.html. The format of the application form titled *Detailed Information to Support an Exception Request* has changed substantially since the first posting, making a redline impractical, so none has been provided.

The Standards Committee and NERC Board of Trustees have recommended that the drafting team address issues such as generation thresholds in a second phase of this project. This approach will ensure that the drafting team has sufficient time to adequately consider and develop a sound technical basis for an approach, and will allow the drafting team to meet the regulatory deadline in FERC Orders 743 and 743a (filing by January 25, 2012). The drafting team has posted a **draft** Supplemental Standards Authorization Request (SAR) for information purposes only; the SAR will be posted for comment at a future time.

Ballot Pools Forming

During the first 30 days of the comment period, two separate ballot pools will be formed: one for balloting the Definition of Bulk Electric System, and a second for balloting the application form titled *Detailed Information to Support an Exception Request*. The ballot pool windows will be open from **Friday, August 26 through 8 a.m. Eastern on Monday, September 26, 2011**.

During the final 10 days of the comment period, two separate initial ballots will be conducted, one for the Definition of the Bulk Electric System, and a second for the application form titled *Detailed Information to Support an Exception Request*. The ballot windows will begin on Friday, September 30th and end at 8 p.m. Eastern on Monday, October 10, 2011.

Instructions for Joining Ballot Pools

Registered Ballot Body members must join each of the ballot pools to be eligible to vote in the upcoming ballots at the following page: https://standards.nerc.net/BallotPool.aspx

During the pre-ballot window, members of each ballot pool may communicate with one another by using their "ballot pool list server." (Once the balloting begins, ballot pool members are prohibited from using the ballot pool list servers.) The list servers for this project are:

- Definition of BES ballot:
  bp-2010-17_BES_Def_in@nerc.com
- *Detailed Information to Support an Exception Request* form:
  bp-2010-17_TechInfo_BES_in@nerc.com

Instructions for Submitting Comments

Please use this electronic comment form to submit comments on the Definition of Bulk Electric System. Please use this separate electronic comment form to submit comments on the draft form application form titled *Detailed Information to Support an Exception Request*.

If you experience any difficulties in using either of these electronic forms, please contact Monica Benson at monica.benson@nerc.net. An off-line, unofficial copy of each comment form is posted on the project page:

Background

On November 18, 2010 FERC issued Order 743 (amended by Order 743A) and directed NERC to revise the definition of Bulk Electric System so that the definition encompasses all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. Additional specificity will reduce ambiguity and establish consistency across all Regions in distinguishing between BES and non-BES Elements and Facilities.

In addition, NERC was directed to develop a process for identifying any Elements or Facilities that should be excluded from the BES. NERC is working to address these directives with two activities – the definition of Bulk Electric System (BES) is being revised through the standard development process and a BES Definition Exception Process is being developed as a proposed modification to the Rules of Procedure. The work of the BES Definition Exception Process has been publicly posted at: http://www.nerc.com/filez/standards/Rules_of_Procedure-RF.html. The Rules of Procedure team expects to post the next draft of its proposed addition to the Rules of Procedure (Appendix 5C – BES Exception Process) in September.

For more information or assistance, please contact Monica Benson, Standards Process Administrator, at monica.benson@nerc.net or at 404-446-2560.

North American Electric Reliability Corporation
116-390 Village Blvd.
Princeton, NJ 08540
609.452.8060 | www.nerc.com

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standards Announcement

Project 2010-17 BES Definition
Two Ballot Pool Windows Open August 26 – September 26, 2011
Two Formal Comment Periods Open August 26 – October 10, 2011
Two Ballot Windows Open September 30 – October 10, 2011

Available tomorrow at: https://standards.nerc.net/BallotPool.aspx

The Definition of Bulk Electric System Standard Drafting Team (DBES SDT) has posted a second draft of the Definition of Bulk Electric System (BES) and associated implementation plan for a formal 45-day comment period, through **8 p.m. Eastern on Monday, October 10, 2011**.

The Definition of Bulk Electric System Standard Drafting Team (DBES SDT) has also posted a draft application form titled *Detailed Information to Support an Exception Request* referenced in the Rules of Procedure Exception Process for a formal 45-day comment period, through **8 p.m. Eastern on Monday, October 10, 2011**. (Note that the information contained in this draft form includes revisions made to the *Technical Principles for Supporting BES Exceptions* that was posted for comment in May and June 2011.)

A separate team is working with NERC to draft a new Appendix 5C to NERC's Rules of Procedure to address the process for requesting BES exceptions. This team will be posting the Rules of Procedure changes for stakeholder comment in September. The comment period for the Rules of Procedure changes will overlap the comment period for the definition and application form, to provide an opportunity for stakeholders to review all three documents to understand how they will work together.

Clean and redline versions of the definition and associated implementation plan, along with a technical justification for the Local Network exclusion and a clean version of the application form titled *Detailed Information to Support an Exception Request* have been posted on the project page at: http://www.nerc.com/filez/standards/Project2010-17_BES.html. The format of the application form titled *Detailed Information to Support an Exception Request* has changed substantially since the first posting, making a redline impractical, so none has been provided.

The Standards Committee and NERC Board of Trustees have recommended that the drafting team address issues such as generation thresholds in a second phase of this project. This approach will ensure that the drafting team has sufficient time to adequately consider and develop a sound technical basis for an approach, and will allow the drafting team to meet the regulatory deadline in FERC Orders 743 and 743a (filing by January 25, 2012). The drafting team has posted a **draft** Supplemental Standards Authorization Request (SAR) for information purposes only; the SAR will be posted for comment at a future time.

Ballot Pools Forming

During the first 30 days of the comment period, two separate ballot pools will be formed: one for balloting the Definition of Bulk Electric System, and a second for balloting the application form titled *Detailed Information to Support an Exception Request*. The ballot pool windows will be open from **Friday, August 26 through 8 a.m. Eastern on Monday, September 26, 2011**.

During the final 10 days of the comment period, two separate initial ballots will be conducted, one for the Definition of the Bulk Electric System, and a second for the application form titled *Detailed Information to Support an Exception Request*. The ballot windows will begin on Friday, September 30th and end at 8 p.m. Eastern on Monday, October 10, 2011.

Instructions for Joining Ballot Pools

Registered Ballot Body members must join each of the ballot pools to be eligible to vote in the upcoming ballots at the following page: https://standards.nerc.net/BallotPool.aspx

During the pre-ballot window, members of each ballot pool may communicate with one another by using their "ballot pool list server." (Once the balloting begins, ballot pool members are prohibited from using the ballot pool list servers.) The list servers for this project are:

- Definition of BES ballot:
  bp-2010-17_BES_Def_in@nerc.com
- *Detailed Information to Support an Exception Request* form:
  bp-2010-17_TechInfo_BES_in@nerc.com

Instructions for Submitting Comments

Please use this electronic comment form to submit comments on the Definition of Bulk Electric System. Please use this separate electronic comment form to submit comments on the draft form application form titled *Detailed Information to Support an Exception Request*.

If you experience any difficulties in using either of these electronic forms, please contact Monica Benson at monica.benson@nerc.net. An off-line, unofficial copy of each comment form is posted on the project page:

Background

On November 18, 2010 FERC issued Order 743 (amended by Order 743A) and directed NERC to revise the definition of Bulk Electric System so that the definition encompasses all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. Additional specificity will reduce ambiguity and establish consistency across all Regions in distinguishing between BES and non-BES Elements and Facilities.

In addition, NERC was directed to develop a process for identifying any Elements or Facilities that should be excluded from the BES. NERC is working to address these directives with two activities – the definition of Bulk Electric System (BES) is being revised through the standard development process and a BES Definition Exception Process is being developed as a proposed modification to the Rules of Procedure. The work of the BES Definition Exception Process has been publicly posted at: http://www.nerc.com/filez/standards/Rules_of_Procedure-RF.html. The Rules of Procedure team expects to post the next draft of its proposed addition to the Rules of Procedure (Appendix 5C – BES Exception Process) in September.

For more information or assistance, please contact Monica Benson, Standards Process Administrator, at monica.benson@nerc.net or at 404-446-2560.

North American Electric Reliability Corporation
116-390 Village Blvd.
Princeton, NJ 08540
609.452.8060 | www.nerc.com

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standards Announcement

Project 2010-17 Definition of Bulk Electric System Initial Ballot Results

Now available

Ballot Results for Definition of Bulk Electric System

The two ballots windows for Project 2010-17 Definition of Bulk Electric System (BES): the first for the definition of Bulk Electric System and associated implementation plan, and the second for the draft application form titled Detailed Information to Support an Exception Request referenced in the Rules of Procedure Exception Process closed at 8 p.m. Eastern on Monday, October 10, 2011.

Voting statistics for each ballot are listed below, and the Ballot Results Web page provides a link to the detailed results.

BES Definition	**Technical Criteria to Support a BES Exception Request**
Quorum: 92.97%	Quorum: 89.53%
Approval: 71.68%	Approval: 64.03%

Next Steps

The drafting team will consider all comments received, and decide whether to make additional revisions to the definition of Bulk Electric System, the associated implementation plan, and the application form titled *Detailed Information to Support an Exception Request* referenced in the Rules of Procedure Exception Process. The drafting team is working to meet the regulatory deadline established in FERC Orders 743 and 743A (filing by January 25, 2012).

The Standards Committee and NERC Board of Trustees have recommended that the drafting team address issues such as generation thresholds in a second phase of this project. This approach will ensure that the drafting team has sufficient time to adequately consider and develop a sound technical basis for an approach, and will allow the drafting team to meet the regulatory deadline in FERC Orders 743 and 743A (filing by January 25, 2012). The drafting team has posted a **draft** Supplemental Standards Authorization Request (SAR) for information purposes only; the SAR will be posted for comment at a future time. Additionally, the drafting team has posted a Fact Sheet, which provides an up to date review of the project scope, project plan - phased approach, current status and upcoming events, on the project webpage.

Project Background

On November 18, 2010 FERC issued Order 743 (amended by Order 743A) and directed NERC to revise the definition of Bulk Electric System so that the definition encompasses all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. Additional specificity will reduce ambiguity and establish consistency across all Regions in distinguishing between BES and non-BES Elements and Facilities.

In addition, NERC was directed to develop a process for identifying any Elements or Facilities that should be excluded from the BES. NERC is working to address these directives with two activities – the definition of Bulk Electric System is being revised through the standard development process and a BES Definition Exception Process is being developed as proposed modifications to the Rules of Procedure. The proposed modifications have been posted for a comment period through October 27, 2011. The work of the BES Definition Exception Process has been publicly posted at: http://www.nerc.com/filez/standards/Rules_of_Procedure-RF.html.

Standards Development Process

The Standard Processes Manual contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate. For more information or assistance, please contact Monica Benson at monica.benson@nerc.net.

For more information or assistance, please contact Monica Benson, Standards Process Administrator, at monica.benson@nerc.net or at 404-446-2560.

North American Electric Reliability Corporation
116-390 Village Blvd.
Princeton, NJ 08540
609.452.8060 | www.nerc.com

Ballot Results	
Ballot Name:	Project 2010-17 Technical Information to Support BES Exception_in
Ballot Period:	9/30/2011 - 10/10/2011
Ballot Type:	Initial
Total # Votes:	385
Total Ballot Pool:	430
Quorum:	**89.53 % The Quorum has been reached**
Weighted Segment Vote:	64.03 %
Ballot Results:	**The SDT will review comments to determine the next process step.**

Summary of Ballot Results

Segment	Ballot Pool	Segment Weight	Affirmative # Votes	Affirmative Fraction	Negative # Votes	Negative Fraction	Abstain # Votes	No Vote
1 - Segment 1.	99	1	50	0.588	35	0.412	9	5
2 - Segment 2.	11	1	3	0.3	7	0.7	1	0
3 - Segment 3.	124	1	72	0.72	28	0.28	6	18
4 - Segment 4.	34	1	23	0.793	6	0.207	2	3
5 - Segment 5.	82	1	34	0.567	26	0.433	8	14
6 - Segment 6.	50	1	31	0.674	15	0.326	2	2
7 - Segment 7.	1	0	0	0	0	0	0	1
8 - Segment 8.	11	1	8	0.8	2	0.2	0	1
9 - Segment 9.	11	0.9	5	0.5	4	0.4	2	0
10 - Segment 10.	7	0.6	5	0.5	1	0.1	0	1
Totals	**430**	**8.5**	**231**	**5.442**	**124**	**3.058**	**30**	**45**

Individual Ballot Pool Results

Segment	Organization	Member	Ballot	Comments
1	Ameren Services	Kirit Shah	Negative	View
1	American Electric Power	Paul B. Johnson	Affirmative	View
1	American Transmission Company, LLC	Andrew Z Pusztai	Negative	View
1	Arizona Public Service Co.	Robert Smith	Negative	View
1	Associated Electric Cooperative, Inc.	John Bussman	Negative	View
1	Austin Energy	James Armke	Abstain	
1	Balancing Authority of Northern California NCR11118	Kevin Smith	Negative	View
1	Baltimore Gas & Electric Company	Gregory S Miller	Affirmative	View

1	BC Hydro and Power Authority	Patricia Robertson	Abstain	
1	Beaches Energy Services	Joseph S Stonecipher	Affirmative	
1	Black Hills Corp	Eric Egge	Affirmative	
1	Bonneville Power Administration	Donald S. Watkins	Negative	View
1	Brazos Electric Power Cooperative, Inc.	Tony Kroskey	Abstain	
1	CenterPoint Energy Houston Electric	Dale Bodden	Abstain	
1	Central Electric Power Cooperative	Michael B Bax	Negative	
1	Central Maine Power Company	Kevin L Howes	Negative	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Affirmative	
1	Colorado Springs Utilities	Paul Morland	Negative	View
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Negative	View
1	Consumers Power Inc.	Stuart Sloan	Affirmative	View
1	CPS Energy	Richard Castrejana	Negative	
1	Dairyland Power Coop.	Robert W. Roddy	Affirmative	
1	Dayton Power & Light Co.	Hertzel Shamash		
1	Dominion Virginia Power	Michael S Crowley	Negative	View
1	Duke Energy Carolina	Douglas E. Hils	Affirmative	
1	East Kentucky Power Coop.	George S. Carruba	Affirmative	
1	Entergy Services, Inc.	Edward J Davis	Affirmative	
1	FirstEnergy Corp.	William J Smith	Affirmative	View
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Negative	
1	Florida Power & Light Co.	Mike O'Neil	Affirmative	
1	Gainesville Regional Utilities	Luther E. Fair	Affirmative	
1	Georgia Transmission Corporation	Harold Taylor	Affirmative	View
1	Great River Energy	Gordon Pietsch	Affirmative	View
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon	Affirmative	
1	Hydro One Networks, Inc.	Ajay Garg	Negative	View
1	Hydro-Quebec TransEnergie	Bernard Pelletier	Negative	View
1	Idaho Power Company	Ronald D. Schellberg	Affirmative	
1	Imperial Irrigation District	Tino Zaragoza	Affirmative	
1	International Transmission Company Holdings Corp	Michael Moltane	Affirmative	
1	JEA	Ted Hobson	Affirmative	
1	KAMO Electric Cooperative	Walter Kenyon	Negative	
1	Kansas City Power & Light Co.	Michael Gammon	Affirmative	
1	Lakeland Electric	Larry E Watt	Affirmative	
1	Lee County Electric Cooperative	John W Delucca	Affirmative	
1	Long Island Power Authority	Robert Ganley	Affirmative	
1	Los Angeles Department of Water & Power	Ly M Le		
1	Lower Colorado River Authority	Martyn Turner	Negative	View
1	M & A Electric Power Cooperative	William Price	Negative	
1	Manitoba Hydro	Joe D Petaski	Negative	View
1	MEAG Power	Danny Dees	Negative	View
1	Memphis Light, Gas and Water Division	Allan Long	Abstain	
1	Metropolitan Water District of Southern California	Ernest Hahn	Negative	View
1	MidAmerican Energy Co.	Terry Harbour		
1	Minnkota Power Coop. Inc.	Richard Burt	Affirmative	View
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Negative	
1	National Grid	Saurabh Saksena		
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Negative	
1	New York Power Authority	Arnold J. Schuff	Negative	View
1	Northeast Missouri Electric Power Cooperative	Kevin White	Negative	
1	Northeast Utilities	David Boguslawski	Affirmative	
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative	
1	NorthWestern Energy	John Canavan	Affirmative	
1	Ohio Valley Electric Corp.	Robert Mattey	Affirmative	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Abstain	
1	Omaha Public Power District	Doug Peterchuck	Negative	View
1	Oncor Electric Delivery	Brenda Pulis	Affirmative	
1	Orlando Utilities Commission	Brad Chase	Affirmative	View
1	Otter Tail Power Company	Daryl Hanson	Affirmative	
1	PECO Energy	Ronald Schloendorn	Affirmative	
1	Platte River Power Authority	John C. Collins	Negative	View

1	Portland General Electric Co.	John T Walker	Abstain	
1	Potomac Electric Power Co.	David Thorne	Affirmative	View
1	PPL Electric Utilities Corp.	Brenda L Truhe	Affirmative	
1	Public Service Company of New Mexico	Laurie Williams		
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Affirmative	
1	Public Utility District No. 1 of Okanogan County	Dale Dunckel	Affirmative	
1	Puget Sound Energy, Inc.	Denise M Lietz	Affirmative	
1	Rochester Gas and Electric Corp.	John C. Allen	Negative	
1	Sacramento Municipal Utility District	Tim Kelley	Negative	View
1	Salt River Project	Robert Kondziolka	Negative	View
1	Santee Cooper	Terry L Blackwell	Affirmative	
1	Seattle City Light	Pawel Krupa	Negative	View
1	Sho-Me Power Electric Cooperative	Denise Stevens	Negative	
1	Sierra Pacific Power Co.	Rich Salgo	Affirmative	View
1	Snohomish County PUD No. 1	Long T Duong	Affirmative	View
1	South California Edison Company	Steven Mavis	Negative	
1	South Texas Electric Cooperative	Richard McLeon	Affirmative	
1	Southwest Transmission Cooperative, Inc.	James Jones	Affirmative	View
1	Sunflower Electric Power Corporation	Noman Lee Williams	Affirmative	View
1	Tampa Electric Co.	Beth Young	Affirmative	
1	Tennessee Valley Authority	Larry Akens	Affirmative	
1	Transmission Agency of Northern California	Bryan Griess	Affirmative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Negative	View
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Vermont Electric Power Company, Inc.	Kim Moulton	Abstain	
1	Westar Energy	Allen Klassen	Negative	
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Wolverine Power Supply Coop., Inc.	Michelle Denike	Abstain	
2	Alberta Electric System Operator	Mark B Thompson	Negative	View
2	BC Hydro	Venkataramakrishnan Vinnakota	Abstain	
2	California ISO	Richard K Vine	Negative	View
2	Electric Reliability Council of Texas, Inc.	Charles B Manning	Affirmative	View
2	Independent Electricity System Operator	Barbara Constantinescu	Negative	View
2	ISO New England, Inc.	Kathleen Goodman	Negative	View
2	Midwest ISO, Inc.	Marie Knox	Negative	View
2	New Brunswick System Operator	Alden Briggs	Negative	View
2	New York Independent System Operator	Gregory Campoli	Affirmative	
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative	
2	Southwest Power Pool, Inc.	Charles Yeung	Negative	View
3	AEP	Michael E Deloach		
3	Alameda Municipal Power	Douglas Draeger	Affirmative	
3	Ameren Services	Mark Peters		
3	APS	Steven Norris	Negative	
3	Associated Electric Cooperative, Inc.	Chris W Bolick	Negative	View
3	Atlantic City Electric Company	NICOLE BUCKMAN	Affirmative	
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain	
3	Benton Rural Electric Association	Clint Gerkensmeyer	Affirmative	
3	Big Bend Electric Cooperative, Inc.	Benjamin Friederichs	Affirmative	View
3	Blachly-Lane Electric Co-op	Bud Tracy	Affirmative	View
3	Blue Ridge Electric	James L Layton		
3	Bonneville Power Administration	Rebecca Berdahl	Negative	View
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Affirmative	View
3	Central Electric Power Cooperative	Ralph J Schulte	Negative	
3	Central Hudson Gas & Electric Corp.	Thomas C Duffy	Affirmative	View
3	Central Lincoln PUD	Steve Alexanderson	Affirmative	View
3	City of Austin dba Austin Energy	Andrew Gallo	Negative	View
3	City of Bartow, Florida	Matt Culverhouse	Affirmative	
3	City of Cheney	Joe Noland	Affirmative	
3	City of Clewiston	Lynne Mila		
3	City of Farmington	Linda Jacobson	Negative	View
3	City of Garland	Ronnie C Hoeinghaus	Abstain	
3	City of Green Cove Springs	Gregg R Griffin	Affirmative	View
3	City of McMinnville	John C Dietz	Affirmative	
3	City of Redding	Bill Hughes	Affirmative	
3	City of Ukiah	Colin Murphey	Affirmative	

3	Clatskanie People's Utility District	Brian Fawcett	Affirmative	
3	Clay Electric Cooperative	Howard M. Mott Jr.	Affirmative	
3	Clearwater Power Co.	Dave Hagen	Affirmative	View
3	Cleco Corporation	Michelle A Corley	Affirmative	
3	Colorado Springs Utilities	Lisa Cleary	Negative	
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Negative	View
3	Constellation Energy	CJ Ingersoll	Affirmative	
3	Consumers Energy	Richard Blumenstock	Negative	View
3	Consumers Power Inc.	Roman Gillen	Affirmative	View
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Affirmative	View
3	Cowlitz County PUD	Russell A Noble	Affirmative	
3	CPS Energy	Jose Escamilla	Negative	View
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Dominion Resources Services	Michael F. Gildea	Negative	View
3	Douglas Electric Cooperative	Dave Sabala	Affirmative	View
3	Duke Energy Carolina	Henry Ernst-Jr	Affirmative	
3	Fall River Rural Electric Cooperative	Bryan Case	Affirmative	View
3	Fayetteville Public Works Commission	Allen R Wallace	Affirmative	
3	FirstEnergy Energy Delivery	Stephan Kern	Affirmative	View
3	Flathead Electric Cooperative	John M Goroski	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Affirmative	View
3	Florida Power Corporation	Lee Schuster	Affirmative	
3	Georgia Systems Operations Corporation	William N. Phinney	Affirmative	View
3	Grays Harbor PUD	Wesley W Gray	Affirmative	
3	Great River Energy	Sam Kokkinen	Affirmative	
3	Harney Electric Cooperative, Inc.	Shane Sweet	Affirmative	
3	Holland Board of Public Works	William Bush	Affirmative	View
3	Hydro One Networks, Inc.	David Kiguel	Negative	View
3	Idaho Falls Power	Richard Malloy	Abstain	
3	Imperial Irrigation District	Jesus S. Alcaraz	Affirmative	
3	JEA	Garry Baker	Affirmative	
3	KAMO Electric Cooperative	Theodore J Hilmes	Negative	
3	Kansas City Power & Light Co.	Charles Locke	Affirmative	
3	Kissimmee Utility Authority	Gregory D Woessner		
3	Kootenai Electric Cooperative	Dave Kahly	Affirmative	
3	La Plata Electric Association	Ronald Meier	Affirmative	
3	Lakeview Light & Power	Robert Truesdell	Affirmative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Affirmative	View
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Affirmative	View
3	Lincoln Electric System	Jason Fortik	Affirmative	View
3	Lost River Electric Cooperative	Richard Reynolds		
3	Louisville Gas and Electric Co.	Charles A. Freibert	Affirmative	View
3	M & A Electric Power Cooperative	Stephen D Pogue	Negative	
3	Manitoba Hydro	Greg C. Parent	Negative	View
3	Manitowoc Public Utilities	Thomas E Reed	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik		
3	Mission Valley Power	Kerry Wiedrich	Affirmative	
3	Mississippi Power	Jeff Franklin	Affirmative	
3	Modesto Irrigation District	Jack W Savage	Negative	View
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Negative	View
3	Muscatine Power & Water	John S Bos	Affirmative	View
3	Nebraska Public Power District	Tony Eddleman	Abstain	
3	New York Power Authority	Marilyn Brown	Negative	View
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Abstain	
3	North Carolina Electric Membership Corp.	Doug White	Affirmative	View
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann		
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	Northern Lights Inc.	Jon Shelby	Affirmative	View
3	Northern Wasco County People's Utility District (PUD)	Paul Titus		
3	NW Electric Power Cooperative, Inc.	David McDowell	Negative	
3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Affirmative	View
3	Omaha Public Power District	Blaine R. Dinwiddie		
3	Orange and Rockland Utilities, Inc.	David Burke	Negative	
3	Oregon Trail Electric Cooperative	ned ratterman	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Affirmative	View

3	Owensboro Municipal Utilities	Thomas T Lyons	Affirmative	
3	Pacific Gas and Electric Company	John H Hagen	Negative	View
3	PacifiCorp	John Apperson		
3	Platte River Power Authority	Terry L Baker	Negative	View
3	Potomac Electric Power Co.	Robert Reuter	Affirmative	
3	Progress Energy Carolinas	Sam Waters	Affirmative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller		
3	Public Utility District No. 1 of Clallam County	David Proebstel	Affirmative	
3	Public Utility District No. 1 of Franklin County	Linda Esparza		
3	Public Utility District No. 2 of Grant County	Greg Lange	Affirmative	View
3	Rayburn Country Electric Coop., Inc.	Eddy Reece		
3	Rutherford EMC	Thomas M Haire	Affirmative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Negative	View
3	Salem Electric	Anthony Schacher	Affirmative	View
3	Salmon River Electric Cooperative	Ken Dizes		
3	Salt River Project	John T. Underhill	Negative	View
3	Santee Cooper	James M Poston	Affirmative	
3	Seattle City Light	Dana Wheelock	Negative	View
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Sho-Me Power Electric Cooperative	Jeff L Neas	Negative	
3	South Carolina Electric & Gas Co.	Hubert C Young	Abstain	
3	Southern California Edison Co.	David Schiada		
3	Springfield Utility Board	Jeff Nelson	Negative	View
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L Donahey	Affirmative	
3	Tennessee Valley Authority	Ian S Grant	Affirmative	View
3	Tri-State G & T Association, Inc.	Janelle Marriott	Negative	View
3	Umatilla Electric Cooperative	Steve Eldrige	Affirmative	View
3	Vigilante Electric Cooperative	Dave Alberi		
3	West Oregon Electric Cooperative, Inc.	Marc Farmer	Affirmative	View
3	Wisconsin Electric Power Marketing	James R Keller		
3	Xcel Energy, Inc.	Michael Ibold	Affirmative	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power	Kevin Koloini	Negative	
4	American Public Power Association	Allen Mosher	Affirmative	View
4	Arkansas Electric Cooperative Corporation	Ronnie Frizzell	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache	Affirmative	View
4	City of Clewiston	Kevin McCarthy		
4	City of Redding	Nicholas Zettel	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	View
4	Consumers Energy	David Frank Ronk	Negative	View
4	Flathead Electric Cooperative	Russ Schneider	Affirmative	
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	View
4	Fort Pierce Utilities Authority	Thomas Richards		
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	View
4	Illinois Municipal Electric Agency	Bob C. Thomas	Affirmative	View
4	Imperial Irrigation District	Diana U Torres	Affirmative	
4	Indiana Municipal Power Agency	Jack Alvey	Affirmative	
4	Integrys Energy Group, Inc.	Christopher Plante	Abstain	
4	Madison Gas and Electric Co.	Joseph DePoorter	Affirmative	View
4	Modesto Irrigation District	Spencer Tacke	Negative	View
4	National Rural Electric Cooperative Association	Barry R. Lawson	Abstain	
4	North Carolina Eastern Municipal Power Agency	Cecil Rhodes	Affirmative	
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	View
4	Oklahoma Municipal Power Authority	Ashley Stringer	Affirmative	
4	Old Dominion Electric Coop.	Mark Ringhausen	Negative	View
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Affirmative	View
4	Public Power Council	Nancy Baker		
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	View
4	Sacramento Municipal Utility District	Mike Ramirez	Negative	View
4	Seattle City Light	Hao Li	Negative	View
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Transmission Access Policy Study Group	William Gallagher	Affirmative	

4	Western Montana Electric G&T	William Drummond	Affirmative	
5	AEP Service Corp.	Brock Ondayko	Affirmative	View
5	AES Corporation	Leo Bernier	Affirmative	
5	Amerenue	Sam Dwyer	Negative	
5	Arizona Public Service Co.	Edward Cambridge	Negative	
5	Associated Electric Cooperative, Inc.	Brad Haralson	Negative	
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla		
5	Bonneville Power Administration	Francis J. Halpin	Negative	View
5	BrightSource Energy, Inc.	Chifong Thomas	Abstain	
5	City and County of San Francisco	Daniel Mason	Abstain	
5	City of Austin dba Austin Energy	Jeanie Doty	Negative	View
5	City of Grand Island	Jeff Mead	Abstain	
5	City of Redding	Paul Cummings	Affirmative	View
5	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Max Emrick	Affirmative	
5	Cogentrix Energy, Inc.	Mike D Hirst	Abstain	
5	Colorado Springs Utilities	Jennifer Eckels	Negative	View
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Negative	View
5	Constellation Power Source Generation, Inc.	Amir Y Hammad	Affirmative	
5	Consumers Energy Company	David C Greyerbiehl	Negative	View
5	Covanta Energy	Samuel Cabassa		
5	CPS Energy	Robert Stevens	Negative	
5	Detroit Edison Company	Christy Wicke	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Negative	View
5	Duke Energy	Dale Q Goodwine	Affirmative	
5	Dynegy Inc.	Dan Roethemeyer	Negative	View
5	East Kentucky Power Coop.	Stephen Ricker	Affirmative	
5	Electric Power Supply Association	John R Cashin		
5	Exelon Nuclear	Michael Korchynsky	Affirmative	
5	ExxonMobil Research and Engineering	Martin Kaufman	Negative	
5	Florida Municipal Power Agency	David Schumann	Affirmative	View
5	Great River Energy	Preston L Walsh	Affirmative	
5	Green Country Energy	Greg Froehling	Affirmative	
5	Imperial Irrigation District	Marcela Y Caballero	Affirmative	
5	Indeck Energy Services, Inc.	Rex A Roehl	Negative	
5	Invenergy LLC	Alan Beckham		
5	JEA	John J Babik		
5	Kissimmee Utility Authority	Mike Blough	Affirmative	
5	Lakeland Electric	James M Howard	Affirmative	View
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver		
5	Lower Colorado River Authority	Tom Foreman	Affirmative	
5	Manitoba Hydro	S N Fernando	Negative	View
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Negative	View
5	Michigan Public Power Agency	Gary Carlson	Affirmative	View
5	MidAmerican Energy Co.	Christopher Schneider	Negative	View
5	Muscatine Power & Water	Mike Avesing	Abstain	
5	Nebraska Public Power District	Don Schmit	Abstain	
5	New York Power Authority	Gerald Mannarino	Negative	View
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Affirmative	View
5	Northern Indiana Public Service Co.	William O. Thompson		
5	Occidental Chemical	Michelle R DAntuono	Negative	View
5	Oklahoma Gas and Electric Co.	Kim Morphis		
5	Omaha Public Power District	Mahmood Z. Safi	Negative	View
5	Ontario Power Generation Inc.	Colin Anderson	Negative	View
5	Orlando Utilities Commission	Richard Kinas		
5	Otter Tail Power Company	Stacie Hebert	Affirmative	
5	PacifiCorp	Sandra L. Shaffer	Affirmative	
5	Platte River Power Authority	Roland Thiel	Negative	View
5	Portland General Electric Co.	Gary L Tingley		
5	PowerSouth Energy Cooperative	Tim Hattaway		
5	PPL Generation LLC	Annette M Bannon	Affirmative	
5	Progress Energy Carolinas	Wayne Lewis	Affirmative	
5	Proven Compliance Solutions	Mitchell E Needham		

5	PSEG Fossil LLC	Mikhail Falkovich	Affirmative	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Negative	View
5	Puget Sound Energy, Inc.	Tom Flynn	Affirmative	
5	Sacramento Municipal Utility District	Bethany Hunter	Negative	View
5	Salt River Project	Glen Reeves	Negative	View
5	Santee Cooper	Lewis P Pierce	Affirmative	
5	Seattle City Light	Michael J. Haynes	Negative	View
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins		
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	View
5	Southern California Edison Co.	Denise Yaffe	Affirmative	
5	Southern Company Generation	William D Shultz	Affirmative	View
5	Tampa Electric Co.	RJames Rocha	Affirmative	
5	Tenaska, Inc.	Scott M Helyer	Affirmative	
5	Tennessee Valley Authority	David Thompson	Affirmative	
5	Tri-State G & T Association, Inc.	Barry Ingold	Negative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	
5	Wisconsin Electric Power Co.	Linda Horn		
5	Wisconsin Public Service Corp.	Leonard Rentmeester	Affirmative	
6	AEP Marketing	Edward P. Cox	Affirmative	View
6	Ameren Energy Marketing Co.	Jennifer Richardson	Negative	
6	APS	RANDY A YOUNG	Negative	
6	Associated Electric Cooperative, Inc.	Brian Ackermann	Negative	
6	Bonneville Power Administration	Brenda S. Anderson	Negative	View
6	City of Austin dba Austin Energy	Lisa L Martin	Negative	View
6	City of Redding	Marvin Briggs	Affirmative	
6	Cleco Power LLC	Robert Hirchak	Affirmative	
6	Colorado Springs Utilities	Lisa C Rosintoski	Negative	View
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Negative	View
6	Constellation Energy Commodities Group	Brenda Powell	Affirmative	View
6	Dominion Resources, Inc.	Louis S. Slade	Negative	View
6	Duke Energy Carolina	Walter Yeager	Affirmative	
6	Entergy Services, Inc.	Terri F Benoit		
6	Exelon Power Team	Pulin Shah	Affirmative	
6	FirstEnergy Solutions	Kevin Querry	Affirmative	View
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative	View
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	View
6	Florida Power & Light Co.	Silvia P. Mitchell	Affirmative	
6	Great River Energy	Donna Stephenson	Affirmative	
6	Imperial Irrigation District	Cathy Bretz	Affirmative	
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Affirmative	
6	Lakeland Electric	Paul Shipps	Affirmative	
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Manitoba Hydro	Daniel Prowse	Negative	View
6	MidAmerican Energy Co.	Dennis Kimm	Negative	
6	New York Power Authority	William Palazzo	Negative	View
6	North Carolina Municipal Power Agency #1	Matthew Schull	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	NRG Energy, Inc.	Alan Johnson	Abstain	
6	Omaha Public Power District	David Ried	Affirmative	
6	Orlando Utilities Commission	Claston Augustus Sunanon	Affirmative	View
6	PacifiCorp	Scott L Smith	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Negative	View
6	PPL EnergyPlus LLC	Mark A Heimbach	Affirmative	
6	Progress Energy	John T Sturgeon	Affirmative	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Affirmative	
6	Public Utility District No. 1 of Chelan County	Hugh A. Owen	Affirmative	
6	Sacramento Municipal Utility District	Claire Warshaw	Negative	View
6	Salt River Project	Steven J Hulet	Negative	View
6	Santee Cooper	Michael Brown	Affirmative	
6	Seattle City Light	Dennis Sismaet	Negative	View
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Snohomish County PUD No. 1	William T Moojen	Affirmative	View
6	South California Edison Company	Lujuanna Medina		
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Affirmative	
6	Tenaska Power Services Co.	John D Varnell	Abstain	View
6	Tennessee Valley Authority	Marjorie S. Parsons	Affirmative	

6	Xcel Energy, Inc.	David F. Lemmons	Affirmative	
7	Siemens Energy, Inc.	Frank R. McElvain		
8		James A Maenner	Affirmative	
8		Merle Ashton	Affirmative	
8		Roger C Zaklukiewicz	Affirmative	
8		Edward C Stein	Affirmative	
8	INTELLIBIND	Kevin Conway		
8	JDRJC Associates	Jim Cyrulewski	Negative	
8	Montana Consumer Counsel	Larry Nordell	Negative	View
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Affirmative	View
8	Transmission Strategies, LLC	Bernie M Pasternack	Affirmative	
8	Utility Services, Inc.	Brian Evans-Mongeon	Affirmative	
8	Volkmann Consulting, Inc.	Terry Volkmann	Affirmative	
9	Alabama Public Service Commission	John Free	Affirmative	
9	California Energy Commission	William M Chamberlain	Negative	View
9	Central Lincoln PUD	Bruce Lovelin	Affirmative	View
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Abstain	
9	Michigan Public Service Commission	Donald J Mazuchowski	Affirmative	
9	National Association of Regulatory Utility Commissioners	Diane J Barney	Negative	View
9	New York State Department of Public Service	Thomas Dvorsky	Negative	
9	Oregon Public Utility Commission	Jerome Murray	Affirmative	
9	Pennsylvania Public Utility Commission	darren gill	Negative	
9	Public Service Commission of South Carolina	Philip Riley	Abstain	
9	Utah Public Service Commission	Ric Campbell	Affirmative	
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council, Inc.	Guy V. Zito	Affirmative	View
10	ReliabilityFirst Corporation	Anthony E Jablonski	Affirmative	View
10	SERC Reliability Corporation	Carter B. Edge	Affirmative	
10	Southwest Power Pool RE	Stacy Dochoda		
10	Texas Reliability Entity, Inc.	Donald G Jones	Affirmative	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Negative	View

Legal and Privacy : 609.452.8060 voice : 609.452.9550 fax : 116-390 Village Boulevard : Princeton, NJ 08540-5721
Washington Office: 1120 G Street, N.W. : Suite 990 : Washington, DC 20005-3801

Account Log-In/Register

Copyright © 2010 by the North American Electric Reliability Corporation. : All rights reserved.
A New Jersey Nonprofit Corporation

Name (50 Responses)
Organization (50 Responses)
Lead Contact (22 Responses)
Contact Organization (22 Responses)
Question 1 (65 Responses)
Question 1 Comments (72 Responses)
Question 2 (65 Responses)
Question 2 Comments (72 Responses)
Question 3 (61 Responses)
Question 3 Comments (72 Responses)
Question 4 (65 Responses)
Question 4 Comments (72 Responses)
Question 5 (61 Responses)
Question 5 Comments (72 Responses)
Question 6 (61 Responses)
Question 6 Comments (72 Responses)
Question 7 (63 Responses)
Question 7 Comments (72 Responses)

Individual
John Bee
Exelon
Yes
Yes
Yes
Yes
This may be a burden on small entities and generators because they would need to use contractors to run studies in order to obtain the required data. Smaller entities and generators may not have the expertise, the software or the necessary personnel to perform studies.
No
No
No
Group
Guy Zito
Northeast Power Coordinating Council
No
How an exception application will be assessed by the RE and NERC is not addressed in the document. Stakeholders need to know how the exception application will be evaluated and processed. Suggest that the SDT develop a reference or a guidance document as part of the RoP that will provide guidance to Registered Entities, Regional Entities and the ERO on how an exception application will be processed. Of particular concern is the lack of clarity and specificity with respect to what analyses and study results are required under the third bullet on page 1 and under question 4 on both pages 2 and 4. This lack of clarity and specificity will lead to inconsistent application of the Technical Principles by both Registered Entities and Regional Entities. We recommend the following: the impact and performance analyses required by the 3rd bullet on page 1 and by #4 on pages 2 and 4 should be stipulated to be all analyses, scenarios, and contingencies required under NERC Standard TPL-002-1 with the "exception element" removed from the base system model. Entities shall report on all key

performance measures of BES reliability specified in the TPL-002-1 attributable to the removed "exception element". On page 1 under General Instructions, it is stated that: "A one-line breaker diagram identifying the facility for which the exception is requested must be supplied with every application. The diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested." What is meant by interface points?
No
For question 2 on page 2 For Transmission Facilities: • What standards will define the "impact"? • What is a material impact and a non-material impact? • What kinds and types of impacts are acceptable/unacceptable? • How are impacts determined? Question 6 on page 3 reads "Is the facility part of a Cranking Path associated with a Blackstart Resource?", suggest removing the reference to "Cranking Path" because the Drafting Team does not require that the BES be contiguous, and black start resource Cranking Paths were deleted from Inclusion I3. Question 7 on page 3 asks, "Does power flow through this facility into the BES?" This can only apply to a Local Network with two or more connections to the BES. No power should normally flow through a Local Network (or Radial system) to another portion of the BES. There may be occasional, brief reverse power flows may be acceptable during short periods under abnormal operating conditions. Question 7 also requests "data for the most recent consecutive two calendar year period." Why is two years worth of data necessary? One year of data would be sufficient. From Question 7, "what is the minimum and maximum magnitude of the power flow out of the facility …" What is intended by the use of magnitude? Suggest that the Drafting Team adopt the FERC Seven Factor test for question 7. Suggest deleting the "% of the calendar year" check boxes in favor of a statement either that power does not flow through the Local Network, or alternatively, a blank space for reporting the net peak MWs and MWHs transferred annually through the facility, and the percentage of these transferred amounts to the peak and annual MWH demands served by the Local Network. Suggest requesting only one year (8,760 hours) of data covering four seasons, including Summer and Winter capability periods.
No
This Application generally applies to traditionally fueled generating facilities. Application form and justifications would be required for non-traditional resources such as solar and wind? Question 2 on page 4 asks, "Is the generator or generator facility used to provide Ancillary Services?" If some of these Generator check list items are market-related and not reliability-related, they should not be present. If the Ancillary Services are reliability-related, please explain their relation to BES reliability. Suggest inserting the word "reliability" before the words "must run" in question 3. Question 5 on page 4 asks, "Does the generator use the BES to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load?" This could mean the generator may serve local loads through non-BES facilities. In order to serve these local loads the generator would need to be connected to a Radial system, a Local Network or to local distribution facilities. Is this what is intended? Were there any other possibilities envisioned by the BES SDT?
No
According to the Applicability section, the TPL Reliability Standards are only applicable to the Planning Coordinator (PC) and the Transmission Planner (TP). Was it the BES SDT's assumption that Applicants would have the PC or TP run studies for them, or that all Applicants would gain access to those models and run the models themselves? (Ref. TPL-002-1b, Applicability: Planning Authority, and Transmission Planner.)
Yes
There is no guidance provided as to how the information asked for in this form will be evaluated, and what the decision making process will entail. As such, a reference document should be developed and provide some guidance how to evaluate applications. Suggest that the BES SDT adopt the FERC Seven Factor test.
No
No
Group
Charles Long

Entergy Services, Inc.
Yes
Yes
Yes
No
No
No
No
Individual
Eric Lee Christensen
Snohomish County PUD
Yes
SNPD agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. SNPD is concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. SNPD envisions that at least four different kinds of documents would be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details. SNPD suggests that a generic example of a completed form be provided to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts.
No
SNPD agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest three modifications to the proposed language to ensure consistency with Section 215 of the Federal Power Act, with the BES Definition, and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) SNPD suggests that a new question should be added concerning the function of the facility, which would read: "Does the facility function as a local distribution facility rather than a Transmission facility? If yes, please provide a detailed explanation of your answer." Section 215(a)(1) of the FPA makes clear that "facilities used in the local distribution of electric energy" are excluded from the BES, 16 U.S.C. § 824o(a)(1), and the most recent draft of the BES definition incorporates the same language. SNPD believes a question to address the function of the Element or system subject to an Exception Request is necessary to determine whether the Element or system is "used" in local distribution and thereby to ensure that this statutory limit on the BES is observed in the Exceptions process. Further, we believe a variety of information may be relevant to determining whether a particular facility functions as local distribution rather than as part of the BES. For example, if power is not scheduled across the facility or if capacity on the system is not posted on the relevant OASIS, it is likely to function as local distribution, not transmission. Similarly, if power enters the system and is delivered to load within the system rather than moving to load located on another system, its function is local distribution rather than transmission. SNPD proposes the language above as an open-ended question so that the entity submitting the Exceptions Request can provide this and any other information it deems relevant to facility function. (2) SNPD suggests modifying question 6 to "Is the facility part a designated Cranking Path associated with a Blackstart Resource identified in a

Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition, which removes the reference to "Cranking Paths," and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (3) A general "catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: "Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request." While SNPD believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.

Yes

SNPD agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. SNPD suggests three refinements to the questions: (1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter is not. (2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, SNPD suggests modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: "Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request." This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.

Yes

The Standards Drafting Team should consider whether it is necessary to require entities other than the entity filing the Exception Request to provide relevant information, either to the entity filing the Exception Request or to the RE receiving the Exceptions Request. For example, in order to answer Question 1 on page 4, regarding the impact of the generator under the most severe single contingency, it may be necessary for the relevant Balancing Authority to provide its Most Severe Single Contingency ("MSSC") to the registered entity seeking an Exception. Similarly, the relevant Transmission Operator or Balancing Authority may have information that is necessary to determine whether the generator has been designated as reliability-must-run or if it provides ancillary services supporting reliable operation of the interconnected transmission grid.

Yes

As discussed in our responses to Questions 1 through 3, SNPD believes that certain additional questions are necessary to elicit all information that may be relevant to an Exceptions Request. As discussed in our answer to Question 4, we are also concerned that it may be necessary to obtain information that is in the hands of the relevant Balancing Authority, Transmission Provider, or other entity, and not in the hands of the entity submitting an Exceptions Request, to develop a complete record upon which a reasoned decision concerning an Exceptions Request can be based.

Yes
As discussed in more detail in our response to Question 2, SNPD believes it is necessary to address the function of an Element or system that is subject to an Exceptions Request to determine whether it is a "facilit[y] used in the local distribution of electric energy" and therefore excluded from the BES under Section 215(a)(1) of the Federal Power Act.
No
As a general matter, SNPD believes the SDT has provided a reasonable check list that will work in most cases to elicit necessary information from the entity submitting an Exception Request. With the added language suggested in our answers to the previous questions, we believe the proposed form will serve its intended purpose of ensuring that decisions regarding Exception Requests are based upon consistent information and are consistent with the requirements of the Federal Power Act and the BES Definition as developed by the Standards Drafting Team. SNPD also supports the Standards Drafting Team's determination to abandon its initial approach to technical criteria, which would have required adherence to specific numerical thresholds. SNPD agrees that this approach was not workable on a nationwide basis, and that the approach embodied in the current draft of the Technical Principles, which would require specific kinds of information on a generic basis but would leave engineering judgment about the significance of that information to the relevant RE, is more workable and provides appropriate deference to the experience and judgment of the REs.
Individual
Greg Rowland
Duke Energy
No
Need to include identification of any System Protection Coordination considerations per PRC-001-1. Also, we believe that a system map showing the geographical location of the facility(s) should be supplied with the request.
No
Modify wording on #3 as follows: "Please provide the appropriate list for the operating area where the facility is located." Modify the wording on #6 as follows: "Is the facility part of a Cranking Path identified in an entity's restoration plan for a Blackstart Resource as required by EOP-005-2?"
No
Modify wording on #3 as follows: "Please provide the appropriate reference for the operating area where the facility is located."
Yes
What is the process for obtaining data from a 3rd party that is either unregistered or unwilling to supply the data?
No
No
No
Group
Brent Ingebrigtson
LG&E and KU Energy
Yes
LG&E and KU Energy request clarification as to how the two year data requirement would apply to a

new facility for which the owner/operator requests an exemption.
Individual
Richard Salgo
NV Energy
Yes
Yes
No
In question #7 of the form, it would be useful to the analysis for technical exception to include not only the minimum and maximum power flow out of the candidate facility, but also a description or demonstration of the "typical" magnitude or the "average" of such flow. An entity may provide this sort of information anyhow, but a prompt for this type of information could be useful and prevent having to solicit more information during the review.
No
The information appears to be readily available to entities seeking exceptions.
No
No
No
Group
Jean Nitz
ACES Power Marketing
No
The first sentence only refers to element(s) designated as excluded. Element(s) designated as included under the BES definition, shouldn't have to go through the exception process either.
No
Q1, Q5 and Q6 have a "Description/Comments" section. What type of information should be included under the Description for each of these questions? Providing more guidance here would help achieve the "standardization, clarity and continuity of process" that we seek. Regarding Q2: A permanent flowgate should not be part of the detailed information to support an exception. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the "permanent" adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First, flowgates are created to manage congestion. The IDC is more of a congestion management tool than a reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve IROLs that have been violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The characteristics of the flowgate make it a good proxy for estimating how much contractual use has

been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROLs, many simply are not. We are unclear about what "an appropriate list" in Q3 is supposed to be. Is it supposed to be a list of all IROLs or only those for which the answer is yes? Why is a list even necessary since the answer to the question answers Exclusion E3.c? If the answer is no, is this asking the submitter to prove the negative?
No
Q5 has a "Description/Comments" section. Further clarification on what type of information to include under the Description would help "standardize" the supporting information and "will provide more clarity and continuity to the process." The definition of ancillary services varies and can be quite broad. It can include reactive power and voltage support for example. All generators provide some reactive power and voltage support. Thus, ancillary services should be further defined or one could construe it to limit any generator from being excepted.
Yes
Some generation owners may not be able to obtain their BA's most severe single Contingency. Many generator owners will not have access to the data necessary to demonstrate the reliability impact to the BES. This is particularly true for transmission dependent utilities.
No
Yes
Some organized markets have a must run concept that has nothing to do with reliability. Thus, Q3 for generation facilities might be confused with these tariff provisions.
No
Individual
Thomas C. Duffy
Central Hudson Gas & Electric Corporation
Yes
Yes
Yes
No
No
No
Yes
The 'Technical Principles for Demonstrating BES Exceptions' process was intended to establish technical exception 'criteria' which would be used by the industry to understand what facilities would qualify for inclusions and exclusions from the BES. What has been produced, however, is essentially a listing of 'electrical system indicators', identified on the form, which may be material to making a decision regarding, 'is it BES or not'. The thresholds (or acceptable values) for the indicators, however, have not been determined. It is understood that in Phase II of the BES Definition development process, the SDT will attempt to address these issues but until that work has been completed, the industry will remain enmeshed in confusion and inefficient application of resources and funding. Without these criteria, it is very difficult to believe that this process can be transparent and consistent. Re: Question 4. (For Transmission Facilities) For the purposes of responding to this question, what constitutes the BES? It would seem that you must exclude the elements you are seeking exceptions for or else the exception request is rendered essentially worthless.
Individual

Chris de Graffenried
Consolidated Edison Co. of NY, Inc.
No
Con Edison's overall concern is the lack of clarity and specificity with respect to what analyses and study results are required under the 3rd bullet on page 1 and under #4 on pages 2 and 4. This lack of clarity and specificity will lead to inconsistent application of the Technical Principles by both Registered Entities and Regional Entities. We recommend the following: the impact and performance analyses required by the 3rd bullet on page 1 and by #4 on pages 2 and 4 should be stipulated to be all analyses, scenarios, and contingencies required under NERC Standard TPL-002-1 with the "exception element" removed from the base system model. Entities shall report on all key performance measures of BES reliability specified in the TPL-002-1 attributable to the removed "exception element". Note that references to NERC Standard TPL-001-2 should not be made in the Technical Principles document as TPL-001-2 has not yet been filed with (nor approved by) FERC. General Instructions One-Line Breaker Diagram questions and comments: Page 1, paragraph 2: Please explain the phrase "at the interface points." Where is this location? Please provide several examples, i.e., for a radial, a local network, a generator, a transformer, a substation buss, and for other Elements (PARs, reactors, UFLS panels, relays and switches).
No
Application Form Page 2 For Transmission Facilities: Impacts: Flowgates: The Application form at 2 states, "How does the facility impact permanent Flowgates in the Eastern Interconnection …" • What standards for "impact" does the BES SDT envision? • What is a material impact and a non-material impact? • What kinds and types of impacts are acceptable and/or unacceptable? • How are impacts determined, e.g., Power TFD method, short circuit analysis, A-10 method? Impact-Based Studies: Note that the FERC Seven Factor test is a time-tested method and FERC has identified it as an acceptable method for reliability purposes; for gauging the expected impact of an Element on the interconnected transmission grid. The NPCC A-10 method has been used extensively in the Northeastern U.S. and Canada, and is an impact-based approach. The power TDF (transfer distribution factor) method is also used by some to assess the impact of changing power flows on individual Elements within a system. FERC has studied using the 'TIER' method for classifying system Elements based on LBMP impacts. WECC uses a short circuit test. Page 3 Cranking Path Issue: The Application form at 6 asks, "Is the facility part of a Cranking Path associated with a Blackstart Resource?" We understand that: (i) The drafting team does not require that the BES be contiguous, and (ii) Blackstart resource Cranking Paths were deleted from Inclusion I3. Recommendation: Delete the reference to "Cranking Paths" in this Application form. Power Flow Issue: The Application form at 7 asks, "Does power flow through this facility into the BES?" We assume that this can only apply to a Local Network with two or more connections to the BES. We believe that no power should normally flow through a Local Network (or Radial system) to another portion of the BES. Occasional, brief reverse power flows may be acceptable during short periods under abnormal operating conditions, e.g., a switch normally open is briefly closed during a forced maintenance outage. The Application form at 7 requests the following: "data for the most recent consecutive two calendar year period." • Please explain why the BES SDT felt that two years worth of data was necessary, as one year of data would appear sufficient? Our experience has been that one year (8,760 hours) of data covers four seasons, including Summer and Winter capability periods, and is therefore sufficient. Requiring an extra year is perhaps unnecessarily burdensome on filing Entities, whether asset owners or Regional Entities. The Application form at 7 asks, "[W]hat is the minimum and maximum magnitude of the power flow outflow of the facility …" • Please explain why the BES SDT used the term "magnitude" when requesting power outflow data? Recommendations: 1) We strongly recommend that the BES SDT adopt the FERC Seven Factor test for these purposes. The FERC Seven Factor test states that, • "Power flows into local distribution systems, and rarely, if ever flows out," and • "When power enters a local distribution system, it is not reconsigned or transported on to some other market." 2) We recommend deleting the "% of the calendar year" check boxes in favor of a statement either that power does not flow through the Local Network, or alternatively, a blank space for reporting the net peak MWs and MWH's transferred annually, and the percentage of these transferred amounts to the peak and annual MWH demands served by with the Local Network. 3) We recommend requesting only one year (8,760 hours) of data covering four seasons, including Summer and Winter capability periods.
No

For Generation Facilities: This Application form would appear to generally apply to traditional generating facilities. • What Application form and justifications would be required for non-traditional resources, e.g., solar and wind? • The Application form at 2 asks, "Is the generator or generator facility used to provide Ancillary Services?"If some of these Generator check list items are market-related and not reliability-related, then they should not be present. • If the Ancillary Services are reliability-related, please explain their relation to BES reliability. Recommendation: Insert the word "reliability" before the words "must run" in question 3. The Application form at 5 asks, "Does the generator use the BES to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load?" We assume this mean the generator may serve local loads through non-BES facilities. In order to serve these local loads the generator would need to be connected to a Radial system, a Local Network or to local distribution facilities. • Is this meaning above implied and intended by this question? • Were there any other possibilities envisioned by the BES SDT?
Yes
According to the Applicability section, the TPL Reliability Standards are only applicable to the Planning Coordinator (PC) and the Transmission Planner (TP). Was it the BES SDT's assumption that Applicants would have the PC or TP run studies for them, or that all Applicants would somehow gain access to those models and run the models themselves? (Ref. TPL-002-1, Applicability: Planning Coordinator, and Transmission Planner.)
Yes
We strongly recommend that the BES SDT adopt the FERC Seven Factor test for local distribution.
Individual
Thad Ness
American Electric Power
Yes
Though we have no objections to the proposed content, this is contingent on the number and type of elements eventually found included or excluded as a result of the BES definition itself which is still being drafted. Any changes in that definition could in turn cause us concern regarding these general instructions. There needs to some provision for cases where specific elements which are not specifically contained within the studies. It needs to be clear what additional analysis needs to be provided under those circumstances. We recommend that the owner of the asset be identified as part of the general instructions. In the case of wind resources, how is individual gross nameplate information to be reported?
Yes
We recommend capitalizing "facility".
No
It is unclear how the process will work with the interaction among the various NERC Functions. For instance, an exception request from generation might require collaboration among other functional entities, i.e. GOP, TOP, and RC. The question "How does an outage of the generator impact the over-all reliability of the BES" may be subjective and dependent on contingencies at any given time. It would be dependent on what state the BES would be in the area the generator is located. More detail would be needed in describing the study required to have consistent results.
No
As stated in the response to question #3, the question "How does an outage of the generator impact the over-all reliability of the BES" may be subjective and dependent on contingencies at any given time. It would be dependent on what state the BES would be in the area the generator is located. More detail would be needed in describing the study required to have consistent results.
No
As stated in the response to question #3, it is unclear how the process will work with the interaction among the various NERC Functions. For instance, an exception request from generation might require collaboration among other functional entities, i.e. GOP, TOP, and RC. The existence of a must run unit means that unit has a material impact on any configuration of the BES and as such would need a serious waiver to not be considered a BES facility. As such, a must run unit would not receive an

exception. As a result, should question #3 be removed? Criteria for applying for an exception should be outlined before filling out the form.
No
AEP is not aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue.
No
AEP agrees with the overall approach demonstrated by the exception request form; however, its appropriateness will be largely dependent on the process eventually used for its implementation. AEP would like guidance on how moth-balled generation should be treated. Perhaps this could be added to the exception form as well.
Individual
Anthony Jablonski
ReliabilityFirst
No
These instructions are at a very high level and provide no clear guidance on what is required. ReliabilityFirst Staff believes each bulleted item needs to provide clear expectations. As an example in bullet #2 "Clearly document all assumptions used", the document and this bullet should include guidance such as what base case transfers were included, a list of facilities that were assumed out of service, new facilities places in service and system load levels, etc.
No
All generating units, to some degree, affect the transmission elements that make-up the BES. What role will this effect have on the determination? If the systems are planned properly and the day-ahead analysis is done for maintenance work, the outage of any one element is moot. What is the phrase "impact the over-all reliability" getting at? These studies and analysis will need to look at multiple outages and groups of elements being taken out and excluded. Will this be on a first come, first out process? As for the Nuclear Plant Interface Requirement (NPIR) question, ReliabilityFirst Staff believes these facilities should always be included as part of the BES and taken out of the Detailed Information to Support an Exception Request. For question 6 ReliabilityFirst Staff believes the Cranking Path should be included in the BES definition. . ReliabilityFirst Staff feels that without including the Cranking Paths, the reliability of the system could be jeopardized if a restoration is required and the Cranking Paths are unavailable due to non-adherence to Reliability Standards. Omit question 7, E3 (LN) of the definition already talks to power flow and even if there is a small percentage of flow, it makes that entity a user of the BES, which should be included.
No
If the systems are planned properly and the day-ahead analysis is done for maintenance work, the outage of any one unit and even with the most serve outage happening, the system should be capable of withstanding. These studies and analysis will need to look at multiple outages and groups of units being taken out and excluded before any could be exempt. What is the phrase "impact the over-all reliability" getting at? These studies and analysis will need to look at multiple outages and groups of elements being taken out and excluded. Will this be on a first come, first out process? As for the Ancillary Services question, ReliabilityFirst Staff believes that if a unit provides this service, it should be included in the BES. The same applies for the "must run units" in question 3. Omit question 5, E3 (LN) of the definition already talks to power flow and even if there is a small percentage of unit's output flowing onto the BES, it makes that entity a user of the BES, which should be included.
Yes
In some cases, models and even knowledge of the system configurations, operating protocols and procedures may not be well known by all the entities. System adjustments, load levels, topologies, maintenance and outage schedules, which happen daily, will or may be unknown to many entities, including the Regional Entities who may submit a request to include facilities. For cross regional boundaries, the problem becomes even larger. That coupled with generation unit owners/operators not permitted to know transmission information (i.e. Questions 4 and 5); this will put them at a huge disadvantage to participate in the exception request process.
No

Yes
Since the inception of the Open Access Transmission Tariff, transmission models and even knowledge of the systems, operating protocols and procedures may not be well known or known at all by all the entities. System adjustments, load levels, topologies, maintenance and outage schedules (i.e. market sensitive information), which happens daily is not permitted to be known by the generation side of the industry. An unknown at this point and without a common set of criteria to be used by the Regional Entities and NERC Staff and Panels, it will be difficult to make consistent determinations across the ERO Enterprise.
Yes
FERC Order 743-A, paragraph 1, discusses that NERC should "…establish an exemption process and criteria for excluding facilities that are not necessary for operating the interconnected transmission network". It also directed in paragraph 4 that "Order No. 743 also directed the ERO to develop an exemption process that includes clear, objective, transparent and uniformly applicable criteria for exempting facilities that are not necessary for operating the interconnected transmission grid." The SDT proposed a set of questions titled "Detailed Information to Support an Exception Request" to assist in the exemption process but in our mind is not "exception criteria" as stated in the FERC Orders. ReliabilityFirst Staff believes that NERC should develop criteria for which facilities or Elements could be exempted from the core definition; an example being Local Networks as outlined in the current draft of the definition. ReliabilityFirst Staff believes the Local Network exclusion is not "bright line" and could be removed from the core definition and used as criteria for exclusion in the exemption process. Item b of the LN (E3) exclusion would need evidence to support the historical and future power flows. Historical data and future power flow study results would be needed to support this exception. Additionally, another example for exemption criterion for inclusion to the BES could be any 69 kV network facilities that provide a parallel path to the BES. Evidence such as one-line diagrams along with power flow studies would need to be provided through the exemption process for these types of facilities to be included in the BES. ReliabilityFirst Staff believes that any BES facilities should not be candidates for exemption based upon the arbitrary determination of a panel that considers the aspects stated in the document "Detailed Information to Support an Exception Request". Without uniform criteria as stated in the FERC Orders, it will be difficult for the panels to make consistent determinations across the ERO Enterprise.
Individual
Joe Petaski
Manitoba Hydro
No
No
No
Yes
Canadian Entities are not under FERC jurisdiction, so the revised BES Definition may not apply. A number of Canadian Entities have the BES defined within their provincial legislation. This may introduce differences and even contradictions between elements that are included in the BES according to provincial legislation and the NERC definition.
Yes
Manitoba Hydro strongly disagrees with the proposed 'Detailed Information to Support an Exception Request' document and associated exception process for the following reasons: -It is not clear what elements or situations beyond what is covered in the core definition and associated inclusions and exclusions that the drafting team is hoping to capture through the exception process. Further, it is unclear what the benefit to reliability would be by allowing an impact based exception process given that entities will be extremely unlikely to use the exception process to include elements in the BES. -The exception process will be extremely resource intensive, particularly in the absence of any

Industry approved threshold criteria. The costs to properly administer and monitor the process to ensure that impact based modeling is done accurately and that it captures the frequent changes on a dynamic system will occupy a wealth of Industry, NERC and Regional Entity time to the detriment of reliability. -It is not reasonable for industry to approve the exception process without knowing what thresholds are required to demonstrate an element as being part of the BES or not. We are concerned that BES determinations would be subjective and would vary from case to case with the particular staff examining the request. BES elements should be established and agreed upon by Industry, not set by a NERC panel. We understand that the drafting team has made this change in the interests of time, but the impact of the BES definition is too broad for this project to be rushed. -The 2010-17 project goals to increase the clarity of the BES definition and establish a 'bright-line' are compromised by the exception process. Changes and alterations to the BES definition should be approved by Industry through the Standards Under Development Process. An interpretation request or SAR should be developed by an entity if they feel that the core definition and associated exceptions and inclusions should be modified. We ask that NERC requests that FERC re-examines the directive to develop an exception process given that the BES definition, which already includes a list of exceptions, is sufficient to standalone without an associated exception process.
Group
Janet Smith
Arizona Public Service Company
Yes
In accordance with WECC's position paper issued on October 5, 2011, AZPS agrees with WECC in that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests.
Individual
Robert Ganley
Long Island Power Authority
Yes
Yes
On page 3 why reference if a facility is part of a Cranking Path after the SDT has deleted Cranking Paths from the Inclusion list as part of the BES definition.
Yes
Need to define the term "must run unit"
No
No
Not aware of any
No
Individual
Eric Salsbury
Consumers Energy
Yes

No
We believe that item 6, should read "Is the facility part of a Primary Cranking Path associated with a Blackstart Resource?" Currently, the word "Primary" is not included.
Yes
Yes
No
No
No
Group
Jonathan Hayes
Southwest Power Pool
Yes
Yes
Yes
Yes
SCADA line flow data might be hard to capture for the last two years. Specifically the line flows may not be available.
No
No
No
Individual
David Burke
Orange and Rockland Utilities, Inc.
No
In the first paragraph “Entities that have Element(s) designated as excluded, under the BES definition and designations, do not have to seek exception for those Elements under the Exception Procedure.”, before the “General Instruction” it should have had another sentence saying that “for those who do not clearly meet the Inclusions and Exclusions should use the following instructions”. Otherwise, it’s still not very clear.
No
Please clarify “facility” and include “N-1” for power-flow studying.
No
However, please clarify “facility” and include “N-1” for power-flow studying.
No
No

No
Group
Steve Rueckert
WECC
No
WECC has several concerns with the instructions on the checklist regarding the studies: • Study Case – The instructions state the study case that should be used, "Be based on an Interconnection-wide base case that is suitably complete and detailed to reflect the facility's electrical characteristics and system topology." The phrase "suitably complete and detailed" is vague. WECC recommends clarification of this phrase and the addition of specific requirements for what will constitute an appropriate case. Allowing the entity requesting an exception to choose any Interconnection-wide case could allow an inappropriate choice of case and could lead to inconsistent study results. If there are no requirements for the chosen case, then it is possible that the most favorable case to an entity's argument will be chosen. In some instances that choice would likely be appropriate, but in others it would not necessarily be appropriate. At a minimum, there should be further description — and preferably, specific requirements — guiding the determination of which study case is most appropriate. Of particular importance in clarifying what case is an appropriate case, is the timeliness of the case. WECC recommends requiring that a recent case be used. In addition, if each entity is able to chose its own case, without further requirements, there will be no way for the Regional Entity or NERC to ensure consistency of determinations with respect to the elements tested. • The entities are asked to address key performance measures of BES reliability through the studies. This instruction is vague concerning what the study must investigate and it leaves it up to the entity to determine the key performance measures. The "key performance" measures should be consistent with respect to similar elements and there is no way to ensure that if there are no specifications regarding such measures. The exceptions process must be objective and clear as to what performance measures need to be met for the process to be implemented consistently. WECC recommends further clarification and the addition of specific requirements beyond the guidance related to consistency with Transmission Planning (TPL) standards. • The background information on the comment form states: "The same checklist will be utilized for exceptions dealing with inclusions or exclusions." But there is no mention of this in the document. A note should be added to the checklist instruction to state that the same checklist will be used for exclusions and inclusions.
Yes
The requested information in the checklist is appropriate. However; the exceptions process as drafted, with no objective criteria defining how to assess the submittals, leaves it to each Regional Entity to develop their own criteria to evaluate the responses to the checklist included in the submittals, leading to inconsistency between Regional Entities. In addition, WECC recommends clarifying Question 7. On its face it is unclear what defines power flowing through a facility in the BES. It should be clear whether a qualitative or quantitative response is required.
Yes
The requested information in the checklist is appropriate. However; the exceptions process as drafted, with no objective criteria defining how to assess the submittals, leaves it to each region to develop their own criteria to evaluate the responses to the checklist included in the submittals, leading to inconsistency between Regional Entities.
Yes
Entities would have a difficult time deciding what data to obtain. Getting the data for their own specific facilities should be relatively simple for the majority of entities. However, it is possible smaller entities may have a higher burden putting together the appropriate information for inclusion in a study case that they currently may not do. In addition, because the instructions state that a case will be "suitably complete and detailed," WECC believes there is insufficient guidance as to what amount and degree of detail in the data is sufficient for the submittal process. Without thresholds it is difficult to determine whether the entities will have the ability to obtain necessary data to file for an exception. At this time, WECC views the instructions as insufficient for these reasons.
Yes

In order to make a determination of BES status of an element, there should be a listing of effects of the outage on certain facilities, frequencies, voltages, transmission elements, or other information that should be included in the submittal by the entity. Without further specification of requirements for presenting a case it is likely that the Regional Entity will receive inconsistent submittals of data. Leaving open the question of what constitutes a sufficient presentation of a case would likely lead to a wide spectrum of submittals with respect to the amount of data and level of detail in the data.
No
Yes
WECC is very concerned that there are no specific qualifications or requirements, either for the entities or for the Regional Entity, with respect to: • the determination of which studies need to be conducted; • the format of the study data that should be submitted; or • the key performance measures that should be evaluated. This vagueness will lead to inconsistency in studies run, data submitted, and measures of data evaluation. If this inconsistency occurs, it will result in a potentially subjective and discordant process on multiple levels for both the submitting entities and the Regional Entities. It may result in submitting entity having to run multiple studies in order to determine what will be acceptable proof, which is overly burdensome on both the submitting entity requesting the exception and the Regional Entity reviewing the request. It also makes the consistency that FERC has requested difficult to assess and achieve. If the goal of the exceptions process is to result in consistent determinations across the regions, then WECC recommends that to the extent possible, the process be objective, clear, and include detailed instructions. The development of such an objective and detailed process is a difficult task and will require additional time. WECC believes it is better to not have an exceptions process in the interim period than to have an inefficient and overly burdensome process in place. To allow adequate time to complete the task of developing a detailed and consistent process WECC recommends that the Detailed Information to Support BES Exceptions Request be included in Phase II of the BES definition project.
Individual
Kathleen Goodman
ISO New England Inc
No
It is unclear what the purpose of submitting diagrams showing the Protection Systems is and we do not feel that it should be a requirement at the onset of the exception process. In the first bullet, we do not feel that the term "Interconnection-wide base case" is required as the phrase "suitably complete and detailed" should provide enough guidance to the submitter that inappropriate equivalent representations would not be accepted. The concern is that one could interpret "Interconnection-wide base case" as the entire Eastern Interconnection model is a requirement.
No
- Question 1 o The use of the words "connected to" is unclear. Some may read this as generation "directly" connected to while others could interpret it more generically. o A generation cut-off should be included in the requirement to list all individual units that may be connected to a facility. A suggestion would be to use a 1 MVA cut-off so that machines such as wind turbines would still be captured but smaller installations would not need to be listed in detail. o When listing individual gross nameplate values, the form should be specific that it is requesting the nameplate MVA value. - Question 3 o It is not clear how a facility could be included in an Interconnection Reliability Operating Limit (IROL) is a limit and not a specific element. Rather, it is clearer to ask if a facility is used to identify an IROL either as a part of the interface itself or as a contingency which relevant to the IROL. - Question 4 o As this question only pertains to the outage of the facility, there may also be a need to show how the outage of another element could impact the facility seeking exception. A new question to add to address this would be "How does an outage of other BES facilities impact flows through this facility and thus, the over-all reliability of the BES?" - Question 6 o This question appears to be inconsistent with the removal of the "Cranking Path" from the BES definition. o If the question is to remain, the question should be clarified to state, "With a Blackstart Resource "material to" and designated as part of a transmission operator entity's restoration plan. - Question 7 o The question should be more specific to whether the flow should be measured under all-lines in conditions or post-contingency. o The question should be more specific as to whether the power flow pertains to Real, Reactive, or Apparent Power. o The use of the word "through" in the question is unclear. This is more

evident when trying to apply this question to facilities which are transmission lines that are not directly connected to the BES.
No
- Question 1 o The question would be better worded as "How many MW are lost following the host Balancing Authority's most severe single Contingency…". o The question becomes difficult to answer when the most severe single Contingency can change on a day-to-day and hour-to-hour basis. o The MVA size of the facility should be requested. - Question 3 o The term "must run unit" is unclear.
No
All concerns were captured in comments provided to the previous questions.
No
All concerns were captured in comments provided to the previous questions.
No
Yes
Given all of these decisional inputs requested by the Exception Application there needs to be some guidance or clarification here regarding the criteria that will be used to render a yes or no decision other than simply filling out the Application and allowing the Rules of Procedure process to take place. The Application process for Exceptions (inclusions or exclusions) appears to be subjective and lacks the decisional technical criteria for the applicant to be confident of the outcome.
Individual
Diane Barney
New York State Dept. of Public Service
No
Missing from the document are any indicators as to how much information is sufficient, how the information will be evaluated, what weight will be given to the individual pieces of information, etc.
No
Question 6 should be dropped. Facilities in a cranking path for a blackstart resource should not be a consideration. Question 7 is circular. If a facility is used to flow power into the BES, by definition it is outside the BES. Needs clarification as to the information the question is seeking.
Individual
John Seelke
PSEg Services Corp
No
What is meant by "key performance measures of BES reliability" in the third bullet? A descriptive list would be helpful.
No
Questions #4 requires an analysis of the "most severe impact" associated an outage of the Element proposed for exception. a. Both the newly Board approved TPL-001-2 standard and the existing TPL-004-1 require that severe contingencies be evaluated, but there are no performance requirements for them. If the team intended the "most-severe impact" analysis to only evaluate TPL outages that incorporate performance requirements, it should make that clear. b. The most-severe-outage impact question does not ask key relevant information such as: i. What is the probability that the "most severe impact "will occur? ii. Could the impact be readily mitigated and service restored? This point is critical because the impact of an outage lasting several minutes before restoration versus several hours before restoration should affect the analysis. What does question #7 ("Does power flow through this facility into the BES?") with check boxes for various % of a calendar year that power flows into the BES) imply with respect to a transmission facility's exception request? Also, is the % of a calendar

year data intended to be forecasted data or historic data? It would seem that forecasted data would need to be supplied that is consistent with the TPL models. Finally, why are historic flows requested – they have no relevance except for perhaps explaining historic and forecasted differences?

No

With regards to question #2 ("Is the generator or generating facility used to provide Ancillary Services"), the answer for most synchronous generators is probably "yes" unless they are in a bid-based market that selects specific generators for Reactive Power delivery. Since most generators (with the exception of those with nuclear prime movers) provide Reactive Power to meet a Transmission Operator-specified voltage, they would provide that Ancillary Service. Other generators (again, with the exception of generators with nuclear prime movers) may be eligible to provide other Ancillary Services such as Spinning Reserve, but may have rarely done so. However, they still may be "used do provide" Spinning Reserve at any time. How would those generators respond to question #2? Questions #4 requires an analysis of the "most severe impact" associated an outage of the Element proposed for exception. a. Both the newly Board approved TPL-001-2 standard and the existing TPL-004-1 require that severe contingencies be evaluated, but there are no performance requirements for them. For consistency, performance requirements for the most-severe-impact analysis needed to be defined by the team. If the team intended the "most-severe impact" analysis to only evaluate TPL outages that incorporate performance requirements, it should make that clear. b. The most-severe-outage impact question does not ask key relevant information such as: i. What is the probability that the "most severe impact "will occur? ii. Could the impact be readily mitigated and service restored? This point is critical because the impact of an outage lasting several minutes before restoration versus several hours before restoration should affect the analysis. What does the answer to the question #5 in the Generator Facilities section ("Does the generator use the BES to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load?") imply with respect to a generator's exclusion? Also, the phrase "deliver its actual or scheduled output …to load" needs explanation. The use of "actual output" and "scheduled output" may have several contexts. a. For example, in a market, a generator's actual output may suddenly go to zero due a forced outage, but the generator has financial obligations that accrue for delivering its scheduled output, which is in fact provided by other sources since the generator is unavailable. Is the question asking about the use of BPS facilities by resources that may be substituted for delivery of a generator's scheduled output when it differs from its actual output? b. Now assume that a generator's actual output equals its scheduled output and that several generators are forced out of service in another Balancing Authority, resulting in a frequency decline. Generators within the interconnection with active governors and available spinning capacity will automatically increase their output above their scheduled output, resulting in Inadvertent Interchange. Is the question related to the BES facilities used to deliver such Inadvertent Interchange? c. Again assume that a generator's actual output equals its scheduled output. Is the question related to the actual BES facilities that may be used to deliver the generator's power to Load? That would require an analysis of generator and load shift factors to determine what actual facilities carry the power generated from a generator to a specific load for a given set of assumptions on the system topology. In a market, this analysis would not be possible for generators that do not self-schedule for delivery to specific loads.

Yes

It would depend upon the clarifications to the points raised above.

No

No

Yes

An applicant should be able to clearly tell whether or not an exception request will likely be granted before it is submitted. It is nearly impossible to divine the whether a request will be granted from a set of data questions. The team is urged to state the exclusion criteria explicitly; data questions required to evaluate a request should directly reference each criterion. See Order 743, paragraph 115: "NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid."

Individual

Sylvain Clermont

Hydro-Quebec TransEnergie
No
We believe that the new Technical Principles are better than the previous ones, as they allow flexibility for an Entity to make their case with technical justifications. However, without any guide or specific criteria, it does not allow an Entity to identify the real possibility to obtain an exception. It is not clear at all what will guide the Region or ERO to make their decision to grant or not the exception. In order give confidence to the Industry in the procedure, it would be necessary to define the elements that will guide the decision. Will impact base study be accepted? Will the threshold differences with Quebec Interconnection be accepted?
No
No
No
Yes
The general characteristics of the Interconnection (such as frequency or voltage variation), as they may guide the decision for exclusion of specific elements.
Yes
For HQT's system, the proposed BES definition combined with the exception procedure are presently incompatible or at least inconsistent with the regulatory framework applicable in Quebec. The proposed changes have not address this concern, neither the SDT's responses to our previous comments last May (Q.9). We reiterate that the definition and the exception procedure shall be determined by Quebec's regulator, the Régie de l'Énergie du Québec, (Quebec Energy Board) which has the responsibility to ensure that electric power transmission in Quebec is carried out according to the reliability standards it adopts. Per se, it would be necessary that E1 and E3 grant exclusions with much higher level of generation. It would also be necessary to allow for several levels of application for the Reliability Standards, in accordance with the Régie de l'énergie du Québec approach: the Bulk Power System (BPS) as determined using an impact-based methodology, the Main Transmission System (MTS), and other parts of Regional System. Standards related to the protection system (PRC-004-1 and PRC-005-1) and those related to the design of the transmission system (TPL 001-0 to TPL-004-0) shall be applicable to the first level, but all other reliability standards shall be applied to the second level, the MTS. The MTS definition is somewhat different than the Bulk Electric System definition, and it includes elements that impact the reliability of the grid, supply-demand balance and interchanges. We argue that it would be necessary for NERC to address the regulatory issues outside ot the present context of the SDT and ROP team.
Individual
Rick Hansen
City of St. George
No
While the general instruction information outlined is applicable, it lacks sufficient detail to know exactly what is needed to be submitted. More importantly the general instructions and the overall document lacks criteria that if met (through study and other documentation methods) would allow for exclusion from or inclusion to the BES. Something similar to the criteria or concepts used in the Appendix 1 of the Local Network Exclusion justification document is needed. Clear criteria should allow an entity to determine with a reasonable degree of certainty that if the criteria are met as demonstrated by the associated study effort that an exemption can be obtained. Otherwise without that criteria, the process will be not far from where the exemption process is today, which will be costly, time consuming and frustrating for the registered entities as well as the regions and NERC. The process needs to be repeatable and consistent between all regions and entities. Entities need to know what is expected and where the finish line is. As presently written each region and NERC would have to develop their own criteria individually and will be open to opinions which could change as personnel changes occur in a given position or panel.

No
The questions for transmission facilities seem to be appropriate; however, how the answers are to be used by the region or NERC is unclear. Will a given response to a question make exclusion impossible? If so this needs to be known upfront and clearly documented. For example question 4, on page 2 is open for interpretation and debate as to what the impact to the over-all reliability of the BES is. The definition of "impact" is really the key to the whole definition effort. Load flow, voltage, frequency change limits may all be pieces to the puzzle. Are these criteria to be met in normal, N-1, N-2, etc. system configurations?
No
The questions for generation facilities seem to be appropriate; however, how the answers are to be used by the region or NERC is unclear. Will a given response to a question make exclusion impossible? If so this needs to be known upfront and clearly documented. For example question 4, on page 4 is open for interpretation and debate as to what the impact to the over-all reliability of the BES is. The definition of "impact" is really the key to the whole definition effort. Load flow, voltage, frequency change limits may all be pieces to the puzzle. Are these criteria to be met in normal, N-1, N-2, etc. system configurations?
Yes
The access to the required data would be potentially be a concern especially for smaller entities. Small entities will typically have to outsource the required studies to consultants and obtaining the data may be difficult for the consultants. The entities most likely to obtain exemptions (smaller & lower impact entities) are the ones that probably will have the most difficulty in obtaining the data. Generally larger utilities "upstream" from the smaller ones are hesitant to give information to other entities. Depending on the study requirements and criteria for application, this could be a very costly process.
No
No
Yes
Clear, concise criteria with consistent repeatable results are a must for a successful outcome of the project effort. The included questions are appropriate questions but the use of those questions and the ultimate outcome is unclear with the current version. The background information indicates that continent wide criteria are not feasible. It is understood that this is a very difficult task and will be difficult to achieve (especially in the time allotted). However, if the decisions are left up to a "panel" to decide the results will be inconsistent and will vary region by region, as well as differ over time. The process involved will be very time consuming (i.e. expensive) and will be difficult to control especially during the initial timeframe. History has demonstrated that review and approval processes that pass from the entity to the regions, then to NERC and then on to FERC backup very easily due to limited staff and resources. The drafting team may want to consider moving this topic to Phase 2 of the project. However, Phase 2 needs to have fairly quick time frame in order to provide the needed direction to the industry in a timely manner.
Individual
Bud Tracy
Blachly-Lane Electric Cooperative
Yes
The Blachly-Lane Electric Cooperative (BLEC) agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. We are concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. We envision that at least four different kinds of documents could be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required

details. WE suggest that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts.

No

BLEC agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest two modifications to the proposed language to ensure consistency with the BES Definition and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) We suggest modifying question 6 to "Is the facility part of a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (2) A general "catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While we believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.

Yes

BLEC agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. We suggest three refinements to the questions: (1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter clearly is not. (2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, we suggest modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.

Yes

The Standards Drafting Team should consider whether it is necessary to require entities other than the entity filing the Exception Request to provide relevant information, either to the entity filing the Exception Request or to the Registered Entity receiving the Exceptions Request. For example, in order to answer Question 1 on page 4, regarding the impact of the generator under the most severe single contingency, it may be necessary for the relevant Balancing Authority to provide its Most Severe Single Contingency ("MSSC") to the registered entity seeking an Exception. Similarly, the relevant Transmission Operator or Balancing Authority may have information that is necessary to determine

whether the generator has been designated as reliability-must-run or if it provides ancillary services supporting reliable operation of the interconnected transmission grid.

Yes

As discussed in our responses to Questions 1 through 3, we believe that certain additional questions are necessary to elicit all information that may be relevant to an Exceptions Request. As discussed in our answer to Question 4, we are also concerned that it may be necessary to obtain information that is in the hands of the relevant Balancing Authority, Transmission Provider, or other entity, and not in the hands of the entity submitting an Exceptions Request, to develop a complete record upon which a reasoned decision concerning an Exceptions Request can be based.

No

No

As a general matter, BLEC believes the SDT has provided a reasonable check list that will work in most cases to elicit necessary information from the entity submitting an Exception Request. With the added language suggested in our answers to the previous questions, we believe the proposed form will serve its intended purpose of ensuring that decisions regarding Exception Requests are based upon consistent information and are consistent with the requirements of the Federal Power Act and the BES Definition as developed by the Standards Drafting Team. We also support the Standards Drafting Team's determination to abandon its initial approach to technical criteria, which would have required adherence to specific numerical thresholds. We agree that this approach was not workable on a nationwide basis, and that the approach embodied in the current draft of the Technical Principles, which would require specific kinds of information on a generic basis but would leave engineering judgment about the significance of that information to the relevant RE, is more workable and provides appropriate deference to the experience and judgment of the Registered Entities.

Individual

Dave Markham

Central Electric Cooperative (CEC)

Yes

The Central Electric Cooperative (CEC) agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. We are concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. We envision that at least four different kinds of documents could be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details. WE suggest that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts.

No

CEC agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest two modifications to the proposed language to ensure consistency with the BES Definition and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) We suggest modifying question 6 to "Is the facility part of a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (2) A general "catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the

information and explain why it is relevant to the Exception Request. While we believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.
Yes
CEC agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. We suggest three refinements to the questions: (1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter clearly is not. (2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, we suggest modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.
Yes
The Standards Drafting Team should consider whether it is necessary to require entities other than the entity filing the Exception Request to provide relevant information, either to the entity filing the Exception Request or to the Registered Entity receiving the Exceptions Request. For example, in order to answer Question 1 on page 4, regarding the impact of the generator under the most severe single contingency, it may be necessary for the relevant Balancing Authority to provide its Most Severe Single Contingency ("MSSC") to the registered entity seeking an Exception. Similarly, the relevant Transmission Operator or Balancing Authority may have information that is necessary to determine whether the generator has been designated as reliability-must-run or if it provides ancillary services supporting reliable operation of the interconnected transmission grid.
Yes
As discussed in our responses to Questions 1 through 3, we believe that certain additional questions are necessary to elicit all information that may be relevant to an Exceptions Request. As discussed in our answer to Question 4, we are also concerned that it may be necessary to obtain information that is in the hands of the relevant Balancing Authority, Transmission Provider, or other entity, and not in the hands of the entity submitting an Exceptions Request, to develop a complete record upon which a reasoned decision concerning an Exceptions Request can be based.
No
No
As a general matter, CEC believes the SDT has provided a reasonable check list that will work in most cases to elicit necessary information from the entity submitting an Exception Request. With the added language suggested in our answers to the previous questions, we believe the proposed form will serve its intended purpose of ensuring that decisions regarding Exception Requests are based upon consistent information and are consistent with the requirements of the Federal Power Act and the BES

Definition as developed by the Standards Drafting Team. We also support the Standards Drafting Team's determination to abandon its initial approach to technical criteria, which would have required adherence to specific numerical thresholds. We agree that this approach was not workable on a nationwide basis, and that the approach embodied in the current draft of the Technical Principles, which would require specific kinds of information on a generic basis but would leave engineering judgment about the significance of that information to the relevant RE, is more workable and provides appropriate deference to the experience and judgment of the Registered Entities.

Individual

Dave Hagen

Clearwater Power Company (CPC)

Yes

The Clearwater Power Company (CPC) agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. We are concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. We envision that at least four different kinds of documents could be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details. WE suggest that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts.

No

CPC agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest two modifications to the proposed language to ensure consistency with the BES Definition and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) We suggest modifying question 6 to "Is the facility part of a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (2) A general "catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While we believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.

Yes

CPC agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. We suggest three refinements to the questions: (1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter clearly is not. (2) The current draft of the

BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, we suggest modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.

Yes

The Standards Drafting Team should consider whether it is necessary to require entities other than the entity filing the Exception Request to provide relevant information, either to the entity filing the Exception Request or to the Registered Entity receiving the Exceptions Request. For example, in order to answer Question 1 on page 4, regarding the impact of the generator under the most severe single contingency, it may be necessary for the relevant Balancing Authority to provide its Most Severe Single Contingency ("MSSC") to the registered entity seeking an Exception. Similarly, the relevant Transmission Operator or Balancing Authority may have information that is necessary to determine whether the generator has been designated as reliability-must-run or if it provides ancillary services supporting reliable operation of the interconnected transmission grid.

Yes

As discussed in our responses to Questions 1 through 3, we believe that certain additional questions are necessary to elicit all information that may be relevant to an Exceptions Request. As discussed in our answer to Question 4, we are also concerned that it may be necessary to obtain information that is in the hands of the relevant Balancing Authority, Transmission Provider, or other entity, and not in the hands of the entity submitting an Exceptions Request, to develop a complete record upon which a reasoned decision concerning an Exceptions Request can be based.

No

No

As a general matter, CPC believes the SDT has provided a reasonable check list that will work in most cases to elicit necessary information from the entity submitting an Exception Request. With the added language suggested in our answers to the previous questions, we believe the proposed form will serve its intended purpose of ensuring that decisions regarding Exception Requests are based upon consistent information and are consistent with the requirements of the Federal Power Act and the BES Definition as developed by the Standards Drafting Team. We also support the Standards Drafting Team's determination to abandon its initial approach to technical criteria, which would have required adherence to specific numerical thresholds. We agree that this approach was not workable on a nationwide basis, and that the approach embodied in the current draft of the Technical Principles, which would require specific kinds of information on a generic basis but would leave engineering judgment about the significance of that information to the relevant RE, is more workable and provides appropriate deference to the experience and judgment of the Registered Entities.

Individual

Roman Gillen

Consumer's Power Inc. (CPI)

Yes

The Consumers Power (CPI) agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. We are concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. We envision that at least four different kinds of documents could be responsive to the description: one-line diagrams with breakers and switches (status); identification of

relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details. WE suggest that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts.

No

CPI agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest two modifications to the proposed language to ensure consistency with the BES Definition and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) We suggest modifying question 6 to "Is the facility part of a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (2) A general "catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While we believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.

Yes

CPI agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. We suggest three refinements to the questions: (1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter clearly is not. (2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, we suggest modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.

Yes

The Standards Drafting Team should consider whether it is necessary to require entities other than the entity filing the Exception Request to provide relevant information, either to the entity filing the Exception Request or to the Registered Entity receiving the Exceptions Request. For example, in order to answer Question 1 on page 4, regarding the impact of the generator under the most severe single

contingency, it may be necessary for the relevant Balancing Authority to provide its Most Severe Single Contingency ("MSSC") to the registered entity seeking an Exception. Similarly, the relevant Transmission Operator or Balancing Authority may have information that is necessary to determine whether the generator has been designated as reliability-must-run or if it provides ancillary services supporting reliable operation of the interconnected transmission grid.

As discussed in our responses to Questions 1 through 3, we believe that certain additional questions are necessary to elicit all information that may be relevant to an Exceptions Request. As discussed in our answer to Question 4, we are also concerned that it may be necessary to obtain information that is in the hands of the relevant Balancing Authority, Transmission Provider, or other entity, and not in the hands of the entity submitting an Exceptions Request, to develop a complete record upon which a reasoned decision concerning an Exceptions Request can be based.

No

No

As a general matter, CPI believes the SDT has provided a reasonable check list that will work in most cases to elicit necessary information from the entity submitting an Exception Request. With the added language suggested in our answers to the previous questions, we believe the proposed form will serve its intended purpose of ensuring that decisions regarding Exception Requests are based upon consistent information and are consistent with the requirements of the Federal Power Act and the BES Definition as developed by the Standards Drafting Team. We also support the Standards Drafting Team's determination to abandon its initial approach to technical criteria, which would have required adherence to specific numerical thresholds. We agree that this approach was not workable on a nationwide basis, and that the approach embodied in the current draft of the Technical Principles, which would require specific kinds of information on a generic basis but would leave engineering judgment about the significance of that information to the relevant RE, is more workable and provides appropriate deference to the experience and judgment of the Registered Entities.

Individual

Dave Sabala

Douglas Electric Cooperative (DEC)

Yes

The Douglas Electric Cooperative (DEC) agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. We are concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. We envision that at least four different kinds of documents could be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details. WE suggest that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts.

No

DEC agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest two modifications to the proposed language to ensure consistency with the BES Definition and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) We suggest modifying question 6 to "Is the facility part of a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (2) A general "catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there

additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While we believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.
Yes
DEC agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. We suggest three refinements to the questions: (1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter clearly is not. (2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, we suggest modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.
Yes
The Standards Drafting Team should consider whether it is necessary to require entities other than the entity filing the Exception Request to provide relevant information, either to the entity filing the Exception Request or to the Registered Entity receiving the Exceptions Request. For example, in order to answer Question 1 on page 4, regarding the impact of the generator under the most severe single contingency, it may be necessary for the relevant Balancing Authority to provide its Most Severe Single Contingency ("MSSC") to the registered entity seeking an Exception. Similarly, the relevant Transmission Operator or Balancing Authority may have information that is necessary to determine whether the generator has been designated as reliability-must-run or if it provides ancillary services supporting reliable operation of the interconnected transmission grid.
Yes
As discussed in our responses to Questions 1 through 3, we believe that certain additional questions are necessary to elicit all information that may be relevant to an Exceptions Request. As discussed in our answer to Question 4, we are also concerned that it may be necessary to obtain information that is in the hands of the relevant Balancing Authority, Transmission Provider, or other entity, and not in the hands of the entity submitting an Exceptions Request, to develop a complete record upon which a reasoned decision concerning an Exceptions Request can be based.
No
No
As a general matter, DEC believes the SDT has provided a reasonable check list that will work in most cases to elicit necessary information from the entity submitting an Exception Request. With the added language suggested in our answers to the previous questions, we believe the proposed form will serve

its intended purpose of ensuring that decisions regarding Exception Requests are based upon consistent information and are consistent with the requirements of the Federal Power Act and the BES Definition as developed by the Standards Drafting Team. We also support the Standards Drafting Team's determination to abandon its initial approach to technical criteria, which would have required adherence to specific numerical thresholds. We agree that this approach was not workable on a nationwide basis, and that the approach embodied in the current draft of the Technical Principles, which would require specific kinds of information on a generic basis but would leave engineering judgment about the significance of that information to the relevant RE, is more workable and provides appropriate deference to the experience and judgment of the Registered Entities.

Individual

Bryan Case

Fall River Electric Cooperative (FALL)

Yes

The Fall River Rural Electric Cooperative (FALL) agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. We are concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. We envision that at least four different kinds of documents could be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details. WE suggest that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts.

No

FALL agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest two modifications to the proposed language to ensure consistency with the BES Definition and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) We suggest modifying question 6 to "Is the facility part of a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (2) A general "catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While we believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.

Yes

FALL agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. We suggest three refinements to the questions: (1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the

interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter clearly is not. (2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, we suggest modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.

Yes

The Standards Drafting Team should consider whether it is necessary to require entities other than the entity filing the Exception Request to provide relevant information, either to the entity filing the Exception Request or to the Registered Entity receiving the Exceptions Request. For example, in order to answer Question 1 on page 4, regarding the impact of the generator under the most severe single contingency, it may be necessary for the relevant Balancing Authority to provide its Most Severe Single Contingency ("MSSC") to the registered entity seeking an Exception. Similarly, the relevant Transmission Operator or Balancing Authority may have information that is necessary to determine whether the generator has been designated as reliability-must-run or if it provides ancillary services supporting reliable operation of the interconnected transmission grid.

Yes

As discussed in our responses to Questions 1 through 3, we believe that certain additional questions are necessary to elicit all information that may be relevant to an Exceptions Request. As discussed in our answer to Question 4, we are also concerned that it may be necessary to obtain information that is in the hands of the relevant Balancing Authority, Transmission Provider, or other entity, and not in the hands of the entity submitting an Exceptions Request, to develop a complete record upon which a reasoned decision concerning an Exceptions Request can be based.

No

No

As a general matter, FALL believes the SDT has provided a reasonable check list that will work in most cases to elicit necessary information from the entity submitting an Exception Request. With the added language suggested in our answers to the previous questions, we believe the proposed form will serve its intended purpose of ensuring that decisions regarding Exception Requests are based upon consistent information and are consistent with the requirements of the Federal Power Act and the BES Definition as developed by the Standards Drafting Team. We also support the Standards Drafting Team's determination to abandon its initial approach to technical criteria, which would have required adherence to specific numerical thresholds. We agree that this approach was not workable on a nationwide basis, and that the approach embodied in the current draft of the Technical Principles, which would require specific kinds of information on a generic basis but would leave engineering judgment about the significance of that information to the relevant RE, is more workable and provides appropriate deference to the experience and judgment of the Registered Entities.

Individual

Rick Crinklaw

Lane Electric Cooperative (LEC)

Yes

The Lane Electric Cooperative (LEC) agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. We are concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface

points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. We envision that at least four different kinds of documents could be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details. WE suggest that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts.

No

LEC agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest two modifications to the proposed language to ensure consistency with the BES Definition and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) We suggest modifying question 6 to "Is the facility part of a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (2) A general "catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While we believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.

Yes

LEC agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. We suggest three refinements to the questions: (1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter clearly is not. (2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, we suggest modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.

Yes

The Standards Drafting Team should consider whether it is necessary to require entities other than

the entity filing the Exception Request to provide relevant information, either to the entity filing the Exception Request or to the Registered Entity receiving the Exceptions Request. For example, in order to answer Question 1 on page 4, regarding the impact of the generator under the most severe single contingency, it may be necessary for the relevant Balancing Authority to provide its Most Severe Single Contingency ("MSSC") to the registered entity seeking an Exception. Similarly, the relevant Transmission Operator or Balancing Authority may have information that is necessary to determine whether the generator has been designated as reliability-must-run or if it provides ancillary services supporting reliable operation of the interconnected transmission grid.
Yes
As discussed in our responses to Questions 1 through 3, we believe that certain additional questions are necessary to elicit all information that may be relevant to an Exceptions Request. As discussed in our answer to Question 4, we are also concerned that it may be necessary to obtain information that is in the hands of the relevant Balancing Authority, Transmission Provider, or other entity, and not in the hands of the entity submitting an Exceptions Request, to develop a complete record upon which a reasoned decision concerning an Exceptions Request can be based.
No
No
As a general matter, LEC believes the SDT has provided a reasonable check list that will work in most cases to elicit necessary information from the entity submitting an Exception Request. With the added language suggested in our answers to the previous questions, we believe the proposed form will serve its intended purpose of ensuring that decisions regarding Exception Requests are based upon consistent information and are consistent with the requirements of the Federal Power Act and the BES Definition as developed by the Standards Drafting Team. We also support the Standards Drafting Team's determination to abandon its initial approach to technical criteria, which would have required adherence to specific numerical thresholds. We agree that this approach was not workable on a nationwide basis, and that the approach embodied in the current draft of the Technical Principles, which would require specific kinds of information on a generic basis but would leave engineering judgment about the significance of that information to the relevant RE, is more workable and provides appropriate deference to the experience and judgment of the Registered Entities.
Individual
Michael Falvo
Independent Electricity System Operator
Yes
Yes
Yes
No
We anticipate that entities will be granted access to the required historical operations records and modeling data after signing of non-disclosure agreements with the providers of the information.
No
No
Yes
We believe that the SDT proposed approach for exception criteria is reasonable recognizing that one method/criteria cannot be applicable to everyone and every situation within the ERO foot print. However, we believe that there is huge gap and lack of any transparency on how the exception application will be evaluated and processed. We strongly suggest that SDT develop a reference or a guidance document as part of the RoP that should provide some guidance to Registered Entities, Regional Entities and the ERO on how an exception application should be processed. The absence of

such guidance will pose a challenge for each entity including the ERO, and may result in discrepancies amongst Regional Entities. The process may be perceived by registered entities as being non-transparency.
Individual
Michael Henry
Lincoln Electric Cooperative (Lincoln)
Yes
The Lincoln Electric Cooperative (Lincoln) agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. We are concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. We envision that at least four different kinds of documents could be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details. WE suggest that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts.
No
LINCOLN agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest two modifications to the proposed language to ensure consistency with the BES Definition and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) We suggest modifying question 6 to "Is the facility part of a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (2) A general "catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While we believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.
Yes
LINCOLN agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. We suggest three refinements to the questions: (1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter clearly is not. (2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, we suggest modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or

a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.
Yes
The Standards Drafting Team should consider whether it is necessary to require entities other than the entity filing the Exception Request to provide relevant information, either to the entity filing the Exception Request or to the Registered Entity receiving the Exceptions Request. For example, in order to answer Question 1 on page 4, regarding the impact of the generator under the most severe single contingency, it may be necessary for the relevant Balancing Authority to provide its Most Severe Single Contingency ("MSSC") to the registered entity seeking an Exception. Similarly, the relevant Transmission Operator or Balancing Authority may have information that is necessary to determine whether the generator has been designated as reliability-must-run or if it provides ancillary services supporting reliable operation of the interconnected transmission grid.
Yes
As discussed in our responses to Questions 1 through 3, we believe that certain additional questions are necessary to elicit all information that may be relevant to an Exceptions Request. As discussed in our answer to Question 4, we are also concerned that it may be necessary to obtain information that is in the hands of the relevant Balancing Authority, Transmission Provider, or other entity, and not in the hands of the entity submitting an Exceptions Request, to develop a complete record upon which a reasoned decision concerning an Exceptions Request can be based.
No
No
As a general matter, LINCOLN believes the SDT has provided a reasonable check list that will work in most cases to elicit necessary information from the entity submitting an Exception Request. With the added language suggested in our answers to the previous questions, we believe the proposed form will serve its intended purpose of ensuring that decisions regarding Exception Requests are based upon consistent information and are consistent with the requirements of the Federal Power Act and the BES Definition as developed by the Standards Drafting Team. We also support the Standards Drafting Team's determination to abandon its initial approach to technical criteria, which would have required adherence to specific numerical thresholds. We agree that this approach was not workable on a nationwide basis, and that the approach embodied in the current draft of the Technical Principles, which would require specific kinds of information on a generic basis but would leave engineering judgment about the significance of that information to the relevant RE, is more workable and provides appropriate deference to the experience and judgment of the Registered Entities.
Individual
Jon Shelby
Northern Lights Inc. (NLI)
Yes
The Northern Lights (NLI) agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. We are concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. We envision that at least four different kinds of documents could be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection

systems at the interface with the Elements for which the Exception is sought, including any required details. WE suggest that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts.

No

NLI agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest two modifications to the proposed language to ensure consistency with the BES Definition and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) We suggest modifying question 6 to "Is the facility part of a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (2) A general "catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While we believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.

Yes

NLI agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. We suggest three refinements to the questions: (1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter clearly is not. (2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, we suggest modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.

Yes

The Standards Drafting Team should consider whether it is necessary to require entities other than the entity filing the Exception Request to provide relevant information, either to the entity filing the Exception Request or to the Registered Entity receiving the Exceptions Request. For example, in order to answer Question 1 on page 4, regarding the impact of the generator under the most severe single contingency, it may be necessary for the relevant Balancing Authority to provide its Most Severe Single Contingency ("MSSC") to the registered entity seeking an Exception. Similarly, the relevant Transmission Operator or Balancing Authority may have information that is necessary to determine

whether the generator has been designated as reliability-must-run or if it provides ancillary services supporting reliable operation of the interconnected transmission grid.

Yes

As discussed in our responses to Questions 1 through 3, we believe that certain additional questions are necessary to elicit all information that may be relevant to an Exceptions Request. As discussed in our answer to Question 4, we are also concerned that it may be necessary to obtain information that is in the hands of the relevant Balancing Authority, Transmission Provider, or other entity, and not in the hands of the entity submitting an Exceptions Request, to develop a complete record upon which a reasoned decision concerning an Exceptions Request can be based.

No

No

As a general matter, NLI believes the SDT has provided a reasonable check list that will work in most cases to elicit necessary information from the entity submitting an Exception Request. With the added language suggested in our answers to the previous questions, we believe the proposed form will serve its intended purpose of ensuring that decisions regarding Exception Requests are based upon consistent information and are consistent with the requirements of the Federal Power Act and the BES Definition as developed by the Standards Drafting Team. We also support the Standards Drafting Team's determination to abandon its initial approach to technical criteria, which would have required adherence to specific numerical thresholds. We agree that this approach was not workable on a nationwide basis, and that the approach embodied in the current draft of the Technical Principles, which would require specific kinds of information on a generic basis but would leave engineering judgment about the significance of that information to the relevant RE, is more workable and provides appropriate deference to the experience and judgment of the Registered Entities.

Individual

Ray Ellis

Okanogan County Electric Cooperative (OCEC)

Yes

The Okanogan County Electric Cooperative (OCEC) agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. We are concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. We envision that at least four different kinds of documents could be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details. WE suggest that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts.

No

OCEC agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest two modifications to the proposed language to ensure consistency with the BES Definition and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) We suggest modifying question 6 to "Is the facility part of a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (2) A general "catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If

yes, please provide the information and explain why it is relevant to the Exception Request. While we believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.
Yes
OCEC agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. We suggest three refinements to the questions: (1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter clearly is not. (2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, we suggest modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.
Yes
The Standards Drafting Team should consider whether it is necessary to require entities other than the entity filing the Exception Request to provide relevant information, either to the entity filing the Exception Request or to the Registered Entity receiving the Exceptions Request. For example, in order to answer Question 1 on page 4, regarding the impact of the generator under the most severe single contingency, it may be necessary for the relevant Balancing Authority to provide its Most Severe Single Contingency ("MSSC") to the registered entity seeking an Exception. Similarly, the relevant Transmission Operator or Balancing Authority may have information that is necessary to determine whether the generator has been designated as reliability-must-run or if it provides ancillary services supporting reliable operation of the interconnected transmission grid.
Yes
As discussed in our responses to Questions 1 through 3, we believe that certain additional questions are necessary to elicit all information that may be relevant to an Exceptions Request. As discussed in our answer to Question 4, we are also concerned that it may be necessary to obtain information that is in the hands of the relevant Balancing Authority, Transmission Provider, or other entity, and not in the hands of the entity submitting an Exceptions Request, to develop a complete record upon which a reasoned decision concerning an Exceptions Request can be based.
No
No
As a general matter, OCEC believes the SDT has provided a reasonable check list that will work in most cases to elicit necessary information from the entity submitting an Exception Request. With the added language suggested in our answers to the previous questions, we believe the proposed form will serve its intended purpose of ensuring that decisions regarding Exception Requests are based

upon consistent information and are consistent with the requirements of the Federal Power Act and the BES Definition as developed by the Standards Drafting Team. We also support the Standards Drafting Team's determination to abandon its initial approach to technical criteria, which would have required adherence to specific numerical thresholds. We agree that this approach was not workable on a nationwide basis, and that the approach embodied in the current draft of the Technical Principles, which would require specific kinds of information on a generic basis but would leave engineering judgment about the significance of that information to the relevant RE, is more workable and provides appropriate deference to the experience and judgment of the Registered Entities.

Individual

Rick Paschall

Pacific Northwest Generating Cooperative (PNGC)

Yes

The Pacific Northwest Generating Cooperative (PNGC) agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. We are concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. We envision that at least four different kinds of documents could be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details. WE suggest that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts.

No

PNGC agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest two modifications to the proposed language to ensure consistency with the BES Definition and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) We suggest modifying question 6 to "Is the facility part of a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (2) A general "catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While we believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.

Yes

PNGC agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. We suggest three refinements to the questions: (1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up

generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter clearly is not. (2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, we suggest modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.

Yes

The Standards Drafting Team should consider whether it is necessary to require entities other than the entity filing the Exception Request to provide relevant information, either to the entity filing the Exception Request or to the Registered Entity receiving the Exceptions Request. For example, in order to answer Question 1 on page 4, regarding the impact of the generator under the most severe single contingency, it may be necessary for the relevant Balancing Authority to provide its Most Severe Single Contingency ("MSSC") to the registered entity seeking an Exception. Similarly, the relevant Transmission Operator or Balancing Authority may have information that is necessary to determine whether the generator has been designated as reliability-must-run or if it provides ancillary services supporting reliable operation of the interconnected transmission grid.

Yes

As discussed in our responses to Questions 1 through 3, we believe that certain additional questions are necessary to elicit all information that may be relevant to an Exceptions Request. As discussed in our answer to Question 4, we are also concerned that it may be necessary to obtain information that is in the hands of the relevant Balancing Authority, Transmission Provider, or other entity, and not in the hands of the entity submitting an Exceptions Request, to develop a complete record upon which a reasoned decision concerning an Exceptions Request can be based.

No

No

As a general matter, PNGC believes the SDT has provided a reasonable check list that will work in most cases to elicit necessary information from the entity submitting an Exception Request. With the added language suggested in our answers to the previous questions, we believe the proposed form will serve its intended purpose of ensuring that decisions regarding Exception Requests are based upon consistent information and are consistent with the requirements of the Federal Power Act and the BES Definition as developed by the Standards Drafting Team. We also support the Standards Drafting Team's determination to abandon its initial approach to technical criteria, which would have required adherence to specific numerical thresholds. We agree that this approach was not workable on a nationwide basis, and that the approach embodied in the current draft of the Technical Principles, which would require specific kinds of information on a generic basis but would leave engineering judgment about the significance of that information to the relevant RE, is more workable and provides appropriate deference to the experience and judgment of the Registered Entities.

Individual

Heber Carpenter

Raft River Rural Electric Cooperative (RAFT)

Yes

The Raft River Rural Electric Cooperative (RAFT) agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. We are concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being

requested" may be subject to differing interpretations. We envision that at least four different kinds of documents could be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details. WE suggest that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts.
No
RAFT agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest two modifications to the proposed language to ensure consistency with the BES Definition and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) We suggest modifying question 6 to "Is the facility part of a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (2) A general "catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While we believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.
Yes
RAFT agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. We suggest three refinements to the questions: (1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter clearly is not. (2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, we suggest modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.
Yes
The Standards Drafting Team should consider whether it is necessary to require entities other than

the entity filing the Exception Request to provide relevant information, either to the entity filing the Exception Request or to the Registered Entity receiving the Exceptions Request. For example, in order to answer Question 1 on page 4, regarding the impact of the generator under the most severe single contingency, it may be necessary for the relevant Balancing Authority to provide its Most Severe Single Contingency ("MSSC") to the registered entity seeking an Exception. Similarly, the relevant Transmission Operator or Balancing Authority may have information that is necessary to determine whether the generator has been designated as reliability-must-run or if it provides ancillary services supporting reliable operation of the interconnected transmission grid.
Yes
As discussed in our responses to Questions 1 through 3, we believe that certain additional questions are necessary to elicit all information that may be relevant to an Exceptions Request. As discussed in our answer to Question 4, we are also concerned that it may be necessary to obtain information that is in the hands of the relevant Balancing Authority, Transmission Provider, or other entity, and not in the hands of the entity submitting an Exceptions Request, to develop a complete record upon which a reasoned decision concerning an Exceptions Request can be based.
No
No
As a general matter, RAFT believes the SDT has provided a reasonable check list that will work in most cases to elicit necessary information from the entity submitting an Exception Request. With the added language suggested in our answers to the previous questions, we believe the proposed form will serve its intended purpose of ensuring that decisions regarding Exception Requests are based upon consistent information and are consistent with the requirements of the Federal Power Act and the BES Definition as developed by the Standards Drafting Team. We also support the Standards Drafting Team's determination to abandon its initial approach to technical criteria, which would have required adherence to specific numerical thresholds. We agree that this approach was not workable on a nationwide basis, and that the approach embodied in the current draft of the Technical Principles, which would require specific kinds of information on a generic basis but would leave engineering judgment about the significance of that information to the relevant RE, is more workable and provides appropriate deference to the experience and judgment of the Registered Entities.
Individual
Steve Eldrige
Umatilla Electric Cooperative
Yes
The Umatilla Electric Cooperative (UEC) agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. We are concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. We envision that at least four different kinds of documents could be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details. WE suggest that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts.
No
UEC agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest two modifications to the proposed language to ensure consistency with the BES Definition and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) We suggest modifying question 6 to "Is the facility part of a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have

Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (2) A general "catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While we believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.

Yes

UEC agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. We suggest three refinements to the questions: (1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter clearly is not. (2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, we suggest modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.

Yes

The Standards Drafting Team should consider whether it is necessary to require entities other than the entity filing the Exception Request to provide relevant information, either to the entity filing the Exception Request or to the Registered Entity receiving the Exceptions Request. For example, in order to answer Question 1 on page 4, regarding the impact of the generator under the most severe single contingency, it may be necessary for the relevant Balancing Authority to provide its Most Severe Single Contingency ("MSSC") to the registered entity seeking an Exception. Similarly, the relevant Transmission Operator or Balancing Authority may have information that is necessary to determine whether the generator has been designated as reliability-must-run or if it provides ancillary services supporting reliable operation of the interconnected transmission grid.

Yes

As discussed in our responses to Questions 1 through 3, we believe that certain additional questions are necessary to elicit all information that may be relevant to an Exceptions Request. As discussed in our answer to Question 4, we are also concerned that it may be necessary to obtain information that is in the hands of the relevant Balancing Authority, Transmission Provider, or other entity, and not in the hands of the entity submitting an Exceptions Request, to develop a complete record upon which a reasoned decision concerning an Exceptions Request can be based.

No

No
As a general matter, UEC believes the SDT has provided a reasonable check list that will work in most cases to elicit necessary information from the entity submitting an Exception Request. With the added language suggested in our answers to the previous questions, we believe the proposed form will serve its intended purpose of ensuring that decisions regarding Exception Requests are based upon consistent information and are consistent with the requirements of the Federal Power Act and the BES Definition as developed by the Standards Drafting Team. We also support the Standards Drafting Team's determination to abandon its initial approach to technical criteria, which would have required adherence to specific numerical thresholds. We agree that this approach was not workable on a nationwide basis, and that the approach embodied in the current draft of the Technical Principles, which would require specific kinds of information on a generic basis but would leave engineering judgment about the significance of that information to the relevant RE, is more workable and provides appropriate deference to the experience and judgment of the Registered Entities.
Individual
Marc Farmer
West Oregon Electric Cooperative (WOEC)
Yes
The West Oregon Electric Cooperative (WOEC) agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. We are concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. We envision that at least four different kinds of documents could be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details. WE suggest that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts.
No
WOEC agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest two modifications to the proposed language to ensure consistency with the BES Definition and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) We suggest modifying question 6 to "Is the facility part of a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (2) A general "catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While we believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.
Yes
WOEC agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. We suggest three refinements to the questions: (1)

Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter clearly is not. (2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, we suggest modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.
Yes
The Standards Drafting Team should consider whether it is necessary to require entities other than the entity filing the Exception Request to provide relevant information, either to the entity filing the Exception Request or to the Registered Entity receiving the Exceptions Request. For example, in order to answer Question 1 on page 4, regarding the impact of the generator under the most severe single contingency, it may be necessary for the relevant Balancing Authority to provide its Most Severe Single Contingency ("MSSC") to the registered entity seeking an Exception. Similarly, the relevant Transmission Operator or Balancing Authority may have information that is necessary to determine whether the generator has been designated as reliability-must-run or if it provides ancillary services supporting reliable operation of the interconnected transmission grid.
Yes
As discussed in our responses to Questions 1 through 3, we believe that certain additional questions are necessary to elicit all information that may be relevant to an Exceptions Request. As discussed in our answer to Question 4, we are also concerned that it may be necessary to obtain information that is in the hands of the relevant Balancing Authority, Transmission Provider, or other entity, and not in the hands of the entity submitting an Exceptions Request, to develop a complete record upon which a reasoned decision concerning an Exceptions Request can be based.
No
No
As a general matter, WOEC believes the SDT has provided a reasonable check list that will work in most cases to elicit necessary information from the entity submitting an Exception Request. With the added language suggested in our answers to the previous questions, we believe the proposed form will serve its intended purpose of ensuring that decisions regarding Exception Requests are based upon consistent information and are consistent with the requirements of the Federal Power Act and the BES Definition as developed by the Standards Drafting Team. We also support the Standards Drafting Team's determination to abandon its initial approach to technical criteria, which would have required adherence to specific numerical thresholds. We agree that this approach was not workable on a nationwide basis, and that the approach embodied in the current draft of the Technical Principles, which would require specific kinds of information on a generic basis but would leave engineering judgment about the significance of that information to the relevant RE, is more workable and provides appropriate deference to the experience and judgment of the Registered Entities.
Individual
Steve Alexanderson
Central Lincoln

Yes
Yes
We note that if Q7 is yes, an entity is asked to provide meter or SCADA data. Evidently the team assumes the facility in question is existing. We propose that study data could be provided instead for facilities that are in the planning stage.
Yes
No
No
No
No
Group
David Kiguel
Hydro One Networks Inc.
No
On the posted document, we did not find how an exception application will be assessed by the RE and NERC. We believe that there is a huge gap and a lack of transparency for all stakeholders on how the exception application will be evaluated and processed. We strongly suggest that the SDT develop a reference or a guidance document as part of the RoP that will provide guidance to Registered Entities, Regional Entities and the ERO on how an exception application would/should be processed.
Yes
We believe that the SDT's proposed approach for exception criteria is reasonable; recognizing that one method/criteria can not be applicable to everyone and every situation within the ERO foot print. See our comment in Q1.
Yes
See comments in Q1.
No
Yes
The general approach, information, data, and assessments proposed seem to be reasonable. However, guidance is not provided as to how this information may be evaluated in the decision making process. As such, a reference document should be developed and provide guidance how applications will be assessed. For example" 1) Does the element(s)? • Would have qualified under one of the exclusions or inclusions but have marginally different threshold as prescribed in the definition; • transfer bulk power within (intra) or between (inter) two Balancing Authority Areas; • monitor facilities included in an Interconnection Reliability Operating Limit (IROL); • are not considered necessary for the operation of interconnected transmission system under normal conditions, contingency or prolonged outage conditions. 2) Are System Element(s) located in close electrical proximity to Load? • Electrical proximity may be a measurement of system impedance between load centers within the system seeking exception. • Other physical characteristics. 3) Are System Elements treated as primarily radial in character? • Smaller deviation from the exclusion E1. • This can be demonstrated by the way the connections to the BES are operated (e.g., the local area is not operated as part of the BES with disconnection procedures when events occur in the local area to separate it.) • This can also be demonstrated by the way resources in the local area are treated in operations, for example, they are not included in a regional dispatch or secured by an ISO/RTO. • Power flows into the system, but rarely flows out. i. This can be demonstrated through transactional records or load flow analysis where it is shown that flow out does not occur or occurs only under a very limited set of conditions and for a limited quantity of energy. a. The limited set of conditions

must clearly state the conditions where power flows out, for example, only under specified contingency events. b. Transactional records provided must be for the same time specified in the Exception Rules of Procedure for performing periodic exception self-certifications (presently two years). c. Power entering the system is not recognized or regularly transported on to some other system. (This can be demonstrated by operational procedures that restrict use of delivered power to that system, e.g., the absence of a wheeling agreement or an agreement that generally restricts wheeling under normal) d. The System Element(s) have a very small Distribution Factor on any other BES Element(s). • System Elements are not necessary for the operation of interconnected transmission under normal, contingency or prolonged outage conditions.
No
We believe, and support that RoP exception procedures are adequately dealing with this issue.
Yes
As mentioned above, we strongly suggest and encourage that SDT to develop a reference or a guidance document that will provide guidance to Registered Entities, Regional Entities and the ERO on how an exception application should/would be processed.
Group
Chris Higgins
Transmission Reliability Program
Yes
BPA suggests clarifying that the interface point is the point where the entity seeking the exception's facility or facilities interconnect(s) to the Bulk Electric System facility. Page 1 states "Supporting statements for your position from other entities are encouraged." BPA believes coordination with affected systems should be required under the exemption process.
No
Regarding #4 on page 2: BPA believes the impact to the over-all reliability of the BES needs to consider more than just an outage of the facility requesting exclusion. One example is a contingency outage of a parallel facility that could cause an overload. Item 4 needs to include impacts of either the outage of the facility, or with the facility in service. BPA believes that the entity requesting an exception may not have information on impacts of the facility on parallel higher-voltage facilities because the NERC requirements for data sharing for these types of facilities does not necessarily include owners and operators of lower voltage systems. The entity requesting an exemption would likely need to coordinate with affected systems, and this coordination should be required in the exemption process so that affected systems are aware of the possible exclusion.
Yes
Regarding #1 on page 4: BPA Believes seasonality may need to be considered when comparing the generator with the most severe single contingency.
Yes
BPA believes the studies discussed in pages 2-4 would likely need to be completed and the required information supplied by the Transmission Planner/Operator of the Balancing Authority Area since many of the assumptions regarding performance of the BES to delivery under a variety of operating conditions is known only to the TP and TOP of the system.
Yes
No
No
Individual
Saurabh Saksena
National Grid
Yes

No
We agree with the information requested on pages 2 and 3, however we would like more clarification regarding Item 7. When answering what % of the calendar year power flows through the facility into BES, should this be calculated on an hourly basis? We would also like clarification for Item 7 regarding the request for SCADA data from the last 2 years to determine the minimum and maximum magnitude of the power flow out of the facility. What data should be used in situations with new facilities or in situations or where the system configuration (topology) has changed in such a way that the power flows in the area have changed, so the last 2 years of SCADA data is no longer relevant
Not Applicable
No
No
No
Yes
We are assuming that "yes" answers on this checklist are not intended to result in automatic rejection of the application. We think the procedure would benefit from a general statement noting that all answers taken together will be considered to make clear that no single answer will necessarily be dispositive of the outcome.
Group
Louis Slade
EMP & NERC Compliance
No
Given that the second sentence in the 1st paragraph of this comment form reads "This same process would be used by Registered Entities to justify including Elements in the BES that might otherwise be excluded according to the proposed definition and designations.", Dominion suggests that the 1st sentence under General Instructions be revised to read "A one-line breaker diagram identifying the facility for which the exception (or inclusion) is requested must be supplied with every application. The diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception (or inclusion) is being requested."
Yes
No
The SDT language specifying services acceptable for inclusion in an exclusion request references ancillary services identified under a Transmission Service Provider's OATT. However, there is great variation in the services that have actually been implemented and posted across North America under those OATTs. There is no consistent description or terminology to characterize those services. In short, Transmission Providers have been permitted to individualize OATT services to fit regional market structures and vernacular. For example, PJM's OATT includes a schedule for Blackstart Service. The FERC pro-forma tariff does not. ISO-NE's tariff includes the following ancillary services (which are performed by the ISO and TSP): • Scheduling, System Control and Dispatch Service • Energy Imbalance Service • Generator Imbalance Service Therefore, Dominion suggests that the SDT provide a specific list of ancillary services that would be eligible for exclusion, rather than rely on OATT references. Examples might include: reactive, voltage control or regulation services, frequency response and blackstart services. Dominion is also aware that the phrase " 'must run" is used in some RTO/ISO market systems to indicate intent to self-schedule the generator. Dominion suggests that question 3 be revised to read "Is the generator designated as a "must run" unit by eitherthe Balancing Authority, Resource Planner or Reliability Coordinator?
Yes
It has been Dominion's experience that CEII or Code/Standards of Conduct rules may restrict generation entities (GO/GOP) from obtaining some of the information necessary to perform the analysis needed to file the "Detailed Information to Support an Exception Request". Dominion is also aware that, in some cases, generation entities do not have the technical expertise (transmission

planning, power flow and or stability analysis background) to perform such analysis.
No
Yes
Much of the information necessary to perform the analysis required is restricted either by federal and/or state Codes/Standards of Conduct and/or CEII prohibitions.
Yes
The Detailed Information to Support an Exception Request form has 2 sections; one for transmission facilities and another for generation facilities. Yet, the Project 2010-17 Definition of Bulk Electric System document uses other terms such as real and reactive power resources, dispersed power producing resources, static or dynamic devices, blackstart resources, radial systems, local networks (LN), and reactive power devices. Dominion suggests that the Detailed Information to Support an Exception Request form be revised to conform to the Project 2010-17 Definition of Bulk Electric System document through either use of some sort of 'selection' (checkbox, drop down, write in) or revision of transmission facilities and generation facilities to be more inclusive.
Group
Bill Middaugh
Bill Middaugh
This question is actually asking two questions; Tri-State's answers would be No & Yes. There needs to be a better introduction to what and why the exception is being requested.
Again Yes/No is conflicting in the question. The requested information in#2 is too vague and may be subjective. If the information in#7 is requested in the planning stage the data would not be available. What objective criteria would be used to determine the state of the exception request?
Again Yes/No is conflicting in the question. Information requested in #4 is subjective and too vague.
Yes
It may be hard for a GO to get the information requested in #1 or #4.
No
No
Yes
TSGT believes that the proposed "Technical Principles for Demonstrating BES Exceptions Request" does not clearly define the basis for decisions to exclude or include, which will lead to inconsistent application by the Regions. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO.
Individual
Darryl Curtis
Oncor Electric Delivery Company LLC
Yes
Yes

Yes
No
No
No
No
Group
David Thorne
Pepco Holdings Inc
No
1)Why must the one-line diagram supplied show the Protection Systems at the interface points associated with the elements for which the exception is being requested? Since Protection Systems are not part of the new bright-line BES definition why would their presence, or absence, on the one-line diagram influence the exception process? 2)The third bullet needs additional detail of what is being requested. The phrase "…key performance measures.." and use of methodologies described in TPS Standards does not provide sufficient direction needed. (see question #4)
No
1) Why is Item 5 (Question pertaining to whether the facility is used for off-site power to a nuclear plant) included, since this criteria is not part of the proposed bright-line BES definition. 2) Similarly, why is Item 6 (Question pertaining to whether the facility is part of a Cranking Path associated with a Black Start Resource) included, since Black Start Cranking Paths were removed from the latest BES definition. Both Items 5 and 6 should be removed from the Exception Request Form.
Yes
No
Not all TOs have the capability to perform the power flow and stability analysis on their own, necessary to meet the exception request. It may be burdensome for the TO to hire a consultant or to have their affiliated TPL perform the rigorous study/analysis as contained in the TPL standards. Additional details should be provided as to what part of the TPL standards apply. Should the Affiliated TPL be required to perform TOs studies for exception requests? If so should that be stated in a related standard as a requirement?
No
No
No
Individual
Roger Meader
Coos-Curry Electric Coooperative
Yes
The Coos-Curry Electric Cooperative (CCEC) agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. We are concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. We envision that at least four different kinds of documents could be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and,

operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details. WE suggest that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts.

No

CCEC agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest two modifications to the proposed language to ensure consistency with the BES Definition and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) We suggest modifying question 6 to "Is the facility part of a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (2) A general "catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While we believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.

Yes

CCEC agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. We suggest three refinements to the questions: (1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter clearly is not. (2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, we suggest modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.

Yes

The Standards Drafting Team should consider whether it is necessary to require entities other than the entity filing the Exception Request to provide relevant information, either to the entity filing the Exception Request or to the Registered Entity receiving the Exceptions Request. For example, in order to answer Question 1 on page 4, regarding the impact of the generator under the most severe single

contingency, it may be necessary for the relevant Balancing Authority to provide its Most Severe Single Contingency ("MSSC") to the registered entity seeking an Exception. Similarly, the relevant Transmission Operator or Balancing Authority may have information that is necessary to determine whether the generator has been designated as reliability-must-run or if it provides ancillary services supporting reliable operation of the interconnected transmission grid.

Yes

As discussed in our responses to Questions 1 through 3, we believe that certain additional questions are necessary to elicit all information that may be relevant to an Exceptions Request. As discussed in our answer to Question 4, we are also concerned that it may be necessary to obtain information that is in the hands of the relevant Balancing Authority, Transmission Provider, or other entity, and not in the hands of the entity submitting an Exceptions Request, to develop a complete record upon which a reasoned decision concerning an Exceptions Request can be based.

No

No

As a general matter, CCEC believes the SDT has provided a reasonable check list that will work in most cases to elicit necessary information from the entity submitting an Exception Request. With the added language suggested in our answers to the previous questions, we believe the proposed form will serve its intended purpose of ensuring that decisions regarding Exception Requests are based upon consistent information and are consistent with the requirements of the Federal Power Act and the BES Definition as developed by the Standards Drafting Team. We also support the Standards Drafting Team's determination to abandon its initial approach to technical criteria, which would have required adherence to specific numerical thresholds. We agree that this approach was not workable on a nationwide basis, and that the approach embodied in the current draft of the Technical Principles, which would require specific kinds of information on a generic basis but would leave engineering judgment about the significance of that information to the relevant RE, is more workable and provides appropriate deference to the experience and judgment of the Registered Entities.

Group

Cynthia S. Bogorad

Transmission Access Policy Study Group (please see www.tapsgroup.org for a list of TAPS' more than 40 members)

Glossary terms should be capitalized throughout the document. Lowercase "facility," especially, should not be used. The document should use "Element" instead. The term "interface points," while common, may not have a sufficiently common understanding to be used in this context. "Boundaries of the Element(s) for which the exception is being requested" may express the SDT's meaning more clearly.

Question 7 asks, "[d]oes power flow through this facility into the BES?" As in the rest of the document, the reference should be to an "Element(s)," rather than to a "facility." In addition, we suggest that the meaning of power flowing "through" the Element(s) be clarified, consistent with clarification of the same point in Exclusion E3 of the BES Definition. In TAPS' comments on the BES Definition, also submitted today, TAPS suggests that the first sentence of Exclusion E3 be revised to state: "Power flows only into the LN, that is, at each individual connection at 100 kV or higher, the pre-contingency flow of power is from outside the LN into the LN for all hours of the previous 2 years." We propose that Question 7 in the Detailed Information to Support an Exception Requests be similarly revised: "Does power flow from this facility into the BES, i.e., at any individual connection at 100kV or higher, is the pre-contingency flow of power from the LN to the BES for any hour of the previous 2 years?"

Group

John P. Hughes

Electricity Consumers Resource Council (ELCON)
No
The exception request form should begin with a question asking if the inclusion was triggered by the entity responding to an emergency request by the applicable BA, RC or TOP. The entity's response to support recovery from an emergency may have resulted in (1) power flows through the entity's facility into the BES, and/or (2) power injections to the BES that exceed the 20/75-MVA thresholds. The entity should not be required to provide detailed data and studies (as described in the "General Instructions") if either of those conditions would not have occurred but for an emergency situation.
No
A sub-question should be added to Question 1 asking: (1) Does the generation serve all or a part of retail customer Load, and (2) If so, the maximum net capacity of each unit injected to the BES during non-emergency conditions.
Yes
Our "Yes" response is conditioned on the comments to Questions 1 and 2 above.
Yes
It may be necessary that the exception request form explicitly address this potential problem by allowing the entity seeking an exception to state that for reasons beyond its control it failed to acquire the necessary data, base case or supporting document to enable completion of the filing.
Individual
Kirit Shah
Ameren
Yes
No
From our perspective, the first question should be "Is the facility connected at 100 kV or above?" The questions should be reordered. Of the questions listed, question #3 should be #1, and questions #1 should be the last question in this section. Regarding the word "permanent" as it is used to describe Flowgates, it is suggested that the word "limiting" or "constrained" be used instead.
No
It is suggested that question #2 be deleted and replaced with "Is the generator designated as a black-start unit in an entity's restoration plan?"
No
No
No
No
Group
William D Shultz
Southern Company Generation
Yes
In the third bullet under the list of study attributes, it is very important to specifically list the "key performance indicators of BES reliability". This will assist in pointing the studies to focus on the issues relevant to determining the signifacance of the exception request.
Yes
We agree with the information being requested.

No
We do not agree completely with the information being requested. For checklist item #2, please specify what is included in "providing Ancillary Services" for a generator. For #4, can the question include a measure of evaluating the "most severe system impact"? Can the specific study that is required to be evaluated be outlined?
Yes
An IPP with no Transmission Planning department may find it very difficult to perform an interconnection wide base case as required in the general instructions.
No
No
No
Individual
Guy Andrews
Georgia System Operations Corporation
No
: The last half of the first sentence should be changed to "do not have to seek an Exclusion Exception under the Exception Procedure for the Element(s)." The use of "Element(s)" relates back to that term at the start of the sentence, and the reference to an "Exclusion Exception" is necessary because an entity (albeit probably not the Owner), still may choose to seek an Inclusion Exception for such an Element(s). In the 3rd bullet, the reference should be to TPL standards (plural).
Yes
No
Item 2 asks about "the generator or generator Facility," but 3, 4 and 5 only refer to the generator. There is no immediately apparent reason for them to be different. The language in Item 2 seems preferable.
No
Throughout the document, because it will be part of a larger Exception Request Form, it should, when possible, use terms consistent with the rest of that form (e.g., "Request" rather than "application"). Similarly, defined terms (even if only defined in the context of the Request Form in which these Principles will be used) such as "Exception," "Request," "Element" or "Facility" should be capitalized; if the use of lower case is intended to convey a different meaning than what is defined, another term should be used to avoid confusion. The Definition and Request Form generally use the term "Element," so it is unclear why this document should so consistently use "facility." For consistency, "Element(s)" or possibly "Element(s) or Facility" should be used.
Yes
Yes
No
Group
John Bussman
AECI
No
An opening statement of this form should make it clear that, prior to its determination, the Facilities within scope of this exemption request, remain included or excluded based upon the basic BES Definition Bright Line criteria Inclusions and Exclusions.

No
There is no basis in this draft Standard for including Item 6). Item 7) does appear appropriate within the Standard, but the intent of the four check-boxes is ambiguous.
No
Most of these questions appear relevant to the LN concept paper, but irrelevant to this standard's requirements. The last conditional of Item 5) must always be answered Yes, unless the local-network is islanded.
No
Group
Janelle Marriott Gill
Tri-State Generation and Transmission Assn., Inc. Energy Management
This question is actually asking two questions; Tri-State's answers would be No & Yes. There needs to be a better introduction to what and why the exception is being requested.
Again Yes/No is conflicting in the question. The requested information in#2 is too vague and may be subjective. If the information in#7 is requested in the planning stage the data would not be available. What objective criteria would be used to determine the state of the exception request?
Again Yes/No is conflicting in the question. Information requested in#4 is subjective and too vague.
Yes
It may be hard for a GO to get the information requested in #1 or #4.
No
No
Yes
TSGT believes that the proposed "Technical Principles for Demonstrating BES Exceptions Request" does not clearly define the basis for decisions to exclude or include, which will lead to inconsistent application by the Regions. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO.
Group
William Bush
Holland Board of Public works
Yes
The requirement to base flow studies on an "interconnection-wide base case" is likely to include many more lines and buses than necessary to model the impact of a facility that is not material to the BES. Holland BPW request the words "or regional reduction of such a case" be added after "interconnection-wide base case" to avoid unnecessary expense and detail if a more limited study set is adequate to demonstrate the lack of material impact of the facility(ies) in question.
Yes

Yes
Yes
On Page 4 Question 1, information on the host Balancing Authority's most severe single contingency may not be publically available and therefore difficult or impossible for a smaller entity to obtain. Even if the data is available, it may not be meaningful in a larger Balancing Authority area such as within MISO where the most severe contingency may be geographically and electrically remote. A more readily available and meaningful measure would be a comparison of the generator's capability as a percent of the peak load for the local Balancing Authority or sub-Balancing Authority, as applicable.
Yes
The following revisions should be made to the procedures: 1. The Technical Review Panel (TRP) provided for in Section 5.3 should not include any staff from the host Regional Entity. 2. The Regional Entity should be required to include an attestation of a qualified individual or individuals to support the factual and technical bases for the decision. This is necessary for purposes of establishing a record in the event of an appeal. If a dispute is appealed, there must be someone at the Regional Entity level that serves as the witness supporting the Regional Entity decision. Currently, there is no accountability for the arguments and suppositions put forth by the Regional Entity; no individuals that stand behind the technical bases proffered in the Regional Entity's written decision. Requiring a qualified individual to attest to the facts and technical arguments relied upon in arriving at the decision will ensure that someone at the Regional Entity level is prepared to take responsibility for reviewing a decision before it is issued, to stand behind the assertions and conclusions reached by the Regional Entity, and whom the Submitting Party may cross examine at hearing. 3. A party seeking an exception should have the right to request a hearing and should not be limited to a paper process. 4. The procedures should not permit the TRP or the Regional Entity to make a decision based upon information that is outside of the record placed before it. That is, the TRP and the Regional Entity may not, on their own, conduct an investigation or seek information independently from what has been presented to it. If the TRP or the Regional Entity requires additional information, it must be requested and provided transparently, and the Submitting Party must have an opportunity to comment upon or challenge that information before the TRP or the Regional Entity relies upon it in any way. This is not currently happening at the Regional Entity and NERC level – decisions have been made based upon documents and information that are not part of the record; the information is not shared with the Submitting Party (the party challenging registration) prior to (or after) a decision is made. 5. Section 5.2.2. should be revised as follows: "Upon Acceptance of the Exception Request, the Regional Entity and Submitting Party (and Owner, if different) shall confer to establish milestones in order to complete the substantive review of the Exception Request within six months after Acceptance of the Exception Request or within an alternative time period under Section 5.0. The Regional Entity and the Submitting Party (and Owner, if different) shall also discuss whether and to what extent a reduced compliance burden is appropriate during the review period. At the conclusion of the review period, the Regional Entity shall issue a notice (in accordance with Sections 5.2.3) stating is Recommendation that the Exception Request be approved or disapproved."
Individual
Andrew Gallo
City of Austin dba Austin Energy
Yes
AE agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. AE is concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. AE believes that at least four different kinds of documents would respond to the description: (i) one-line diagrams with breakers and switches (status); (ii) identification of relays by their ANSI device numbers; (iii) details of the DC control logic for ANSI devices; and, (iv) operational scheme

descriptions of the type used by system operators. Accordingly, we suggest the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details, such as breaker settings. AE suggests that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts.
No
AE agrees that the checklist of items on pages two and three lists most of the information necessary to determine if an Exceptions Request is justified. We suggest three modifications to the proposed language to ensure consistency with Section 215 of the Federal Power Act, with the BES Definition, and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) AE suggests that a new question be added concerning the function of the facility, which would read: "Does the facility function as a local distribution facility rather than a Transmission facility? If yes, please provide a detailed explanation of your answer." AE makes this suggestion because Section 215(a)(1) of the FPA makes clear that "facilities used in the local distribution of electric energy" are excluded from the BES (16 U.S.C. § 824o(a)(1)) and the most recent draft of the BES definition incorporates the same language. AE believes a question to address the function of the Element or system subject to an Exception Request is necessary to determine whether the Element or system is "used" in local distribution and thereby to ensure observance of the statutory limit on the BES. Further, we believe a variety of information may be relevant to determining whether a particular facility functions as local distribution rather than as part of the BES. For example, if power is not scheduled across the facility or if capacity on the system is not posted on the relevant OASIS, it is likely to function as local distribution, not transmission. Similarly, if power enters the system and is delivered to load within the system rather than moving to load located on another system, its function is local distribution rather than transmission. AE proposes the language above as an open-ended question so the entity submitting the Exceptions Request can provide this and any other information it deems relevant to facility function. (2) AE suggests modifying question 6 to "Is the facility part of a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (3) A general "catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While AE believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, there may be unusual circumstances where the information either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.
Yes
AE agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information generally necessary to make a reasoned determination concerning the BES status of a generation facility. AE suggests three refinements to the questions: (1) Modify Question 2 by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter is not. (2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, AE suggests modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load?" (3) For reasons

similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.

Yes

The Standards Drafting Team should consider whether it is necessary to require entities other than the entity filing the Exception Request to provide relevant information, either to the entity filing the Exception Request or to the RE receiving the Exceptions Request. For example, in order to answer Question 1 on page 4, regarding the impact of the generator under the most severe single contingency, it may be necessary for the relevant Balancing Authority to provide its Most Severe Single Contingency ("MSSC") to the registered entity seeking an Exception. Similarly, the relevant Transmission Operator or Balancing Authority may have information necessary to determine whether the generator has been designated as reliability-must-run or if it provides ancillary services supporting reliable operation of the interconnected transmission grid.

Yes

As discussed in our responses to Questions 1 through 3, AE believes that certain additional questions are necessary to elicit all information relevant to an Exceptions Request. As discussed in our answer to Question 4, we are also concerned that it may be necessary to obtain information in the hands of the relevant Balancing Authority, Transmission Provider or other entity and not in the hands of the entity submitting an Exceptions Request, to develop a complete record upon which a reasoned decision concerning an Exceptions Request can be based.

Yes

As discussed in more detail in our response to Question 2, AE believes it is necessary to address the function of an Element or system subject to an Exceptions Request to determine whether it is a "facilit[y] used in the local distribution of electric energy" and, therefore, excluded from the BES under Section 215(a)(1) of the Federal Power Act.

No

As a general matter, AE believes the SDT has provided a reasonable check list that will work in most cases to elicit necessary information from the entity submitting an Exception Request. With the added language suggested in our answers to the previous questions, we believe the proposed form will serve its intended purpose of ensuring that decisions regarding Exception Requests are based upon consistent information and are consistent with the requirements of the Federal Power Act and the BES Definition as developed by the Standards Drafting Team. AE also supports the Standards Drafting Team's determination to abandon its initial approach to technical criteria, which would have required adherence to specific numerical thresholds. AE agrees that this approach was not workable on a nationwide basis, and that the approach embodied in the current draft of the Technical Principles, which would require specific kinds of information on a generic basis but would leave engineering judgment about the significance of that information to the relevant RE, is more workable and provides appropriate deference to the experience and judgment of the REs.

Individual

Andy Pusztai

ATC LLC

No

Since an Exception Request may be for approval to designate identified Element(s) as either excluded from or included in the BES, the wording of the first sentence should be changed and the request should clearly indicate (e.g. exclusion/inclusion check boxes) whether the request regards exclusion or inclusion of the Element(s). Here is some draft wording for consideration: Entities that have Element(s) that are included under the BES definition and designations, but seek to have them designated as excluded from the BES or that that have Element(s) that are excluded under the BES definition and designations, but seek to have them designated as included in the BES should submit

an Exception Request according to the NERC Exception Procedures and provide detailed information to support the Exception Request as indicated below. In addition, ATC suggests the following clarifying edit. Entities that have BES Element(s) considered as excluded under the BES definition and designations, do not have to seek exception for those Elements under the Exception Procedure.
No
ATC proposes the following changes to Item #7: 7a. Are Firm Power Transfers scheduled to flow out of, or through, this facility into the BES in the operating horizon? [for BES designations applicable to the operating horizon] Note: The consideration for power flowing into the BES should be based on normal operating conditions or base case (n-0 contingency analysis), not on historical real-time telemetry. 7b. Are Firm Power Transfers reserved to flow out of, or through, this facility into the BES in the planning horizon? [for BES designations applicable to the planning horizon)
Yes
No
No
No
No
Group
David Taylor
David.Taylor@nerc.net
Yes
No
In addition to describing how an outage of the facility under consideration affects the rest of the BES, the Submitting Entity also should be required to provide an assessment of how outages of BES facilities affect the facility under consideration. This could be achieved with powerflow studies or distribution factor analysis.
No
For units designated as must run, the Submitting Entity should be required to describe the reasons for which the unit has been so designated. We believe the general requirement to provide an appropriate reference is too vague, and should be appended with ". . . including a description of why the unit has been designated as must run and if applicable, the contingencies that would result in violation of the NERC Reliability Standards if the unit was not must run."
No
No
No
Yes
At a minimum, we believe there are some facilities which should not be excluded from the BES under any circumstances and a list of such facilities should be documented, including facilities such as (1) Elements that are relied on in the determination of an Interconnection Reliability Operating Limit (IROL); (2) Blackstart resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage, (3) Elements subject to Nuclear Plant Interface Requirements (NPIRs) as agreed to by a Nuclear Plant Generator Operator and a Transmission Entity defined in NUC-001, (4) Elements identified as required to comply with a NERC Reliability Standard by application of criteria defined within the standard (e.g., the test defined in

PRC-023 to identify sub-200 kV Elements to which the standard is applicable), and (5) a generating unit that is designated as a must run unit to assure reliability of the BES. Also, to make the process of reviewing exception applications consistent and transparent some high level guidance should be developed as to how the information provided will be assessed by the Regional Entities and NERC. In addition to supporting the objectives of consistency and transparency, this also would provide benefit to entities submitting an exception application by allowing them to understand how the Required Information will be evaluated.

Individual

David Kahly

Kootenai Electric Cooperative

Yes

KEC agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. KEC is concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. KEC envisions that at least four different kinds of documents would be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details. KEC suggests that a generic example of a completed form be provided to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts.

No

KEC agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest three modifications to the proposed language to ensure consistency with Section 215 of the Federal Power Act, with the BES Definition, and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) KEC suggests that a new question should be added concerning the function of the facility, which would read: "Does the facility function as a local distribution facility rather than a Transmission facility? If yes, please provide a detailed explanation of your answer." Section 215(a)(1) of the FPA makes clear that "facilities used in the local distribution of electric energy" are excluded from the BES, 16 U.S.C. § 824o(a)(1), and the most recent draft of the BES definition incorporates the same language. KEC believes a question to address the function of the Element or system subject to an Exception Request is necessary to determine whether the Element or system is "used" in local distribution and thereby to ensure that this statutory limit on the BES is observed in the Exceptions process. Further, we believe a variety of information may be relevant to determining whether a particular facility functions as local distribution rather than as part of the BES. For example, if power is not scheduled across the facility or if capacity on the system is not posted on the relevant OASIS, it is likely to function as local distribution, not transmission. Similarly, if power enters the system and is delivered to load within the system rather than moving to load located on another system, its function is local distribution rather than transmission. KEC proposes the language above as an open-ended question so that the entity submitting the Exceptions Request can provide this and any other information it deems relevant to facility function. (2) KEC suggests modifying question 6 to "Is the facility part of a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition, which removes the reference to "Cranking Paths," and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (3) A general "catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While KEC believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is

foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.
Yes
KEC agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. KEC suggests three refinements to the questions: (1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter is not. (2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, KEC suggests modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.
Yes
The Standards Drafting Team should consider whether it is necessary to require entities other than the entity filing the Exception Request to provide relevant information, either to the entity filing the Exception Request or to the RE receiving the Exceptions Request. For example, in order to answer Question 1 on page 4, regarding the impact of the generator under the most severe single contingency, it may be necessary for the relevant Balancing Authority to provide its Most Severe Single Contingency ("MSSC") to the registered entity seeking an Exception. Similarly, the relevant Transmission Operator or Balancing Authority may have information that is necessary to determine whether the generator has been designated as reliability-must-run or if it provides ancillary services supporting reliable operation of the interconnected transmission grid.
Yes
As discussed in our responses to Questions 1 through 3, KEC believes that certain additional questions are necessary to elicit all information that may be relevant to an Exceptions Request. As discussed in our answer to Question 4, we are also concerned that it may be necessary to obtain information that is in the hands of the relevant Balancing Authority, Transmission Provider, or other entity, and not in the hands of the entity submitting an Exceptions Request, to develop a complete record upon which a reasoned decision concerning an Exceptions Request can be based.
Yes
As discussed in more detail in our response to Question 2, KEC believes it is necessary to address the function of an Element or system that is subject to an Exceptions Request to determine whether it is a "facilit[y] used in the local distribution of electric energy" and therefore excluded from the BES under Section 215(a)(1) of the Federal Power Act.
No
As a general matter, KEC believes the SDT has provided a reasonable check list that will work in most cases to elicit necessary information from the entity submitting an Exception Request. With the added language suggested in our answers to the previous questions, we believe the proposed form will serve its intended purpose of ensuring that decisions regarding Exception Requests are based upon

consistent information and are consistent with the requirements of the Federal Power Act and the BES Definition as developed by the Standards Drafting Team. KEC also supports the Standards Drafting Team's determination to abandon its initial approach to technical criteria, which would have required adherence to specific numerical thresholds. KEC agrees that this approach was not workable on a nationwide basis, and that the approach embodied in the current draft of the Technical Principles, which would require specific kinds of information on a generic basis but would leave engineering judgment about the significance of that information to the relevant RE, is more workable and provides appropriate deference to the experience and judgment of the REs.
Group
Silvia Parada Mitchell
Corporate Responsibility Organization
Yes
Yes
"Impact" and "degree of impact" in question 2 should be framed with the criteria expected.
Yes
No
No
No
No
Group
Sandra Shaffer
PacifiCorp
Yes
No
Question 6 implies that if the facility is part of a designated blackstart cranking path then an exception request would most likely be denied. To the extent that was the intent, such an assumption would only be reasonable if the blackstart cranking path is the only path available. However, PacifiCorp suggests modifying the current Question 6 to reflect a situation in which multiple cranking paths are available, as follows: "6A. Is the facility part of a Cranking Path associated with a Blackstart Resource? 6B. If yes, does the Blackstart Resource have other viable Cranking Paths?"
Yes
PacifiCorp suggests modifying Question 3 as follows: "Is the generator designated as a must run unit by the Balancing Authority?"
No
PacifiCorp is speaking from a perspective where the Company is registered for multiple functions (i.e., TO, GO, TOP, GOP, BA, TPL, etc.) and the requested information is currently available from Company resources.
No
No
No
Individual

Linda Jacobson-Quinn
Farmington Electric Utility System
No
The general instructions presented are primarily components to substantiate an Exception Request. However, a cover sheet (template) should be created that includes overall identifying information of the Submitting Entity and the and the Owner if the if they are not the same – the template should align with the draft Appendix 5C Section 4.5.1 of the NERC Rules of Procedure. An Exception Request can be submitted for Inclusion or Exclusion of the BES. The first sentence in the form, "Entities that have Element(s) designated as excluded, under the BES definition and designations, so not have to seek exception for those Element(s) under the Exception Procedure. This would not be true if a Submitting Entity is seeking an Inclusion Exception. FEUS recommends revising to include Inclusion Exception Requests.
No
The form should be titled "For Transmission Elements" rather than "Facilities" to align with the BES definition and Appendix 5C of the NERC Rules of Procedure. The form should align with section 4.5.1 and 4.5.2 of Appendix 5C. It should include a listing of the Element(s) and the status based on the application of the BES Definition. Question 6 relates to a 'facility' that is part of a Cranking Path. The latest revision of the BES Definition removed the designated blackstart Cranking Paths from the Inclusion of the BES in I3. Having a question regarding the Cranking Path in the Exception Request makes it appear Cranking Paths are still automatically included in the BES. Question 7; what is an alternate method if a Requesting Entity does not have SCADA data for the most recent two consecutive calendar years.
No
Question 1, the SDT team should consider if the Submitting Entity or Owner is part of a Reserve Sharing Group. The host BA's most single severe Contingency vs the obligation of reserves required as part of a Reserve Sharing Group may be substantial. The SDT team should clarify if it is a single generator or if it is the aggregate at a facility.
Yes
See response to question 2
Yes
The SDT should consider additional limits on Generation. For example, if a generation prime mover (turbine) has a maximum output of 35 MW but is coupled to a generator with a rating in excess of 75 MVA. The generator output is limited by the turbine - thus the rating of the turbine should be a taken into consideration rather than the generator rating.
No
No
Individual
Mary Downey
City of Redding Electric Utility
Yes
Yes
Yes
Yes
Yes
Yes

Yes
Redding acknowledges there is an immediate need for a method where an entity can present evidence that their facilities are "not necessary for the Reliable Operation of the interconnected bulk power transmission system" as stated in the NERC Rules of Procedure Section 3.0. "BASIS FOR APPROVAL OF AN EXCEPTION." Without a process to present the evidence then the RE and the ERO are under no mandate to review facilities in light of any criteria besides the BES definition as NERC clearly pointed out in the City of Holland case where they were forced to register by the RE (RFC). However, Redding also is very concerned that under the proposed Exception process the final evaluation of an element or facility is left to the sole judgment of NERC. The concern is there is no method, criteria, measurement, or standard that NERC will use for the evaluation. It is also a concern that NERC has a predetermined definition of Distribution Facilities and will not evaluate networked distribution facilities fairly. NERC has already stated their predetermined position as to what they determine to be distribution and not distribution facilities in their "MOTION TO INTERVENE AND COMMENTS OF THE NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION" filed in the case of the City of Holland, Michigan (Docket No. RC11-5-000). On page 10 and 11 of this motion, under the section labeled "A. Holland's 138 kV lines are transmission rather that local distribution facilities" NERC states "Distribution facilities generally are characterized as elements that are designed and can carry electric energy (Watts/MW) in one direction only at any given time from a single source point (distribution substation) to final load centers." NERC clearly states that only radial facilities are considered distribution facilities and are unwilling to consider that network facilities over 100Kv could be classified as Distribution Facilities. Holland's claim of NERC over reaching their authority appears to have credibility. In conclusion, Redding supports this exception process as it stands because it does allow an entity the right to a process which NERC is currently not obligated to allow, it requires that NERC judge the facilities on the merit of "necessary for the Reliable Operation of the interconnected bulk power transmission system", and it allows an appeals process that must judge if NERC evaluated facilities on the standard set forth. However, Redding's vote is conditional on the completion of phase 2 where the term "necessary for the Reliable Operation of the interconnected bulk power transmission system" needs to be defined.
Individual
Paul Cummings
City of Redding
Yes
Yes
Yes
No
No
No
Yes
Redding acknowledges there is an immediate need for a method where an entity can present evidence that their facilities are "not necessary for the Reliable Operation of the interconnected bulk power transmission system" as stated in the NERC Rules of Procedure Section 3.0. "BASIS FOR APPROVAL OF AN EXCEPTION." Without a process to present the evidence then the RE and the ERO are under no mandate to review facilities in light of any criteria besides the BES definition as NERC clearly pointed out in the City of Holland case where Holland was forced to register by the RE (RFC). However, Redding is very concerned that under the proposed Exception process the final evaluation of an element or facility is left to the sole judgment of NERC. The concern is there is no method, criteria, measurement, or standard that NERC will use for the evaluation. It is also a concern that NERC has a

predetermined definition of Distribution Facilities and will not evaluate networked Distribution Facilities fairly. NERC has already stated their predetermined position as to what they determine to be distribution and not distribution facilities in their "MOTION TO INTERVENE AND COMMENTS OF THE NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION" filed in the case of the City of Holland, Michigan (Docket No. RC11-5-000). On page 10 and 11 of this motion, under the section labeled "A. Holland's 138 kV lines are transmission rather that local distribution facilities" NERC states "Distribution facilities generally are characterized as elements that are designed and can carry electric energy (Watts/MW) in one direction only at any given time from a single source point (distribution substation) to final load centers." NERC has clearly stated that only radial facilities are considered distribution facilities and were unwilling to consider that network facilities over 100Kv could be classified as Distribution Facilities in this case. Holland's claim of NERC over-reaching their authority appears to have credibility. In conclusion, Redding supports the proposed exception process as it stands on the grounds that it allows an entity the right to a process which NERC is currently not obligated to allow, it requires that NERC judge the facilities on the merit of "necessary for the Reliable Operation of the interconnected bulk power transmission system", and it allows an appeals process that must judge if NERC evaluated facilities on the standard set forth. However, Redding's vote is conditional on the completion of phase 2 where the term "necessary for the Reliable Operation of the interconnected bulk power transmission system" needs to be defined.
Individual
Edwin Tso
Metropolitan Water District of Southern California
No
General Comments: Metropolitan Water District of Southern California ("MWDSC") believes that additional work is necessary to explain how this Detailed Information to Support an Exception Request will be used in evaluating whether a transmission facility will be an exception to the BES. In addition, MWDSC agrees WECC that the proposed Technical Principles for Demonstrating BES Exceptions Request is lack of clarity. It does not provide detail information as to what entities must provide to support their requests, nor does it provide any criteria for consistency among regions in their assessment of requests. Lastly, the current proposal leaves it to each region to develop its own methodology and criteria for evaluating the technical studies. MWDSC believes that drafting team should establish a common method and criteria to apply continent-wide in achieving uniformity and consistency among regions in their assessment of exception requests. Comments to Checklist #4: MWDSC recommends the following changes to emphasize facility impact on the interconnection of the BES: "How does an outage of the facility impact the over-all reliability of to the interconnection of the BES?" Comments to Checklist #7: What percentage of power flow through entity's facility into the BES will be considered as an exception to the BES?
Group
Al DiCaprio
PJM
Yes
No
We agree with most parts on P.2 and P.3, but question the need for Q6, which asks: "Is the facility part of a Cranking Path associated with a Blackstart Resource?" I3 in the BES definition stipulates that Blackstart Resources identified in the Transmission Operator's restoration plan be included (which we disagree and commented in the BES Definition Comment Form). There is no inclusion of any transmission facilities that are part of the cranking path. We suggest this item (Q6) be removed.
We do not agree with the detailed information requirements for generators. In a deregulated

environment, generators are free to bid into the market or offer their availability, to dispatched based on bid price and resource needs, or overall generation dispatch plans. A generator may be on line but not dispatched, or not on line at all due to maintenance outage or a decision to not start. Its status and generation level have little to do in determining whether or not it needs to be included as a BES facility. Rather, it is the generator's active contribution to the BES performance, namely, its protective relay setting and coordination with those of related facilities and its ability to control voltage, respond to contingencies, ride through frequency and voltage excursion, provide accurate model with verification, etc., are critical to BES reliability performance. There are currently no standards or requirements that mandate a generator to be on line or to attain a specific level of output, and we do not see such a need at all in the future. Whether or not the unit is designed as a MUST RUN will depend on whether the generator is (a) on line and bid into the market or be included in the dispatch plan, and (b) the prevailing system conditions such as flow pattern, potential constraints, etc. A generator may be designated as a MUST RUN one day but not the others. Similar argument applies to a generator bidding in the ancillary service markets, or be dispatched to provide reserve or AGC control capability. In our view, generators' physical characteristics and their response to changes on the BES are important considerations for them to be included in the BES. These characteristics affect the assessment and actual performance of the BES in the following key areas: • Voltage and frequency ride through capability • Voltage control (AVR, etc.) • Underfrequency trip setting • Protection relay setting coordination • Data submission for modeling; verification of capability and model We therefore suggest that the entire P.4 be removed as the information it asks for has nothing to do with a generator's physical characteristics or material impact on BES reliability. Having a threshold by MVA suffices to determine if a generator needs to be included as a BES facility, whose characteristics, expected performance and data provision are important to achieve target BES performance and hence should be governed by reliability standards.

No

Yes

One acid test to determine if a facility needs to be included or can be excluded from a BES facility is to simulate an uncleared fault at that facility. If the simulation shows a stable BES performance, then it suggests that even if the fault is not cleared due to whatever reason, the facility has no adverse impact that can lead to instability, cascading or collapse of the BES.

Individual

Rex Roehl

Indeck Energy Services

Yes

As acknowledged in the response to Question 12 comments on the previous BES definition, the BES definition is expansive compared to the definition of the BPS in the FPA Section 215. The inclusion of the limited Exclusions is an attempt to remedy the situation. However, the Exclusions need to include a fifth one that if, based on studies or other assessments, it can be shown that any tranmission or generator element otherwise identified as part of the BES is not important to the reliability of the BPS, then that element should be excluded from the mandatory standards program. There has never been a study to show that elements, such as a 20 MW wind farm, 60 MW merchant generator (which operates infrequently in the depressed market) in a large BA (eg NYISO) or a radial transmission line connecting a small generator are important to the reliability of the BPS. They are covered by the mandatory standards program through the registration criteria. The BES Definition is the opportunity to permit an entity to demonstrate that an element is unimportant to reliability of the BPS. The SDT has identified a small subset of elements that it is willing to exclude. By their very nature, these exclusions dim the bright line that is the stated goal of this project. However, the SDT's foresight seems limited in its selections. Analytical studies are used to evaluate contingencies that could lead to

the Big Three (cascading outages, instability or voltage collapse). Such a study showing that a transmission or generation element is bounded by the N-1 or N-2 contingency would exclude it from the BES definition. For example, in a BA with a NERC definition Reportable Disturbance of approximately 400 MW (eg NYISO), a 20 MW wind farm, 60 MW merchant generator or numerous other smaller facilities would be bounded by larger contingencies. It would take more than six 60 MW merchant generators with close location and common mode failure to even be a Reportable Disturbance, much less become the N-1 contingency for the Big Three. Exclusion E5 should be "E5 - Any facility that can be demonstrated to the Regional Entity by analytical study or other assessment to be unimportant to the reliability of the BPS (with periodic reports by the Regional Entity to NERC of any such assessments)."
Yes
As acknowledged in the response to Question 12 comments on the previous BES definition, the BES definition is expansive compared to the definition of the BPS in the FPA Section 215. The inclusion of the limited Exclusions is an attempt to remedy the situation. However, the Exclusions need to include a fifth one that if, based on studies or other assessments, it can be shown that any tranmission or generator element otherwise identified as part of the BES is not important to the reliability of the BPS, then that element should be excluded from the mandatory standards program. There has never been a study to show that elements, such as a 20 MW wind farm, 60 MW merchant generator (which operates infrequently in the depressed market) in a large BA (eg NYISO) or a radial transmission line connecting a small generator are important to the reliability of the BPS. They are covered by the mandatory standards program through the registration criteria. The BES Definition is the opportunity to permit an entity to demonstrate that an element is unimportant to reliability of the BPS. The SDT has identified a small subset of elements that it is willing to exclude. By their very nature, these exclusions dim the bright line that is the stated goal of this project. However, the SDT's foresight seems limited in its selections. Analytical studies are used to evaluate contingencies that could lead to the Big Three (cascading outages, instability or voltage collapse). Such a study showing that a transmission or generation element is bounded by the N-1 or N-2 contingency would exclude it from the BES definition. For example, in a BA with a NERC definition Reportable Disturbance of approximately 400 MW (eg NYISO), a 20 MW wind farm, 60 MW merchant generator or numerous other smaller facilities would be bounded by larger contingencies. It would take more than six 60 MW merchant generators with close location and common mode failure to even be a Reportable Disturbance, much less become the N-1 contingency for the Big Three. Exclusion E5 should be "E5 - Any facility that can be demonstrated to the Regional Entity by analytical study or other assessment to be unimportant to the reliability of the BPS (with periodic reports by the Regional Entity to NERC of any such assessments)."
Yes
As acknowledged in the response to Question 12 comments on the previous BES definition, the BES definition is expansive compared to the definition of the BPS in the FPA Section 215. The inclusion of the limited Exclusions is an attempt to remedy the situation. However, the Exclusions need to include a fifth one that if, based on studies or other assessments, it can be shown that any tranmission or generator element otherwise identified as part of the BES is not important to the reliability of the BPS, then that element should be excluded from the mandatory standards program. There has never been a study to show that elements, such as a 20 MW wind farm, 60 MW merchant generator (which operates infrequently in the depressed market) in a large BA (eg NYISO) or a radial transmission line connecting a small generator are important to the reliability of the BPS. They are covered by the mandatory standards program through the registration criteria. The BES Definition is the opportunity to permit an entity to demonstrate that an element is unimportant to reliability of the BPS. The SDT has identified a small subset of elements that it is willing to exclude. By their very nature, these exclusions dim the bright line that is the stated goal of this project. However, the SDT's foresight seems limited in its selections. Analytical studies are used to evaluate contingencies that could lead to the Big Three (cascading outages, instability or voltage collapse). Such a study showing that a transmission or generation element is bounded by the N-1 or N-2 contingency would exclude it from the BES definition. For example, in a BA with a NERC definition Reportable Disturbance of approximately 400 MW (eg NYISO), a 20 MW wind farm, 60 MW merchant generator or numerous other smaller facilities would be bounded by larger contingencies. It would take more than six 60 MW merchant generators with close location and common mode failure to even be a Reportable Disturbance, much less become the N-1 contingency for the Big Three. Exclusion E5 should be "E5 -

Any facility that can be demonstrated to the Regional Entity by analytical study or other assessment to be unimportant to the reliability of the BPS (with periodic reports by the Regional Entity to NERC of any such assessments).”
Individual
Keith Morisette
Tacoma Power
Yes
Tacoma Power supports the instructions as written.
Yes
Tacoma Power supports the information requested on page 2 and 3.
Yes
Tacoma Power supports the information requested on page 4.
No
Tacoma Power supports the expectation that entities will be able to supply the information requested.
No
Tacoma Power does not know of any characteristics to add at this time.
No
Tacoma Power is not aware of any conflicts at this time.
Yes
Tacoma Power has a concern that the form may be too general in nature. The task before NERC and the industry is to promote consistency in the application of the BES definition. The form will require the regions to develop individual criteria for assessing an exception request and making a recommendation on the request. We recommend in Phase 2 that the SDT develop specific evaluation criteria for the regions to apply to an exception request. Thank you for consideration of our comments.
Individual
Tracy Richardson
Springfield Utility Board
Yes
SUB agrees with the instructions, finding them to be clear and reasonable.
Yes
SUB agrees with the instructions, finding them to be clear and reasonable.
No SUB comments as this is not currently applicable to SUB operations.
No
No
Individual
Frank Cumpton
BGE
Yes
No comment.
Yes
No comment.
Yes
No comment.
No

No comment.
No
No comment.
No
No comment.
No
No comment.
Individual
Gary Carlson
Michigan Public Power Agency
Yes
The requirement to base flow studies on an "interconnection-wide base case" is likely to include many more lines and buses than necessary to model the impact of a facility that is not material to the BES. MPPA and its members request the words "or regional reduction of such a case" be added after "interconnection-wide base case" to avoid unnecessary expense and detail if a more limited study set is adequate to demonstrate the lack of material impact of the facility(ies) in question.
Yes
Yes
Yes
On Page 4 Question 1, information on the host Balancing Authority's most severe single contingency may not be publically available and therefore difficult or impossible for a smaller entity to obtain. Even if the data is available, it may not be meaningful in a larger Balancing Authority area such as within MISO where the most severe contingency may be geographically and electrically remote. A more readily available and meaningful measure would be a comparison of the generator's capability as a percent of the peak load for the local Balancing Authority or sub-Balancing Authority, as applicable.
No
No
Yes
The following revisions should be made to the procedures: 1. The Technical Review Panel (TRP) provided for in Section 5.3 should not include any staff from the host Regional Entity. 2. The Regional Entity should be required to include an attestation of a qualified individual or individuals to support the factual and technical bases for the decision. This is necessary for purposes of establishing a record in the event of an appeal. If a dispute is appealed, there must be someone at the Regional Entity level that serves as the witness supporting the Regional Entity decision. Currently, there is no accountability for the arguments and suppositions put forth by the Regional Entity; no individuals that stand behind the technical bases proffered in the Regional Entity's written decision. Requiring a qualified individual to attest to the facts and technical arguments relied upon in arriving at the decision will ensure that someone at the Regional Entity level is prepared to take responsibility for reviewing a decision before it is issued, to stand behind the assertions and conclusions reached by the Regional Entity, and whom the Submitting Party may cross examine at hearing. 3. A party seeking an exception should have the right to request a hearing and should not be limited to a paper process. 4. The procedures should not permit the TRP or the Regional Entity to make a decision based upon information that is outside of the record placed before it. That is, the TRP and the Regional Entity may not, on their own, conduct an investigation or seek information independently from what has been presented to it. If the TRP or the Regional Entity requires additional information, it must be requested and provided transparently, and the Submitting Party must have an opportunity to comment upon or challenge that information before the TRP or the Regional Entity relies upon it in any way. This is not currently happening at the Regional Entity and NERC level – decisions have been made based upon

documents and information that are not part of the record; the information is not shared with the Submitting Party (the party challenging registration) prior to (or after) a decision is made. 5. Section 5.2.2. should be revised as follows: "Upon Acceptance of the Exception Request, the Regional Entity and Submitting Party (and Owner, if different) shall confer to establish milestones in order to complete the substantive review of the Exception Request within six months after Acceptance of the Exception Request or within an alternative time period under Section 5.0. The Regional Entity and the Submitting Party (and Owner, if different) shall also discuss whether and to what extent a reduced compliance burden is appropriate during the review period. At the conclusion of the review period, the Regional Entity shall issue a notice (in accordance with Sections 5.2.3) stating is Recommendation that the Exception Request be approved or disapproved."

Additional Comments Submitted: Salt River Project

Detailed Information to Support BES Exceptions Request:
SRP agrees with the WECC Staff recommendation on the "Detailed Information to Support BES Exceptions Request."

"WECC Staff believes that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the

Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request.

We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO."

Consideration of Comments on Initial Ballot Project 2010-17 BES Technical Exceptions

Date of Initial Ballot: September 30 – October 10, 2011

Summary Consideration: Many commenters followed instructions and cast their ballot while simply pointing to their detailed comments in the posted comment report. The SDT thanks those commenters as this greatly reduces the administrative workload on the SDT. Those who decided to place comments in the ballot report for the most part echoed comments that had already been seen by the SDT in the posted comment report which was administered first by the SDT. As a result, there were no changes to the definition due to comments received in the ballot report. However, for ease of reference, the changes to the definition made as a result of those comments are repeated here.

The SDT made the following changes to the request form due to industry comments received:

- **General** – Clarified the use of facility versus Element(s).
- **Page 1** – Deleted 's' : List any attached supporting documents and any additional information that is included to support~~s~~ the request:
- **Generation - Q1.** Replaced 'generator's or generator's facility' with 'generation resource': What is the MW value of the host Balancing Authority's most severe single Contingency and what is the ~~generator's, or generator facility's~~ generation resource's, percent of this value?
- **Generation - Q2**. Replaced 'generator's or generator's facility' with 'generation resource': Is the ~~generator or generator facility~~ generation resource used to provide reliability ~~-~~related Ancillary Services?
- **Generation - Q3**. Replaced 'generator's or generator's facility' with 'generation resource': Is the ~~generator~~ generation resource designated as a must run unit for reliability?

The SDT feels that it is important to remind the industry that Phase II of this project will begin immediately after the conclusion of Phase I as SDT resources clear up. The same SDT will follow through with Phase II.

The SDT is recommending that this project be moved forward to the recirculation ballot stage.

There were two comments that were repeated multiple times throughout the various documents. The first topic was about how to sort through the definition inclusions and exclusions, i.e., which takes precedence. The SDT offers this guidance on that issue:

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.

Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.

In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.

The second item is about providing specific guidance on how the information on the exception request form will be used in making decisions on inclusions/exclusions in the exception process. The SDT provides the following information on this item:

The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication.

Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further,

reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved."

The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

If you feel that the drafting team overlooked your comments, please let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 404-446-2560 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

[1] The appeals process is in the Standards Processes Manual: http://www.nerc.com/docs/standards/sc/Standard_Processes_Manual_Approved_May_2010.pdf.

Voter	Entity	Segment	Vote	Comment
Kirit Shah	Ameren Services	1	Negative	Please refer to Ameren comments submitted using the Comment Form.
Andrew Z Pusztai	American Transmission Company, LLC	1	Negative	Comments submitted.
Robert Smith	Arizona Public Service Co.	1	Negative	Comments submitted
John Bussman	Associated Electric Cooperative, Inc.	1	Negative	comments posted on comment form
Donald S. Watkins	Bonneville Power Administration	1	Negative	comments submitted for both BES ballots
Christopher L de Graffenried	Consolidated Edison Co. of New York	1	Negative	See Con Edison's comments on the Technical Principles submitted separately by electronic survey form.
Michael S Crowley	Dominion Virginia Power	1	Negative	Please see Dominion's submitted comments
Bernard Pelletier	Hydro-Quebec TransEnergie	1	Negative	Please see our comments on the Technical Information to Support BES Exception.
Chris W Bolick	Associated Electric Cooperative, Inc.	3	Negative	Please see comments of Associated Electric Cooperative
Charles Yeung	Southwest Power Pool, Inc.	2	Negative	SPP's comments on this concurrent ballot/comment period have been submitted and provide support for our Negative vote. In addition, SPP is a member of the IRC SRC and is in support of those comments on this standard. Please refer to these sets of comments for our recommendations.
Kathleen Goodman	ISO New England, Inc.	2	Negative	please refer to detailed comments submitted for this project.

Voter	Entity	Segment	Vote	Comment
Tracy Sliman	Tri-State G & T Association, Inc.	1	Negative	Comments submitted on electronic form.
Rebecca Berdahl	Bonneville Power Administration	3	Negative	Please see BPA's responses on the comment form submitted seperately.
Andrew Gallo	City of Austin dba Austin Energy	3	Negative	Austin Energy (AE) has submitted detailed comments on this issue through its official Comment document. Please refer to those comments.
Peter T Yost	Consolidated Edison Co. of New York	3	Negative	Con Edison comments have been submitted separately.
Richard Blumenstock	Consumers Energy	3	Negative	See Consumers Energy's comments on the official submittal form.
Michael F. Gildea	Dominion Resources Services	3	Negative	See Dominin's submitted comments.
Janelle Marriott	Tri-State G & T Association, Inc.	3	Negative	Tri-State G&T Load Serving Entity comments were submitted through the formal electronic comment process.
David Frank Ronk	Consumers Energy	4	Negative	See Comments of Consumers Energy Company
Francis J. Halpin	Bonneville Power Administration	5	Negative	Please see BPA's responses on the comment form submitted seperately.
Jeanie Doty	City of Austin dba Austin Energy	5	Negative	Austin Energy (AE) has submitted detailed comments on this issue through its official Comment document. Please refer to those comments.
Wilket (Jack) Ng	Consolidated Edison Co. of New York	5	Negative	See Con Edison’s comments on the Technical Principles submitted separately by electronic survey form.

Voter	Entity	Segment	Vote	Comment
David C Greyerbiehl	Consumers Energy Company	5	Negative	See Consumers Energy's comments on the official comment submittal forms.
Mike Garton	Dominion Resources, Inc.	5	Negative	See comments filed on this project.
Dan Roethemeyer	Dynegy Inc.	5	Negative	Comments to be submitted with the SERC OC Standards Review Group.
Christopher Schneider	MidAmerican Energy Co.	5	Negative	See the MidAmerican submitted comments. The BES definition needs additional specific inclusion or exclusion provisions that clearly exclude variable resource generation collector circuits rated below 100 kV and generators less than 20 MVA connected to those collector circuits in accordance with the registration criteria.
Mahmood Z. Safi	Omaha Public Power District	5	Negative	See Doug Peterchuck's comments
Glen Reeves	Salt River Project	5	Negative	See comments submitted
Brenda S. Anderson	Bonneville Power Administration	6	Negative	Please see BPA's responses on the comment form submitted seperately.
Lisa L Martin	City of Austin dba Austin Energy	6	Negative	Austin Energy (AE) has submitted detailed comments on this issue through its official Comment document. Please refer to those comments.
Nickesha P Carrol	Consolidated Edison Co. of New York	6	Negative	Con Edison comments have been submitted separately.
Louis S. Slade	Dominion Resources, Inc.	6	Negative	See comments submitted by Dominion.
Steven L. Rueckert	Western Electricity Coordinating Council	10	Negative	Comments Submitted

Voter	Entity	Segment	Vote	Comment
Ajay Garg	Hydro One Networks, Inc.	1	Negative	After careful analysis of the proposed documents, Hydro One Networks Inc. is casting a negative vote. We commend the SDT for the effort in facing the challenge. However, we believe that the proposed definition and the exception request criteria still need further work. Some issues need to be resolved before a final approval is granted. Please see our detailed comments as provided in the on-line system.
Anthony E Jablonski	ReliabilityFirst Corporation	10	Affirmative	Comments submitted
Guy V. Zito	Northeast Power Coordinating Council, Inc.	10	Affirmative	NPCC will be submitting comments on behalf of our members through the formal comment process along with suggestions to address those comments.
Bruce Lovelin	Central Lincoln PUD	9	Affirmative	I support the additional comments prepared by Steve Alexanderson of Central Lincoln PUD
Margaret Ryan	Pacific Northwest Generating Cooperative	8	Affirmative	Please see PNGC's separate comment form.
Kevin Querry	FirstEnergy Solutions	6	Affirmative	FirstEnergy supports the proposed technical information to support BES exceptions and offers comments and suggestions through the formal comment period.
Richard L. Montgomery	Florida Municipal Power Agency	6	Affirmative	Please see comments submitted through the formal comments
Thomas Washburn	Florida Municipal Power Pool	6	Affirmative	See FMPA's comments
William D Shultz	Southern Company Generation	5	Affirmative	Comments from Southern Company Generation are being submitted via the electronic comment form found on the project page.
Edward P. Cox	AEP Marketing	6	Affirmative	Comments are being submitted via electronic form by Thad Ness on behalf of American Electric Power.

Voter	Entity	Segment	Vote	Comment
Gary Carlson	Michigan Public Power Agency	5	Affirmative	Comments submitted separately
David Schumann	Florida Municipal Power Agency	5	Affirmative	Please see comments submitted through the formal comments
James M Howard	Lakeland Electric	5	Affirmative	Refer to comments from FMPA.
Brock Ondayko	AEP Service Corp.	5	Affirmative	Comments are being submitted via electronic form by Thad Ness on behalf of American Electric Power.
Aleka K Scott	Pacific Northwest Generating Cooperative	4	Affirmative	Please see PNGC's separate comment form.
Douglas Hohlbaugh	Ohio Edison Company	4	Affirmative	FirstEnergy supports the proposed technical information to support BES exceptions and offers comments and suggestions through the formal comment period.
Guy Andrews	Georgia System Operations Corporation	4	Affirmative	See electronic comment form submitted by Georgia System Operations Corp
Joseph DePoorter	Madison Gas and Electric Co.	4	Affirmative	Please see the MRO NSRF comments concerning this project.
Bob C. Thomas	Illinois Municipal Electric Agency	4	Affirmative	Illinois Municipal Electric Agency (IMEA) appreciates the SDT's diligence in developing technical inforamtion to support the BES Exception process. With its Affirmative vote, IMEA supports and recommends comments submitted by the Transmission Access Policy Study Group.
Shamus J Gamache	Central Lincoln PUD	4	Affirmative	See Central Lincoln PUD comments (CLPUD) Posted by Steve Alexanderson.
John Allen	City Utilities of Springfield,	4	Affirmative	City Utilities of Springfield, Missouri supports the comments from SPP.

Voter	Entity	Segment	Vote	Comment
	Missouri			
Frank Gaffney	Florida Municipal Power Agency	4	Affirmative	Please see comments submitted through the formal comments
Steve Eldrige	Umatilla Electric Cooperative	3	Affirmative	Please see UEC's separate comment form.
Marc Farmer	West Oregon Electric Cooperative, Inc.	3	Affirmative	Please see WOEC's separate comment form.
Ian S Grant	Tennessee Valley Authority	3	Affirmative	My company has submitted comments via the comment form.
Jon Shelby	Northern Lights Inc.	3	Affirmative	Please see NLI's separate comment form.
Ray Ellis	Okanogan County Electric Cooperative, Inc.	3	Affirmative	Please see Okanogan's separate comment form.
John S Bos	Muscatine Power & Water	3	Affirmative	MPW agrees with the comments submitted by the MRO NERC Standards Review Forum (NSRF)
Rick Crinklaw	Lane Electric Cooperative, Inc.	3	Affirmative	Please see LEC's separate comment form.
Michael Henry	Lincoln Electric Cooperative, Inc.	3	Affirmative	Please see Lincoln's separate comment form.
Stephan Kern	FirstEnergy Energy	3	Affirmative	FirstEnergy supports the proposed technical information to support BES exceptions and offers comments and suggestions through the formal comment

Voter	Entity	Segment	Vote	Comment
	Delivery			period.
Joe McKinney	Florida Municipal Power Agency	3	Affirmative	Please see comments submitted through the formal comments
William N. Phinney	Georgia Systems Operations Corporation	3	Affirmative	See electronic comment form from Georgia System Operations Corporation
William Bush	Holland Board of Public Works	3	Affirmative	Please see Holland Board of Public Works' comment form.
Dave Sabala	Douglas Electric Cooperative	3	Affirmative	Please see DEC's separate comment form.
Bryan Case	Fall River Rural Electric Cooperative	3	Affirmative	Please see FREC's separate comment form.
Dave Hagen	Clearwater Power Co.	3	Affirmative	Please see Clearwater's separate comment form.
Roman Gillen	Consumers Power Inc.	3	Affirmative	Please see CPI's separate comment form.
Roger Meader	Coos-Curry Electric Cooperative, Inc	3	Affirmative	Please see CCEC's separate comment form.
Steve Alexanderson	Central Lincoln PUD	3	Affirmative	Comments previously submitted.
Dave Markham	Central Electric Cooperative, Inc. (Redmond, Oregon)	3	Affirmative	Please see Central's separate comment form.

Voter	Entity	Segment	Vote	Comment
Bud Tracy	Blachly-Lane Electric Co-op	3	Affirmative	Please see BLEC's separate comment form.
Rich Salgo	Sierra Pacific Power Co.	1	Affirmative	Comments Submitted
Charles B Manning	Electric Reliability Council of Texas, Inc.	2	Affirmative	ERCOT ISO has joined the IRC SRC comments submitted.
David Thorne	Potomac Electric Power Co.	1	Affirmative	Comments submitted
Richard Burt	Minnkota Power Coop. Inc.	1	Affirmative	While MPC is voting affirmative, we ask that you see the comments submitted by the MRO NERC Standards Review Forum (NSRF).
Gordon Pietsch	Great River Energy	1	Affirmative	Please see MRO NSRF comments
William J Smith	FirstEnergy Corp.	1	Affirmative	FirstEnergy supports the proposed technical information to support BES exceptions and offers comments and suggestions through the formal comment period.
Paul B. Johnson	American Electric Power	1	Affirmative	Comments are being submitted via electronic form by Thad Ness on behalf of American Electric Power.
Stuart Sloan	Consumers Power Inc.	1	Affirmative	Please see CPI's separate comment form.
Response: The SDT thanks you for following the instructions with regard to comments. This greatly reduces the administrative burden for the SDT and will help accelerate the process.				
Paul Morland	Colorado Springs Utilities	1	Negative	Colorado Springs Utilities believes that the proposed Technical Information to Support BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the

Voter	Entity	Segment	Vote	Comment
				studies submitted will be overly burdensome on our staff. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable us to understand what is necessary for submitting an exception request. To allow sufficient time to complete this difficult task, we believe that the Detailed Information to Support BES Exceptions Request should not be part of the Phase 1 Bulk Electric System Definition effort, but should be postponed and included in the Phase 2 effort.

Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either

Voter	Entity	Segment	Vote	Comment
party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. The SDT is required to submit the exception process as part of the revised definition on January 25, 2012 as specified in Order743.				

Voter	Entity	Segment	Vote	Comment
Martyn Turner	Lower Colorado River Authority	1	Negative	1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: LCRA TSC supports the inclusion of transformers (with both the primary and secondary windings operated at 100-kV or higher) in the BES definition; however, additional clarification is suggested. The term transformers needs to be further defined with respect to function (auto transformers, phase angle regulators, generator step-up transformers, etc.). Similarly, a separate definition for "Transformer" could be developed and included in the NERC Glossary of Terms. 3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: 4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: 5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: LCRA TSC suggests consistency between this inclusion criteria and the criteria used in I2 for "generation".

Voter	Entity	Segment	Vote	Comment
				6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: This inclusion conflicts with exclusion E4. Which one takes priority? 7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The current wording is unclear with respect to the treatment of normally open switching devices. LCRA TSC suggests the following language to replace the existing language on the note to E1: “Two radial systems connected by a normally open, manually operated switching device, as depicted on prints or one-line diagrams for example, may be considered as radial systems under this exclusion.” The current wording is unclear with respect to “non-retail generation”. The sudden loss of large, radial-supplied load may result in reliability deficiencies. LCRA TSC suggests stating a load level or a load capacity in the exclusion. 8. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2 (behind-the-meter generation)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: 9. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3 (local network)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: 10. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E4 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Voter	Entity	Segment	Vote	Comment
				Yes: No: X Comments: This exclusion conflicts with inclusion item I5. Which one takes priority? 11. Are there any other concerns with this definition that haven't been covered in previous questions and comments remembering that the exception criteria are posted separately for comment? Yes: X No: Comments: LCRA TSC supports the direction the standards drafting team taking with this project on the BES Definition and encourages further clarification as noted in these comments for proper application.
Response: The SDT directs LCRA to the detailed responses in the regular comment form as these comments are identical to those contained there.				
Greg C. Parent	Manitoba Hydro	3	Negative	Manitoba Hydro strongly disagrees with the proposed 'Detailed Information to Support an Exception Request' document and associated exception process for the following reasons: -It is not clear what elements or situations beyond what is covered in the core definition and associated inclusions and exclusions that the drafting team is hoping to capture through the exception process. Further, it is unclear what the benefit to reliability would be by allowing an impact based exception process given that entities will be extremely unlikely to use the exception process to include elements in the BES. -The exception process will be extremely resource intensive, particularly in the absence of any Industry approved threshold criteria. The costs to properly administer and monitor the process to ensure that impact based modeling is done accurately and that it captures the frequent changes on a dynamic system will occupy a wealth of Industry, NERC and Regional Entity time to the detriment of reliability. -It is not reasonable for industry to approve the exception process without knowing what thresholds are required to demonstrate an element as being part of the BES or not. We are concerned that BES determinations would be subjective and would vary from case to case with the particular staff examining the request. BES elements should be established and agreed upon by Industry, not set by a NERC panel. We understand that the drafting team has made this change in the interests of time, but the impact of the BES definition is too broad for this project to be rushed. -The 2010-17 project goals to increase the clarity of the BES definition and establish a 'bright-line' are compromised by the exception process. Changes and alterations to the BES

Voter	Entity	Segment	Vote	Comment
				definition should be approved by Industry through the Standards Under Development Process. An interpretation request or SAR should be developed by an entity if they feel that the core definition and associated exceptions and inclusions should be modified. We ask that NERC requests that FERC re-examines the directive to develop an exception process given that the BES definition, which already includes a list of exceptions, is sufficient to standalone without an associated exception process.
S N Fernando	Manitoba Hydro	5	Negative	Manitoba Hydro strongly disagrees with the proposed 'Detailed Information to Support an Exception Request' document and associated exception process for the following reasons: -It is not clear what elements or situations beyond what is covered in the core definition and associated inclusions and exclusions that the drafting team is hoping to capture through the exception process. Further, it is unclear what the benefit to reliability would be by allowing an impact based exception process given that entities will be extremely unlikely to use the exception process to include elements in the BES. -The exception process will be extremely resource intensive, particularly in the absence of any Industry approved threshold criteria. The costs to properly administer and monitor the process to ensure that impact based modeling is done accurately and that it captures the frequent changes on a dynamic system will occupy a wealth of Industry, NERC and Regional Entity time to the detriment of reliability. -It is not reasonable for industry to approve the exception process without knowing what thresholds are required to demonstrate an element as being part of the BES or not. We are concerned that BES determinations would be subjective and would vary from case to case with the particular staff examining the request. BES elements should be established and agreed upon by Industry, not set by a NERC panel. We understand that the drafting team has made this change in the interests of time, but the impact of the BES definition is too broad for this project to be rushed. -The 2010-17 project goals to increase the clarity of the BES definition and establish a 'bright-line' are compromised by the exception process. Changes and alterations to the BES definition should be approved by Industry through the Standards Under Development Process. An interpretation request or SAR should be developed by an entity if they feel that the core definition and associated exceptions and inclusions should be modified. We ask that NERC requests that FERC re-examines the

Voter	Entity	Segment	Vote	Comment
				directive to develop an exception process given that the BES definition, which already includes a list of exceptions, is sufficient to standalone without an associated exception process.
Daniel Prowse	Manitoba Hydro	6	Negative	Manitoba Hydro strongly disagrees with the proposed 'Detailed Information to Support an Exception Request' document and associated exception process for the following reasons: -It is not clear what elements or situations beyond what is covered in the core definition and associated inclusions and exclusions that the drafting team is hoping to capture through the exception process. Further, it is unclear what the benefit to reliability would be by allowing an impact based exception process given that entities will be extremely unlikely to use the exception process to include elements in the BES. -The exception process will be extremely resource intensive, particularly in the absence of any Industry approved threshold criteria. The costs to properly administer and monitor the process to ensure that impact based modeling is done accurately and that it captures the frequent changes on a dynamic system will occupy a wealth of Industry, NERC and Regional Entity time to the detriment of reliability. -It is not reasonable for industry to approve the exception process without knowing what thresholds are required to demonstrate an element as being part of the BES or not. We are concerned that BES determinations would be subjective and would vary from case to case with the particular staff examining the request. BES elements should be established and agreed upon by Industry, not set by a NERC panel. We understand that the drafting team has made this change in the interests of time, but the impact of the BES definition is too broad for this project to be rushed. -The 2010-17 project goals to increase the clarity of the BES definition and establish a 'bright-line' are compromised by the exception process. Changes and alterations to the BES definition should be approved by Industry through the Standards Under Development Process. An interpretation request or SAR should be developed by an entity if they feel that the core definition and associated exceptions and inclusions should be modified. We ask that NERC requests that FERC re-examines the directive to develop an exception process given that the BES definition, which already includes a list of exceptions, is sufficient to standalone without an associated exception process.

Voter	Entity	Segment	Vote	Comment
Joe D Petaski	Manitoba Hydro	1	Negative	Manitoba Hydro strongly disagrees with the proposed 'Detailed Information to Support an Exception Request' document and associated exception process for the following reasons: -It is not clear what elements or situations beyond what is covered in the core definition and associated inclusions and exclusions that the drafting team is hoping to capture through the exception process. Further, it is unclear what the benefit to reliability would be by allowing an impact based exception process given that entities will be extremely unlikely to use the exception process to include elements in the BES. -The exception process will be extremely resource intensive, particularly in the absence of any Industry approved threshold criteria. The costs to properly administer and monitor the process to ensure that impact based modeling is done accurately and that it captures the frequent changes on a dynamic system will occupy a wealth of Industry, NERC and Regional Entity time to the detriment of reliability. -It is not reasonable for industry to approve the exception process without knowing what thresholds are required to demonstrate an element as being part of the BES or not. We are concerned that BES determinations would be subjective and would vary from case to case with the particular staff examining the request. BES elements should be established and agreed upon by Industry, not set by a NERC panel. We understand that the drafting team has made this change in the interests of time, but the impact of the BES definition is too broad for this project to be rushed. -The 2010-17 project goals to increase the clarity of the BES definition and establish a 'bright-line' are compromised by the exception process. Changes and alterations to the BES definition should be approved by Industry through the Standards Under Development Process. An interpretation request or SAR should be developed by an entity if they feel that the core definition and associated exceptions and inclusions should be modified. We ask that NERC requests that FERC re-examines the directive to develop an exception process given that the BES definition, which already includes a list of exceptions, is sufficient to standalone without an associated exception process.
Danny Dees	MEAG Power	1	Negative	We believe that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the

Voter	Entity	Segment	Vote	Comment
				checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO. We believe that a Yes vote for the Technical Principles for Demonstrating BES Exceptions Request will result in minimal or no changes to today's process under the current definition which includes the language "as defined by the Regional Reliability Organization." While the proposed Technical Principles for Demonstrating BES Exceptions Request includes a checklist that must be submitted with exception requests, a yes vote will still require each region to develop their own methods and criteria for assessing materials submitted with exemption requests. We believe that a No vote with guidance to the drafting team that objective methods and criteria must be developed and applied continent-wide will result in the desired uniformity and consistency among regions in their assessment of exception requests. To allow sufficient time to complete this difficult task, we believe that the Detailed Information to Support BES Exceptions Request should not be part of the Phase 1 Bulk Electric System Definition effort, but should be postponed and included in the Phase 2 effort.
Ernest Hahn	Metropolitan Water District of Southern California	1	Negative	MWDSC supports WECC's comments that proposed Technical Information to Support BES Exceptions does not provide the necessary clarity, nor does it provide any criteria for consistency among regions. This detail should be postponed and included in the Phase 2 SAR effort.

Voter	Entity	Segment	Vote	Comment
Kevin Smith	Balancing Authority of Northern California	1	Negative	We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO.
Terry L Baker	Platte River Power Authority	3	Negative	Platte River believes that a Yes vote for the Technical Principles for Demonstrating BES Exceptions Request will result in minimal changes to today's process under the current definition which includes the language "as defined by the Regional Reliability Organization." While the proposed Technical Principles for Demonstrating BES Exceptions Request includes a checklist that must be submitted with exception requests, a yes vote will still require each region to develop their own methods and criteria for assessing materials submitted with exemption requests. We believe that a No vote with guidance to the drafting team that objective methods and criteria must be developed and applied continent-wide will result in the desired uniformity and consistency among regions in their assessment of exception requests.
Roland Thiel	Platte River Power Authority	5	Negative	Definition of BES Platte River believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although Platte River ballots "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. Platte River recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, Platte River agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification. That said, Platte River is prepared to support the BES definition as proposed by the SDT going forward. Platte River has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. Detailed Information to Support BES Exceptions Requests

Voter	Entity	Segment	Vote	Comment
				Platte River believes that a Yes vote for the Technical Principles for Demonstrating BES Exceptions Request will result in minimal changes to today's process under the current definition which includes the language "as defined by the Regional Reliability Organization." While the proposed Technical Principles for Demonstrating BES Exceptions Request includes a checklist that must be submitted with exception requests, a yes vote will still require each region to develop their own methods and criteria for assessing materials submitted with exemption requests. We believe that a No vote with guidance to the drafting team that objective methods and criteria must be developed and applied continent-wide will result in the desired uniformity and consistency among regions in their assessment of exception requests.
Carol Ballantine	Platte River Power Authority	6	Negative	Platte River believes that a Yes vote for the Technical Principles for Demonstrating BES Exceptions Request will result in minimal changes to today's process under the current definition which includes the language "as defined by the Regional Reliability Organization." While the proposed Technical Principles for Demonstrating BES Exceptions Request includes a checklist that must be submitted with exception requests, a yes vote will still require each region to develop their own methods and criteria for assessing materials submitted with exemption requests. We believe that a No vote with guidance to the drafting team that objective methods and criteria must be developed and applied continent-wide will result in the desired uniformity and consistency among regions in their assessment of exception requests.
John C. Collins	Platte River Power Authority	1	Negative	Platte River believes that a Yes vote for the Technical Principles for Demonstrating BES Exceptions Request will result in minimal changes to today's process under the current definition which includes the language "as defined by the Regional Reliability Organization." While the proposed Technical Principles for Demonstrating BES Exceptions Request includes a checklist that must be submitted with exception requests, a yes vote will still require each region to develop their own methods and criteria for assessing materials submitted with exemption requests. We believe that a No vote with guidance to the drafting team that objective methods and criteria must be developed and applied continent-wide will result in the desired uniformity and consistency among regions in their assessment of exception requests.

Voter	Entity	Segment	Vote	Comment
Dana Wheelock	Seattle City Light	3	Negative	Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although SCL ballots "Negative" we agree with and strongly support the Technical Exceptions Principles as a concept. However, SCL finds that the Principles as written do not provide the necessary clarity as what applying entities must provide to support their request, nor do they provide adequate criteria for consistency among regions in their assessment of requests. SCL recommends the development of objective methods and criteria for identifying which facilities may be excluded from or included in the BES. SCL also recommends the development of one or more examples that illustrate what studies must be submitted and what must be documented as part of an exception request. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address issues such as the exception process. SCL has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. SCL is prepared to support the BES Exception process as proposed by the SDT going forward.
Hao Li	Seattle City Light	4	Negative	Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although SCL ballots "Negative" we agree with and strongly support the Technical Exceptions Principles as a concept. However, SCL finds that the Principles as written do not provide the necessary clarity as what applying entities must provide to support their request, nor do they provide adequate criteria for consistency among regions in their assessment of requests. SCL recommends the development of objective methods and criteria for identifying which facilities may be excluded from or included in the BES. SCL also recommends the development of one or more examples that illustrate what studies must be submitted and what must be documented as part of an exception request. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis

Voter	Entity	Segment	Vote	Comment
				within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address issues such as the exception process. SCL has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. SCL is prepared to support the BES Exception process as proposed by the SDT going forward.
Michael J. Haynes	Seattle City Light	5	Negative	Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although SCL ballots "Negative" we agree with and strongly support the Technical Exceptions Principles as a concept. However, SCL finds that the Principles as written do not provide the necessary clarity as what applying entities must provide to support their request, nor do they provide adequate criteria for consistency among regions in their assessment of requests. SCL recommends the development of objective methods and criteria for identifying which facilities may be excluded from or included in the BES. SCL also recommends the development of one or more examples that illustrate what studies must be submitted and what must be documented as part of an exception request. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address issues such as the exception process. SCL has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. SCL is prepared to support the BES Exception process as proposed by the SDT going forward.
Dennis Sismaet	Seattle City Light	6	Negative	Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although SCL ballots "Negative" we agree with and strongly support the Technical Exceptions Principles

Voter	Entity	Segment	Vote	Comment
				as a concept. However, SCL finds that the Principles as written do not provide the necessary clarity as what applying entities must provide to support their request, nor do they provide adequate criteria for consistency among regions in their assessment of requests. SCL recommends the development of objective methods and criteria for identifying which facilities may be excluded from or included in the BES. SCL also recommends the development of one or more examples that illustrate what studies must be submitted and what must be documented as part of an exception request. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address issues such as the exception process. SCL has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. SCL is prepared to support the BES Exception process as proposed by the SDT going forward.
Pawel Krupa	Seattle City Light	1	Negative	Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although SCL ballots "Negative" we agree with and strongly support the Technical Exceptions Principles as a concept. However, SCL finds that the Principles as written do not provide the necessary clarity as what applying entities must provide to support their request, nor do they provide adequate criteria for consistency among regions in their assessment of requests. SCL recommends the development of objective methods and criteria for identifying which facilities may be excluded from or included in the BES. SCL also recommends the development of one or more examples that illustrate what studies must be submitted and what must be documented as part of an exception request. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address issues such as the exception process. SCL has taken the opportunity

Voter	Entity	Segment	Vote	Comment
				to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. SCL is prepared to support the BES Exception process as proposed by the SDT going forward.
Tim Kelley	Sacramento Municipal Utility District	1	Negative	We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO.
Richard K Vine	California ISO	2	Negative	The ISO believes that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. The lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. The ISO believes that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO.
Barbara Constantinescu	Independent Electricity	2	Negative	We believe that the SDT proposed approach for exception criteria is reasonable recognizing that one method/criteria cannot be applicable to everyone and every

Voter	Entity	Segment	Vote	Comment
	System Operator			situation within the ERO foot print. However, we believe that there is huge gap and lack of any transparency on how the exception application will be evaluated and processed. We strongly suggest that SDT develop a reference or a guidance document as part of the RoP that should provide some guidance to Registered Entities, Regional Entities and the ERO on how an exception application should be processed. The absence of such guidance will pose a challenge for each entity including the ERO, and may result in discrepancies amongst Regional Entities. The process may be perceived by registered entities as being non-transparency.
Alden Briggs	New Brunswick System Operator	2	Negative	The NBSO has concern about the lack of clarity and specificity with respect to what analyses and study results are required. This lack of clarity and specificity may lead to inconsistent application of the Technical Principles by both Registered Entities and Regional Entities.
Steven Grego	MEAG Power	5	Negative	We believe that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO. We believe that a Yes vote for the Technical Principles for Demonstrating BES Exceptions Request will result in minimal or no changes to today's process under the current definition which includes the

Voter	Entity	Segment	Vote	Comment
				language "as defined by the Regional Reliability Organization." While the proposed Technical Principles for Demonstrating BES Exceptions Request includes a checklist that must be submitted with exception requests, a yes vote will still require each region to develop their own methods and criteria for assessing materials submitted with exemption requests. We believe that a No vote with guidance to the drafting team that objective methods and criteria must be developed and applied continent-wide will result in the desired uniformity and consistency among regions in their assessment of exception requests. To allow sufficient time to complete this difficult task, we believe that the Detailed Information to Support BES Exceptions Request should not be part of the Phase 1 Bulk Electric System Definition effort, but should be postponed and included in the Phase 2 effort.
Steven M. Jackson	Municipal Electric Authority of Georgia	3	Negative	We believe that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO. We believe that a Yes vote for the Technical Principles for Demonstrating BES Exceptions Request will result in minimal or no changes to today's process under the current definition which includes the language "as defined by the Regional Reliability Organization." While the proposed

Voter	Entity	Segment	Vote	Comment
				Technical Principles for Demonstrating BES Exceptions Request includes a checklist that must be submitted with exception requests, a yes vote will still require each region to develop their own methods and criteria for assessing materials submitted with exemption requests. We believe that a No vote with guidance to the drafting team that objective methods and criteria must be developed and applied continent-wide will result in the desired uniformity and consistency among regions in their assessment of exception requests. To allow sufficient time to complete this difficult task, we believe that the Detailed Information to Support BES Exceptions Request should not be part of the Phase 1 Bulk Electric System Definition effort, but should be postponed and included in the Phase 2 effort.
John H Hagen	Pacific Gas and Electric Company	3	Negative	This does not provide clarity on the criteria that will be used to manage the inclusion/exclusion process. Leaving it up to the regions will only create variances that this effort was chartered to eliminate. To support a bright line BES defintion, the exclusion process must not have subjective results baed on regional variances. We may be better off without an exclusion process and include the exclusions as written into the definition.
Mike Ramirez	Sacramento Municipal Utility District	4	Negative	We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO.
Bethany Hunter	Sacramento Municipal Utility District	5	Negative	We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO.
Claire Warshaw	Sacramento Municipal Utility District	6	Negative	We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their

Voter	Entity	Segment	Vote	Comment
				initial assessment and recommendations to the ERO.
James Leigh-Kendall	Sacramento Municipal Utility District	3	Negative	We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO.
Mark B Thompson	Alberta Electric System Operator	2	Negative	The AESO agrees with the WECC, who say: WECC Staff believes that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO.
Lisa C Rosintoski	Colorado Springs Utilities	6	Negative	Colorado Springs Utilities believes that the proposed Technical Information to Support BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the

Voter	Entity	Segment	Vote	Comment
				studies submitted will be overly burdensome on our staff. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable us to understand what is necessary for submitting an exception request. To allow sufficient time to complete this difficult task, we believe that the Detailed Information to Support BES Exceptions Request should not be part of the Phase 1 Bulk Electric System Definition effort, but should be postponed and included in the Phase 2 effort.
Jennifer Eckels	Colorado Springs Utilities	5	Negative	Colorado Springs Utilities believes that the proposed Technical Information to Support BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on our staff. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable us to understand what is necessary for submitting an exception request. To allow sufficient time to complete this difficult task, we believe that the Detailed Information to Support BES Exceptions Request should not be part of the Phase 1 Bulk Electric System Definition effort, but should be postponed and included in the Phase 2 effort.
Spencer Tacke	Modesto Irrigation District	4	Negative	We believe that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and

Voter	Entity	Segment	Vote	Comment
				the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO. Thank you.
William M Chamberlain	California Energy Commission	9	Negative	We agree with WECC that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO. We are voting No to allow the drafting team to develop objective methods and criteria that can be applied continent-wide, resulting in the desired uniformity and consistency among regions in their assessment of exception requests.
Allen Mosher	American Public Power Association	4	Affirmative	See comments submitted in response to BES Definition. APPA also requests more specificity on the detailed information required to support BES exceptions processed through the NERC Rules of Procedure drafting process. Additional

Voter	Entity	Segment	Vote	Comment
				technical specificity will help ensure consistency between regions and transparency for registered entities on the technical studies and data required to support exception requests. These issues should be addressed in Phase 2.

Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication.

Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers

Voter	Entity	Segment	Vote	Comment
the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.				
Marilyn Brown	New York Power Authority	3	Negative	1. Page one of the 'Detailed Information to Support an Exception Request' contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one that is missing? Please be as specific as possible with your comments. Yes: X No: Comments: No comments. 2. Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there information that you believe needs to be on page two or three that is missing? Please be as specific as possible with your comments. Yes: No: X Comments: For Question 2 on page 2, recommend that the specific types of studies to be provided are defined to add consistency and transparency to the Exception request process. Recommend that the concept and the words "material to" be included as part of

Voter	Entity	Segment	Vote	Comment
				the question as follows “Is the facility material to permanent Flowgates in the Eastern Interconnection.....” For Question 4 on page 2, recommend that single contingency analysis be performed and submitted to demonstrate impacts to the BES. For Question 6 on page 3, recommend that “Cranking Path” be removed to be consistent with the draft BES Definition. Recommend that the concept and the words “material to and designated as part of” be included as part of the question. Recommend rewording Question 6 as follows “Is the facility a Blackstart resource material to and designated as part of the Transmission Operator’s restoration plan?” For Question 7 on page 3, facilities less than two years old or under construction would not be able to provide SCADA data for the most recent consecutive two calendar year period. Facility rating changes and the magnitude of such changes which trigger application or reapplication of the exception process are not addressed. Recommend that Question 7 be revised to address these issues. 3. Page four of the ‘Detailed Information to Support an Exception Request’ contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four that is missing? Please be as specific as possible with your comments. Yes: No: X Comment Form for 2nd Draft of Project 2010-17: Definition of BES (BES) Technical Principles for Demonstrating BES Exceptions Page 4 of 5 Comments: For Question 2 on page 4, recommend that the specific generator ancillary service products be defined to add consistency and transparency to the Exception Request process. For Question 3 on page 4, recommend that confirmation of must-run generation be provided by the Reliability Coordinator, Reliability Planner, or the Balancing Authority as a clarification to the “appropriate reference”. 4. Do you have concerns about an entity’s ability to obtain the data they would need to file the ‘Detailed Information to Support an Exception Request’? If so, please be specific with your concerns so that the SDT can fully understand the problem. Yes: No: X Comments: No comments. Comment Form for 2nd Draft of Project 2010-17: Definition of BES (BES) Technical Principles for Demonstrating BES Exceptions Page 5 of 5 5. Are there other specific characteristics that you feel would be important for presenting a case and which are generic enough that they belong in the request? If so, please identify them here and provide suggested language that could be added to the document. Yes:

Voter	Entity	Segment	Vote	Comment
				No: X Comments: No comments. 6. Are you aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? If so, please identify them here and provide suggested language changes that may clarify the issue. Yes: No: X Comments: No comments. 7. Are there any other concerns with the proposed approach for demonstrating BES Exceptions that haven't been covered in previous questions and comments (bearing in mind that the definition itself and the proposed Rules of Procedure changes are posted separately for comments)? Please be as specific as possible with your comments. Yes: X No: Comments: Completing the exception form does not provide the entity with any indication of whether the Exception will be granted or rejected. It would be more effective and efficient to revise the Exception request questions to provide confirmation or rejection after completion of the form. Consistent application of the exception process across regions may become challenging with separate exception request review teams.
Gerald Mannarino	New York Power Authority	5	Negative	Comments: For Question 2 on page 2, recommend that the specific types of studies to be provided are defined to add consistency and transparency to the Exception request process. Recommend that the concept and the words "material to" be included as part of the question as follows "Is the facility material to permanent Flowgates in the Eastern Interconnection....." For Question 4 on page 2, recommend that single contingency analysis be performed and submitted to demonstrate impacts to the BES. For Question 6 on page 3, recommend that "Cranking Path" be removed to be consistent with the draft BES Definition. Recommend that the concept and the words "material to and designated as part of" be included as part of the question. Recommend rewording Question 6 as follows "Is the facility a Blackstart resource material to and designated as part of the Transmission Operator's restoration plan?" For Question 7 on page 3, facilities less than two years old or under construction would not be able to provide SCADA data for the most recent consecutive two calendar year period. Facility rating changes and the magnitude of such changes which trigger application or reapplication of the exception process are not addressed. Recommend that Question 7 be revised to address these issues. Comments: For Question 2 on page 4, recommend that the specific generator ancillary service products be defined to

Voter	Entity	Segment	Vote	Comment
				add consistency and transparency to the Exception Request process. For Question 3 on page 4, recommend that confirmation of must-run generation be provided by the Reliability Coordinator, Reliability Planner, or the Balancing Authority as a clarification to the "appropriate reference".
William Palazzo	New York Power Authority	6	Negative	1. Page one of the 'Detailed Information to Support an Exception Request' contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one that is missing? Please be as specific as possible with your comments. Yes: X No: Comments: No comments. 2. Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there information that you believe needs to be on page two or three that is missing? Please be as specific as possible with your comments. Yes: No: X Comments: For Question 2 on page 2, recommend that the specific types of studies to be provided are defined to add consistency and transparency to the Exception request process. Recommend that the concept and the words "material to" be included as part of the question as follows "Is the facility material to permanent Flowgates in the Eastern Interconnection....." For Question 4 on page 2, recommend that single contingency analysis be performed and submitted to demonstrate impacts to the BES. For Question 6 on page 3, recommend that "Cranking Path" be removed to be consistent with the draft BES Definition. Recommend that the concept and the words "material to and designated as part of" be included as part of the question. Recommend rewording Question 6 as follows "Is the facility a Blackstart resource material to and designated as part of the Transmission Operator's restoration plan?" For Question 7 on page 3, facilities less than two years old or under construction would not be able to provide SCADA data for the most recent consecutive two calendar year period. Facility rating changes and the magnitude of such changes which trigger application or reapplication of the exception process are not addressed. Recommend that Question 7 be revised to address these issues. 3. Page four of the 'Detailed Information to Support an Exception Request' contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four that is missing? Please be as specific as possible with your

Voter	Entity	Segment	Vote	Comment
				comments. Yes: No: X Comments: For Question 2 on page 4, recommend that the specific generator ancillary service products be defined to add consistency and transparency to the Exception Request process. For Question 3 on page 4, recommend that confirmation of must-run generation be provided by the Reliability Coordinator, Reliability Planner, or the Balancing Authority as a clarification to the "appropriate reference". 4. Do you have concerns about an entity's ability to obtain the data they would need to file the 'Detailed Information to Support an Exception Request'? If so, please be specific with your concerns so that the SDT can fully understand the problem. Yes: No: X Comments: No comments.
Arnold J. Schuff	New York Power Authority	1	Negative	You do not have to answer all questions. Enter all comments in simple text format. Insert a "check" mark in the appropriate boxes by double-clicking the gray areas. 1. Page one of the 'Detailed Information to Support an Exception Request' contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one that is missing? Please be as specific as possible with your comments. Yes: X No: Comments: No comments. 2. Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there information that you believe needs to be on page two or three that is missing? Please be as specific as possible with your comments. Yes: No: X Comments: For Question 2 on page 2, recommend that the specific types of studies to be provided are defined to add consistency and transparency to the Exception request process. Recommend that the concept and the words "material to" be included as part of the question as follows "Is the facility material to permanent Flowgates in the Eastern Interconnection....." For Question 4 on page 2, recommend that single contingency analysis be performed and submitted to demonstrate impacts to the BES. For Question 6 on page 3, recommend that "Cranking Path" be removed to be consistent with the draft BES Definition. Recommend that the concept and the words "material to and designated as part of" be included as part of the question. Recommend rewording Question 6 as follows "Is the facility a Blackstart resource material to and designated as part of the Transmission Operator's restoration

Voter	Entity	Segment	Vote	Comment
				plan?" For Question 7 on page 3, facilities less than two years old or under construction would not be able to provide SCADA data for the most recent consecutive two calendar year period. Facility rating changes and the magnitude of such changes which trigger application or reapplication of the exception process are not addressed. Recommend that Question 7 be revised to address these issues. 3. Page four of the 'Detailed Information to Support an Exception Request' contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four that is missing? Please be as specific as possible with your comments. Yes: No: X Comments: For Question 2 on page 4, recommend that the specific generator ancillary service products be defined to add consistency and transparency to the Exception Request process. For Question 3 on page 4, recommend that confirmation of must-run generation be provided by the Reliability Coordinator, Reliability Planner, or the Balancing Authority as a clarification to the "appropriate reference". 4. Do you have concerns about an entity's ability to obtain the data they would need to file the 'Detailed Information to Support an Exception Request'? If so, please be specific with your concerns so that the SDT can fully understand the problem. Yes: No: X Comments: No comments. 5. Are there other specific characteristics that you feel would be important for presenting a case and which are generic enough that they belong in the request? If so, please identify them here and provide suggested language that could be added to the document. Yes: No: X Comments: No comments. 6. Are you aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? If so, please identify them here and provide suggested language changes that may clarify the issue. Yes: No: X Comments: No comments. 7. Are there any other concerns with the proposed approach for demonstrating BES Exceptions that haven't been covered in previous questions and comments (bearing in mind that the definition itself and the proposed Rules of Procedure changes are posted separately for comments)? Please be as specific as possible

Voter	Entity	Segment	Vote	Comment
				with your comments. Yes: X No: Comments: Completing the exception form does not provide the entity with any indication of whether the Exception will be granted or rejected. It would be more effective and efficient to revise the Exception request questions to provide confirmation or rejection after completion of the form. Consistent application of the exception process across regions may become challenging with separate exception request review teams.

Response: 1. Thank you for your support.
2. See response to #10 below. Material is an unmeasurable concept. No change made. The SDT believes that an entity should follow the TPL methodology in formulating its request. If the entity believes that an n-1 analysis is all that is needed then it can submit just an n-1 analysis. No change made. Cranking Path information is just one piece of information that may be of value to the ERO Panel in making its decision. No change made. If two years worth of data are not available, the SDT believes that a Regional Entity will accept what is available and will work with the submitter to come up with an acceptable plan to move forward.
3. Ancillary service products differ from region to region so providing a list in the form would be problematic. The form has sufficient flexibility for the entity to specify which products it is dealing with. However, the SDT has clarified the language concerning ancillary service products and must run units to indicate that only reliability-based information is pertinent.

Q2. Is the ~~generator or generator facility~~ generation resource used to provide reliability--related Ancillary Services?

Q3. Is the ~~generator~~ generation resource designated as a must run unit for reliability?

4. 5. & 6. Without a specific comment, the SDT is unable to respond.
7. The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.
There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the

Voter	Entity	Segment	Vote	Comment
ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved."				

Voter	Entity	Segment	Vote	Comment
The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.				
Doug Peterchuck	Omaha Public Power District	1	Negative	The technical document on exceptions is appropriate, but there should be a guideline on what a typical exception is. The guideline can easily be created by what is now listed within the four-item "Exclusion List". For example when looking at the current Local Network exclusion (E3), it looks to be based on a regional request and thus is in direct conflict with FERC's order. We interpret the creation of a technical document regarding a proposed BES exclusion as a case that should be examined during the Exception Process and not during the BES definition process. The simple question that FERC could eventually ask is why don't all listed exclusions include a technical justification?
Response: The SDT did not provide a technical justification for items that are simply being copied from the existing definition. Technical justification was only provided for items that are new with this revision.				
John T. Underhill	Salt River Project	3	Negative	Definition of Bulk Electric System (BES) The Blackstart "Cranking Path" has been deleted from Inclusion 3 of the BES definition. However, NERC standards EOP-005 and CIP-002, R1.2.4 require documenting the Cranking Path. In addition, CIP-002-4 identifies the Cranking Path as a Critical Asset in Attachment 1. Compliance to the NERC Standards needs to be an exact science whenever possible. SRP does not argue the inclusion or exclusion of Cranking Path. However, if it is excluded, guidance must be provided on whether or not a Cranking Path is subject to the previously mentioned Standards. Detailed Information to Support BES Exceptions Request SRP agrees with the WECC Staff recommendation on the "Detailed Information to Support BES Exceptions Request." "WECC Staff believes that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support

Voter	Entity	Segment	Vote	Comment
				their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO."
Steven J Hulet	Salt River Project	6	Negative	SRP agrees with the WECC Staff recommendation on the "Detailed Information to Support BES Exceptions Request." "WECC Staff believes that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods

Voter	Entity	Segment	Vote	Comment
				and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO."
Robert Kondziolka	Salt River Project	1	Negative	Definition of Bulk Electric System (BES) The Blackstart "Cranking Path" has been deleted from Inclusion 3 of the BES definition. However, NERC standards EOP-005 and CIP-002, R1.2.4 require documenting the Cranking Path. In addition, CIP-002-4 identifies the Cranking Path as a Critical Asset in Attachment 1. Compliance to the NERC Standards needs to be an exact science whenever possible. SRP does not argue the inclusion or exclusion of Cranking Path. However, if it is excluded, guidance must be provided on whether or not a Cranking Path is subject to the previously mentioned Standards. Detailed Information to Support BES Exceptions Request SRP agrees with the WECC Staff recommendation on the "Detailed Information to Support BES Exceptions Request." "WECC Staff believes that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO."

Voter	Entity	Segment	Vote	Comment
Response: Cranking Path information is just one piece of information that may be of value to the ERO Panel in making its decision. No change made. The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception				

Voter	Entity	Segment	Vote	Comment
request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.				
Marie Knox	Midwest ISO, Inc.	2	Negative	We support the SDT's decision to exclude the cranking paths from the BES definition since testing and verification of the use of facilities in the cranking path is already covered by the appropriate EOP standards. However Inclusion I3 (blackstart) is extraneous given there is already designation specific for system restoration covered by an existing standard; EOP-005-2. Therefore, information on whether the facility is part of a Cranking Path associated with a Blackstart Resource, should not be required to receive consideration for an exception.
Response: The SDT disagrees that Blackstart Resources should not be included in the BES Definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without				

Voter	Entity	Segment	Vote	Comment
connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES elements. No change made. Cranking Path information is just one piece of information that may be of value to the ERO Panel in making its decision. EOP-005-2 has no relevance in this regard. No change made.				
Linda Jacobson	City of Farmington	3	Negative	FEUS appreciates the efforts of the SDT. However, the Detailed Information to Support an Exception Request does not align with the Draft Appendix 5C as it is applied to 'Facilities' rather than 'Elements' and is unclear how it is applied for an Inclusion Exception. Additional Comments have been submitted using the comment form.
Response: Please see the detailed responses to comments for Farmington in the general consideration of comments document for the technical criteria.				
Gregg R Griffin	City of Green Cove Springs	3	Affirmative	GCS appreciates the SDT's work on this project. For the most part,GCS supports what it believes to be the intent of the proposed language. The proposed specific exclusion of facilities used in the local distribution of electric energy is appropriate and consistent with Section 215 of the Federal Power Act. However, we have suggestions to better carry out what we believe to be the SDT's intent. The first sentence can be read as: "... all ... Real Power and Reactive Power resources connected at 100 kV or higher", which is surely not what the SDT intends. The basic problem is that Inclusions I2 and I4 do not modify the first sentence, e.g., from a set theory perspective, the set described by the first sentence includes the sets described in inclusions I2 and I4; hence, I2 and I4 do not modify the first sentence. From a literal reading, this would cause any size generator connected at 100 kV to be included, which is surely not the intent of the SDT. For similar reasons, the core definition and Inclusion I5 now has the effect of including all generators connected at 100 kV since a generator is a "dynamic device ... supplying or absorbing Reactive Power". The word "dedicated" in I5 is not sufficient in GCS's mind to unambiguously exclude generators from this statement. FMPA suggests the following wording to address these issues: "Transmission Elements (not including elements used in the local distribution of electric energy) and Real Power

Voter	Entity	Segment	Vote	Comment
				and Reactive Power resources as described in the list below, unless excluded by Exclusion or Exception: a. Transmission Elements other than transformers and reactive resources operated at 100 kV or higher. b. Transformers with primary and secondary terminals operated at 100 kV or higher. c. Generating resource(s) (with gross individual or gross aggregate nameplate rating per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above. d. Blackstart Resources identified in the Transmission Operator's restoration plan. e. Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above, but not including generation on the retail side of the retail meter. f. Non-generator static or dynamic devices dedicated to supplying or absorbing more than 6 MVAr of Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in bullet 2 above." 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: Yes No: Comments: Please see comments to Question 1 3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: yes No: Comments: Please see comments to Question 1 4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: Yes No: Comments: Please see comments to Question 1. 5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)?

Voter	Entity	Segment	Vote	Comment
				If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: Yes No: Comments: We recommend clarifying that the dispersed power resources covered by this inclusion do not include generators on the retail side of the retail meter. Specifically, we recommend that the Inclusion read: "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100kV or above, but not including generation on the retail side of the retail meter." 6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: Comments: To help clarify and to avoid inclusion of de minimis reactive resources, we propose a size threshold of 6 MVAr consistent with the smallest size generator included in the BES at a 0.95 power factor, which is a common leading power factor used in Facility Connection Requirements for generators. In other words, 6 MVAr is consistent with typically the least amount of MVAr required to be absorbed by the smallest generator meeting the registry criteria. 7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: Yes No: Comments: FMPA supports the exclusion of radial systems from the BES Definition. Such systems are generally not "necessary for operating an interconnected electric transmission network," the standard in Orders 743 and 743-A. We have several suggestions to clarify the proposed language for this Exclusion. Proposed Exclusion E1 refers to "[a] group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher." We appreciate the SDT's clarification of the point of connection requirement, but the term "a single point of connection" should be further defined (more clearly than just by voltage), and should be generic enough to encompass the various bus configurations. It is not the case, for example, that each individual breaker position

Voter	Entity	Segment	Vote	Comment
				in a ring bus is a separate point of connection for this purpose; in that situation, a bus at one voltage level at one substation should be considered “a single point of connection.” Some examples of configurations that should be considered a single point of connection for this purpose are at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf, Examples 1-6. Although the core definition (appropriately) refers to “Transmission Elements” (with a capital “T”), proposed Exclusion E1 refers to “transmission Elements” (with a lowercase “t”). To avoid confusion, either “Transmission” should be capitalized in both locations, or the word “transmission” should simply be deleted from Exclusion E1, leaving a “group of contiguous Elements.” We understand that the lack of capitalization may have been a deliberate choice by the SDT in an attempt to avoid confusion that SDT members believe exists in the Glossary definition. If the Glossary definition of Transmission is unclear-which GCS does not necessarily believe is the case-the answer is not to simply abandon the Glossary definition in favor of an entirely und
Response: Please see the detailed responses to comments for Green Cove in the ballot consideration of comments document for the definition.				
Jose Escamilla	CPS Energy	3	Negative	The sample form "Request for Exception to the Bulk Electric System Definition" developed by the BES ROP Team is a more complete form.
Response: The SDT believes that the indicated form was an early draft and is no longer applicable. The SDT has worked closely with the Rules of Procedure team to make certain that the form is coordinated with the proposed ERO Rules of Procedure changes.				
David Kiguel	Hydro One Networks, Inc.	3	Negative	After careful analysis of the proposed documents, Hydro One Networks Inc. is casting a negative vote. We commend the SDT for the effort in facing the challenge. However, we believe that the proposed definition and the exception request criteria still needs further work. Some issues need to be resolved before a final approval is granted. Please see our detailed comments as provided in the on-line system.
Response: Please see the detailed responses to comments for Hydro One in the general consideration of comments document for the technical criteria.				
Jack W Savage	Modesto Irrigation	3	Negative	MID is voting No with the following comments. Inclusions and exclusions are based upon the ERO Statement of Compliance Registry Criteria - currently 75MVA. What

Voter	Entity	Segment	Vote	Comment
	District			is the SDT's technical justification for using this generation level? If 75MVA is the criteria for including facilities as part of the BES, why is that same criteria not applied at voltages below 100kv? Is 75MVA of generation within an area whose load far exceeds that 75MVA cause to classify that entire area as part of the BES and not exclude it as a Local Network? Why are customer owned generators treated differently than other generators? Where is "non-retail generation" defined? The Detailed Information to Support an Exception Request requests information that is not included or mentioned in the definition of the BES. One example is reference to a Balancing Authorities most severe single contingency outage. How does the SDT justify inclusion of these type of questions which are not supported by the actual definition of the BES?
Response: The SDT recognizes that some candidate local networks will have far in excess of 75 MVA of load demand, yet it believes that the 75 MVA threshold value given in Exclusion E3.a is an appropriate level regardless of the amount of load. This value is consistent with the existing threshold of aggregate generation in the ERO Statement of Compliance Registry Criteria. The generation values used in the BES definition will receive more attention and refinement as part of Phase 2 of this Project 2010-17. The SDT assumes the commenter is referring to Exclusion E2. This exclusion is simply clarifying what already exists in the ERO Statement of Compliance Registry Criteria for behind-the-meter generation. Non-retail generation is the generation on the system (supply) side of the meter. The indicated information is simply one piece of data that the SDT felt might be of value in the decision process and does not believe that data requested has to match one for one with the actual language of the definition.				
Jeff Nelson	Springfield Utility Board	3	Negative	Excellent progress has been made, but the technical information to support BES exceptions needs strengthening. For example, unscheduled flows in or out of a local network should not be used as a determination of whether a network is excluded. Reactive devices needs clarification as there are some reactive devices used for power factor correction, for example, on systems above 100kV that SUB believes should be exempt from the BES
Response: The SDT believes it is vital to ensure both that power flow is always in the direction from the BES toward the LN at all points of connection, and that the LN facilities not be used for “wheeling” type transactions. The SDT believes the existing language accomplishes this. The suggested language in this comment touches on an important aspect, the scheduled use of the facilities, but the SDT believes that the existing language is more appropriate to express this point. No change made. Special circumstances such as described by SUB will need to be submitted to the exception process. In general, the SDT believes that reactive				

Voter	Entity	Segment	Vote	Comment
devices above 100 kV should be part of the BES.				
Mark Ringhausen	Old Dominion Electric Coop.	4	Negative	I cannot vote for this as it references in I2 the ERO Statement of Compliance Registry Criteria, which can be changed without stakeholder review and approval. The industry would be held to a changing standard that is not included in the Standars itself.
Response: This is a factor for the definition and not the criteria. Voting on the two separate issues should be done separately on their own individual merits. In response to comments, the SDT has deleted the reference to the ERO Statement of Compliance Registry and replaced it with the existing numeric values. This way, any changes to the ERO Statement of Compliance Registry prior to resolution of threshold values in Phase II will not affect the definition				
Michelle R DAntuono	Occidental Chemical	5	Negative	1. Page 1 of the Detailed Information to Support an Exception Request contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one and is missing? Please be as specific as possible with your comments. No: X Comments: It would be helpful to specify what the “key performance measures of BES reliability” are in the instructions (or at least examples of what these measures are in relation to the TPL Table 1). There must be some guidance on the relative level that should be considered acceptable to exclude a facility. Since the Regional Entities are responsible under the proposed Rules of Procedure to recommend the approval or disapproval of an exception request, it makes sense that they should provide this guidance. However, the DBESSDT should suggest an acceptable minimum - perhaps 10% of the allowed voltage transient dip or frequency excursion as assessed under a single contingency scenario. 2. Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there information that you believe needs to be on page three and is missing? Please be as specific as possible with your comments. No: X Comments: Item 4 needs to be expanded to provide some guidance on what an acceptable “impact to the over-all reliability of the BES” is. Also, there needs to be some sort of qualifier for the request to specify the “most severe system impact of an outage of the facility,” i.e., at least add the

Voter	Entity	Segment	Vote	Comment
				qualifier that it only requires a credible scenario. For example, what is the status of the BES when the outage of the facility occurs such that it represents the "most severe impact." Most Regional Entities have settled on Transmission Planning models and thresholds that any new transmission deployment must minimally meet before it goes online. In some Regions, power transfer distribution factor may be gating factor - others may look at transient response. Whatever the case, the Regions should use those same criteria for BES exceptions - reduced to some conservative percentage level; perhaps 10% of the available margin. 3. Page four of the Detailed Information to Support an Exception Request contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four and is missing? Please be as specific as possible with your comments. No: X Comments: Item 4 needs to be expanded to provide some guidance on what an acceptable "impact to the over-all reliability of the BES" is. Also, there needs to be some sort of qualifier for the request to specify the "most severe system impact of an outage of the facility," i.e., at least add the qualifier that it only requires a credible scenario. For example, what is the status of the BES when the outage of the facility occurs such that it represents the "most severe impact." Most Regional Entities have settled on Transmission Planning models and thresholds that any new generation deployment must minimally meet before it goes online. In some Regions, power transfer distribution factor may be gating factor - others may look at transient response. Whatever the case, the Regions should use those same criteria for BES exceptions - reduced to some conservative percentage level; perhaps 10% of the available margin. 4. Do you have concerns about an entity's ability to obtain the data they would need to file the Detailed Information to Support an Exception Request? If so, please be specific with your concerns so that the SDT can fully understand the problem. Yes: X Comments: Having the data to perform studies of generator outage effects on the BES may require sharing of potentially confidential and/or classified information between the generator and transmission entities. Obviously, "base case" and possibly "N-1" information would need to be shared. Hence, there needs to be some assurance that information will be provided (Possibly in the proposed Appendix 5C of the NERC Rules of Procedure).

Voter	Entity	Segment	Vote	Comment
				5. Are there other specific characteristics that you feel would be important for presenting a case and generic enough that they belong in the request? If so, please identify them here and provide suggested language that could be added to the document. Yes: No: Comments: 6. Are you aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? If so, please identify them here and provide suggested language changes that may clarify the issue. Yes: X Comments: This Detailed Information to Support an Exemption Request document obviously does not conform to FERC Order 743, Sections 115,116 "NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid." The question is will the justification for declining to observe this FERC directive be sufficient. We would assert that is it a lesser consequence for the BES to raise the single generation threshold to 75 MVA than it is to violate this FERC directive by not providing clear, objective, transparent and uniform criteria for the exemption process. We understand that the FERC directive was not well conceived in that if a bright line criteria could be developed for the exemption process, it should be included in the BES Definition itself. However, it leaves the exemption process that FERC had originally conceived non-attainable and causes angst to the industry. 7. Are there any other concerns with this approach that haven't been covered in previous questions and comments bearing in mind that the definition itself and the proposed Rules of Procedure changes are posted separately for comments? Please be as specific as possible with your comments. Yes: No: Comments:
Response: 1. 2. & 3. The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional				

Voter	Entity	Segment	Vote	Comment
discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.				

Voter	Entity	Segment	Vote	Comment
Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. 4. If confidential data is involved in the submittal, the SDT expects the Regional Entity to work with the submitter to get around this problem. 5. & 7. Thank you for your response. 6. The SDT believes the process is in alignment with Order 743 directives as explained above.				
Colin Anderson	Ontario Power Generation Inc.	5	Negative	OPG has cast a negative ballot in the BES Definition poll. Since we disagree with the Definition, and the justification for it, we don't see the need for an exception process. OPG continues to question the need for the changes required (and costs imposed) as a result of the new BES definition. OPG disagrees in general with proceeding to implement a 100 kV brightline definition in the absence of a properly quantified cost/benefit analysis. Entities are being asked to incur a high cost for no demonstrated benefit in wide-area reliability.
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at				

Voter	Entity	Segment	Vote	Comment
the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the				

Voter	Entity	Segment	Vote	Comment
proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 & 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 & 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.				
Steven Grega	Public Utility District No. 1 of Lewis County	5	Negative	Process should make it easier to prove facility is a non-BES; process should take into account the plant load factor, if the plant is dispatchable and if it cricital resource as determine by the BA. Most facilities should be able to prove they are not part of the BES. In WECC, only critical cranking paths are part of BES.
Response: The SDT has attempted to make the exception process as easy as possible while still providing the information necessary to properly process a request. Factors such as described by the commenter can be supplied with the submittal as there is no limit or constraint on additional information that can be supplied by the submitter.				

Voter	Entity	Segment	Vote	Comment
Larry Nordell	Montana Consumer Counsel	8	Negative	The BES exception process must be cognizant of costs and benefits. In addition to the explicit information required in the current proposal it needs to provide an opportunity for an exception for elements whose failure would have no consequential impacts on the bulk system, and a process for an exception for elements for which the costs inclusion can be shown to be clearly in excess of the benefits of inclusion.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 & 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 & 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.				
Diane J Barney	National Association of Regulatory Utility Commissioners	9	Negative	The draft definition has a circularity issue with the Registry, lacks clarity in some aspects, and lacks a technical basis and cost/benefit analysis. (See specific comments submitted.)
Response: Please see the specific responses provided.				
John D Varnell	Tenaska Power Services Co.	6	Abstain	Which part of this definition has the highest priority inclusions or exclusions.
Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included				

Voter	Entity	Segment	Vote	Comment
in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.				
Brenda Powell	Constellation Energy Commodities Group	6	Affirmative	While the Technical Principles for BES Exception are acceptable, they are quite complicated. Further simplification may ease the process.

Voter	Entity	Segment	Vote	Comment
Response: The SDT has attempted to make the exception process as easy as possible while still providing the information necessary to properly process a request.				
Greg Lange	Public Utility District No. 2 of Grant County	3	Affirmative	Public Utility District No. 2 of Grant County (GCPD) agrees that the General Instructions set forth the basic information that would be necessary to support an Exception Request. GCPD is concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. GCPD envisions that at least four different kinds of documents would be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details. GCPD suggests that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts. GCPD agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. GCPD suggests three refinements to the questions: (1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter is not.

Voter	Entity	Segment	Vote	Comment
				(2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, GCPD suggests modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.
Response: The SDT believes that the form allows for the flexibility of an entity supplying any types of diagrams that it believes will support its request. This is a preferable situation to coming up with a hard coded list. No change made. The SDT will consider completing a sample form in Phase II. The SDT has modified the wording of the question to clarify the intent. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability-~~-~~related Ancillary Services? The SDT does not believe that the suggested wording change provides any additional clarification and may even cause confusion. No change made. The SDT agrees that any information that might support a request should be allowed and has clarified the wording on page 1 to that effect. **Page 1** - List any attached supporting documents and any additional information that is included to supports the request:				
Jeffrey S Brame	North Carolina Electric Membership Corp.	5	Affirmative	In general, we support the "Detailed Information to Support an Exception Request". However, we have identified a few concerns that warrant the SDT's consideration. Q1, Q5 and Q6 in the Transmission Facilities section have a "Description/Comments" section. What type of information should be included

Voter	Entity	Segment	Vote	Comment
				under the Description for each of these questions? Providing more guidance here would help achieve the "standardization, clarity and continuity of process" that we seek. Regarding Q2: A permanent flowgate should not be part of the detailed information to support an exception. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no ransactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the permanent adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. In the Transmission Facilities section, we are unclear about what "an appropriate list" in Q3 is supposed to be. Is it supposed to be a list of all IROLs or only those for which the answer is yes? Why is a list even necessary since the answer to the question answers Exclusion E3.c? If the answer to Q3 is no, is this asking the submitter to prove the negative? For Q2 in the Generation Facilities section, the definition of ancillary services varies and can be quite broad. It can include reactive power and voltage support for example. All generators provide some reactive power and voltage support. Thus, ancillary services should be further defined or one could construe it to limit any generator from being excluded. For Q1 in the Generation Facilities section, some generation owners may not be able to obtain their BA's most severe single Contingency. Many generator owners will not have access to the data necessary to demonstrate the reliability impact to the BES. This is particularly true for transmission dependent utilities.

Voter	Entity	Segment	Vote	Comment
Doug White	North Carolina Electric Membership Corp.	3	Affirmative	In general, we support the proposed definition of the BES. However, we have identified a few concerns that warrant the SDT's consideration. We'd prefer to see the language from the ERO Statement of Compliance Registry Criteria repeated within the BES Definition itself instead of referencing an outside document. As it stands right now, the Compliance Registry Criteria needs to stay intact for Phase I of this project. That makes the Compliance Registry Criteria reliant on the BES Definition and vice versa. We understand that the Statement of Compliance Registry Criteria may be reviewed/revised at the same time Phase 2 of this project is being developed, therefore we agree with Inclusion I2 of this draft. Blackstart Resources can actually be on the distribution system. There is still the question of whether the distribution system would then be subjected to the enforceable standards. If so, there would most likely be a significant cost increase associated with tracking compliance for these distribution systems without a commensurate increase in reliability since Blackstart Resources are rarely used. This could very well cause entities to un-designate Blackstart Resources on distribution systems to avoid these distribution systems from becoming part of the BES. The same rationale that was used for eliminating cranking paths could also be applied to Blackstart Resources. A flowgate should not be used to limit applicability of E3. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the "permanent" adjective applied to flowgates probably limits the

Voter	Entity	Segment	Vote	Comment
				applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First, flowgates are created to manage congestion. The IDC is more of a congestion management tool than a reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve IROLs that have been violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The characteristics of the flowgate make it a good proxy for estimating how much contractual use has been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROLs, many simply are not. The term "non-retail generation" used in Exclusion E1 (item c) and again in E3 (item a) should be clarified (see comments for question 8 below). The Note after item c should also be clarified to indicate that closing a normally open switch doesn't affect this exclusion. Detailed Information to Support an Exception Request: Vote affirmative with the comments below Comments for Ballot (these may be copied and pasted): In general, we support the "Detailed Information to Support an Exception Request". However, we have identified a few concerns that warrant the SDT's consideration. Q1, Q5 and Q6 in the Transmission Facilities section have a "Description/Comments" section. What type of information should be included under the Description for each of these questions? Providing more guidance here would help achieve the "standardization, clarity and continuity of process" that we seek. Regarding Q2: A permanent flowgate should not be part of the detailed information to support an exception. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates

Voter	Entity	Segment	Vote	Comment
				in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the permanent adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. In the Transmission Facilities section, we are unclear about what "an appropriate list" in Q3 is supposed to be. Is it supposed to be a list of all IROLs or only those for which the answer is yes? Why is a list even necessary since the answer to the question answers Exclusion E3.c? If the answer to Q3 is no, is this asking the submitter to prove the negative? For Q2 in the Generation Facilities section, the definition of ancillary services varies and can be quite broad. It can include reactive power and voltage support for example. All generators provide some reactive power and voltage support. Thus, ancillary services should be further defined or one could construe it to limit any generator from being excluded. For Q1 in the Generation Facilities section, some generation owners may not be able to obtain their BA's most severe single Contingency. Many generator owners will not have access to the data necessary to demonstrate the reliability impact to the BES. This is particularly true for transmission dependent utilities.

Response: In response to comments, the SDT has deleted the reference to the ERO Statement of Compliance Registry and replaced it with the existing numeric values. This way, any changes to the ERO Statement of Compliance Registry prior to resolution of threshold values in Phase II will not affect the definition.

The SDT has determined that it should be conservative with regard to allowing exclusion for radial systems that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent radial systems without blackstart resources. No change made.

Voter	Entity	Segment	Vote	Comment
The SDT believes that the language in Exclusion E3.c prohibiting "Flowgates" from qualifying for definitional exclusion is appropriate and necessary. As a definitional exclusion characteristic, Exclusion E3.c must follow the principle of being a bright-line and easily identifiable, and as such, the SDT feels that the definition cannot allow some types of Flowgates and disallow others. Flowgates must continue to be a prohibiting characteristic under Exclusion E3, since these facilities are more likely to be used in the transfer of bulk power than not. An entity who wishes to make a case for exclusion of a unique type of Flowgate facility can do so through the exception process. The SDT believes that the continued qualifier of "permanent" associated with the term "Flowgate" addresses the majority of the concern in this comment. No change made. Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. The requesting entity should supply any and all information that it feels will help support its request. No change made. The SDT has modified the wording of the question to clarify the intent. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability--related Ancillary Services? Any information that an entity believes will support its request should be included. No change made. The SDT believes that the language in Exclusion E3.c prohibiting "Flowgates" from qualifying for definitional exclusion is appropriate and necessary. As a definitional exclusion characteristic, Exclusion E3.c must follow the principle of being a bright-line and easily identifiable, and as such, the SDT feels that the definition cannot allow some types of Flowgates and disallow others. Flowgates must continue to be a prohibiting characteristic under Exclusion E3, since these facilities are more likely to be used in the transfer of bulk power than not. An entity who wishes to make a case for exclusion of a unique type of Flowgate facility can do so through the exception process. The SDT believes that the continued qualifier of "permanent" associated with the term "Flowgate" addresses the majority of the concern in this comment. No change made. The SDT believes that the wording is clear as stated and that the list would be those IROLs that include the Element(s) in question. No change made. The SDT has modified the wording of the question to clarify the intent. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability--related Ancillary Services? Based on the comments received, the SDT believes that entities will be able to obtain the requisite information necessary to submit a request. However, should an entity have difficulty, they will need to obtain the assistance of their Regional Entity to secure the data. If the entity still can't obtain the needed data, then the SDT fully expects that entity's Regional Entity to work with them to come up with a plan that will allow that entity to fill out the request form in a manner that will be acceptable to the Regional Entity so that processing of the request can continue.				

Voter	Entity	Segment	Vote	Comment
Claston Augustus Sunanon	Orlando Utilities Commission	6	Affirmative	Orlando Utilities Commission supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date.
Brad Chase	Orlando Utilities Commission	1	Affirmative	Orlando Utilities Commission supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. in addition, phase II should include a clear distinction between the BES and BPS.
Ballard K Mutters	Orlando Utilities Commission	3	Affirmative	Orlando Utilities Commission supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date.
Response: The exception process is being worked on in parallel with the definition and will be part of the same filing. Phase II will start up as soon as Phase I is completed and the SDT has the available resources to work on it.				
Noman Lee Williams	Sunflower Electric Power Corporation	1	Affirmative	Q1, Q5 and Q6 in the Transmission Facilities section have a "Description/Comments" section. What type of information should be included under the Description for each of these questions? Providing more guidance here would help achieve the "standardization, clarity and continuity of process" that we seek. Regarding Q2: A permanent flowgate should not be part of the detailed information to support an exception. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms

Voter	Entity	Segment	Vote	Comment
				definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the permanent adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First,flowgates are created to manage congestion. The IDC is more of a congestion management tool than a reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve IROLs that have been violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The characteristics of the flowgate make it a good proxy for estimating how much contractual use has been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROLs, many simply are not. In the Transmission Facilities section, we are unclear about what "an appropriate list" in Q3 is supposed to be. Is it supposed to be a list of all IROLs or only those for which the answer is yes? Why is a list even necessary since the answer to the question answers Exclusion E3.c? If the answer to Q3 is no, is this asking the submitter to prove the negative? For Q2 in the Generation Facilities section, the definition of ancillary services varies and can be quite broad. It can include reactive power and voltage support for example. All generators provide some reactive power and voltage support. Thus, ancillary services should be further defined or one could construe it to limit any generator from being excluded. For Q1 in the Generation Facilities section, some generation owners may not be

Voter	Entity	Segment	Vote	Comment
				able to obtain their BA's most severe single Contingency. Many generator owners will not have access to the data necessary to demonstrate the reliability impact to the BES. This is particularly true for transmission dependent utilities.
James Jones	Southwest Transmission Cooperative, Inc.	1	Affirmative	In general, we support the "Detailed Information to Support an Exception Request". However, we have identified a few concerns that warrant the SDT's consideration. Q1, Q5 and Q6 in the Transmission Facilities section have a "Description/Comments" section. What type of information should be included under the Description for each of these questions? Providing more guidance here would help achieve the "standardization, clarity and continuity of process" that we seek. Regarding Q2: A permanent flowgate should not be part of the detailed information to support an exception. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the permanent adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First,flowgates are created to manage congestion. The IDC is more of a congestion management tool than a reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve IROLs that have been

Voter	Entity	Segment	Vote	Comment
				violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The characteristics of the flowgate make it a good proxy for estimating how much contractual use has been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROLs, many simply are not. In the Transmission Facilities section, we are unclear about what "an appropriate list" in Q3 is supposed to be. Is it supposed to be a list of all IROLs or only those for which the answer is yes? Why is a list even necessary since the answer to the question answers Exclusion E3.c? If the answer to Q3 is no, is this asking the submitter to prove the negative? For Q2 in the Generation Facilities section, the definition of ancillary services varies and can be quite broad. It can include reactive power and voltage support for example. All generators provide some reactive power and voltage support. Thus, ancillary services should be further defined or one could construe it to limit any generator from being excluded. For Q1 in the Generation Facilities section, some generation owners may not be able to obtain their BA's most severe single Contingency. Many generator owners will not have access to the data necessary to demonstrate the reliability impact to the BES. This is particularly true for transmission dependent utilities.

Response: Any information that an entity believes will support its request should be included. No change made.
The SDT believes that the language in Exclusion E3.c prohibiting "Flowgates" from qualifying for definitional exclusion is appropriate and necessary. As a definitional exclusion characteristic, Exclusion E3.c must follow the principle of being a bright-line and easily identifiable, and as such, the SDT feels that the definition cannot allow some types of Flowgates and disallow others. Flowgates must continue to be a prohibiting characteristic under Exclusion E3, since these facilities are more likely to be used in the transfer of bulk power than not. An entity who wishes to make a case for exclusion of a unique type of Flowgate facility can do so through the exception process. The SDT believes that the continued qualifier of "permanent" associated with the term "Flowgate" addresses the majority of the concern in this comment. No change made.
Any information that an entity believes will support its request should be included. No change made.
The SDT has modified the wording of the question to clarify the intent.

Q2. Is the ~~generator or generator facility~~ generation resource used to provide reliability--related Ancillary Services?

Based on the comments received, the SDT believes that entities will be able to obtain the requisite information necessary to submit a request.

Voter	Entity	Segment	Vote	Comment
However, should an entity have difficulty, they will need to obtain the assistance of their Regional Entity to secure the data. If the entity still can't obtain the needed data, then the SDT fully expects that entity's Regional Entity to work with them to come up with a plan that will allow that entity to fill out the request form in a manner that will be acceptable to the Regional Entity so that processing of the request can continue.				
Paul Cummings	City of Redding	5	Affirmative	Redding's vote is conditional on the adoption and dedication to Phase 2 of this project.
Response: Phase II will begin as soon as Phase I is over and the SDT has the resources available to continue.				
Sam Nietfeld	Snohomish County PUD No. 1	5	Affirmative	Below are SNPD's responses to the NERC comment form for the Definition of the BES (Project 2010-17)Technical Principles for Demonstrating BES Exceptions). SNPD believes the refinements below will clarify the current draft of the BES definition, without hanging the current intent. 1. Page one of the 'Detailed Information to Support an Exception Request' contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. SNPD is concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. SNPD envisions that at least four different kinds of documents would be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details, such as breaker settings. SNPD suggests that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts. 2. Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there

Voter	Entity	Segment	Vote	Comment
				information that you believe needs to be on page two or three that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest three modifications to the proposed language to ensure consistency with Section 215 of the Federal Power Act, with the BES Definition, and to provide an entity seeking an Exception with the opportunity to submit all relevant information: 1) SNPD suggests that a new question should be added concerning the function of the facility, which would read: "Does the facility function as a local distribution facility rather than a Transmission facility? If yes, please provide a detailed explanation of your answer." Section 215(a)(1) of the FPA makes clear that "facilities used in the local distribution of electric energy" are excluded from the BES, 16 U.S.C. Â§ 824o(a)(1), and the most recent draft of the BES definition incorporates the same language. SNPD believes a question to address the function of the Element or system subject to an Exception Request is necessary to determine whether the Element or system is "used" in local distribution and thereby to ensure that this statutory limit on the BES is observed in the Exceptions process. Further, we believe a variety of information may be relevant to determining whether a particular facility functions as local distribution rather than as part of the BES. For example, if power is not scheduled across the facility or if capacity on the system is not posted on the relevant OASIS, it is likely to function as local distribution, not transmission. Similarly, if power enters the system and is delivered to load within the system rather than moving to load located on another system, its function is local distribution rather than transmission. SNPD proposes the language above as an open-ended question so that the entity submitting the Exceptions Request can provide this and any other information it deems relevant to facility function. 2) SNPD suggests modifying question 6 to "Is the facility part a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. 3) A general

Voter	Entity	Segment	Vote	Comment
				"catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While SNPD believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant. 3. Page four of the 'Detailed Information to Support an Exception Request' contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. SNPD suggests three refinements to the questions: 1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter is not. 2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, SNPD suggests modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the

Voter	Entity	Segment	Vote	Comment
				generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? 3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional in
John D Martinsen	Public Utility District No. 1 of Snohomish County	4	Affirmative	Below are SNPD's responses to the NERC comment form for the Definition of the BES (Project 2010-17)Technical Principles for Demonstrating BES Exceptions). SNPD believes the refinements below will clarify the current draft of the BES definition, without hanging the current intent. 1. Page one of the 'Detailed Information to Support an Exception Request' contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. SNPD is concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. SNPD envisions that at least four different kinds of documents would be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details, such as breaker settings. SNPD suggests that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts. 2. Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there

Voter	Entity	Segment	Vote	Comment
				information that you believe needs to be on page two or three that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest three modifications to the proposed language to ensure consistency with Section 215 of the Federal Power Act, with the BES Definition, and to provide an entity seeking an Exception with the opportunity to submit all relevant information: 1) SNPD suggests that a new question should be added concerning the function of the facility, which would read: "Does the facility function as a local distribution facility rather than a Transmission facility? If yes, please provide a detailed explanation of your answer." Section 215(a)(1) of the FPA makes clear that "facilities used in the local distribution of electric energy" are excluded from the BES, 16 U.S.C. Â§ 824o(a)(1), and the most recent draft of the BES definition incorporates the same language. SNPD believes a question to address the function of the Element or system subject to an Exception Request is necessary to determine whether the Element or system is "used" in local distribution and thereby to ensure that this statutory limit on the BES is observed in the Exceptions process. Further, we believe a variety of information may be relevant to determining whether a particular facility functions as local distribution rather than as part of the BES. For example, if power is not scheduled across the facility or if capacity on the system is not posted on the relevant OASIS, it is likely to function as local distribution, not transmission. Similarly, if power enters the system and is delivered to load within the system rather than moving to load located on another system, its function is local distribution rather than transmission. SNPD proposes the language above as an open-ended question so that the entity submitting the Exceptions Request can provide this and any other information it deems relevant to facility function. 2) SNPD suggests modifying question 6 to "Is the facility part a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. 3) A general

Voter	Entity	Segment	Vote	Comment
				"catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While SNPD believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant. 3. Page four of the 'Detailed Information to Support an Exception Request' contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. SNPD suggests three refinements to the questions: 1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter is not. 2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, SNPD suggests modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the

Voter	Entity	Segment	Vote	Comment
				generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? 3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional in
William T Moojen	Snohomish County PUD No. 1	6	Affirmative	Below are SNPD's responses to the NERC comment form for the Definition of the BES (Project 2010-17)Technical Principles for Demonstrating BES Exceptions). SNPD believes the refinements below will clarify the current draft of the BES definition, without hanging the current intent. 1. Page one of the 'Detailed Information to Support an Exception Request' contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. SNPD is concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. SNPD envisions that at least four different kinds of documents would be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details, such as breaker settings. SNPD suggests that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts. 2. Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there

Voter	Entity	Segment	Vote	Comment
				information that you believe needs to be on page two or three that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest three modifications to the proposed language to ensure consistency with Section 215 of the Federal Power Act, with the BES Definition, and to provide an entity seeking an Exception with the opportunity to submit all relevant information: 1) SNPD suggests that a new question should be added concerning the function of the facility, which would read: "Does the facility function as a local distribution facility rather than a Transmission facility? If yes, please provide a detailed explanation of your answer." Section 215(a)(1) of the FPA makes clear that "facilities used in the local distribution of electric energy" are excluded from the BES, 16 U.S.C. Â§ 824o(a)(1), and the most recent draft of the BES definition incorporates the same language. SNPD believes a question to address the function of the Element or system subject to an Exception Request is necessary to determine whether the Element or system is "used" in local distribution and thereby to ensure that this statutory limit on the BES is observed in the Exceptions process. Further, we believe a variety of information may be relevant to determining whether a particular facility functions as local distribution rather than as part of the BES. For example, if power is not scheduled across the facility or if capacity on the system is not posted on the relevant OASIS, it is likely to function as local distribution, not transmission. Similarly, if power enters the system and is delivered to load within the system rather than moving to load located on another system, its function is local distribution rather than transmission. SNPD proposes the language above as an open-ended question so that the entity submitting the Exceptions Request can provide this and any other information it deems relevant to facility function. 2) SNPD suggests modifying question 6 to "Is the facility part a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. 3) A general

Voter	Entity	Segment	Vote	Comment
				"catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While SNPD believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant. 3. Page four of the 'Detailed Information to Support an Exception Request' contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. SNPD suggests three refinements to the questions: 1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter is not. 2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, SNPD suggests modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the

Voter	Entity	Segment	Vote	Comment
				generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? 3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional in
Long T Duong	Snohomish County PUD No. 1	1	Affirmative	Below are SNPD's responses to the NERC comment form for the Definition of the BES (Project 2010-17)Technical Principles for Demonstrating BES Exceptions). SNPD believes the refinements below will clarify the current draft of the BES definition, without hanging the current intent. 1. Page one of the 'Detailed Information to Support an Exception Request' contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. SNPD is concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. SNPD envisions that at least four different kinds of documents would be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details, such as breaker settings. SNPD suggests that a generic example of a completed form be available to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts. 2. Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there

Voter	Entity	Segment	Vote	Comment
				information that you believe needs to be on page two or three that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest three modifications to the proposed language to ensure consistency with Section 215 of the Federal Power Act, with the BES Definition, and to provide an entity seeking an Exception with the opportunity to submit all relevant information: 1) SNPD suggests that a new question should be added concerning the function of the facility, which would read: "Does the facility function as a local distribution facility rather than a Transmission facility? If yes, please provide a detailed explanation of your answer." Section 215(a)(1) of the FPA makes clear that "facilities used in the local distribution of electric energy" are excluded from the BES, 16 U.S.C. Â§ 824o(a)(1), and the most recent draft of the BES definition incorporates the same language. SNPD believes a question to address the function of the Element or system subject to an Exception Request is necessary to determine whether the Element or system is "used" in local distribution and thereby to ensure that this statutory limit on the BES is observed in the Exceptions process. Further, we believe a variety of information may be relevant to determining whether a particular facility functions as local distribution rather than as part of the BES. For example, if power is not scheduled across the facility or if capacity on the system is not posted on the relevant OASIS, it is likely to function as local distribution, not transmission. Similarly, if power enters the system and is delivered to load within the system rather than moving to load located on another system, its function is local distribution rather than transmission. SNPD proposes the language above as an open-ended question so that the entity submitting the Exceptions Request can provide this and any other information it deems relevant to facility function. 2) SNPD suggests modifying question 6 to "Is the facility part a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. 3) A general

Voter	Entity	Segment	Vote	Comment
				"catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While SNPD believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant. 3. Page four of the 'Detailed Information to Support an Exception Request' contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four that is missing? Please be as specific as possible with your comments. Comments: SNPD agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. SNPD suggests three refinements to the questions: 1) Question 2 should be modified by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter is not. 2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, SNPD suggests modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the

Voter	Entity	Segment	Vote	Comment
				generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? 3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language: Is there additional in
Response: Please see the detailed responses to comments for Snohomish in the general consideration of comments document for the technical criteria.				
Harold Taylor	Georgia Transmission Corporation	1	Affirmative	Throughout the document, because it will be part of a larger Exception Request Form, it should, when possible, use terms consistent with the rest of that form (e.g., "Request" rather than "application"). Similarly, defined terms (even if only defined in the context of the Request Form in which these Principles will be used) such as "Exception," "Request," "Element" or "Facility" should be capitalized; if the use of lower case is intended to convey a different meaning than what is defined, another term should be used to avoid confusion. The Definition and Request Form generally use the term "Element," so it is unclear why this document should so consistently use "facility." For consistency, "Element(s)" or possibly "Element(s) or Facility" should be used.
Response: The SDT has attempted to clean up any inconsistencies in terminology.				
Gregory S Miller	Baltimore Gas & Electric Company	1	Affirmative	While the Technical Principles for BES Exception are acceptable, they are quite complicated. Further simplification may ease the process.
Response: The SDT would point the commenter to the Phase II draft SAR which contains wording to allow for a review of the principles after a 12 month period of real-world experience.				
Charles A. Freibert	Louisville Gas and Electric Co.	3	Affirmative	LG&E and KU Energy request clarification as to how the two year data requirement would apply to a new facility for which the owner/operator requests an exemption.
Response: If two years worth of data are not available, the SDT believes that a Regional Entity will accept what is available and will work with the submitter to come up with an acceptable plan to move forward.				

Voter	Entity	Segment	Vote	Comment
Anthony Schacher	Salem Electric	3	Affirmative	Salem Electric is encouraged to see that the standard drafting team understands the reality that in many circumstances many small radially fed utilities have no effect on the bulk electric system. By permitting reasonable and prudent exceptions it will allow many of the small utilities to be able to spend our limited time and resources on the reliability of our systems for our end users, instead of undertaking unnecessary steps to protect a system upon which we have no effect. The exception process is thorough but still manageable for small utilities with limited resources. Salem Electric would like to thank the Standards Drafting Team for their hard work and dedication in defining the Bulk Electric System.
Thomas C Duffy	Central Hudson Gas & Electric Corp.	3	Affirmative	The 'Technical Principles for Demonstrating BES Exceptions' process was intended to establish technical exception 'criteria' which would be used by the industry to understand what facilities would qualify for inclusions and exclusions from the BES. What has been produced, however, is essentially a listing of 'electrical system indicators', identified on the form, which may be material to making a decision regarding, 'is it BES or not'. The thresholds (or acceptable values) for the indicators, however, have not been determined. It is understood that in Phase II of the BES Definition development process, the SDT will attempt to address these issues but until that work has been completed, the industry will remain enmeshed in confusion and inefficient application of resources and funding. Without these criteria, it is very difficult to believe that this process can be transparent and consistent.
Jason Fortik	Lincoln Electric System	3	Affirmative	No comments.
Benjamin Friederichs	Big Bend Electric Cooperative, Inc.	3	Affirmative	These principles seem reasonable.
Response: Thank you for your support.				

END OF REPORT

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Consideration of Comments

Definition of the Bulk Electric System Exception Criteria (Project 2010-17)

The Bulk Electric System Drafting Team thanks all commenters who submitted comments on the second draft of the Project 2010-17: Definition of the Bulk Electric System (BES) Exception Criteria. These standards were posted for a 45-day public comment period from August 26, 2011 through October 10, 2011. Stakeholders were asked to provide feedback on the standards and associated documents through a special electronic comment form. There were 72 sets of comments, including comments from approximately 137 different people from approximately 83 companies representing all 10 Industry Segments as shown in the table on the following pages.

The SDT made the following changes to the request form due to industry comments received:

- **General** – Clarified the use of facility versus Element(s).
- **Page 1** – Corrected typo: List any attached supporting documents and any additional information that is included to support~~s~~ the request:
- **Generation - Q1**. Replaced 'generator's or generator facility's' with 'generation resource's': What is the MW value of the host Balancing Authority's most severe single Contingency and what is the ~~generator's, or generator facility's~~ generation resource's, percent of this value?
- **Generation - Q2**. Replaced 'generator's or generator facility's' with 'generation resource's': Is the ~~generator or generator facility~~ generation resource used to provide reliability-~~-~~related Ancillary Services?
- **Generation - Q3**. Replace 'generator' with 'generation resource': Is the ~~generator~~ generation resource designated as a must run unit for reliability?

The SDT feels that it is important to remind the industry that Phase II of this project will begin immediately after the conclusion of Phase I as SDT resources clear up. The same SDT will follow through with Phase II.

The SDT is recommending that this project be moved forward to the recirculation ballot stage.

There were two comments that were repeated multiple times throughout the various documents. The first topic was about how to sort through the definition inclusions and exclusions, i.e., which takes precedence. The SDT offers this guidance on that issue:

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.

Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.

In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.

The second item is about providing specific guidance on how the information on the exception request form will be used in making decisions on inclusions/exclusions in the exception process. The SDT provides the following information on this item:

The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by

being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication.

Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved."

The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

All comments submitted may be reviewed in their original format on the standard's project page:

http://www.nerc.com/filez/standards/Project2010-17_BES.html

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 404-446-2560 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

[1] The appeals process is in the Standards Processes Manual: http://www.nerc.com/docs/standards/sc/Standard_Processes_Manual_Approved_May_2010.pdf.

Index to Questions, Comments, and Responses

1. **Page one of the 'Detailed Information to Support an Exception Request' contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one that is missing? Please be as specific as possible with your comments.** 13
2. **Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there information that you believe needs to be on page two or three that is missing? Please be as specific as possible with your comments.** 49
3. **Page four of the 'Detailed Information to Support an Exception Request' contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four that is missing? Please be as specific as possible with your comments.** 88
4. **Do you have concerns about an entity's ability to obtain the data they would need to file the 'Detailed Information to Support an Exception Request'? If so, please be specific with your concerns so that the SDT can fully understand the problem.**108
5. **Are there other specific characteristics that you feel would be important for presenting a case and which are generic enough that they belong in the request? If so, please identify them here and provide suggested language that could be added to the document.**.....120
6. **Are you aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? If so, please identify them here and provide suggested language changes that may clarify the issue.**.....133
7. **Are there any other concerns with the proposed approach for demonstrating BES Exceptions that haven't been covered in previous questions and comments (bearing in mind that the definition itself and the proposed Rules of Procedure changes are posted separately for comments)? Please be as specific as possible with your comments.** 142

END OF REPORT 167

The Industry Segments are:

1 — Transmission Owners
2 — RTOs, ISOs
3 — Load-serving Entities
4 — Transmission-dependent Utilities
5 — Electric Generators
6 — Electricity Brokers, Aggregators, and Marketers
7 — Large Electricity End Users
8 — Small Electricity End Users
9 — Federal, State, Provincial Regulatory or other Government Entities
10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Guy Zito	Northeast Power Coordinating Council										X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Alan Adamson	New York State Reliability Council, LLC	NPCC	10
2.	Gregory Campoli	New York Independent System Operator	NPCC	2
3.	Kurtis Chong	Independent Electricity System Operator	NPCC	2
4.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1
5.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC	1
6.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10
7.	Brian Evans-Mongeon	Utility Services	NPCC	8
8.	Mike Garton	Dominion Resources Services, Inc.	NPCC	5
9.	Kathleen Goodman	ISO - New England	NPCC	2
10.	Chantel Haswell	FPL Group, Inc.	NPCC	5

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
11. David Kiguel	Hydro One Networks Inc.	NPCC 1										
12. Michael Lombardi	Northeast Utilities	NPCC 1										
13. Randy MacDonald	New Brunswick Power Transmission	NPCC 9										
14. Bruce Metruck	New York Power Authority	NPCC 6										
15. Lee Pedowicz	Northeast Power Coordinating Council	NPCC 10										
16. Robert Pellegrini	The United Illuminating Company	NPCC 1										
17. Si Truc Phan	Hydro-Quebec TransEnergie	NPCC 1										
18. David Ramkalawan	Ontario Power Generation, Inc.	NPCC 5										
19. Saurabh Saksena	National Grid	NPCC 1										
20. Michael Schiavone	National Grid	NPCC 1										
21. Wayne Sipperly	New York Power Authority	NPCC 5										
22. Donald Weaver	New Brunswick System Operator	NPCC 2										
23. Ben Wu	Orange and Rockland Utilities	NPCC 1										
24. Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC 3										
2. Group	Charles Long	SERC Planning Standards Subcommittee	X									X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Pat Huntley	SERC	SERC	10
2.	John Sullivan	Ameren Services Co.	SERC	1
3.	James Manning	NC Electric Membership Corp.	SERC	1
4.	Philip Kleckley	SC Electric & Gas Co.	SERC	1
5.	Bob Jones	Southern Company Services	SERC	1
6.	Jim Kelley	PowerSouth Energy Cooperative	SERC	1

3. Group	Brent Ingebrigtson	LG&E and KU Energy	X		X		X	X				
No additional members listed.												
4. Group	Jean Nitz	ACES Power Marketing Standards Collaborators						X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Mohan Sachdeva	Buckeye Power, Inc.	RFC	3, 4
2.	Susan Sosbe	Wabash Valley Power Association	SERC	3

5. Group	Jonathan Hayes	Southwest Power Pool Standards Review		X								

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
			Team										

	Additional Member	Additional Organization	Region	Segment Selection
1.	Mark Wurm	Board of Public Utilities City of McPherson	SPP	1, 3, 5
2.	John Allen	City Utilities of Springfield	SPP	1, 4
3.	Sean Simpson	Board of Public Utilities City of McPherson	SPP	1, 3, 5
4.	Stephen McGie	Coffeyville	SPP	
5.	Robert Rhodes	Southwest Power Pool	SPP	2
6.	Jonathan Hayes	Southwest Power Pool	SPP	2

6.	Group	Steve Rueckert	WECC Staff										X

No additional members listed.

7.	Group	Chris Higgins	Bonneville Power Administration	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Lorissa Jones	Transmission Internal Ops	WECC	1
2.	Chuck Matthews	Transmission Planning	WECC	1
3.	Steve Larson	General Counsel	WECC	1, 3, 5, 6
4.	Rebecca Berdahl	Long Term Sales and Purchases	WECC	3
5.	John Anasis	Technical Operations	WECC	1
6.	Erika Doot	Generation Support	WECC	1, 3, 5
7.	Don Watkins	System Operations	WECC	1
8.	Fran Halpin	Duty Scheduling	WECC	5
9.	Joe Rogers	Transfer Services	WECC	3

8.	Group	Louis Slade	Dominion	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Connie Lowe		RFC	5, 6
2.	Mike Garton		MRO	5, 6
3.	Michael Gildea		NPCC	5, 6
4.	Michael Crowley	Electric Transmission	SERC	1, 3
5.	Sean Iseminger	Fossil & Hydro	SERC	5

9.	Group	Bill Middaugh	TSGT G&T	X									

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
No additional members listed.													
10.	Group	David Thorne	Pepco Holdings Inc	X		X							
	Additional Member	**Additional Organization**	**Region**	**Segment Selection**									
1.	Carl Kinsley	Delmarva Power & Light Co	RFC	1, 3									
11.	Group	Cynthia S. Bogorad	Transmission Access Policy Study Group	X		X	X	X	X				
No additional members listed.													
12.	Group	John P. Hughes	Electricity Consumers Resource Council (ELCON)	X		X		X	X	X			
No additional members listed.													
13.	Group	William D Shultz	Southern Company Generation					X					
	Additional Member	**Additional Organization**	**Region**	**Segment Selection**									
1.	Tom Higgins	Southern Company Generation	SERC	5									
2.	Terry Crawley	Southern Company Generation	SERC	5									
3.	Therron Wingard	Southern Company Generation	SERC	5									
4.	Ed Goodwin	Southern Company Generation	SERC	5									
14.	Group	John Bussman	AECI and member G&Ts	X		X		X	X				
No additional members listed.													
15.	Group	Janelle Marriott Gill	Tri-State Generation and Transmission Assn., Inc. Energy Mangement			X		X					
No additional members listed.													
16.	Group	David Taylor	NERC Staff Technical Review										
No additional members listed.													
17.	Group	Al DiCaprio	IRC Standards Review Committee		X								
	Additional Member	**Additional Organization**	**Region**	**Segment Selection**									
1.	Steve Myers	ERCOT	ERCOT	2									
2.	Mark Thompson	AESO	WECC	2									
3.	Don Weaver	NBSO	NPCC	2									
4.	Charles Yeung	SPP	SPP	2									
5.	Ben Li	IESO	NPCC	2									
6.	Greg Campoli	NYISO	NPCC	2									

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
7. Katherine Goodman		ISO-NE	NPCC 2										
8. Terry Bilke		MISO	MRO 2										
18.	Individual	William Bush	Holland Board of Public Works			X							
19.	Individual	Silvia Parada Mitchell	Transmission	X		X		X	X				
20.	Individual	Sandra Shaffer	PacifiCorp	X		X		X	X				
21.	Individual	Janet Smith	Arizona Public Service Company	X		X		X	X				
22.	Individual	David Kiguel	Hydro One Networks Inc.	X		X							
23.	Individual	John Bee	Exelon	X		X		X					
24.	Individual	Eric Lee Christensen	Snohomish County PUD	X		X	X	X					
25.	Individual	Greg Rowland	Duke Energy	X		X		X	X				
26.	Individual	Richard Salgo	NV Energy	X									
27.	Individual	Thomas C. Duffy	Central Hudson Gas & Electric Corporation			X							
28.	Individual	Chris de Graffenried	Consolidated Edison Co. of NY, Inc.	X		X		X	X				
29.	Individual	Thad Ness	American Electric Power	X		X		X	X				
30.	Individual	Anthony Jablonski	ReliabilityFirst										X
31.	Individual	Joe Petaski	Manitoba Hydro	X		X		X	X				
32.	Individual	Robert Ganley	Long Island Power Authority	X									
33.	Individual	Eric Salsbury	Consumers Energy			X	X	X					
34.	Individual	David Burke	Orange and Rockland Utilities, Inc.	X		X							
35.	Individual	Kathleen Goodman	ISO New England Inc		X								
36.	Individual	Diane Barney	New York State Dept. of Public Service									X	
37.	Individual	John Seelke	PSEg Services Corp	X		X		X	X				
38.	Individual	Sylvain Clermont	Hydro-Quebec TransEnergie	X									
39.	Individual	Rick Hansen	City of St. George			X		X				X	
40.	Individual	Bud Tracy	Blachly-Lane Electric Cooperative			X							
41.	Individual	Dave Markham	Central Electric Cooperative (CEC)			X							

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
42.	Individual	Dave Hagen	Clearwater Power Company (CPC)			X							
43.	Individual	Roman Gillen	Consumer's Power Inc. (CPI)	X		X							
44.	Individual	Dave Sabala	Douglas Electric Cooperative (DEC)								X		
45.	Individual	Bryan Case	Fall River Electric Cooperative (FALL)			X							
46.	Individual	Rick Crinklaw	Lane Electric Cooperative (LEC)			X							
47.	Individual	Michael Falvo	Independent Electricity System Operator		X								
48.	Individual	Michael Henry	Lincoln Electric Cooperative (Lincoln)								X		
49.	Individual	Jon Shelby	Northern Lights Inc. (NLI)			X							
50.	Individual	Ray Ellis	Okanogan County Electric Cooperative (OCEC)			X							
51.	Individual	Rick Paschall	Pacific Northwest Generating Cooperative (PNGC)			X	X				X		
52.	Individual	Heber Carpenter	Raft River Rural Electric Cooperative (RAFT)			X							
53.	Individual	Steve Eldrige	Umatilla Electric Cooperative	X		X							
54.	Individual	Marc Farmer	West Oregon Electric Cooperative (WOEC)			X							
55.	Individual	Steve Alexanderson	Central Lincoln			X	X					X	
56.	Individual	Saurabh Saksena	National Grid	X		X							
57.	Individual	Darryl Curtis	Oncor Electric Delivery Company LLC	X									
58.	Individual	Roger Meader	Coos-Curry Electric Coooperative			X							
59.	Individual	Kirit Shah	Ameren	X		X		X	X				
60.	Individual	Guy Andrews	Georgia System Operations Corporation			X	X						
61.	Individual	Andrew Gallo	City of Austin dba Austin Energy	X		X	X	X	X				
62.	Individual	Andy Pusztai	ATC LLC	X									
63.	Individual	David Kahly	Kootenai Electric Cooperative			X							
64.	Individual	Linda Jacobson-Quinn	Farmington Electric Utility System			X							
65.	Individual	Mary Downey	City of Redding Electric Utility			X	X	X	X				

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
66.	Individual	Paul Cummings	City of Redding					X					
67.	Individual	Edwin Tso	Metropolitan Water District of Southern California	X									
68.	Individual	Rex Roehl	Indeck Energy Services					X					
69.	Individual	Keith Morisette	Tacoma Power	X		X	X	X	X				
70.	Individual	Tracy Richardson	Springfield Utility Board			X							
71.	Individual	Frank Cumpton	BGE	X									
72.	Individual	Gary Carlson	Michigan Public Power Agency					X					

1. **Page one of the 'Detailed Information to Support an Exception Request' contains general instructions. Do you agree with the instructions presented or is there information that you believe needs to be on page one that is missing? Please be as specific as possible with your comments.**

Summary Consideration: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception application form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the application to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the application process. The SDT again points to the variations that will abound in the applications as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the application details, the SDT believes that both

sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO panel for adjudication.

Now, the commenters could point to lack of direction being supplied to the ERO panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the Bulk Electric System. The SDT firmly believes that the technical prowess of the ERO panel, the visibility of the process, and the experience gained by having this same panel review multiple applications will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception application form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved."

The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Finally, the SDT would point to the SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

The SDT clarified the point that an entity may submit any information that it feels will help support its request as follows:

Page 1 - List any attached supporting documents and any additional information that is included to supports the request:

Organization	Yes or No	Question 1 Comment
Northeast Power Coordinating Council	No	How an exception application will be assessed by the RE and NERC is not addressed in the document. Stakeholders need to know how the exception application will be evaluated and processed. Suggest that the SDT develop a reference or a guidance document as part of the RoP that will provide guidance to Registered Entities, Regional Entities and the ERO on how an exception application will be processed. Of particular concern is the lack of clarity and specificity with respect to what analyses and study results are required under the third bullet on page 1 and under question 4 on both pages 2 and 4. This lack of clarity and specificity will lead to inconsistent application of the Technical Principles by both Registered Entities and Regional Entities. We recommend the following: the impact and performance analyses required by the 3rd bullet on page 1 and by #4 on pages 2 and 4 should be stipulated to be all analyses, scenarios, and contingencies required under NERC Standard TPL-002-1 with the "exception element" removed from the base system model. Entities shall report on all key performance measures of BES reliability specified in the TPL-002-1 attributable to the removed "exception element". On page 1 under General Instructions, it is stated that:"A one-line breaker diagram identifying the facility for which the exception is requested must be supplied with every application. The diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested."What is meant by interface points?
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT		

Organization	Yes or No	Question 1 Comment
would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the		

Organization	Yes or No	Question 1 Comment
bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. As far as developing reference or guidance documents, the SDT will consider this recommendation in Phase II of the project. The recommendation to use "the impact and performance analyses required by the 3rd bullet on page 1 and by #4 on pages 2 and 4 should be stipulated to be all analyses, scenarios, and contingencies required under NERC Standard TPL-002-1 with the "exception element" removed from the base system model" could be viable as a form of evidence an entity may want to submit if the entity believes this test provides evidence for the exception of an Element(s). The SDT encourages the submitting entity to provide any additional information or explanation in the comments section of the questions that it believes will assist in the review of its Exception Request. The SDT has made a clarifying change to the page 1 instructions to make this point clearer. Also see the answer to question #4.		

Organization	Yes or No	Question 1 Comment
Page one: List any attached supporting documents and any additional information that is included to supports the request: As far as interface points, the SDT agrees with BPA's suggestion that the interface point is the point requested by the entity seeking the exception where the Element or Elements interconnect(s) to Bulk Electric System Elements.		
ACES Power Marketing Standards Collaborators	No	The first sentence only refers to element(s) designated as excluded. Element(s) designated as included under the BES definition, shouldn't have to go through the exception process either.
Response: The SDT agrees with this comment. This language was added to clarify that Elements that are excluded (or included) do not have to go through the Exception Process unless they are attempting to change to classification of their Elements.		
WECC Staff	No	WECC has several concerns with the instructions on the checklist regarding the studies: o Study Case - The instructions state the study case that should be used, "Be based on an Interconnection-wide base case that is suitably complete and detailed to reflect the facility's electrical characteristics and system topology." The phrase "suitably complete and detailed" is vague. WECC recommends clarification of this phrase and the addition of specific requirements for what will constitute an appropriate case. Allowing the entity requesting an exception to choose any Interconnection-wide case could allow an inappropriate choice of case and could lead to inconsistent study results. If there are no requirements for the chosen case, then it is possible that the most favorable case to an entity's argument will be chosen. In some instances that choice would likely be appropriate, but in others it would not necessarily be appropriate. At a minimum, there should be further description - and preferably, specific requirements - guiding the determination of which study case is most appropriate. Of particular importance in clarifying what case is an appropriate case, is the timeliness of the case. WECC recommends requiring that a recent case be used. In addition, if each entity is able to chose its own case, without further

Organization	Yes or No	Question 1 Comment
		requirements, there will be no way for the Regional Entity or NERC to ensure consistency of determinations with respect to the elements tested. o The entities are asked to address key performance measures of BES reliability through the studies. This instruction is vague concerning what the study must investigate and it leaves it up to the entity to determine the key performance measures. The "key performance" measures should be consistent with respect to similar elements and there is no way to ensure that if there are no specifications regarding such measures. The exceptions process must be objective and clear as to what performance measures need to be met for the process to be implemented consistently. WECC recommends further clarification and the addition of specific requirements beyond the guidance related to consistency with Transmission Planning (TPL) standards. o The background information on the comment form states: "The same checklist will be utilized for exceptions dealing with inclusions or exclusions." But there is no mention of this in the document. A note should be added to the checklist instruction to state that the same checklist will be used for exclusions and inclusions.

Response: In response to the comment about an appropriate base case, the SDT expects the entity seeking an exception to supply an appropriate base case that the Regional Entity will acknowledge as appropriate. Not indicating the explicit types of studies or base cases to be provided and how to interpret the information in the application process does not fail to provide a basis for the Regional Entity to determine what constitutes an acceptable submittal.

The SDT again points to the variations that will abound in the applications as negating any hard and fast rules in this regard. However, this is not something that hasn't been handled before and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the application details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to move upward to the ERO panel for a final determination.

The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would

Organization	Yes or No	Question 1 Comment
like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being		

Organization	Yes or No	Question 1 Comment
made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. As to the last comment, the SDT finds this wording redundant and not providing any additional clarity. No change made.		
Dominion	No	Given that the second sentence in the 1st paragraph of this comment form reads "This same process would be used by Registered Entities to justify including Elements in the BES that might otherwise be excluded according to the proposed definition and designations.", Dominion suggests that the 1st

Organization	Yes or No	Question 1 Comment
		sentence under General Instructions be revised to read "A one-line breaker diagram identifying the facility for which the exception (or inclusion) is requested must be supplied with every application. The diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception **(or inclusion)** is being requested."
Response: The SDT reviewed the suggestion to add the phrase "(or inclusion)"and has elected to keep the original language because the term Exception includes both Exclusions and Inclusions.		
Pepco Holdings Inc	No	1) Why must the one-line diagram supplied show the Protection Systems at the interface points associated with the elements for which the exception is being requested? Since Protection Systems are not part of the new bright-line BES definition why would their presence, or absence, on the one-line diagram influence the exception process? 2) The third bullet needs additional detail of what is being requested. The phrase "...key performance measures.." and use of methodologies described in TPS Standards does not provide sufficient direction needed. (see question #4)
Response: In response to the question about including Protection Systems, the SDT has used the term "should also show the Protection Systems". This is not mandatory; however the SDT has suggested this because the criterion for the evaluation of an exception is "the Elements are necessary for the reliable operation of the interconnected bulk power transmission system". As an example, the elements could be part of a Special Protection System or RAS thus they could help the ERO to identify the Elements "necessary for Reliable Operation…" No change made. The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and		

Organization	Yes or No	Question 1 Comment
received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled		

Organization	Yes or No	Question 1 Comment
separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. Also, see the answer to question #4.		
Electricity Consumers Resource Council (ELCON)	No	The exception request form should begin with a question asking if the inclusion was triggered by the entity responding to an emergency request by the applicable BA, RC or TOP. The entity's response to support recovery from an emergency may have resulted in (1) power flows through the entity's facility into the BES, and/or (2) power injections to the BES that exceed the 20/75-MVA thresholds. The entity should not be required to provide detailed data and studies (as described in the "General Instructions") if either of those conditions would not have occurred but for

Organization	Yes or No	Question 1 Comment
		an emergency situation.
Response: While the SDT seriously doubts that such a situation will occur, the entity can choose the amount of and type of evidence to present; if the entity feels that abnormal operation should be considered in the evaluation of the Element(s) then they should supply that information to help explain its position.		
AECI and member G&Ts	No	An opening statement of this form should make it clear that, prior to its determination, the Facilities within scope of this exemption request, remain included or excluded based upon the basic BES Definition Bright Line criteria Inclusions and Exclusions.
Response: This is a question that relates to the proposed ERO Rules of Procedure Appendix 5C. This question was forwarded to the RoP team.		
Hydro One Networks Inc.	No	On the posted document, we did not find how an exception application will be assessed by the RE and NERC. We believe that there is a huge gap and a lack of transparency for all stakeholders on how the exception application will be evaluated and processed. We strongly suggest that the SDT develop a reference or a guidance document as part of the RoP that will provide guidance to Registered Entities, Regional Entities and the ERO on how an exception application would/should be processed.
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say		

Organization	Yes or No	Question 1 Comment
		that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and

Organization	Yes or No	Question 1 Comment
consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. In response to the comment about developing reference or guidance documents, the SDT will consider this recommendation in Phase II.		
Duke Energy	No	Need to include identification of any System Protection Coordination considerations per PRC-001-1. Also, we believe that a system map showing the geographical location of the facility(s) should be supplied with the request.
Response: The detail of the diagrams and the type of diagrams suggested by Duke could be viable forms of evidence that an entity may want to submit if the entity believes they provide evidence to support the exception of an Element. Additionally, the SDT encourages the submitting entity to provide any additional information or explanation in the comments section of the questions that it believes will assist in the review of its Exception Request.		

Organization	Yes or No	Question 1 Comment
Consolidated Edison Co. of NY, Inc.	No	Con Edison's overall concern is the lack of clarity and specificity with respect to what analyses and study results are required under the 3rd bullet on page 1 and under #4 on pages 2 and 4. This lack of clarity and specificity will lead to inconsistent application of the Technical Principles by both Registered Entities and Regional Entities. We recommend the following: the impact and performance analyses required by the 3rd bullet on page 1 and by #4 on pages 2 and 4 should be stipulated to be all analyses, scenarios, and contingencies required under NERC Standard TPL-002-1 with the "exception element" removed from the base system model. Entities shall report on all key performance measures of BES reliability specified in the TPL-002-1 attributable to the removed "exception element". Note that references to NERC Standard TPL-001-2 should not be made in the Technical Principles document as TPL-001-2 has not yet been filed with (nor approved by) FERC. General Instructions One-Line Breaker Diagram questions and comments: Page 1, paragraph 2: Please explain the phrase "at the interface points." Where is this location? Please provide several examples, i.e., for a radial, a local network, a generator, a transformer, a substation buss, and for other Elements (PARs, reactors, UFLS panels, relays and switches).

Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a

Organization	Yes or No	Question 1 Comment
		single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

Organization	Yes or No	Question 1 Comment
Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. 2. TPL-001-2 has been approved by the NERC Board of Trustees. As per drafting team guidelines, this document is now to be used in all cases where the TPL standards are referenced in other standards projects. 3. In response to the comment about interface points, the SDT agrees with BPA's suggestion that the interface point is the point requested by the entity seeking the exception were the Element or Elements interconnect(s) to Bulk Electric System Elements.		
New York State Dept. of Public Service	No	Missing from the document are any indicators as to how much information is sufficient, how the information will be evaluated, what weight will be given to the individual pieces of information, etc.
ReliabilityFirst	No	These instructions are at a very high level and provide no clear guidance on what is required. ReliabilityFirst Staff believes each bulleted item needs to provide clear expectations. As an example in bullet #2 "Clearly document all assumptions used", the document and this bullet should include guidance such as what base case transfers were included, a list of facilities that were

Organization	Yes or No	Question 1 Comment
		assumed out of service, new facilities places in service and system load levels, etc.

Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for

Organization	Yes or No	Question 1 Comment
adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.		
Manitoba Hydro	No	

Organization	Yes or No	Question 1 Comment
Response: Without any specific comment the SDT is unable to respond.		
Orange and Rockland Utilities, Inc.	No	In the first paragraph "Entities that have Element(s) designated as excluded, under the BES definition and designations, do not have to seek exception for those Elements under the Exception Procedure.", before the "General Instruction" it should have had another sentence saying that "for those who do not clearly meet the Inclusions and Exclusions should use the following instructions". Otherwise, it's still not very clear.
Response: The SDT would like to point out that the "Detailed Information to Support an Exception Request" is only one section of the Exception Form. For clarity, please refer to the complete form contained as part of the proposed ERO Rules of Procedure Appendix 5C; also, see the RoP's flow chart that outlines the process.		
ISO New England Inc	No	It is unclear what the purpose of submitting diagrams showing the Protection Systems is and we do not feel that it should be a requirement at the onset of the exception process. In the first bullet, we do not feel that the term "Interconnection-wide base case" is required as the phrase "suitably complete and detailed" should provide enough guidance to the submitter that inappropriate equivalent representations would not be accepted. The concern is that one could interpret "Interconnection-wide base case" as the entire Eastern Interconnection model is a requirement.
Response: In response to the question about including Protection Systems, the SDT used the term "should also show the Protection Systems". This is not mandatory; however the SDT has suggested this because the criterion for the evaluation of an Exception is "the Elements are necessary for the Reliable Operation of the interconnected bulk power transmission system". As an example, the elements could be part of a special protection system or RAS thus they could help the ERO to identify the Elements "necessary for Reliable Operation…" No change made. In response to the comment about a base case, the SDT expects the entity seeking an exception to supply a Base Case that the Regional Entity will acknowledge as appropriate. The SDT points to the variations that will abound in the applications as negating		

Organization	Yes or No	Question 1 Comment
any hard and fast rules in this regard. However, this is not something that hasn't been handled before and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the application details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to move upward to the ERO panel for a final determination. No change made.		
PSEg Services Corp	No	What is meant by "key performance measures of BES reliability" in the third bullet? A descriptive list would be helpful.
Response: As to the lack of key performance measures, the SDT refers the commenters to Appendix 5C of the proposed ERO Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. No change made.		
Hydro-Quebec TransEnergie	No	We believe that the new Technical Principles are better than the previous ones, as they allow flexibility for an Entity to make their case with technical justifications. However, without any guide or specific criteria, it does not allow an Entity to identify the real possibility to obtain an exception. It is not clear at all what will guide the Region or ERO to make their decision to grant or not the exception. In order give confidence to the Industry in the procedure, it would be necessary to define the elements that will guide the decision. Will impact base study be accepted? Will the threshold differences with Quebec Interconnection be accepted?
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and		

Organization	Yes or No	Question 1 Comment
received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled		

Organization	Yes or No	Question 1 Comment
separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. The SDT refers Hydro-Quebec to Appendix 5C of the proposed ERO Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected bulk transmission system. Further, Reliable Operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. As far as a difference for the Quebec Interconnection, the SDT encourages the submitting entity to provide any additional information or explanation in the comments section of the questions that it believes will assist in the review of its Exception Request.		

Organization	Yes or No	Question 1 Comment
City of St. George	No	While the general instruction information outlined is applicable, it lacks sufficient detail to know exactly what is needed to be submitted. More importantly the general instructions and the overall document lacks criteria that if met (through study and other documentation methods) would allow for exclusion from or inclusion to the BES. Something similar to the criteria or concepts used in the Appendix 1 of the Local Network Exclusion justification document is needed. Clear criteria should allow an entity to determine with a reasonable degree of certainty that if the criteria are met as demonstrated by the associated study effort that an exemption can be obtained. Otherwise without that criteria, the process will be not far from where the exemption process is today, which will be costly, time consuming and frustrating for the registered entities as well as the regions and NERC. The process needs to be repeatable and consistent between all regions and entities. Entities need to know what is expected and where the finish line is. As presently written each region and NERC would have to develop their own criteria individually and will be open to opinions which could change as personnel changes occur in a given position or panel.

Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity

Organization	Yes or No	Question 1 Comment
plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or		

Organization	Yes or No	Question 1 Comment
response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. In response to clear criteria, the SDT refers the commenters to Appendix 5C of the proposed ERO Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements.		
Georgia System Operations Corporation	No	: The last half of the first sentence should be changed to "do not have to seek an Exclusion Exception under the Exception Procedure for the Element(s)." The use of "Element(s)" relates back to that term at the start of the sentence, and the reference to an "Exclusion Exception" is necessary because an entity (albeit probably not the Owner), still may choose to seek an Inclusion Exception for such an Element(s). In the 3rd bullet, the reference should be to TPL standards (plural).
Response: In response to the suggestion to change the first sentence, the SDT would like to point out that the "Detailed Information to Support an Exception Request" is only one section of the Exception Form. For further clarity, please refer to the complete Exception form contained as part of the proposed ERO Rules of Procedure Appendix 5C; also, see the RoP's flow chart that outlines		

Organization	Yes or No	Question 1 Comment
the process. No change made. The SDT notes that there is now only one TPL standard, TPL-001-2; TPL-001-2 has been approved by the NERC Board of Trustees. As per drafting team guidelines, this document is now to be used in all cases where the TPL standards are referenced in other standards projects. No change made.		
ATC LLC	No	Since an Exception Request may be for approval to designate identified Element(s) as either excluded from or included in the BES, the wording of the first sentence should be changed and the request should clearly indicate (e.g. exclusion/inclusion check boxes) whether the request regards exclusion or inclusion of the Element(s). Here is some draft wording for consideration: Entities that have Element(s) that are included under the BES definition and designations, but seek to have them designated as excluded from the BES or that that have Element(s) that are excluded under the BES definition and designations, but seek to have them designated as included in the BES should submit an Exception Request according to the NERC Exception Procedures and provide detailed information to support the Exception Request as indicated below. In addition, ATC suggests the following clarifying edit. Entities that have BES Element(s) considered as excluded under the BES definition and designations, do not have to seek exception for those Elements under the Exception Procedure.
Response: In response to the suggestion to change the first sentence, the SDT would like to point out that the "Detailed Information to Support an Exception Request" is only one section of the Exception Form. For further clarity, please refer to the complete form contained as part of the proposed ERO Rules of Procedure Appendix 5C; also, see the RoP's flow chart that outlines the process. The SDT would refer the commenter to the first line of page 1 which clearly states this fact. No change made.		
Farmington Electric Utility System	No	The general instructions presented are primarily components to substantiate an Exception Request. However, a cover sheet (template) should be created that includes overall identifying information of the Submitting Entity and the

Organization	Yes or No	Question 1 Comment
		and the Owner if the if they are not the same - the template should align with the draft Appendix 5C Section 4.5.1 of the NERC Rules of Procedure. An Exception Request can be submitted for Inclusion or Exclusion of the BES. The first sentence in the form, "Entities that have Element(s) designated as excluded, under the BES definition and designations, so not have to seek exception for those Element(s) under the Exception Procedure. This would not be true if a Submitting Entity is seeking an Inclusion Exception. FEUS recommends revising to include Inclusion Exception Requests.
Response: The SDT acknowledges that the "Detailed Information to Support an Exception Request" is only one section of the Exception Form and in itself lacks required information; the complete form contains the information suggested by the commenter. The full Exception form is part of the proposed ERO Rules of Procedure Appendix 5C; also, see the RoP's flow chart that outlines the process.		
Transmission Access Policy Study Group		Glossary terms should be capitalized throughout the document. Lowercase "facility," especially, should not be used. The document should use "Element" instead. The term "interface points," while common, may not have a sufficiently common understanding to be used in this context. "Boundaries of the Element(s) for which the exception is being requested" may express the SDT's meaning more clearly.
Response: The SDT agrees with the commenter and the form was edited to use the term Element instead of Facility where appropriate. In response to the comment about interface points, the SDT agrees with BPA's suggestion that the interface point is the point requested by the entity seeking the exception were the Element or Elements interconnect(s) to Bulk Electric System Elements.		
Tri-State Generation and Transmission Assn., Inc. Energy Mangement		This question is actually asking two questions; Tri-State's answers would be No & Yes. There needs to be a better introduction to what and why the exception is being requested.

Organization	Yes or No	Question 1 Comment
TSGT G&T		This question is actually asking two questions; Tri-State's answers would be No & Yes. There needs to be a better introduction to what and why the exception is being requested.
Response: This is a question that relates to the proposed ERO Rules of Procedure Appendix 5C. This question was forwarded to the RoP team.		
American Electric Power	Yes	Though we have no objections to the proposed content, this is contingent on the number and type of elements eventually found included or excluded as a result of the BES definition itself which is still being drafted. Any changes in that definition could in turn cause us concern regarding these general instructions. There needs to some provision for cases where specific elements which are not specifically contained within the studies. It needs to be clear what additional analysis needs to be provided under those circumstances. We recommend that the owner of the asset be identified as part of the general instructions. In the case of wind resources, how is individual gross nameplate information to be reported?
Response: In response to a provision for specific elements not contained in studies, the SDT encourages the submitting entity to provide any additional information or explanation in the comments section of the questions that it believes will assist in the review of its Exception Request. Additionally, the exception form has been clarified to bring home that point. **Page one**: List any attached supporting documents and any additional information that is included to supports the request: The owner of the asset is identified in the instructions that are being proposed as part of the ERO Rules of Procedures changes. This revised definition does not change the way that wind resources are reported.		

Organization	Yes or No	Question 1 Comment
Snohomish County PUD Blachly-Lane Electric Cooperative Central Electric Cooperative (CEC) Clearwater Power Company (CPC) Consumer's Power Inc. (CPI) Douglas Electric Cooperative (DEC) Fall River Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (Lincoln) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) Umatilla Electric Cooperative West Oregon Electric Cooperative (WOEC) Coos-Curry Electric Coooperative City of Austin dba Austin Energy Kootenai Electric Cooperative	Yes	SNPD agrees generally that the General Instructions set forth the basic information that would be necessary to support an Exception Request. SNPD is concerned, however, that the statement "diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested" may be subject to differing interpretations. SNPD envisions that at least four different kinds of documents would be responsive to the description: one-line diagrams with breakers and switches (status); identification of relays by their ANSI device numbers; details of the DC control logic for ANSI devices; and, operational scheme descriptions of the type used by system operators. Accordingly, we suggest that the language be refined to identify the specific kinds of diagrams necessary to identify protection systems at the interface with the Elements for which the Exception is sought, including any required details. SNPD suggests that a generic example of a completed form be provided to the industry to help ensure that Exception Requests are supported by consistent and complete information. Such a generic example could be addressed in the Phase 2 BES efforts.
Response: The various diagrams suggested by SNPD could be viable as forms of evidence that an entity may want to submit if the		

Organization	Yes or No	Question 1 Comment
entity believes they provide evidence to support the exception of an Element. As far as developing generic examples, reference, or guidance documents, the SDT agrees with SNPD that this should be considered in Phase II of the project.		
Southern Company Generation	Yes	In the third bullet under the list of study attributes, it is very important to specifically list the "key performance indicators of BES reliability". This will assist in pointing the studies to focus on the issues relevant to determining the signifacance of the exception request.
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be		

Organization	Yes or No	Question 1 Comment
provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to		

Organization	Yes or No	Question 1 Comment
consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. Also, see the answer to question #4.		
Holland Board of Public Works	Yes	The requirement to base flow studies on an “interconnection-wide base case" is likely to include many more lines and buses than necessary to model the impact of a facility that is not material to the BES. Holland BPW request the words “or regional reduction of such a case” be added after “interconnection-wide base case” to avoid unnecessary expense and detail if a more limited study set is adequate to demonstrate the lack of material impact of the facility(ies) in question.
Michigan Public Power Agency	Yes	The requirement to base flow studies on an “interconnection-wide base case" is likely to include many more lines and buses than necessary to model the impact of a facility that is not material to the BES. MPPA and its members request the words “or regional reduction of such a case” be added after “interconnection-wide base case” to avoid unnecessary expense and detail if a more limited study set is adequate to demonstrate the lack of material impact of the facility(ies) in question.
Response: In response to the comment about a reduction base case, the SDT expects the entity seeking an exception to supply a Base Case that the Regional Entity will acknowledge as appropriate. The SDT points to the variations that will abound in the applications as negating any hard and fast rules in this regard. However, this is not something that hasn’t been handled before and there is a great deal of professional experience involved on both the submitter’s and the Regional Entity’s side of this equation. Having viewed the application details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to move upward to the ERO panel for a final determination. No change made.		
Bonneville Power Administration	Yes	BPA suggests clarifying that the interface point is the point where the entity seeking the exception’s facility or facilities interconnect(s) to the Bulk Electric System facility.

Organization	Yes or No	Question 1 Comment
		Page 1 states "Supporting statements for your position from other entities are encouraged." BPA believes coordination with affected systems should be required under the exemption process.
Response: In response to the comment about interface points, the SDT agrees with BPA's suggestion that the interface point is the point requested by the entity seeking the exception were the Element or Elements interconnect(s) to Bulk Electric System Elements. As for the comment about coordination, the SDT refers the commenter to Appendix 5C of the proposed NERC Rules of Procedure, Section 4.5.2. This section requires the submitting entity to submit a copy of the Exception Request Form Section II to each Planning Coordinator, Reliability Coordinator, Transmission Operator, Transmission Planner, and Balancing Authority that has (or will have upon inclusion of the Element(s) in the BES) the Elements covered by an Exception Request within its Scope of Responsibility.		
Independent Electricity System Operator	Yes	
Central Lincoln	Yes	
National Grid	Yes	
Oncor Electric Delivery Company LLC	Yes	
Ameren	Yes	
Long Island Power Authority	Yes	
Consumers Energy	Yes	
NV Energy	Yes	
Central Hudson Gas & Electric	Yes	

Organization	Yes or No	Question 1 Comment
Corporation		
Exelon	Yes	
Transmission	Yes	
PacifiCorp	Yes	
NERC Staff Technical Review	Yes	
IRC Standards Review Committee	Yes	
City of Redding Electric Utility	Yes	
City of Redding	Yes	
Tacoma Power	Yes	Tacoma Power supports the instructions as written.
Springfield Utility Board	Yes	SUB agrees with the instructions, finding them to be clear and reasonable.
BGE	Yes	No comment.
Southwest Power Pool Standards Review Team	Yes	
SERC Planning Standards Subcommittee	Yes	
Response: Thank you for your support.		

2. **Pages two and three of the Detailed Information to Support an Exception Request contain a checklist of items that deal with transmission facilities. Do you agree with the information being requested or is there information that you believe needs to be on page two or three that is missing? Please be as specific as possible with your comments.**

Summary Consideration: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it had become obvious to the SDT that the simple answer that so many sought is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception application form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the Exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. The SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the application to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the Exception Request. Conversely, an argument could be raised that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information are not shown in the application process. The SDT again points to the variations that will abound in the applications as negating any hard and fast rules. However, this is not something that has not been handled before and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of the Exception process. Having viewed the application details, the SDT believes that both sides can quickly arrive at

a resolution as to what information needs to be supplied for the submittal to move upward to the ERO panel for a final determination.

While commenters point to lack of direction being supplied to the ERO panel as to specific guidelines for them to follow in making their decision, the SDT re-iterates the problem with providing such hard and fast rules. There are too many variables to consider. Providing concrete guidelines is going to tie the hands of the ERO panel and inevitably result in poor decisions. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical expertise of the ERO panel, the visibility of the process, and the experience gained by having the hindsight resulting from reviewing multiple applications will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception application form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2, which states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved."

The SDT has made several minor changes made to the specific items in the form in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Finally, the SDT would point to the SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

The SDT affirms the requirement to provide the most recent consecutive two calendar year period minimum and maximum magnitude of the power flow out of the Element(s) for which an Exception is sought. The SDT believes that a single year's data is

insufficient to determine a pattern of flow on the Element(s). Moreover, many of the NERC Standards already require longer data retention periods; typically for a full audit period which is either three or six years. See NERC Compliance Process Bulletin #2009-005, Current In-Force Document Data Retention Requirements for Registered Entities, Version 1.0, at 1 (Jun.29, 2009). It should be noted that retaining three second data from an Energy Management System (EMS) or a Supervisory Control And Data Acquisition (SCADA) system is not sought in this instance.

The SDT declines to further define the "maximum magnitude of the power flow." It is up to the submitting entity to determine how best to present the information supporting their request and any responses provided by the submitting entity can be further described or qualified under the comments section.

The SDT has determined that information on Flowgate impacts and whether Element(s) are included in an Interconnection Reliability Operating Limit (IROL) are necessary to the Regional Entity's determination of whether an Element(s) is used to provide bulk power transfers within the Interconnections or whether the Element(s) is distribution. A number of interchange coordination Reliability Standards apply to these transfer paths and Flowgates. Accordingly, the SDT believes such facilities are necessary for the reliable operation of an interconnected electric transmission network and would not be excluded from the definition of the BES. Furthermore, the SDT understands that each Flowgate list may be added to or subtracted from based on prevailing system conditions, however, a core set of Flowgates will remain the same. It is up to the submitting entity to determine how best to present the information supporting their request and the nature of the Element(s) impact on a permanent flowgate can be further described or qualified under the comments section.

Due to comments received, the SDT made the following clarifying changes to the request form:

Page 1 - List any attached supporting documents and any additional information that is included to supports the request:

Q3. Please provide the appropriate list for ~~your~~the operating area where the Element(s) is located:

Q6. Is/Are the ~~facility~~ Element(s) part of a Cranking Path ~~associated with a Blackstart Resource~~ identified in a Transmission Operator's restoration plan?

Q7. If yes, then using metered or SCADA data for the most recent consecutive two calendar year period, what is the minimum and maximum magnitude of the power flow out of the ~~facility~~ Element(s)? ~~and d~~Describe the conditions and the time duration when this ~~could~~ occurs?

Organization	Yes or No	Question 2 Comment

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	For question 2 on page 2 For Transmission Facilities: o What standards will define the "impact"? o What is a material impact and a non-material impact? o What kinds and types of impacts are acceptable/unacceptable? o How are impacts determined? Question 6 on page 3 reads "Is the facility part of a Cranking Path associated with a Blackstart Resource?", suggest removing the reference to "Cranking Path" because the Drafting Team does not require that the BES be contiguous, and black start resource Cranking Paths were deleted from Inclusion I3. Question 7 on page 3 asks, "Does power flow through this facility into the BES?" This can only apply to a Local Network with two or more connections to the BES. No power should normally flow through a Local Network (or Radial system) to another portion of the BES. There may be occasional, brief reverse power flows may be acceptable during short periods under abnormal operating conditions. Question 7 also requests "data for the most recent consecutive two calendar year period." Why is two years worth of data necessary? One year of data would be sufficient. From Question 7, "what is the minimum and maximum magnitude of the power flow out of the facility ..." What is intended by the use of magnitude? Suggest that the Drafting Team adopt the FERC Seven Factor test for question 7. Suggest deleting the "% of the calendar year" check boxes in favor of a statement either that power does not flow through the Local Network, or alternatively, a blank space for reporting the net peak MWs and MWHs transferred annually through the facility, and the percentage of these transferred amounts to the peak and annual MWH demands served by the Local Network. Suggest requesting only one year (8,760 hours) of data covering four seasons,

Organization	Yes or No	Question 2 Comment
		including Summer and Winter capability periods.
Consolidated Edison Co. of NY, Inc.	No	Application Form Page 2For Transmission Facilities:Impacts:Flowgates: The Application form at 2 states, "How does the facility impact permanent Flowgates in the Eastern Interconnection ..." o What standards for "impact" does the BES SDT envision? o What is a material impact and a non-material impact? o What kinds and types of impacts are acceptable and/or unacceptable? o How are impacts determined, e.g., Power TFD method, short circuit analysis, A-10 method?Impact-Based Studies: Note that the FERC Seven Factor test is a time-tested method and FERC has identified it as an acceptable method for reliability purposes; for gauging the expected impact of an Element on the interconnected transmission grid. The NPCC A-10 method has been used extensively in the Northeastern U.S. and Canada, and is an impact-based approach. The power TDF (transfer distribution factor) method is also used by some to assess the impact of changing power flows on individual Elements within a system. FERC has studied using the 'TIER' method for classifying system Elements based on LBMP impacts. WECC uses a short circuit test. Page 3Cranking Path Issue: The Application form at 6 asks, "Is the facility part of a Cranking Path associated with a Blackstart Resource?"We understand that:(i) The drafting team does not require that the BES be contiguous, and (ii) Blackstart resource Cranking Paths were deleted from Inclusion I3. Recommendation: Delete the reference to "Cranking Paths" in this Application form. Power Flow Issue: The Application form at 7 asks, "Does power flow through this facility into the BES?" We assume that this can only apply to a Local Network with two or more connections to the BES. We believe that no power should normally flow through a Local Network (or Radial system) to another portion of the BES. Occasional, brief reverse power flows may be acceptable during short periods under abnormal operating conditions, e.g., a switch

Organization	Yes or No	Question 2 Comment
		normally open is briefly closed during a forced maintenance outage. The Application form at 7 requests the following: "data for the most recent consecutive two calendar year period." o Please explain why the BES SDT felt that two years worth of data was necessary, as one year of data would appear sufficient? Our experience has been that one year (8,760 hours) of data covers four seasons, including Summer and Winter capability periods, and is therefore sufficient. Requiring an extra year is perhaps unnecessarily burdensome on filing Entities, whether asset owners or Regional Entities. The Application form at 7 asks, "[W]hat is the minimum and maximum magnitude of the power flow outflow of the facility ..." o Please explain why the BES SDT used the term "magnitude" when requesting power outflow data? Recommendations: 1) We strongly recommend that the BES SDT adopt the FERC Seven Factor test for these purposes. The FERC Seven Factor test states that, o "Power flows into local distribution systems, and rarely, if ever flows out," and o "When power enters a local distribution system, it is not reconsigned or transported on to some other market." 2) We recommend deleting the "% of the calendar year" check boxes in favor of a statement either that power does not flow through the Local Network, or alternatively, a blank space for reporting the net peak MWs and MWH's transferred annually, and the percentage of these transferred amounts to the peak and annual MWH demands served by with the Local Network.3) We recommend requesting only one year (8,760 hours) of data covering four seasons, including Summer and Winter capability periods.
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on the Exception criteria. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that a simple answer is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and		

Organization	Yes or No	Question 2 Comment
		received very little in the form of substantive comments. Not indicating the explicit types of studies to be provided and how to interpret the information in the application process does not fail to provide a basis for the Regional Entity to determine what constitutes an acceptable submittal. The SDT again points to the variations that will abound in the applications as negating any hard and fast rules in this regard. However, this is not something that hasn't been handled before and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the application details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to move upward to the ERO panel for a final determination. As to the lack of direction being supplied to the ERO panel in the form of specific guidelines to follow, the SDT refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical expertise of the ERO panel, the visibility of the process, and the experience gained by having the hindsight resulting from reviewing multiple applications will result in an equitable, transparent, and consistent approach to the problem. Finally, there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. The SDT disagrees with eliminating the question pertaining to Cranking Path. It is important to realize a distinction between the BES definition and the Exception process. While the BES definition established bright-line criteria for the determination between BES and non-BES Element(s), the Exception Process requires an evaluation of all the responses and supporting materials provided as part of the Exception Request Form. No single response or piece of supporting information will be solely dispositive in an Exception Request evaluation. It is not correct to assume that simply because an evaluation criterion was removed from the bright-line definition it should also be eliminated from consideration in the Exception Process. The SDT believes that consideration of Cranking Paths is among the factors to be given consideration in the evaluation for an Exception Request application. Any further discussion of this issue is within the scope of the Phase II SAR. No change made. With respect to concerns about including power flowing through a local network in the Exception Request Form, these concerns fail to recognize the distinction between the BES definition and the Exception Process. As stated above, while the BES definition

Organization	Yes or No	Question 2 Comment

established bright-line criteria for the determination between BES and non-BES Element(s), the Exception Process requires an evaluation of all the responses and supporting materials provided as part of the Exception Request Form. The SDT believes that power flow through an Element into the BES is among the factors to be given consideration in the evaluation of an Exception Request. In fact, the example identified by commenters identifies one situation that requires such consideration; where occasional, brief reverse power flows may be acceptable during short periods under abnormal operating conditions. Further discussion of this issue is within the scope of the Phase II SAR. No change made.

The SDT affirms the requirement to provide the most recent consecutive two calendar year period minimum and maximum magnitude of the power flow out of the Element(s) for which an Exception is sought. The SDT believes that a single year's data is insufficient to determine a pattern of flow on the Element(s). Moreover, many of the NERC Standards already require longer data retention periods; typically for a full audit period which is either three or six years. *See* NERC Compliance Process Bulletin #2009-005, Current In-Force Document Data Retention Requirements for Registered Entities, Version 1.0, at 1 (Jun.29, 2009). It should be noted that retaining three second data from an Energy Management System (EMS) or a Supervisory Control And Data Acquisition (SCADA) system is not sought in this instance. No change made.

The SDT declines to further define the "maximum magnitude of the power flow." It is up to the submitting entity to determine how best to present the information supporting their request and any responses provided by the submitting entity can be further described or qualified under the comments section. No change made.

The General Instruction area on page one has been modified to clarify that a submitting entity may provide documents and any additional information, including Seven Factor Test related information, which supports their request. It is up to the Submitting entity to determine how best to present the information supporting their request. If the submitting entity wishes to provide this additional information it may do so by listing this information in the area provided under General Instructions in the Exception Request Form.

> **Page one**: List any attached supporting documents and any additional information that is included to supports the request:

The SDT has deleted the checkboxes in Question 7. To replace the checkboxes, language has been added requesting the submitting entity to describe the conditions and the time duration when power flow through Element(s) into the BES. It is up to the submitting entity to determine how best to present the information supporting their request.

> **Q7**. If yes, then using metered or SCADA data for the most recent consecutive two calendar year period, what is the minimum and maximum magnitude of the power flow out of the facility Element(s)? and dDescribe the conditions and the time duration when this could occurs?

Organization	Yes or No	Question 2 Comment
ACES Power Marketing Standards Collaborators	No	Q1, Q5 and Q6 have a "Description/Comments" section. What type of information should be included under the Description for each of these questions? Providing more guidance here would help achieve the "standardization, clarity and continuity of process" that we seek. Regarding Q2: A permanent flowgate should not be part of the detailed information to support an exception. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the "permanent" adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First, flowgates are created to manage congestion. The IDC is more of a congestion management tool than a reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve IROLs that have been violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The

Organization	Yes or No	Question 2 Comment
		characteristics of the flowgate make it a good proxy for estimating how much contractual use has been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROLs, many simply are not. We are unclear about what "an appropriate list" in Q3 is supposed to be. Is it supposed to be a list of all IROLs or only those for which the answer is yes? Why is a list even necessary since the answer to the question answers Exclusion E3.c? If the answer is no, is this asking the submitter to prove the negative?
Response: The SDT believes the guidance provided on Page 1 of the Exception Request Form is sufficient. A submitting entity may provide any additional information or explanation in the comments section of the questions that it believes will assist in the review of its Exception Request. No single response or piece of supporting information will be solely dispositive in an Exception Request evaluation and all responses and supporting information provided will receive consideration. It is up to the submitting entity to determine how best to present the information supporting their request in the comment area provided for each question. No change made. The SDT has determined that information on Flowgate impacts and whether Element(s) are included in an Interconnection Reliability Operating Limit (IROL) are necessary to the Regional Entity's determination of whether an Element(s) is used to provide bulk power transfers within the Interconnections or whether the Element(s) is distribution. A number of interchange coordination Reliability Standards apply to these transfer paths and Flowgates. Accordingly, the SDT believes such facilities are necessary for the reliable operation of an interconnected electric transmission network and would not be excluded from the definition of the BES. Furthermore, the SDT understands that each Flowgate list may be added to or subtracted from based on prevailing system conditions, however, a core set of Flowgates will remain the same. It is up to the submitting entity to determine how best to present the information supporting their request and the nature of the Element(s) impact on a permanent flowgate can be further described or qualified under the comments section. No change made. The SDT has clarified that the submitting entity is to provide the appropriate list of IROLs for the operating area where the Element(s) is/are located. **Q3**. Please provide the appropriate list for ~~your~~the operating area where the Element(s) is located:		
Bonneville Power	No	Regarding #4 on page 2: BPA believes the impact to the over-all reliability of

Organization	Yes or No	Question 2 Comment
Administration		the BES needs to consider more than just an outage of the facility requesting exclusion. One example is a contingency outage of a parallel facility that could cause an overload. Item 4 needs to include impacts of either the outage of the facility, or with the facility in service.BPA believes that the entity requesting an exception may not have information on impacts of the facility on parallel higher-voltage facilities because the NERC requirements for data sharing for these types of facilities does not necessarily include owners and operators of lower voltage systems. The entity requesting an exemption would likely need to coordinate with affected systems, and this coordination should be required in the exemption process so that affected systems are aware of the possible exclusion.
Response: The SDT will continue to monitor the process over next 12 months and if it is determined additional information is needed, such as how outages of BES facilities impact the Element(s) for which an exception is sought, it will be addressed in Phase II. Nevertheless, submitting entities are free to include information in response to any question that best supports their request for an exception. No change made. Coordination of an exception request with affected systems is already addressed in the Exception Rules of Procedure, Appendix 5C Sections 4.1, 4.4, 4.5.1, and 4.5.2, requiring the submitting entity, if not the facility owner, to provide a copy of the request to the facility owner, all involved Regional Entities if it is a cross-border facility, and to the Planning Coordinator, Reliability Coordinator, Transmission Operator, Transmission Planner, and Balancing Authority that has (or will have upon inclusion in the BES) the Elements covered by an exception request within its scope of responsibility.		
Pepco Holdings Inc	No	1) Why is Item 5 (Question pertaining to whether the facility is used for off-site power to a nuclear plant) included, since this criteria is not part of the proposed bright-line BES definition. 2) Similarly, why is Item 6 (Question pertaining to whether the facility is part of a Cranking Path associated with a Black Start Resource) included, since Black Start Cranking Paths were removed from the latest BES definition. Both Items 5 and 6 should be removed from the Exception Request Form.

Organization	Yes or No	Question 2 Comment
Response: The SDT disagrees with eliminating Questions 5 and 6. It is important to realize a distinction between the BES definition and the Exception Procedure. While the BES definition established bright-line criteria for the determination between BES and non-BES Element(s), the Exception Process requires an evaluation of all the responses and supporting materials provided as part of the Exception Request Form. No single response or piece of supporting information will be solely dispositive in an Exception Request evaluation. It is not correct to assume that simply because an evaluation criterion was removed from the bright-line definition it should also be eliminated from consideration in the Exception Process. The SDT believes that Cranking Paths and off-site power supply to a nuclear power plants are among the factors to be given consideration in the evaluation for an Exception Request. Further discussion of this issue is within the scope of the Phase II SAR. No change made.		
Electricity Consumers Resource Council (ELCON)	No	A sub-question should be added to Question 1 asking: (1) Does the generation serve all or a part of retail customer Load, and (2) If so, the maximum net capacity of each unit injected to the BES during non-emergency conditions.
Response: The General Instruction area on page one has been modified to clarify that a submitting entity may provide documents and any additional information that supports their request. If the submitting entity wishes to provide this additional information it may do so by listing this information in the area provided under General Instructions. No change made.		
AECI and member G&Ts	No	There is no basis in this draft Standard for including Item 6). Item 7) does appear appropriate within the Standard, but the intent of the four check-boxes is ambiguous.
Response: The SDT disagrees with eliminating the question pertaining to Cranking Path. It is important to realize a distinction between the BES definition and the Exception Procedure. While the BES definition established bright-line criteria for the determination between BES and non-BES Element(s), the Exception Procedure requires an evaluation of all the responses and supporting materials provided as part of the Exception Request Application Form. No single response or piece of supporting information will be solely dispositive in an Exception Request evaluation. The SDT believes that the Cranking Path is among the factors to be given consideration in the evaluation for an Exception Request application. Further discussion of this issue is within the scope of the Phase II SAR. No change made. The SDT has deleted the checkboxes in Question 7. To replace the checkboxes, language has been added requesting the submitting entity to describe the conditions and the time duration when power flow through Element(s) into the BES. It is up to the submitting		

Organization	Yes or No	Question 2 Comment
entity to determine how best to present the information supporting their request. Q7. If yes, then using metered or SCADA data for the most recent consecutive two calendar year period, what is the minimum and maximum magnitude of the power flow out of the ~~facility~~ Element(s)? ~~and d~~Describe the conditions and the time duration when this ~~could~~ occurs?		
NERC Staff Technical Review	No	In addition to describing how an outage of the facility under consideration affects the rest of the BES, the Submitting entity also should be required to provide an assessment of how outages of BES facilities affect the facility under consideration. This could be achieved with powerflow studies or distribution factor analysis.
Response: The SDT will continue to monitor the process over next 12 months and if it is determined additional information is needed, such as how outages of BES facilities impact the Element(s) for which an Exception is sought, it will be addressed in Phase II. Nevertheless, the General Instruction area on page one has been modified to clarify that a submitting entity may provide documents and any additional information that supports their request. If the submitting entity wishes to provide this additional information it may do so by listing this information in the area provided under General Instructions. No change made.		
IRC Standards Review Committee	No	We agree with most parts on P.2 and P.3, but question the need for Q6, which asks:"Is the facility part of a Cranking Path associated with a Blackstart Resource?"I3 in the BES definition stipulates that Blackstart Resources identified in the Transmission Operator's restoration plan be included (which we disagree and commented in the BES Definition Comment Form). There is no inclusion of any transmission facilities that are part of the cranking path. We suggest this item (Q6) be removed.
Response: The SDT disagrees with eliminating the question pertaining to Cranking Path. It is important to realize a distinction between the BES definition and the Exception Procedure. While the BES definition established bright-line criteria for the determination between BES and non-BES Element(s), the Exception Procedure requires an evaluation of all the responses and supporting materials provided as part of the Exception Request Form. No single response or piece of supporting information will be solely dispositive in an Exception Request evaluation. It is not correct to assume that simply because an evaluation criterion was removed from the bright-line definition it should also be eliminated from consideration in the Exception Procedure. The SDT believes		

Organization	Yes or No	Question 2 Comment
that Cranking Path is among the factors to be given consideration in the evaluation for an Exception Request application. Further discussion of this issue is within the scope of the Phase II SAR. No change made.		
PacifiCorp	No	Question 6 implies that if the facility is part of a designated blackstart cranking path then an exception request would most likely be denied. To the extent that was the intent, such an assumption would only be reasonable if the blackstart cranking path is the only path available. However, PacifiCorp suggests modifying the current Question 6 to reflect a situation in which multiple cranking paths are available, as follows:"6A. Is the facility part of a Cranking Path associated with a Blackstart Resource? 6B. If yes, does the Blackstart Resource have other viable Cranking Paths?"
Response: Several commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed ERO Rules of Procedure, Section 3.2 that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT has adopted clarifying language to differentiate between multiple Cranking Paths by requiring the Cranking Path "identified in a Transmission Operator's restoration plan." **Q6**. Is/Are the ~~facility~~ Element(s) part of a Cranking Path ~~associated with a Blackstart Resource~~ identified in a Transmission Operator's restoration plan?		
Snohomish County PUD	No	SNPD agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest three modifications to the proposed language to ensure consistency with Section 215 of the Federal Power Act, with the BES Definition, and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) SNPD suggests that a new question should be added concerning the function of the facility, which would read: "Does the facility function as a local distribution facility rather than a Transmission facility? If yes, please provide a detailed explanation of your answer." Section 215(a)(1) of the

Organization	Yes or No	Question 2 Comment
		FPA makes clear that “facilities used in the local distribution of electric energy” are excluded from the BES, 16 U.S.C. Â§ 824o(a)(1), and the most recent draft of the BES definition incorporates the same language. SNPD believes a question to address the function of the Element or system subject to an Exception Request is necessary to determine whether the Element or system is “used” in local distribution and thereby to ensure that this statutory limit on the BES is observed in the Exceptions process. Further, we believe a variety of information may be relevant to determining whether a particular facility functions as local distribution rather than as part of the BES. For example, if power is not scheduled across the facility or if capacity on the system is not posted on the relevant OASIS, it is likely to function as local distribution, not transmission. Similarly, if power enters the system and is delivered to load within the system rather than moving to load located on another system, its function is local distribution rather than transmission. SNPD proposes the language above as an open-ended question so that the entity submitting the Exceptions Request can provide this and any other information it deems relevant to facility function. (2) SNPD suggests modifying question 6 to “Is the facility part a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator’s restoration plan.” This language reflects the most recent revision of the BES Definition, which removes the reference to “Cranking Paths,” and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator’s restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (3) A general “catch-all” question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language:"Is there additional information not covered in the questions above that supports the Exception Request? If yes, please

Organization	Yes or No	Question 2 Comment
		provide the information and explain why it is relevant to the Exception Request."While SNPD believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.
Response: The General Instruction area on page one has been modified to clarify that a submitting entity may provide documents and any additional information that supports their request. It is up to the submitting entity to determine how best to present the information supporting their request. If the submitting entity wishes to provide this additional information it may do so by listing this information in the area provided under General Instructions. **Page one**: List any attached supporting documents and any additional information that is included to supports the request: The SDT has adopted clarifying language to differentiate between multiple Cranking Paths by requiring the Cranking Path "identified in a Transmission Operator's restoration plan." **Q6**. Is/Are the facility Element(s) part of a Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan?		
Duke Energy	No	Modify wording on #3 as follows: "Please provide the appropriate list for the operating area where the facility is located." Modify the wording on #6 as follows: "Is the facility part of a Cranking Path identified in an entity's restoration plan for a Blackstart Resource as required by EOP-005-2?"
Response: The SDT has accepted the recommended wording change to Question 3. **Q3**. Please provide the appropriate list for yourthe operating area where the Element(s) is located: The SDT has adopted clarifying language to differentiate between multiple cranking paths by requiring the cranking path "identified		

Organization	Yes or No	Question 2 Comment
in a Transmission Operator's restoration plan." **Q6**. Is/Are the ~~facility~~ Element(s) part of a Cranking Path ~~associated with a Blackstart Resource~~ identified in a Transmission Operator's restoration plan?		
ReliabilityFirst	No	All generating units, to some degree, affect the transmission elements that make-up the BES. What role will this effect have on the determination? If the systems are planned properly and the day-ahead analysis is done for maintenance work, the outage of any one element is moot. What is the phrase "impact the over-all reliability" getting at? These studies and analysis will need to look at multiple outages and groups of elements being taken out and excluded. Will this be on a first come, first out process? As for the Nuclear Plant Interface Requirement (NPIR) question, ReliabilityFirst Staff believes these facilities should always be included as part of the BES and taken out of the Detailed Information to Support an Exception Request. For question 6 ReliabilityFirst Staff believes the Cranking Path should be included in the BES definition. . ReliabilityFirst Staff feels that without including the Cranking Paths, the reliability of the system could be jeopardized if a restoration is required and the Cranking Paths are unavailable due to non-adherence to Reliability Standards. Omit question 7, E3 (LN) of the definition already talks to power flow and even if there is a small percentage of flow, it makes that entity a user of the BES, which should be included.
Response: The SDT refers the commenter to the phrase consistent 'with TPL methodologies' which the SDT believes will cover the item in question. The SDT reminds the commenter that the evaluation in question is not for removing the Element from service but simply from inclusion or exclusion in the BES. Therefore, there should be no problem with evaluating multiple requests in the same area and no first in, first out scenario. The questions on nuclear interface facilities and Cranking Paths will be retained. They are just one piece of information in the process		

Organization	Yes or No	Question 2 Comment
and the SDT considers them as important considerations. No change made. Question 7 will be retained. It is important to realize a distinction between the BES definition and the Exception Procedure. While the BES definition established bright-line criteria for the determination between BES and non-BES Element(s), the Exception Procedure requires an evaluation of all the responses and supporting materials provided as part of the Exception Request Form. No single response or piece of supporting information will be solely dispositive in an Exception Request evaluation. The SDT believes that power flow through this Element(s) into the BES is among the factors to be given consideration in the evaluation for an Exception Request application.		
Hydro-Quebec TransEnergie	No	
Manitoba Hydro	No	
Response: Without additional information, the SDT is unable to respond.		
Consumers Energy	No	We believe that item 6, should read "Is the facility part of a Primary Cranking Path associated with a Blackstart Resource?" Currently, the word "Primary" is not included.
Response: The SDT has adopted clarifying language to differentiate between multiple cranking paths by requiring the cranking path "identified in a Transmission Operator's restoration plan." **Q6**. Is/Are the ~~facility~~ Element(s) part of a Cranking Path ~~associated with a Blackstart Resource~~ identified in a Transmission Operator's restoration plan?		
Orange and Rockland Utilities, Inc.	No	Please clarify "facility" and include "N-1" for power-flow studying.
Response: In order to maintain consistency with the nomenclature used in the Exception Process Document, draft Appendix 5C of the NERC Rules of Procedure, the SDT has replaced "facilities" with "Element(s)", where appropriate. The SDT has pointed to the TPL methodology in the document and that should address your comment. No change made.		

Organization	Yes or No	Question 2 Comment
ISO New England Inc	No	- Question 1o The use of the words “connected to” is unclear. Some may read this as generation “directly” connected to while others could interpret it more generically. o A generation cut-off should be included in the requirement to list all indiv
Response: The SDT acknowledges and appreciates the comments but has determined no additional clarity is needed to Question 1. It is up to the submitting entity to determine how best to present the information supporting their request and any responses can be further described or qualified under the comments section to Question 1. No change made. The SDT does not believe a generation threshold is appropriate for listing all connected units. The SAR for Phase II of this project calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. No change made.		
PSEg Services Corp	No	Questions #4 requires an analysis of the “most severe impact” associated an outage of the Element proposed for exception. a. Both the newly Board approved TPL-001-2 standard and the existing TPL-004-1 require that severe contingencies be evaluated, but there are no performance requirements for them. If the team intended the “most-severe impact” analysis to only evaluate TPL outages that incorporate performance requirements, it should make that clear. b. The most-severe-outage impact question does not ask key relevant information such as: i. What is the probability that the “most severe impact “will occur? ii. Could the impact be readily mitigated and service restored? This point is critical because the impact of an outage lasting several minutes before restoration versus several hours before restoration should affect the analysis. What does question #7 (“Does power flow through this facility into the BES?”) with check boxes for various % of a calendar year that power flows into the BES) imply with respect to a transmission facility’s exception request? Also, is the % of a calendar year data intended to be forecasted data or historic data? It would seem that forecasted data would need to be supplied that is consistent

Organization	Yes or No	Question 2 Comment
		with the TPL models. Finally, why are historic flows requested - they have no relevance except for perhaps explaining historic and forecasted differences?
Response: The document cites that the TPL methodology should be followed and that should address your concern. An entity does not have to duplicate TPL studies. No change made. The SDT has replaced the checkboxes and language has been added requesting the submitting entity to describe the conditions and the time duration when power flow through Element(s) into the BES. It is up to the submitting entity to determine how best to present the information supporting their request. **Q7**. If yes, then using metered or SCADA data for the most recent consecutive two calendar year period, what is the minimum and maximum magnitude of the power flow out of the ~~facility~~ Element(s)? ~~and d~~Describe the conditions and the time duration when this ~~could~~ occurs? Historic flows are requested because they are an indication of power flow patterns. It is up to the submitting entity to determine how best to present the information supporting their request and any responses can be further described or qualified under the comments section.		
City of St. George	No	The questions for transmission facilities seem to be appropriate; however, how the answers are to be used by the region or NERC is unclear. Will a given response to a question make exclusion impossible? If so this needs to be known upfront and clearly documented. For example question 4, on page 2 is open for interpretation and debate as to what the impact to the over-all reliability of the BES is. The definition of "impact" is really the key to the whole definition effort. Load flow, voltage, frequency change limits may all be pieces to the puzzle. Are these criteria to be met in normal, N-1, N-2, etc. system configurations?
Response: Several commenters have asked whether a single 'yes' or 'no' response to an item on the exception application form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an		

Organization	Yes or No	Question 2 Comment
Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The document cites that an entity should follow the TPL methodology.		
Blachly-Lane Electric Cooperative Central Electric Cooperative (CEC) Clearwater Power Company (CPC) Consumer's Power Inc. (CPI) Douglas Electric Cooperative (DEC) Fall River Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (Lincoln) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric	No	BLEC agrees that the checklist of items on pages two and three lists most of the information that would be necessary to determine if an Exceptions Request is justified. We suggest two modifications to the proposed language to ensure consistency with the BES Definition and to provide an entity seeking an Exception with the opportunity to submit all relevant information: (1) We suggest modifying question 6 to "Is the facility part of a designated Cranking Path associated with a Blackstart Resource identified in a Transmission Operator's restoration plan." This language reflects the most recent revision of the BES Definition and also helps distinguish between generators which have Blackstart capability and those generators that are designated as a Blackstart Resource in the Transmission Operator's restoration plan. It is only the latter that are included in the BES under the current draft of the definition. (2) A general "catch-all" question should be added that will prompt the entity submitting an Exception Request to submit any information it believes is relevant to the Exception that is not captured in the other questions. We suggest the following language: Is there additional information not covered in the questions above that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request. While we believes the questions set forth in the draft capture the information that generally would be necessary to determine whether an Exception Request should be granted, it is foreseeable that there may be unusual circumstances where the information called for either does not capture the full picture or where studies other than the specific types called for in the draft form support the Exception. An entity seeking an Exception should have the opportunity to present any information it believes is relevant.

Organization	Yes or No	Question 2 Comment
Cooperative (RAFT) Umatilla Electric Cooperative West Oregon Electric Cooperative (WOEC) Coos-Curry Electric Coooperative City of Austin dba Austin Energy Kootenai Electric Cooperative		
Response: The SDT has clarified the language of question 6. > **Q6**. Is/Are the ~~facility~~ Element(s) part of a Cranking Path ~~associated with a Blackstart Resource~~ identified in a Transmission Operator's restoration plan? The General Instruction area on page one has been modified to clarify that a submitting entity may provide documents and any additional information that supports their request. It is up to the submitting entity to determine how best to present the information supporting their request. If the submitting entity wishes to provide this additional information it may do so by listing this information in the area provided under General Instructions on the Exception Request Form. > **Page one**: List any attached supporting documents and any additional information that is included to support~~s~~ the request:		
Central Lincoln	Yes	We note that if Q7 is yes, an entity is asked to provide meter or SCADA data. Evidently the team assumes the facility in question is existing. We propose that study data could be provided instead for facilities that are in the planning stage.
Response: The SDT recommends that each submitting entity work with its Regional Entity to resolve issues with information availability or access and, in the event such information is not available, whether suitable replacement data is acceptable. The SDT further recommends that where information is unavailable, the submitting entity state such in the comment area and provide the reason for this unavailability. This will signal the Regional Entity that an issue concerning information availability will need to be		

Organization	Yes or No	Question 2 Comment
resolved as part of the review process. No change made.		
National Grid	No	We agree with the information requested on pages 2 and 3, however we would like more clarification regarding Item 7. When answering what % of the calendar year power flows through the facility into BES, should this be calculated on an hourly basis? We would also like clarification for Item 7 regarding the request for SCADA data from the last 2 years to determine the minimum and maximum magnitude of the power flow out of the facility. What data should be used in situations with new facilities or in situations or where the system configuration (topology) has changed in such a way that the power flows in the area have changed, so the last 2 years of SCADA data is no longer relevant
Response: The SDT has deleted the checkboxes in Question 7. To replace the checkboxes, language has been added requesting the submitting entity to describe the conditions and the time duration when power flow through Element(s) into the BES. It is up to the submitting entity to determine how best to present the information supporting their request. **Q7**. If yes, then using metered or SCADA data for the most recent consecutive two calendar year period, what is the minimum and maximum magnitude of the power flow out of the ~~facility~~ Element(s)? ~~and d~~Describe the conditions and the time duration when this ~~could~~ occurs? The SDT recommends that each submitting entity work with its Regional Entity to resolve issues with information availability or access and, in the event such information is not available, whether suitable replacement data is acceptable. The SDT further recommends that where information is unavailable, the submitting entity state such in the comment area and provide the reason for this unavailability. This will signal the Regional Entity that an issue concerning information availability will need to be resolved as part of the review process.		
Ameren	No	From our perspective, the first question should be “Is the facility connected at 100 kV or above?” The questions should be reordered. Of the questions listed, question #3 should be #1, and questions #1 should be the last question in this section.

Organization	Yes or No	Question 2 Comment
		Regarding the word "permanent" as it is used to describe Flowgates, it is suggested that the word "limiting" or "constrained" be used instead.
Response: The SDT does not believe the order of the questions is significant since no single response or piece of supporting information will be solely dispositive in an Exception Request evaluation and all responses and supporting information provided will receive consideration. No change made. The SDT believes that the continued qualifier of "permanent" associated with the term "Flowgate" addresses the intent of the definition. No change made.		
ATC LLC	No	ATC proposes the following changes to Item #7:7a. Are Firm Power Transfers scheduled to flow out of, or through, this facility into the BES in the operating horizon? [for BES designations applicable to the operating horizon] Note: The consideration for power flowing into the BES should be based on normal operating conditions or base case (n-0 contingency analysis), not on historical real-time telemetry. 7b. Are Firm Power Transfers reserved to flow out of, or through, this facility into the BES in the planning horizon? [for BES designations applicable to the planning horizon)
Response: The General Instruction area on page one has been modified to clarify that a submitting entity may provide documents and any additional information that supports the request. It is up to the submitting entity to determine how best to present the information supporting their request. If the submitting entity wishes to provide this additional information it may do so by listing this information in the area provided under General Instructions on the Exception Request Form. **Page one**: List any attached supporting documents and any additional information that is included to supports the request:		
Farmington Electric Utility System	No	The form should be titled "For Transmission Elements" rather than "Facilities" to align with the BES definition and Appendix 5C of the NERC Rules of Procedure. The form should align with section 4.5.1 and 4.5.2 of Appendix 5C. It should include a listing of the Element(s) and the status based on the application of the

Organization	Yes or No	Question 2 Comment
		BES Definition. Question 6 relates to a 'facility' that is part of a Cranking Path. The latest revision of the BES Definition removed the designated blackstart Cranking Paths from the Inclusion of the BES in I3. Having a question regarding the Cranking Path in the Exception Request makes it appear Cranking Paths are still automatically included in the BES. Question 7; what is an alternate method if a Requesting Entity does not have SCADA data for the most recent two consecutive calendar years.

Response: In order to maintain consistency with the nomenclature used in the Exception Process Document, draft Appendix 5C of the NERC Rules of Procedure, the SDT has replaced "facilities" with "Element(s)", where appropriate.

A checkbox for indicating the current BES status and a space for listing elements for which an exception is sought is included in Sections I and II, respectively, of the Exception Request Form provided by the Rules of Procedure Team in their posting.

The SDT disagrees with eliminating the question pertaining to Cranking Path. It is important to realize a distinction between the BES definition and the Exception process. While the BES definition established bright-line criteria for the determination between BES and non-BES Element(s), the Exception Process requires an evaluation of all the responses and supporting materials provided as part of the Exception Request Form. No single response or piece of supporting information will be solely dispositive in an Exception Request evaluation. It is not correct to assume that simply because an evaluation criterion was removed from the bright-line definition it should also be eliminated from consideration in the Exception process. The SDT believes that cranking paths is among the factors to be given consideration in the evaluation for an Exception Request application. Any further discussion of this issue is within the scope of the Phase II SAR. No change made.

The SDT further disagrees that including Question 6 in the Exception Request Form, relating to Element(s) that are a part of a Cranking Path, makes it appear that Cranking Paths are automatically included in the BES. The BES definition and the Exception Request Procedure are separate processes.

The SDT recommends that each submitting entity work with its Regional Entity to resolve issues with information availability or access and, in the event such information is not available, whether suitable replacement data is acceptable. The SDT further recommends that where information is unavailable, the submitting entity state such in the comment area and provide the reason for this unavailability. This will signal the Regional Entity that an issue concerning information availability will need to be resolved as part

Organization	Yes or No	Question 2 Comment
of the review process. No change made.		
Metropolitan Water District of Southern California	No	General Comments: Metropolitan Water District of Southern California ("MWDSC") believes that additional work is necessary to explain how this Detailed Information to Support an Exception Request will be used in evaluating whether a transmission facility will be an exception to the BES. In addition, MWDSC agrees WECC that the proposed Technical Principles for Demonstrating BES Exceptions Request is lack of clarity. It does not provide detail information as to what entities must provide to support their requests, nor does it provide any criteria for consistency among regions in their assessment of requests. Lastly, the current proposal leaves it to each region to develop its own methodology and criteria for evaluating the technical studies. MWDSC believes that drafting team should establish a common method and criteria to apply continent-wide in achieving uniformity and consistency among regions in their assessment of exception requests. Comments to Checklist #4: MWDSC recommends the following changes to emphasize facility impact on the interconnection of the BES:"How does an outage of the facility impact the over-all reliability of to the interconnection of the BES?" Comments to Checklist #7: What percentage of power flow through entity's facility into the BES will be considered as an exception to the BES?
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.		

Organization	Yes or No	Question 2 Comment
		There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled

Organization	Yes or No	Question 2 Comment
		separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. The SDT believes no further clarification is needed in Question 4. The General Instruction area on page one has been modified to clarify that a submitting entity may provide documents and any additional information that supports their request. It is up to the submitting entity to determine how best to present the information supporting their request. If the submitting entity wishes to provide this additional information it may do so by listing this information in the area provided under General Instructions on the Exception Request Form. > **Page one**: List any attached supporting documents and any additional information that is included to supports the request: The Exception Process requires an evaluation of all the responses and supporting materials provided as part of the Exception Request Form. There are no set thresholds, the percentage of power flow through and entity's facility into the BES will be but one factor

Organization	Yes or No	Question 2 Comment
among others considered when evaluating a BES Exception Request.		
Transmission Access Policy Study Group		Question 7 asks, "[d]oes power flow through this facility into the BES?" As in the rest of the document, the reference should be to an "Element(s)," rather than to a "facility." In addition, we suggest that the meaning of power flowing "through" the Element(s) be clarified, consistent with clarification of the same point in Exclusion E3 of the BES Definition. In TAPS' comments on the BES Definition, also submitted today, TAPS suggests that the first sentence of Exclusion E3 be revised to state: "Power flows only into the LN, that is, at each individual connection at 100 kV or higher, the pre-contingency flow of power is from outside the LN into the LN for all hours of the previous 2 years." We propose that Question 7 in the Detailed Information to Support an Exception Requests be similarly revised: "Does power flow from this facility into the BES, i.e., at any individual connection at 100kV or higher, is the pre-contingency flow of power from the LN to the BES for any hour of the previous 2 years?"
Response: In order to maintain consistency with the nomenclature used in the Exception Process Document, draft Appendix 5C of the NERC Rules of Procedure, the SDT has replaced "facilities" with "Element(s)" where appropriate. The SDT disagrees with the use of parallel language for exclusions in the BES Definition and Exception Request Form. It is important to realize a distinction between the BES definition and the Exception process. While the BES definition established bright-line criteria for the determination between BES and non-BES Element(s), the Exception Process requires an evaluation of all the responses and supporting materials provided as part of the Exception Request Application Form.		
Tri-State Generation and Transmission Assn., Inc. Energy Mangement		Again Yes/No is conflicting in the question. The requested information in#2 is too vague and may be subjective. If the information in#7 is requested in the planning stage the data would not be available. What objective criteria would be used to determine the state of the exception request?

Organization	Yes or No	Question 2 Comment
TSGT G&T		Again Yes/No is conflicting in the question. The requested information in#2 is too vague and may be subjective. If the information in#7 is requested in the planning stage the data would not be available. What objective criteria would be used to determine the state of the exception request?

Response: The SDT disagrees that the information requested in Question 2 is too vague and subjective but understands the concerns raised by the commenters in not receiving hard and fast guidance on the Exception criteria. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in

Organization	Yes or No	Question 2 Comment
		rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of

Organization	Yes or No	Question 2 Comment
experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. As to the availability of needed information to support an exception request, the SDT recommends that each submitting entity work with its Regional Entity to resolve issues with information availability or access, and in the event such information is not available, whether suitable replacement data is acceptable. The SDT further recommends that where information is unavailable, the submitting entity state such in the comment area and provide the reason for this unavailability. This will signal the Regional Entity that an issue concerning information availability will need to be resolved as part of the review process. Finally, there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.		
WECC Staff	Yes	The requested information in the checklist is appropriate. However; the exceptions process as drafted, with no objective criteria defining how to assess the submittals, leaves it to each Regional Entity to develop their own criteria to evaluate the responses to the checklist included in the submittals, leading to inconsistency between Regional Entities. In addition, WECC recommends clarifying Question 7. On its face it is unclear what defines power flowing through a facility in the BES. It should be clear whether a qualitative or quantitative response is required.
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.		

Organization	Yes or No	Question 2 Comment
		There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled

Organization	Yes or No	Question 2 Comment
		separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. The SDT has deleted the checkboxes under Question 7. To replace the checkboxes, language has been added requesting the submitting entity to describe the conditions and the time duration when power flow through Element(s) into the BES. If the answer is yes to the question "Does power flow through this Element(s) into the BES," the sub-question seeks a quantitative amount. However, it is up to the submitting entity to determine how best to present the information supporting their request and any responses can be further described or qualified under the comments section. **Q7**. If yes, then using metered or SCADA data for the most recent consecutive two calendar year period, what is the minimum and maximum magnitude of the power flow out of the ~~facility~~ Element(s)? ~~and d~~Describe the conditions and the time duration when this ~~could~~ occurs?

Organization	Yes or No	Question 2 Comment
Transmission	Yes	"Impact" and "degree of impact" in question 2 should be framed with the criteria expected.

Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides

Organization	Yes or No	Question 2 Comment
		can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes

Organization	Yes or No	Question 2 Comment
will result in a favorable outcome.		
American Electric Power	Yes	We recommend capitalizing “facility”.
Response: In order to maintain consistency with the nomenclature used in the Exception Process Document, draft Appendix 5C of the NERC Rules of Procedure, the SDT has replaced “facilities” with “Element(s)”, where appropriate.		
Long Island Power Authority	Yes	On page 3 why reference if a facility is part of a Cranking Path after the SDT has deleted Cranking Paths from the Inclusion list as part of the BES definition.
Response: It is important to realize a distinction between the BES definition and the Exception Procedure. While the BES definition established bright-line criteria for the determination between BES and non-BES Element(s), the Exception Procedure requires an evaluation of all the responses and supporting materials provided as part of the Exception Request Application Form. No single response or piece of supporting information will be solely dispositive in an Exception Request evaluation. It is not correct to assume that simply because an evaluation criterion was removed from the bright-line definition it should also be eliminated from consideration in the Exception process. The SDT believes that Cranking Path is among the factors to be given consideration in the evaluation for an Exception Request application. Further discussion of this issue is within the scope of the Phase II SAR. No change made.		
City of Redding Electric Utility	Yes	
City of Redding	Yes	
Georgia System Operations Corporation	Yes	
Oncor Electric Delivery Company LLC	Yes	
Independent Electricity System Operator	Yes	

Organization	Yes or No	Question 2 Comment
NV Energy	Yes	
Central Hudson Gas & Electric Corporation	Yes	
Exelon	Yes	
Hydro One Networks Inc.	Yes	We believe that the SDT's proposed approach for exception criteria is reasonable; recognizing that one method/criteria can not be applicable to everyone and every situation within the ERO foot print. See our comment in Q1.
Holland Board of Public Works	Yes	
Southern Company Generation	Yes	We agree with the information being requested.
Dominion	Yes	
Southwest Power Pool Standards Review Team	Yes	
SERC Planning Standards Subcommittee	Yes	
Tacoma Power	Yes	Tacoma Power supports the information requested on page 2 and 3.
Springfield Utility Board	Yes	SUB agrees with the instructions, finding them to be clear and reasonable.
BGE	Yes	No comment.
Michigan Public Power Agency	Yes	

Organization	Yes or No	Question 2 Comment
Response: Thank you for your support.		

3. **Page four of the 'Detailed Information to Support an Exception Request' contains a checklist of items that deal with generation facilities. Do you agree with the information being requested or is there information that you believe needs to be on page four that is missing? Please be as specific as possible with your comments.**

Summary Consideration: Several respondents suggested better clarity on whether responses should be market or reliability related. The SDT made slight modifications to the "Detailed Information to Support an Exception Request" form to request responses that are specifically reliability related.

Based on the comments received and past history for such situations, the SDT believes that entities will be able to obtain the requisite information necessary to submit a request. However, should an entity have difficulty, they will need to obtain the assistance of their Regional Entity to secure the data. If the entity still can't obtain the needed data, then the SDT fully expects that entity's Regional Entity to work with them to come up with a plan that will allow that entity to fill out the request form in a manner that will be acceptable to the Regional Entity so that processing of the request can continue.

The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to

NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication.

Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved."

The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the

complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

Page 1 - List any attached supporting documents and any additional information that is included to supports the request:

Generation - Q1. What is the MW value of the host Balancing Authority's most severe single Contingency and what is the generator's, or generator facility's generation resource's, percent of this value?

Generation - Q2. Is the generator or generator facility generation resource used to provide reliability-related Ancillary Services?

Generation - Q3. Is the generator generation resource designated as a must run unit for reliability?

Organization	Yes or No	Question 3 Comment
Northeast Power Coordinating Council	No	This Application generally applies to traditionally fueled generating facilities. Application form and justifications would be required for non-traditional resources such as solar and wind? Question 2 on page 4 asks, "Is the generator or generator facility used to provide Ancillary Services?" If some of these Generator check list items are market-related and not reliability-related, they should not be present. If the Ancillary Services are reliability-related, please explain their relation to BES reliability. Suggest inserting the word "reliability" before the words "must run" in question 3. Question 5 on page 4 asks, "Does the generator use the BES to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load?" This could mean the generator may serve local loads through non-BES facilities. In order to serve these local loads the generator would need to be connected to a Radial system, a Local Network or to local distribution facilities. Is this what is intended? Were there any other possibilities envisioned by the BES SDT?
Response: The SDT believes the form can be used for any type of generation resource as there are no restrictions on type in the		

Organization	Yes or No	Question 3 Comment
questions. No change made. The form has been modified to request only reliability related functions be included. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability--related Ancillary Services? **Q3**. Is the ~~generator~~ generation resource designated as a must run unit for reliability? If the entity serves the indicated Load through a radial system, etc., it should supply that information as part of its supporting information. No change made.		
ACES Power Marketing Standards Collaborators	No	Q5 has a "Description/Comments" section. Further clarification on what type of information to include under the Description would help "standardize" the supporting information and "will provide more clarity and continuity to the process." The definition of ancillary services varies and can be quite broad. It can include reactive power and voltage support for example. All generators provide some reactive power and voltage support. Thus, ancillary services should be further defined or one could construe it to limit any generator from being excepted.
Response: Entities applying for an exception can include any information they deem appropriate in the general and specific sections of the form. It would be difficult to establish specific criteria that would be applicable to all systems. Questions regarding ancillary services have been further clarified. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability--related Ancillary Services?		
Farmington Electric Utility System	No	Question 1, the SDT team should consider if the Submitting entity or Owner is part of a Reserve Sharing Group. The host BA's most single severe Contingency vs the obligation of reserves required as part of a Reserve Sharing Group may be substantial. The SDT team should clarify if it is a single generator or if it is the aggregate at a facility.

Organization	Yes or No	Question 3 Comment
Response: An entity can supply that information as part of its supporting information in its request. No change made. The assumption is that the request is being made as a result of the application of the definition which is for single units or aggregate as appropriate.		
Dominion	No	The SDT language specifying services acceptable for inclusion in an exclusion request references ancillary services identified under a Transmission Service Provider's OATT. However, there is great variation in the services that have actually been implemented and posted across North America under those OATTs. There is no consistent description or terminology to characterize those services. In short, Transmission Providers have been permitted to individualize OATT services to fit regional market structures and vernacular. For example, PJM's OATT includes a schedule for Blackstart Service. The FERC pro-forma tariff does not. ISO-NE's tariff includes the following ancillary services (which are performed by the ISO and TSP): o Scheduling, System Control and Dispatch Service o Energy Imbalance Service o Generator Imbalance Service Therefore, Dominion suggests that the SDT provide a specific list of ancillary services that would be eligible for exclusion, rather than rely on OATT references. Examples might include: reactive, voltage control or regulation services, frequency response and blackstart services. Dominion is also aware that the phrase " 'must run" is used in some RTO/ISO market systems to indicate intent to self-schedule the generator. Dominion suggests that question 3 be revised to read "Is the generator designated as a "must run" unit by either the Balancing Authority, Resource Planner or Reliability Coordinator?
Response: The form has been modified to request only reliability related functions are included. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability-related Ancillary Services? **Q3**. Is the ~~generator~~ generation resource designated as a must run unit for reliability?		
Southern Company	No	We do not agree completely with the information being requested. For checklist item #2, please specify what is included in "providing Ancillary Services" for a

Organization	Yes or No	Question 3 Comment
Generation		generator. For #4, can the question include a measure of evaluating the "most severe system impact"? Can the specific study that is required to be evaluated be outlined?
Response: Questions regarding ancillary services have been further clarified. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability-related Ancillary Services? The SDT refers the commenter to the statement that TPL methodologies should be followed in formulating the supporting information for the request.		
AECI and member G&Ts	No	Most of these questions appear relevant to the LN concept paper, but irrelevant to this standard's requirements. The last conditional of Item 5) must always be answered Yes, unless the local-network is islanded.
Response: The SDT does not see a need for a one-to-one correspondence between the definition items and the information requested. The form contains questions that will supply information the review panel will need to evaluate the request.		
NERC Staff Technical Review	No	For units designated as must run, the Submitting entity should be required to describe the reasons for which the unit has been so designated. We believe the general requirement to provide an appropriate reference is too vague, and should be appended with ". . . including a description of why the unit has been designated as must run and if applicable, the contingencies that would result in violation of the NERC Reliability Standards if the unit was not must run."
Response: The form has been modified to request only reliability related functions are included. Information such as shown in the comment can be entered as needed by the requesting entity. In general, an entity should supply any and all information that it feels is needed to support its request. **Q3**. Is the ~~generator~~ generation resource designated as a must run unit for reliability?		

Organization	Yes or No	Question 3 Comment
Duke Energy	No	Modify wording on #3 as follows: "Please provide the appropriate reference for the operating area where the facility is located."
Response: The SDT does not believe that the suggested wording provides any additional clarity. No change made.		
NV Energy	No	In question #7 of the form, it would be useful to the analysis for technical exception to include not only the minimum and maximum power flow out of the candidate facility, but also a description or demonstration of the "typical" magnitude or the "average" of such flow. An entity may provide this sort of information anyhow, but a prompt for this type of information could be useful and prevent having to solicit more information during the review. Should be included in Question 2.
New York State Dept. of Public Service	No	Question 6 should be dropped. Facilities in a cranking path for a blackstart resource should not be a consideration. Question 7 is circular. If a facility is used to flow power into the BES, by definition it is outside the BES. Needs clarification as to the information the question is seeking. Should be question 2.
Response: Please see the response to Q2.		
Consolidated Edison Co. of NY, Inc.	No	For Generation Facilities: This Application form would appear to generally apply to traditional generating facilities. o What Application form and justifications would be required for non-traditional resources, e.g., solar and wind? o The Application form at 2 asks, "Is the generator or generator facility used to provide Ancillary Services?"If some of these Generator check list items are market-related and not reliability-related, then they should not be present. o If the Ancillary Services are reliability-related, please explain their relation to BES

Organization	Yes or No	Question 3 Comment
		reliability. Recommendation: Insert the word "reliability" before the words "must run" in question 3. The Application form at 5 asks, "Does the generator use the BES to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load?" We assume this mean the generator may serve local loads through non-BES facilities. In order to serve these local loads the generator would need to be connected to a Radial system, a Local Network or to local distribution facilities. o Is this meaning above implied and intended by this question? o Were there any other possibilities envisioned by the BES SDT?
Response: The SDT believes the form can be used for any type of generation resource as there are no restrictions on type in the questions. The form has been modified to request only reliability related functions be included. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability–related Ancillary Services? **Q3**. Is the ~~generator~~ generation resource designated as a must run unit for reliability? Entities applying for an exception can include any information they deem appropriate in the general and specific sections of the form. If the entity serves the indicated Load through a radial system, etc., it should supply that information as part of its supporting information. No change made.		
American Electric Power	No	It is unclear how the process will work with the interaction among the various NERC Functions. For instance, an exception request from generation might require collaboration among other functional entities, i.e. GOP, TOP, and RC. The question "How does an outage of the generator impact the over-all reliability of the BES" may be subjective and dependent on contingencies at any given time. It would be dependent on what state the BES would be in the area the generator is located. More detail would be needed in describing the study required to have

Organization	Yes or No	Question 3 Comment
		consistent results.
Response: Please refer to the Rules of Procedure for clarity on how the process will provide consistency. As every generator will have different impact it is up to the entity to complete the studies and to respond appropriately in the written section of the question.		
ReliabilityFirst	No	If the systems are planned properly and the day-ahead analysis is done for maintenance work, the outage of any one unit and even with the most serve outage happening, the system should be capable of withstanding. These studies and analysis will need to look at multiple outages and groups of units being taken out and excluded before any could be exempt. What is the phrase "impact the over-all reliability" getting at? These studies and analysis will need to look at multiple outages and groups of elements being taken out and excluded. Will this be on a first come, first out process? As for the Ancillary Services question, ReliabilityFirst Staff believes that if a unit provides this service, it should be included in the BES. The same applies for the "must run units" in question 3. Omit question 5, E3 (LN) of the definition already talks to power flow and even if there is a small percentage of unit's output flowing onto the BES, it makes that entity a user of the BES, which should be included.
Response: The SDT refers the commenter to the phrase consistent 'with TPL methodologies' which the SDT believes will cover the item in question. The SDT reminds the commenter the evaluation in question is not for removing the Element from service but simply from inclusion or exclusion in the BES. Therefore, there should be no problem with evaluating multiple requests in the same area and no first in, first out scenario. Ancillary services or must run status is only one piece of information in a total review of the impact of the Element on the BES. The		

Organization	Yes or No	Question 3 Comment
SDT does not believe that simply because a generator provides ancillary services or that it is must run that it should be automatically included. There is more to the BES than just the local networks. No change made.		
Hydro-Quebec TransEnergie	No	
Manitoba Hydro	No	
Response: Without any specific comments, the SDT is unable to respond.		
ISO New England Inc	No	- Question 1o The question would be better worded as "How many MW are lost following the host Balancing Authority's most severe single Contingency...".o The question becomes difficult to answer when the most severe single Contingency can change on a
Response: A slight revision has been made to Question 1 which should provide more clarity in this regard. **Q1**. What is the MW value of the host Balancing Authority's most severe single Contingency and what is the ~~generator's, or generator facility's~~ generation resource's, percent of this value?		
PSEg Services Corp	No	With regards to question #2 ("Is the generator or generating facility used to provide Ancillary Services"), the answer for most synchronous generators is probably "yes" unless they are in a bid-based market that selects specific generators for Reactive Power delivery. Since most generators (with the exception of those with nuclear prime movers) provide Reactive Power to meet a Transmission Operator-specified voltage, they would provide that Ancillary Service. Other generators (again, with the exception of generators with nuclear prime movers) may be eligible to provide other Ancillary Services such as Spinning Reserve, but may have rarely done so. However, they still may be "used do provide" Spinning Reserve at any time. How would those generators respond to question #2? Questions #4 requires an analysis of the "most severe impact" associated an outage

Organization	Yes or No	Question 3 Comment
		of the Element proposed for exception. a. Both the newly Board approved TPL-001-2 standard and the existing TPL-004-1 require that severe contingencies be evaluated, but there are no performance requirements for them. For consistency, performance requirements for the most-severe-impact analysis needed to be defined by the team. If the team intended the "most-severe impact" analysis to only evaluate TPL outages that incorporate performance requirements, it should make that clear.b. The most-severe-outage impact question does not ask key relevant information such as: i. What is the probability that the "most severe impact "will occur?ii. Could the impact be readily mitigated and service restored? This point is critical because the impact of an outage lasting several minutes before restoration versus several hours before restoration should affect the analysis. What does the answer to the question #5 in the Generator Facilities section ("Does the generator use the BES to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load?") imply with respect to a generator's exclusion? Also, the phrase "deliver its actual or scheduled output ...to load" needs explanation. The use of "actual output" and "scheduled output" may have several contexts. a. For example, in a market, a generator's actual output may suddenly go to zero due a forced outage, but the generator has financial obligations that accrue for delivering its scheduled output, which is in fact provided by other sources since the generator is unavailable. Is the question asking about the use of BPS facilities by resources that may be substituted for delivery of a generator's scheduled output when it differs from its actual output?b. Now assume that a generator's actual output equals its scheduled output and that several generators are forced out of service in another Balancing Authority, resulting in a frequency decline. Generators within the interconnection with active governors and available spinning capacity will automatically increase their output above their scheduled output, resulting in Inadvertent Interchange. Is the question related to the BES facilities used to deliver such Inadvertent Interchange?c. Again assume that a generator's actual output equals its scheduled output. Is the question related to the actual BES facilities that may be used to deliver the generator's power to Load? That would require an

Organization	Yes or No	Question 3 Comment
		analysis of generator and load shift factors to determine what actual facilities carry the power generated from a generator to a specific load for a given set of assumptions on the system topology. In a market, this analysis would not be possible for generators that do not self-schedule for delivery to specific loads.
Response: The form has been modified to request only reliability related functions are included. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability--related Ancillary Services? The SDT reminds the commenter the requirement is only to follow the TPL methodologies which have been spelled out in TPL-001-2. An entity can supply any and all information that it thinks will support its request. Entities applying for an exception can include any information they deem appropriate in the general and specific sections of the form. It is simply just one piece of information that is considered as useful for the review panel in making its ultimate decision. Any clarifying points an entity wants to make in its request can be supplied as the entity thinks appropriate.		
City of St. George	No	The questions for generation facilities seem to be appropriate; however, how the answers are to be used by the region or NERC is unclear. Will a given response to a question make exclusion impossible? If so this needs to be known upfront and clearly documented. For example question 4, on page 4 is open for interpretation and debate as to what the impact to the over-all reliability of the BES is. The definition of "impact" is really the key to the whole definition effort. Load flow, voltage, frequency change limits may all be pieces to the puzzle. Are these criteria to be met in normal, N-1, N-2, etc. system configurations?
Response: Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT refers the commenter to the statement that TPL methodologies should be followed in formulating the supporting		

Organization	Yes or No	Question 3 Comment
information for the request.		
Ameren	No	It is suggested that question #2 be deleted and replaced with "Is the generator designated as a black-start unit in an entity's restoration plan?"
Response: The SDT assumes the commenter is actually referring to the sixth question for transmission. Please see the detailed response to Q2.		
Georgia System Operations Corporation	No	Item 2 asks about "the generator or generator Facility," but 3, 4 and 5 only refer to the generator. There is no immediately apparent reason for them to be different. The language in Item 2 seems preferable.
Response: The SDT has reviewed all of the terminology for consistency and made clarifying changes as necessary. For example: **Q1**. What is the MW value of the host Balancing Authority's most severe single Contingency and what is the ~~generator's, or generator facility's~~ generation resource's, percent of this value?		
IRC Standards Review Committee		We do not agree with the detailed information requirements for generators. In a deregulated environment, generators are free to bid into the market or offer their availability, to dispatched based on bid price and resource needs, or overall generation dispatch plans. A generator may be on line but not dispatched, or not on line at all due to maintenance outage or a decision to not start. Its status and generation level have little to do in determining whether or not it needs to be included as a BES facility. Rather, it is the generator's active contribution to the BES performance, namely, its protective relay setting and coordination with those of related facilities and its ability to control voltage, respond to contingencies, ride through frequency and voltage excursion, provide accurate model with verification, etc., are critical to BES reliability performance. There are currently no standards or requirements that mandate a generator to be on line or to attain a specific level of output, and we do not see such a need at all in the future. Whether or not the unit is designed as a MUST RUN will depend on whether the generator is (a) on line and bid into the market or be included in the dispatch plan, and (b) the prevailing system

Organization	Yes or No	Question 3 Comment
		conditions such as flow pattern, potential constraints, etc. A generator may be designated as a MUST RUN one day but not the others. Similar argument applies to a generator bidding in the ancillary service markets, or be dispatched to provide reserve or AGC control capability. In our view, generators' physical characteristics and their response to changes on the BES are important considerations for them to be included in the BES. These characteristics affect the assessment and actual performance of the BES in the following key areas: o Voltage and frequency ride through capability o Voltage control (AVR, etc.) o Underfrequency trip setting o Protection relay setting coordination o Data submission for modeling; verification of capability and model We therefore suggest that the entire P.4 be removed as the information it asks for has nothing to do with a generator's physical characteristics or material impact on BES reliability. Having a threshold by MVA suffices to determine if a generator needs to be included as a BES facility, whose characteristics, expected performance and data provision are important to achieve target BES performance and hence should be governed by reliability standards.
Response: The form has been modified to request only reliability related functions are included. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability-related Ancillary Services? **Q3**. Is the ~~generator~~ generation resource designated as a must run unit for reliability?		
Tri-State Generation and Transmission Assn., Inc. Energy Mangement		Again Yes/No is conflicting in the question. Information requested in#4 is subjective and too vague.
TSGT G&T		Again Yes/No is conflicting in the question. Information requested in #4 is subjective and too vague.
Response: The SDT has attempted to build in maximum flexibility within the form while still providing the review panel information that will be needed in evaluating a request. No change made.		

Organization	Yes or No	Question 3 Comment
Hydro One Networks Inc.	Yes	See comments in Q1.
Response: Please see response to Q1.		
Long Island Power Authority	Yes	Need to define the term "must run unit"
PacifiCorp	Yes	PacifiCorp suggests modifying Question 3 as follows: "Is the generator designated as a must run unit by the Balancing Authority?"
Response: The form has been modified to request only reliability related functions are included. **Q3**. Is the ~~generator~~ generation resource designated as a must run unit for reliability?		
Electricity Consumers Resource Council (ELCON)	Yes	Our "Yes" response is conditioned on the comments to Questions 1 and 2 above.
Response: Please see responses to Q1 and Q2.		
Bonneville Power Administration	Yes	Regarding #1 on page 4: BPA Believes seasonality may need to be considered when comparing the generator with the most severe single contingency.
Response: Seasonality issues can be explained in the written response areas of the application form or additional documentation can be provided as needed. No change made.		
WECC Staff	Yes	The requested information in the checklist is appropriate. However; the exceptions process as drafted, with no objective criteria defining how to assess the submittals, leaves it to each region to develop their own criteria to evaluate the responses to the checklist included in the submittals, leading to inconsistency between Regional Entities.
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many		

Organization	Yes or No	Question 3 Comment
		hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions

Organization	Yes or No	Question 3 Comment
being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.		
Kootenai Electric Cooperative Snohomish County PUD Blachly-Lane Electric	Yes	KEC agrees that the items listed on page 4 of the Detailed Information to Support an Exception Request capture the information that generally would be necessary to make a reasoned determination concerning the BES status of a generation facility. KEC suggests three refinements to the questions: (1) Question 2 should be modified

Organization	Yes or No	Question 3 Comment
Cooperative Central Electric Cooperative (CEC) Clearwater Power Company (CPC) Consumer's Power Inc. (CPI) Douglas Electric Cooperative (DEC) Fall River Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (Lincoln) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) Umatilla Electric Cooperative West Oregon Electric Cooperative (WOEC) Coos-Curry Electric		by adding "necessary for the operation of the interconnected bulk transmission system" to the end of the question, so that it reads: "Is the generator or the generator facility used to provide Ancillary Services necessary for the operation of the interconnected bulk transmission system?" The italicized language is necessary to distinguish between a generator that provides, for example, reactive power or regulating reserves that support operation of the interconnected bulk grid, and, for example, a behind-the-meter generator that provides back-up generation to a specific industrial facility. The former may be necessary for the reliable operation of the interconnected bulk transmission system, but the latter is not. (2) The current draft of the BES Definition contains Exclusions for radials and for Local Networks. To be consistent with these aspects of the revised BES definition, KEC suggests modifying question 5 by adding "radial, or Local Network" to the question, so that it would read: "Does the generator use the BES, a radial system, or a Local Network to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load? (3) For reasons similar to those explained in our response to Question 2, a general "catch-all" question should be added that will prompt an entity submitting an Exception Request for a generator to submit any information it believes is relevant to the Exception that is not captured in the previous questions. We suggest the following language:Is there additional information not covered in questions 1 through 5 that supports the Exception Request? If yes, please provide the information and explain why it is relevant to the Exception Request.This will allow an entity seeking an Exception for a generator to identify any unusual circumstances or non-standard information that might support its Exception Request. An entity seeking such an Exception should have the opportunity to present any information it believes is relevant.

Organization	Yes or No	Question 3 Comment
Coooperative City of Austin dba Austin Energy		
Response: (1) Questions regarding ancillary services have been further clarified. **Q2**. Is the ~~generator or generator facility~~ generation resource used to provide reliability–related Ancillary Services? (2) If the entity serves the indicated Load through a radial system, etc., it should supply that information as part of its supporting information. No change made. (3) This type of question is covered by the clarified line item on page 1 of the form: List any attached supporting documents and any additional information that is included to supports~~~~ the request:		
Central Lincoln	Yes	
Oncor Electric Delivery Company LLC	Yes	
Independent Electricity System Operator	Yes	
Consumers Energy	Yes	
Central Hudson Gas & Electric Corporation	Yes	
Exelon	Yes	
Holland Board of Public Works	Yes	
Transmission	Yes	

Organization	Yes or No	Question 3 Comment
Pepco Holdings Inc	Yes	
ATC LLC	Yes	
Southwest Power Pool Standards Review Team	Yes	
SERC Planning Standards Subcommittee	Yes	
City of Redding Electric Utility	Yes	
City of Redding	Yes	
Tacoma Power	Yes	Tacoma Power supports the information requested on page 4.
BGE	Yes	No comment.
Michigan Public Power Agency	Yes	

Response: Thank you for your support. The SDT did make some clarifying changes due to comments received.

Q2. Is the ~~generator or generator facility~~ generation resource used to provide reliability–related Ancillary Services?

Q3. Is the ~~generator~~ generation resource designated as a must run unit for reliability?

4. **Do you have concerns about an entity's ability to obtain the data they would need to file the 'Detailed Information to Support an Exception Request'? If so, please be specific with your concerns so that the SDT can fully understand the problem.**

Summary Consideration: Based on the comments received, the SDT believes that entities will be able to obtain the requisite information necessary to submit a request. However, should an entity have difficulty, they will need to obtain the assistance of their Regional Entity to secure the data. If the entity still can't obtain the needed data, then the SDT fully expects that entity's Regional Entity to work with them to come up with a plan that will allow that entity to fill out the request form in a manner that will be acceptable to the Regional Entity so that processing of the request can continue. The SDT recognizes that there will be costs associated with the request. The SDT feels that an entity may have to conduct a cost and benefit analysis in order to determine the value of pursuing a request.

No significant changes were made to the request form as a result of comments received to this question. There were suggestions to use some terms more consistently, and this suggestion was adopted. The SDT had used, "facility" and "element" to mean the same things, and has now adopted the word, "Element" throughout the revised document. Similarly the team changed the word, "application" to "request" for greater clarity.

Organization	Yes or No	Question 4 Comment
AECI and member G&Ts	No	
Ameren	No	
ATC LLC	No	
BGE	No	No comment.
Central Hudson Gas & Electric Corporation	No	
Central Lincoln	No	

Organization	Yes or No	Question 4 Comment
City of Redding	No	
Hydro One Networks Inc.	No	
Hydro-Quebec TransEnergie	No	
IRC Standards Review Committee	No	
ISO New England Inc	No	All concerns were captured in comments provided to the previous questions.
Long Island Power Authority	No	
National Grid	No	
NERC Staff Technical Review	No	
NV Energy	No	The information appears to be readily available to entities seeking exceptions.
Oncor Electric Delivery Company LLC	No	
PacifiCorp	No	PacifiCorp is speaking from a perspective where the Company is registered for multiple functions (i.e., TO, GO, TOP, GOP, BA, TPL, etc.) and the requested information is currently available from Company resources.
SERC Planning Standards Subcommittee	No	
Springfield Utility Board	No	

Organization	Yes or No	Question 4 Comment
Tacoma Power	No	Tacoma Power supports the expectation that entities will be able to supply the information requested.
Response: Thank you for your support.		
American Electric Power	No	As stated in the response to question #3, the question "How does an outage of the generator impact the over-all reliability of the BES" may be subjective and dependent on contingencies at any given time. It would be dependent on what state the BES would be in the area the generator is located. More detail would be needed in describing the study required to have consistent results.
Response: See response to Q3.		
Georgia System Operations Corporation	No	Throughout the document, because it will be part of a larger Exception Request Form, it should, when possible, use terms consistent with the rest of that form (e.g., "Request" rather than "application"). Similarly, defined terms (even if only defined in the context of the Request Form in which these Principles will be used) such as "Exception," "Request," "Element" or "Facility" should be capitalized; if the use of lower case is intended to convey a different meaning than what is defined, another term should be used to avoid confusion. The Definition and Request Form generally use the term "Element," so it is unclear why this document should so consistently use "facility." For consistency, "Element(s)" or possibly "Element(s) or Facility" should be used.
Response: The SDT has made changes to the Request Form based upon your comments, changing the word, "facility" to "Element" and "application" to "request" for consistency throughout the document.		
Independent Electricity System Operator	No	We anticipate that entities will be granted access to the required historical operations records and modeling data after signing of non-disclosure agreements with the

Organization	Yes or No	Question 4 Comment
		providers of the information.
Response: The SDT concurs that it may be necessary for entities to execute such agreements.		
Northeast Power Coordinating Council	No	According to the Applicability section, the TPL Reliability Standards are only applicable to the Planning Coordinator (PC) and the Transmission Planner (TP). Was it the BES SDT's assumption that Applicants would have the PC or TP run studies for them, or that all Applicants would gain access to those models and run the models themselves? (Ref. TPL-002-1b, Applicability: Planning Authority, and Transmission Planner.)
Pepco Holdings Inc	No	Not all TOs have the capability to perform the power flow and stability analysis on their own, necessary to meet the exception request. It may be burdensome for the TO to hire a consultant or to have their affiliated TPL perform the rigorous study/analysis as contained in the TPL standards. Additional details should be provided as to what part of the TPL standards apply. Should the Affiliated TPL be required to perform TOs studies for exception requests? If so should that be stated in a related standard as a requirement?
Southern Company Generation	Yes	An IPP with no Transmission Planning department may find it very difficult to perform an interconnection wide base case as required in the general instructions.
Bonneville Power Administration	Yes	BPA believes the studies discussed in pages 2-4 would likely need to be completed and the required information supplied by the Transmission Planner/Operator of the Balancing Authority Area since many of the assumptions regarding performance of the BES to delivery under a variety of operating conditions is known only to the TP and TOP of the system.
Consolidated Edison Co. of NY, Inc.	Yes	According to the Applicability section, the TPL Reliability Standards are only applicable to the Planning Coordinator (PC) and the Transmission Planner (TP). Was it the BES SDT's assumption that Applicants would have the PC or TP run studies for them, or that all Applicants would somehow gain access to those models and run the models

Organization	Yes or No	Question 4 Comment
		themselves? (Ref. TPL-002-1, Applicability: Planning Coordinator, and Transmission Planner.)
Response: The Request Form includes language indicating that studies need to be consistent with the methodologies described in the TPL standards, not that the studies need to be the actual Planning Coordinator or Transmission Planner studies. The SDT feels that it is up to the Registered Entity to work out the details for studies needed for a request.		
Orange and Rockland Utilities, Inc.	No	However, please clarify "facility" and include "N-1" for power-flow studying.
Response: The SDT has modified the document to consistently use the term, "Element" rather than facility throughout the document. The SDT believes that solely relying upon a single case study, i.e., N-1; would be inappropriate for the purposes of making a decision under this definition. Entities will need to consider the use of the Elements in a variety of cases to determine whether or not the Elements would be BES or not.		
WECC Staff	Yes	Entities would have a difficult time deciding what data to obtain. Getting the data for their own specific facilities should be relatively simple for the majority of entities. However, it is possible smaller entities may have a higher burden putting together the appropriate information for inclusion in a study case that they currently may not do. In addition, because the instructions state that a case will be "suitably complete and detailed," WECC believes there is insufficient guidance as to what amount and degree of detail in the data is sufficient for the submittal process. Without thresholds it is difficult to determine whether the entities will have the ability to obtain necessary data to file for an exception. At this time, WECC views the instructions as insufficient for these reasons.
Response: The SDT understands the concerns raised by the commenter in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenter that it directly solicited assistance in this matter in the first posting of the criteria and received		

Organization	Yes or No	Question 4 Comment
very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the application to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the application process. The SDT again points to the variations that will abound in the applications as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1, where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the		

Organization	Yes or No	Question 4 Comment
bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple applications will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.		
Blachly-Lane Electric Cooperative Central Electric Cooperative (CEC) City of Austin dba Austin Energy Clearwater Power Company	Yes	The Standards Drafting Team should consider whether it is necessary to require entities other than the entity filing the Exception Request to provide relevant information, either to the entity filing the Exception Request or to the Registered Entity receiving the Exceptions Request. For example, in order to answer Question 1 on page 4, regarding the impact of the generator under the most severe single contingency, it may be necessary for the relevant Balancing Authority to provide its Most Severe Single Contingency ("MSSC") to the registered entity seeking an Exception. Similarly, the relevant Transmission Operator or Balancing Authority may

Organization	Yes or No	Question 4 Comment
(CPC) Consumer's Power Inc. (CPI) Coos-Curry Electric Coooperative Douglas Electric Cooperative (DEC) Fall River Electric Cooperative (FALL) Kootenai Electric Cooperative Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (Lincoln) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) Snohomish County PUD Umatilla Electric Cooperative West Oregon Electric Cooperative (WOEC)		have information that is necessary to determine whether the generator has been designated as reliability-must-run or if it provides ancillary services supporting reliable operation of the interconnected transmission grid.

Organization	Yes or No	Question 4 Comment
Response: Based on the comments received, the SDT believes that entities will be able to obtain the requisite information necessary to submit a request. However, should an entity have difficulty, it will need to obtain the assistance of its Regional Entity to secure the data. If the entity still can't obtain the needed data, then the SDT fully expects that entity's Regional Entity to work with them to come up with a plan that will allow that entity to fill out the request form in a manner that will be acceptable to the Regional Entity so that processing of the request can continue.		
Exelon	Yes	This may be a burden on small entities and generators because they would need to use contractors to run studies in order to obtain the required data. Smaller entities and generators may not have the expertise, the software or the necessary personnel to perform studies.
Response: The SDT recognizes that there will be costs associated with the request. The SDT feels that an entity may have to conduct a cost and benefit analysis in order to determine the value of pursuing a request.		
PSEg Services Corp	Yes	It would depend upon the clarifications to the points raised above.
Response: The SDT suggests that you review the responses to the points raised above and if concerns still exist, please submit those concerns to the SDT as we proceed to the second phase of this project.		
Holland Board of Public Works Michigan Public Power Agency	Yes	On Page 4 Question 1, information on the host Balancing Authority's most severe single contingency may not be publically available and therefore difficult or impossible for a smaller entity to obtain. Even if the data is available, it may not be meaningful in a larger Balancing Authority area such as within MISO where the most severe contingency may be geographically and electrically remote. A more readily available and meaningful measure would be a comparison of the generator's capability as a percent of the peak load for the local Balancing Authority or sub-Balancing Authority, as applicable.
Response: The SDT believes that an entity can use any data or information available to it in order to make its request, especially if other information is not available. Note that the SDT modified the form to clarify that entities may submit additional information		

Organization	Yes or No	Question 4 Comment
(beyond the information listed on the form as "required") to support their request for an exception.		
Duke Energy	Yes	What is the process for obtaining data from a 3rd party that is either unregistered or unwilling to supply the data?
Response: The SDT is not aware of any instance where an unregistered entity would have vital information relevant to a request. For an organization unwilling to share, the SDT expects that entities may need to execute confidentiality or other agreements in order to obtain the use of the necessary information and data.		
ACES Power Marketing Standards Collaborators	Yes	Some generation owners may not be able to obtain their BA's most severe single Contingency. Many generator owners will not have access to the data necessary to demonstrate the reliability impact to the BES. This is particularly true for transmission dependent utilities.
City of St. George	Yes	The access to the required data would be potentially be a concern especially for smaller entities. Small entities will typically have to outsource the required studies to consultants and obtaining the data may be difficult for the consultants. The entities most likely to obtain exemptions (smaller & lower impact entities) are the ones that probably will have the most difficulty in obtaining the data. Generally larger utilities "upstream" from the smaller ones are hesitant to give information to other entities. Depending on the study requirements and criteria for application, this could be a very costly process.
Dominion	Yes	It has been Dominion's experience that CEII or Code/Standards of Conduct rules may restrict generation entities (GO/GOP) from obtaining some of the information necessary to perform the analysis needed to file the "Detailed Information to Support an Exception Request". Dominion is also aware that, in some cases, generation entities do not have the technical expertise (transmission planning, power flow and or stability analysis background) to perform such analysis.
Electricity Consumers	Yes	It may be necessary that the exception request form explicitly address this potential

Organization	Yes or No	Question 4 Comment
Resource Council (ELCON)		problem by allowing the entity seeking an exception to state that for reasons beyond its control it failed to acquire the necessary data, base case or supporting document to enable completion of the filing.
ReliabilityFirst	Yes	In some cases, models and even knowledge of the system configurations, operating protocols and procedures may not be well known by all the entities. System adjustments, load levels, topologies, maintenance and outage schedules, which happen daily, will or may be unknown to many entities, including the Regional Entities who may submit a request to include facilities. For cross regional boundaries, the problem becomes even larger. That coupled with generation unit owners/operators not permitted to know transmission information (i.e. Questions 4 and 5); this will put them at a huge disadvantage to participate in the exception request process.
Southwest Power Pool Standards Review Team	Yes	SCADA line flow data might be hard to capture for the last two years. Specifically the line flows may not be available.
Tri-State Generation and Transmission Assn., Inc. Energy Management	Yes	It may be hard for a GO to get the information requested in #1 or #4.
TSGT G&T	Yes	It may be hard for a GO to get the information requested in #1 or #4.
Response: Based on the comments received, the SDT believes that entities will be able to obtain the requisite information necessary to submit a request. However, should an entity have difficulty, it will need to obtain the assistance of its Regional Entity to secure the data. If the entity still can't obtain the needed data, then the SDT fully expects that entity's Regional Entity to work with them to come up with a plan that will allow that entity to fill out the request form in a manner that will be acceptable to the Regional Entity so that processing of the request can continue. The SDT expects that entities my need to execute confidentiality type or other agreements in order to obtain the use of the necessary information and data.		
Farmington Electric Utility System	Yes	See response to question 2

Organization	Yes or No	Question 4 Comment
Response: Please see response to Q2.		
Consumers Energy	Yes	
City of Redding Electric Utility	Yes	
Response: Without any specific comment, the SDT is unable to respond.		

5. **Are there other specific characteristics that you feel would be important for presenting a case and which are generic enough that they belong in the request? If so, please identify them here and provide suggested language that could be added to the document.**

Summary Consideration: Based on the responses to this question, the SDT offers the following for summary consideration.

Regarding the FERC seven factor test, an entity requesting an exception can always submit data related to that test for the Regional Entity and ERO to evaluate.

In response to the suggestions for additional inclusion in the technical criteria document, there are no restrictions on what data can be submitted in an exception request. An entity requesting an exception can always submit data it believes will be beneficial to its exception request for the Regional Entity and ERO to evaluate.

Finally, if an entity that is submitting an exception request cannot gain access to certain information that is listed in the technical criteria document, it should work with its Regional Entity to come up with substitute data that is acceptable. The submitting entity should state in its exception request submittal that it is unable to access certain data from other parties and explain the reasons why that is the case.

Organization	Yes or No	Question 5 Comment
Northeast Power Coordinating Council	Yes	There is no guidance provided as to how the information asked for in this form will be evaluated, and what the decision making process will entail. As such, a reference document should be developed and provide some guidance how to evaluate applications. Suggest that the BES SDT adopt the FERC Seven Factor test.
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are		

Organization	Yes or No	Question 5 Comment
always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience		

Organization	Yes or No	Question 5 Comment
gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. Regarding the FERC seven factor test, an entity requesting an exception can always submit data related to that test for the Regional Entity and ERO to evaluate.		
Hydro One Networks Inc.	Yes	The general approach, information, data, and assessments proposed seem to be reasonable. However, guidance is not provided as to how this information may be evaluated in the decision making process. As such, a reference document should be developed and provide guidance how applications will be assessed. For example"1) Does the element(s)? o Would have qualified under one of the exclusions or inclusions but have marginally different threshold as prescribed in the definition; o transfer bulk power within (intra) or between (inter) two Balancing Authority Areas; o monitor facilities included in an Interconnection Reliability Operating Limit (IROL); o are not considered necessary for the operation of interconnected transmission

Organization	Yes or No	Question 5 Comment
		system under normal conditions, contingency or prolonged outage conditions.2) Are System Element(s) located in close electrical proximity to Load? o Electrical proximity may be a measurement of system impedance between load centers within the system seeking exception. o Other physical characteristics.3) Are System Elements treated as primarily radial in character? o Smaller deviation from the exclusion E1. o This can be demonstrated by the way the connections to the BES are operated (e.g., the local area is not operated as part of the BES with disconnection procedures when events occur in the local area to separate it.) o This can also be demonstrated by the way resources in the local area are treated in operations, for example, they are not included in a regional dispatch or secured by an ISO/RTO. o Power flows into the system, but rarely flows out. i. This can be demonstrated through transactional records or load flow analysis where it is shown that flow out does not occur or occurs only under a very limited set of conditions and for a limited quantity of energy. a. The limited set of conditions must clearly state the conditions where power flows out, for example, only under specified contingency events. b. Transactional records provided must be for the same time specified in the Exception Rules of Procedure for performing periodic exception self-certifications (presently two years). c. Power entering the system is not recognized or regularly transported on to some other system. (This can be demonstrated by operational procedures that restrict use of delivered power to that system, e.g., the absence of a wheeling agreement or an agreement that generally restricts wheeling under normal) d. The System Element(s) have a very small Distribution Factor on any other BES Element(s). o System Elements are not necessary for the operation of interconnected transmission under normal, contingency or prolonged outage conditions.
WECC Staff	Yes	In order to make a determination of BES status of an element, there should be a listing of effects of the outage on certain facilities, frequencies, voltages, transmission elements, or other information that should be included in the submittal by the entity. Without further specification of requirements for presenting a case it is likely that the Regional Entity will receive inconsistent submittals of data. Leaving open the question of what constitutes a sufficient presentation of a case would likely lead to a wide

Organization	Yes or No	Question 5 Comment
		spectrum of submittals with respect to the amount of data and level of detail in the data.

Response: The technical criteria document currently includes a request for information related to an outage of an element on the BES.

The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and

Organization	Yes or No	Question 5 Comment
		there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

Organization	Yes or No	Question 5 Comment
City of Redding Electric Utility	Yes	
Georgia System Operations Corporation	Yes	
Bonneville Power Administration	Yes	
Response: Without specific comments, the SDT is unable to respond.		
IRC Standards Review Committee	Yes	One acid test to determine if a facility needs to be included or can be excluded from a BES facility is to simulate an uncleared fault at that facility. If the simulation shows a stable BES performance, then it suggests that even if the fault is not cleared due to whatever reason, the facility has no adverse impact that can lead to instability, cascading or collapse of the BES.
Response: There are no restrictions on what data can be submitted in an exception request. Regarding an uncleared fault test, an entity requesting an exception can always submit data related to that test for the RE and NERC to evaluate.		
Snohomish County PUD Blachly-Lane Electric Cooperative Central Electric Cooperative (CEC) Clearwater Power Company (CPC) Consumer's Power Inc. (CPI) Douglas Electric Cooperative (DEC)	Yes	As discussed in our responses to Questions 1 through 3, SNPD believes that certain additional questions are necessary to elicit all information that may be relevant to an Exceptions Request. As discussed in our answer to Question 4, we are also concerned that it may be necessary to obtain information that is in the hands of the relevant Balancing Authority, Transmission Provider, or other entity, and not in the hands of the entity submitting an Exceptions Request, to develop a complete record upon which a reasoned decision concerning an Exceptions Request can be based.

Organization	Yes or No	Question 5 Comment
Fall River Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (Lincoln) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) Umatilla Electric Cooperative West Oregon Electric Cooperative (WOEC) Coos-Curry Electric Coooperative City of Austin dba Austin Energy Kootenai Electric Cooperative		
Response: Please see the detailed responses to Q1 – Q4.		
Consolidated Edison Co. of NY, Inc.	Yes	We strongly recommend that the BES SDT adopt the FERC Seven Factor test for local distribution.

Organization	Yes or No	Question 5 Comment
Response: There are no restrictions on what data can be submitted in an exception request. Regarding the FERC seven factor test, an entity requesting an exception can always submit data related to that test for the Regional Entity and ERO to evaluate.		
American Electric Power	No	As stated in the response to question #3, it is unclear how the process will work with the interaction among the various NERC Functions. For instance, an exception request from generation might require collaboration among other functional entities, i.e. GOP, TOP, and RC. The existence of a must run unit means that unit has a material impact on any configuration of the BES and as such would need a serious waiver to not be considered a BES facility. As such, a must run unit would not receive an exception. As a result, should question #3 be removed? Criteria for applying for an exception should be outlined before filling out the form.
Response: If an entity that is submitting an exception request cannot gain access to certain information that is listed in the technical criteria document, it should work with its Regional Entity to come up with substitute data that is acceptable. The submitting entity should state in its exception request submittal that it is unable to access certain data from other parties and explain the reasons why that is the case. As stated in the proposed ERO Rules of Procedure, ""No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved.". Please see the proposed ERO Rules of Procedure for details on filling out a form.		
Farmington Electric Utility System	Yes	The SDT should consider additional limits on Generation. For example, if a generation prime mover (turbine) has a maximum output of 35 MW but is coupled to a generator with a rating in excess of 75 MVA. The generator output is limited by the turbine - thus the rating of the turbine should be a taken into consideration rather than the generator rating.
Hydro-Quebec TransEnergie	Yes	The general characteristics of the Interconnection (such as frequency or voltage variation), as they may guide the decision for exclusion of specific elements.

Organization	Yes or No	Question 5 Comment
Response: Regarding the suggestions for inclusion in the technical criteria document, there are no restrictions on what data can be submitted in an exception request. An entity requesting an exception can always submit data it believes will be beneficial to its exception request for the RE and NERC to evaluate. No change made.		
Indeck Energy Services	Yes	As acknowledged in the response to Question 12 comments on the previous BES definition, the BES definition is expansive compared to the definition of the BPS in the FPA Section 215. The inclusion of the limited Exclusions is an attempt to remedy the situation. However, the Exclusions need to include a fifth one that if, based on studies or other assessments, it can be shown that any tranmission or generator element otherwise identified as part of the BES is not important to the reliability of the BPS, then that element should be excluded from the mandatory standards program. There has never been a study to show that elements, such as a 20 MW wind farm, 60 MW merchant generator (which operates infrequently in the depressed market) in a large BA (eg NYISO) or a radial transmission line connecting a small generator are important to the reliability of the BPS. They are covered by the mandatory standards program through the registration criteria. The BES Definition is the opportunity to permit an entity to demonstrate that an element is unimportant to reliability of the BPS. The SDT has identified a small subset of elements that it is willing to exclude. By their very nature, these exclusions dim the bright line that is the stated goal of this project. However, the SDT's foresight seems limited in its selections. Analytical studies are used to evaluate contingencies that could lead to the Big Three (cascading outages, instability or voltage collapse). Such a study showing that a transmission or generation element is bounded by the N-1 or N-2 contingency would exclude it from the BES definition. For example, in a BA with a NERC definition Reportable Disturbance of approximately 400 MW (eg NYISO), a 20 MW wind farm, 60 MW merchant generator or numerous other smaller facilities would be bounded by larger contingencies. It would take more than six 60 MW merchant generators with close location and common mode failure to even be a Reportable Disturbance, much less become the N-1 contingency for the Big Three. Exclusion E5 should be "E5 - Any facility that can be demonstrated to the Regional Entity by analytical study or other

Organization	Yes or No	Question 5 Comment
		assessment to be unimportant to the reliability of the BPS (with periodic reports by the Regional Entity to NERC of any such assessments).”
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
City of Redding	No	
ATC LLC	No	
Ameren	No	
Central Lincoln	No	
National Grid	No	
Oncor Electric Delivery Company LLC	No	
Independent Electricity System Operator	No	
City of St. George	No	

Organization	Yes or No	Question 5 Comment
PSEg Services Corp	No	
ReliabilityFirst	No	
Long Island Power Authority	No	
Consumers Energy	No	
Orange and Rockland Utilities, Inc.	No	
ISO New England Inc	No	All concerns were captured in comments provided to the previous questions.
Duke Energy	No	
NV Energy	No	
Central Hudson Gas & Electric Corporation	No	
Exelon	No	
Transmission	No	
PacifiCorp	No	
NERC Staff Technical Review	No	
Dominion	No	
TSGT G&T	No	

Organization	Yes or No	Question 5 Comment
Pepco Holdings Inc	No	
Southern Company Generation	No	
Tri-State Generation and Transmission Assn., Inc. Energy Mangement	No	
SERC Planning Standards Subcommittee	No	
ACES Power Marketing Standards Collaborators	No	
Southwest Power Pool Standards Review Team	No	
Tacoma Power	No	Tacoma Power does not know of any characteristics to add at this time.
BGE	No	No comment.
Michigan Public Power Agency	No	
Response: Thank you for your support.		

6. **Are you aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue? If so, please identify them here and provide suggested language changes that may clarify the issue.**

Summary Consideration: The majority of commenters responded that they were not aware of any conflicts. However, some comments were supplied indicating concerns.

Three commenters expressed the need to address the function of an Element or system that is subject to an exception request to determine whether it is a "facilit[y] used in the local distribution of electric energy" and therefore excluded from the BES under Section 215(a)(1) of the Federal Power Act. Those commenters have been directed to question 2 for detailed responses on this issue.

Two commenters submitted concerns that the ERO does not have the authority to apply the BES definition in Canada. The SDT is attempting to craft a BES definition that can be applied within the ERO footprint. It is neither within the scope of the SDT nor is it appropriate for the SDT to provide a Canadian regulatory resolution within the definition. As such, the SDT agrees that the ERO will have to address these types of non-jurisdictional situations with relevant Regions through the exception procedure.

Two commenters expressed a concern that information necessary to perform an analysis may be restricted either by federal-/state Codes/Standards of Conduct and/or CEII prohibitions. Based on the comments received, the SDT believes that entities will be able to obtain the requisite information necessary to submit a request. However, should an entity have difficulty, it will need to obtain the assistance of its Regional Entity to secure the data. If the entity still can't obtain the needed data, then the SDT fully expects that entity's Regional Entity to work with them to come up with a plan that will allow that entity to fill out the request form in a manner that will be acceptable to the Regional Entity so that processing of the request can continue.

One comment stated that organized markets have a "must run" generator concept that has nothing to do with reliability. Thus, Q3 for generation facilities might be confused with market tariff provisions. To resolve this concern, the SDT has clarified Q3 for generation resources as follows:

3. Is the ~~generator~~ generation resource designated as a must run unit for reliability?

Organization	Yes or No	Question 6 Comment
Northeast Power Coordinating	No	

Organization	Yes or No	Question 6 Comment
Council		
SERC Planning Standards Subcommittee	No	
Southwest Power Pool Standards Review Team	No	
WECC Staff	No	
Bonneville Power Administration	No	
TSGT G&T	No	
Pepco Holdings Inc	No	
Southern Company Generation	No	
Tri-State Generation and Transmission Assn., Inc. Energy Mangement	No	
NERC Staff Technical Review	No	
Transmission	No	
PacifiCorp	No	
Hydro One Networks Inc.	No	We believe, and support that RoP exception procedures are adequately dealing with

Organization	Yes or No	Question 6 Comment
		this issue.
Exelon	No	
Duke Energy	No	
NV Energy	No	
Central Hudson Gas & Electric Corporation	No	
American Electric Power	No	AEP is not aware of any conflicts between the proposed approach and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement, or jurisdictional issue.
Consumers Energy	No	
Orange and Rockland Utilities, Inc.	No	
ISO New England Inc	No	
PSEg Services Corp	No	
City of St. George	No	
Blachly-Lane Electric Cooperative	No	
Central Electric Cooperative (CEC)	No	

Organization	Yes or No	Question 6 Comment
Clearwater Power Company (CPC)	No	
Consumer's Power Inc. (CPI)	No	
Douglas Electric Cooperative (DEC)	No	
Fall River Electric Cooperative (FALL)	No	
Lane Electric Cooperative (LEC)	No	
Independent Electricity System Operator	No	
Lincoln Electric Cooperative (Lincoln)	No	
Northern Lights Inc. (NLI)	No	
Okanogan County Electric Cooperative (OCEC)	No	
Pacific Northwest Generating Cooperative (PNGC)	No	
Raft River Rural Electric Cooperative (RAFT)	No	

Organization	Yes or No	Question 6 Comment
Umatilla Electric Cooperative	No	
West Oregon Electric Cooperative (WOEC)	No	
Central Lincoln	No	
National Grid	No	
Oncor Electric Delivery Company LLC	No	
Coos-Curry Electric Coooperative	No	
Ameren	No	
Georgia System Operations Corporation	Yes	
ATC LLC	No	
Farmington Electric Utility System	No	
City of Redding	No	
Tacoma Power	No	Tacoma Power is not aware of any conflicts at this time.
Springfield Utility Board	No	

Organization	Yes or No	Question 6 Comment
BGE	No	No comment.
Michigan Public Power Agency	No	
Long Island Power Authority		Not aware of any
Response: Thank you for your response.		
Indeck Energy Services	Yes	As acknowledged in the response to Question 12 comments on the previous BES definition, the BES definition is expansive compared to the definition of the BPS in the FPA Section 215. The inclusion of the limited Exclusions is an attempt to remedy the situation. However, the Exclusions need to include a fifth one that if, based on studies or other assessments, it can be shown that any tranmission or generator element otherwise identified as part of the BES is not important to the reliability of the BPS, then that element should be excluded from the mandatory standards program. There has never been a study to show that elements, such as a 20 MW wind farm, 60 MW merchant generator (which operates infrequently in the depressed market) in a large BA (eg NYISO) or a radial transmission line connecting a small generator are important to the reliability of the BPS. They are covered by the mandatory standards program through the registration criteria. The BES Definition is the opportunity to permit an entity to demonstrate that an element is unimportant to reliability of the BPS. The SDT has identified a small subset of elements that it is willing to exclude. By their very nature, these exclusions dim the bright line that is the stated goal of this project. However, the SDT's foresight seems limited in its selections. Analytical studies are used to evaluate contingencies that could lead to the Big Three (cascading outages, instability or voltage collapse). Such a study showing that a transmission or generation element is bounded by the N-1 or N-2 contingency would exclude it from the BES definition. For example, in a BA with a NERC definition Reportable Disturbance of approximately 400 MW (eg NYISO), a 20 MW wind farm, 60 MW merchant generator or numerous other smaller facilities would be bounded by larger contingencies. It would take more than six 60 MW merchant generators with close

Organization	Yes or No	Question 6 Comment
		location and common mode failure to even be a Reportable Disturbance, much less become the N-1 contingency for the Big Three. Exclusion E5 should be "E5 - Any facility that can be demonstrated to the Regional Entity by analytical study or other assessment to be unimportant to the reliability of the BPS (with periodic reports by the Regional Entity to NERC of any such assessments)."
Response: The SDT has already incorporated a note at the bottom of the definition stating that exceptions can be pursued through the exception process. The SDT feels that this note is sufficient to address the concerns raised herein. In addition, the SDT reminds the commenter that all threshold values will be examined in Phase II of this project. No change made.		
City of Redding Electric Utility	Yes	
Response: Without a specific comment, the SDT is unable to respond.		
Hydro-Quebec TransEnergie	Yes	For HQT's system, the proposed BES definition combined with the exception procedure are presently incompatible or at least inconsistent with the regulatory framework applicable in Quebec. The proposed changes have not address this concern, neither the SDT's responses to our previous comments last May (Q.9).We reiterate that the definition and the exception procedure shall be determined by Quebec's regulator, the RÃ©gie de l'Ã‰nergie du QuÃ©bec, (Quebec Energy Board) which has the responsibility to ensure that electric power transmission in Quebec is carried out according to the reliability standards it adopts. Per se, it would be necessary that E1 and E3 grant exclusions with much higher level of generation. It would also be necessary to allow for several levels of application for the Reliability Standards, in accordance with the RÃ©gie de l'Ã©nergie du QuÃ©bec approach: the Bulk Power System (BPS) as determined using an impact-based methodology, the Main Transmission System (MTS), and other parts of Regional System. Standards related to the protection system (PRC-004-1 and PRC-005-1) and those related to the design of the transmission system (TPL 001-0 to TPL-004-0) shall be applicable to the first level, but all other reliability standards shall be applied to the second level, the MTS. The MTS definition is somewhat different than the Bulk Electric System

Organization	Yes or No	Question 6 Comment
		definition, and it includes elements that impact the reliability of the grid, supply-demand balance and interchanges.We argue that it would be necessary for NERC to address the regulatory issues outside ot the present context of the SDT and ROP team.
Manitoba Hydro	Yes	Canadian Entities are not under FERC jurisdiction, so the revised BES Definition may not apply. A number of Canadian Entities have the BES defined within their provincial legislation. This may introduce differences and even contradictions between elements that are included in the BES according to provincial legislation and the NERC definition.
Response: The SDT is attempting to craft a BES definition that can be applied within the ERO footprint. It is neither within the scope of the SDT nor is it appropriate for the SDT to provide a Canadian regulatory resolution within the definition. As such, the SDT agrees that the ERO will have to address these types of non-jurisdictional situations with relevant Regions through the exception procedure.		
Kootenai Electric Cooperative	Yes	As discussed in more detail in our response to Question 2, KEC believes it is necessary to address the function of an Element or system that is subject to an Exceptions Request to determine whether it is a "facilit[y] used in the local distribution of electric energy" and therefore excluded from the BES under Section 215(a)(1) of the Federal Power Act.
City of Austin dba Austin Energy	Yes	As discussed in more detail in our response to Question 2, AE believes it is necessary to address the function of an Element or system subject to an Exceptions Request to determine whether it is a "facilit[y] used in the local distribution of electric energy" and, therefore, excluded from the BES under Section 215(a)(1) of the Federal Power Act.
Snohomish County PUD	Yes	As discussed in more detail in our response to Question 2, SNPD believes it is necessary to address the function of an Element or system that is subject to an Exceptions Request to determine whether it is a "facilit[y] used in the local distribution of electric energy" and therefore excluded from the BES under Section 215(a)(1) of the Federal Power Act.

Organization	Yes or No	Question 6 Comment
Response: Please see response to Q2.		
ReliabilityFirst	Yes	Since the inception of the Open Access Transmission Tariff, transmission models and even knowledge of the systems, operating protocols and procedures may not be well known or known at all by all the entities. System adjustments, load levels, topologies, maintenance and outage schedules (i.e. market sensitive information), which happens daily is not permitted to be known by the generation side of the industry. An unknown at this point and without a common set of criteria to be used by the Regional Entities and NERC Staff and Panels, it will be difficult to make consistent determinations across the ERO Enterprise.
Dominion	Yes	Much of the information necessary to perform the analysis required is restricted either by federal and/or state Codes/Standards of Conduct and/or CEII prohibitions.
Response: Please see response to Q4.		
ACES Power Marketing Standards Collaborators	Yes	Some organized markets have a must run concept that has nothing to do with reliability. Thus, Q3 for generation facilities might be confused with these tariff provisions.
Response: To resolve this concern, the SDT has clarified question 3 for generation resources to read: **3**. Is the ~~generator~~ generation resource designated as a must run unit for reliability?		

7. **Are there any other concerns with the proposed approach for demonstrating BES Exceptions that haven't been covered in previous questions and comments (bearing in mind that the definition itself and the proposed Rules of Procedure changes are posted separately for comments)? Please be as specific as possible with your comments.**

Summary Consideration: Based on the responses to this question, the SDT offers the following for summary consideration.

The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception application form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the application to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the application process. The SDT again points to the variations that will abound in the applications as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there

is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the application details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO panel for adjudication.

In addition, the SDT would point to the SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

NERC and the industry cannot wait until Phase 2 for the development of the exception process as it is an Order No. 743 directive that must be addressed by the FERC established deadline of January 25, 2012.

If an entity that is submitting an exception request cannot gain access to certain information that is listed in the technical criteria document, it should work with its Regional Entity to come up with substitute data that is acceptable. In addition, the submitting entity should state in its exception request submittal that it is unable to access certain data from other parties and explain the reasons why that is the case.

Organization	Yes or No	Question 7 Comment
LG&E and KU Energy	Yes	LG&E and KU Energy request clarification as to how the two year data requirement would apply to a new facility for which the owner/operator requests an exemption.
Response: The SDT recommends that a submitting entity work with its Regional Entity to determine how best to handle this type of a situation.		
Tacoma Power	Yes	Tacoma Power has a concern that the form may be too general in nature. The task before NERC and the industry is to promote consistency in the application of the BES definition. The form will require the regions to develop individual criteria for assessing an exception request and making a recommendation on the request. We recommend in Phase 2 that the SDT develop specific evaluation criteria for the regions to apply to

Organization	Yes or No	Question 7 Comment
		an exception request. Thank you for consideration of our comments.
City of Redding City of Redding Electric Utility	Yes	Redding acknowledges there is an immediate need for a method where an entity can present evidence that their facilities are "not necessary for the Reliable Operation of the interconnected bulk power transmission system" as stated in the NERC Rules of Procedure Section 3.0. "BASIS FOR APPROVAL OF AN EXCEPTION." Without a process to present the evidence then the RE and the ERO are under no mandate to review facilities in light of any criteria besides the BES definition as NERC clearly pointed out in the City of Holland case where Holland was forced to register by the RE (RFC). However, Redding is very concerned that under the proposed Exception process the final evaluation of an element or facility is left to the sole judgment of NERC. The concern is there is no method, criteria, measurement, or standard that NERC will use for the evaluation. It is also a concern that NERC has a predetermined definition of Distribution Facilities and will not evaluate networked Distribution Facilities fairly. NERC has already stated their predetermined position as to what they determine to be distribution and not distribution facilities in their "MOTION TO INTERVENE AND COMMENTS OF THE NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION" filed in the case of the City of Holland, Michigan (Docket No. RC11-5-000). On page 10 and 11 of this motion, under the section labeled "A. Holland's 138 kV lines are transmission rather that local distribution facilities" NERC states "Distribution facilities generally are characterized as elements that are designed and can carry electric energy (Watts/MW) in one direction only at any given time from a single source point (distribution substation) to final load centers." NERC has clearly stated that only radial facilities are considered distribution facilities and were unwilling to consider that network facilities over 100Kv could be classified as Distribution Facilities in this case. Holland's claim of NERC over-reaching their authority appears to have credibility. In conclusion, Redding supports the proposed exception process as it stands on the grounds that it allows an entity the right to a process which NERC is currently not obligated to allow, it requires that NERC judge the facilities on the merit of "necessary for the Reliable Operation of the interconnected bulk power transmission system", and it allows an appeals process that must judge if NERC evaluated facilities on the standard set forth. However,

Organization	Yes or No	Question 7 Comment
		Redding's vote is conditional on the completion of phase 2 where the term "necessary for the Reliable Operation of the interconnected bulk power transmission system" needs to be defined.
Independent Electricity System Operator	Yes	We believe that the SDT proposed approach for exception criteria is reasonable recognizing that one method/criteria cannot be applicable to everyone and every situation within the ERO foot print. However, we believe that there is huge gap and lack of any transparency on how the exception application will be evaluated and processed. We strongly suggest that SDT develop a reference or a guidance document as part of the RoP that should provide some guidance to Registered Entities, Regional Entities and the ERO on how an exception application should be processed. The absence of such guidance will pose a challenge for each entity including the ERO, and may result in discrepancies amongst Regional Entities. The process may be perceived by registered entities as being non-transparency.
City of St. George	Yes	Clear, concise criteria with consistent repeatable results are a must for a successful outcome of the project effort. The included questions are appropriate questions but the use of those questions and the ultimate outcome is unclear with the current version. The background information indicates that continent wide criteria are not feasible. It is understood that this is a very difficult task and will be difficult to achieve (especially in the time allotted). However, if the decisions are left up to a "panel" to decide the results will be inconsistent and will vary region by region, as well as differ over time. The process involved will be very time consuming (i.e. expensive) and will be difficult to control especially during the initial timeframe. History has demonstrated that review and approval processes that pass from the entity to the regions, then to NERC and then on to FERC backup very easily due to limited staff and resources.The drafting team may want to consider moving this topic to Phase 2 of the project. However, Phase 2 needs to have fairly quick time frame in order to provide the needed direction to the industry in a timely manner.

Organization	Yes or No	Question 7 Comment
PSEg Services Corp	Yes	An applicant should be able to clearly tell whether or not an exception request will likely be granted before it is submitted. It is nearly impossible to divine the whether a request will be granted from a set of data questions. The team is urged to state the exclusion criteria explicitly; data questions required to evaluate a request should directly reference each criterion. See Order 743, paragraph 115: "NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid."
ISO New England Inc	Yes	Given all of these decisional inputs requested by the Exception Application there needs to be some guidance or clarification here regarding the criteria that will be used to render a yes or no decision other than simply filling out the Application and allowing the Rules of Procedure process to take place. The Application process for Exceptions (inclusions or exclusions) appears to be subjective and lacks the decisional technical criteria for the applicant to be confident of the outcome.
Manitoba Hydro	Yes	Manitoba Hydro strongly disagrees with the proposed 'Detailed Information to Support an Exception Request' document and associated exception process for the following reasons: -It is not clear what elements or situations beyond what is covered in the core definition and associated inclusions and exclusions that the drafting team is hoping to capture through the exception process. Further, it is unclear what the benefit to reliability would be by allowing an impact based exception process given that entities will be extremely unlikely to use the exception process to include elements in the BES. -The exception process will be extremely resource intensive, particularly in the absence of any Industry approved threshold criteria. The costs to properly administer and monitor the process to ensure that impact based modeling is done accurately and that it captures the frequent changes on a dynamic system will occupy a wealth of Industry, NERC and Regional Entity time to the detriment of reliability.-It is not reasonable for industry to approve the exception process without knowing what thresholds are required to demonstrate an element as being part of the

Organization	Yes or No	Question 7 Comment
		BES or not. We are concerned that BES determinations would be subjective and would vary from case to case with the particular staff examining the request. BES elements should be established and agreed upon by Industry, not set by a NERC panel. We understand that the drafting team has made this change in the interests of time, but the impact of the BES definition is too broad for this project to be rushed. -The 2010-17 project goals to increase the clarity of the BES definition and establish a 'bright-line' are compromised by the exception process. Changes and alterations to the BES definition should be approved by Industry through the Standards Under Development Process. An interpretation request or SAR should be developed by an entity if they feel that the core definition and associated exceptions and inclusions should be modified. We ask that NERC requests that FERC re-examines the directive to develop an exception process given that the BES definition, which already includes a list of exceptions, is sufficient to standalone without an associated exception process.
ReliabilityFirst	Yes	FERC Order 743-A, paragraph 1, discusses that NERC should "...establish an exemption process and criteria for excluding facilities that are not necessary for operating the interconnected transmission network". It also directed in paragraph 4 that "Order No. 743 also directed the ERO to develop an exemption process that includes clear, objective, transparent and uniformly applicable criteria for exempting facilities that are not necessary for operating the interconnected transmission grid." The SDT proposed a set of questions titled "Detailed Information to Support an Exception Request" to assist in the exemption process but in our mind is not "exception criteria" as stated in the FERC Orders. ReliabilityFirst Staff believes that NERC should develop criteria for which facilities or Elements could be exempted from the core definition; an example being Local Networks as outlined in the current draft of the definition. ReliabilityFirst Staff believes the Local Network exclusion is not "bright line" and could be removed from the core definition and used as criteria for exclusion in the exemption process. Item b of the LN (E3) exclusion would need evidence to support the historical and future power flows. Historical data and future power flow study results would be needed to support this exception. Additionally, another example for exemption criterion for inclusion to the BES could be any 69 kV network facilities that

Organization	Yes or No	Question 7 Comment
		provide a parallel path to the BES. Evidence such as one-line diagrams along with power flow studies would need to be provided through the exemption process for these types of facilities to be included in the BES. ReliabilityFirst Staff believes that any BES facilities should not be candidates for exemption based upon the arbitrary determination of a panel that considers the aspects stated in the document "Detailed Information to Support an Exception Request". Without uniform criteria as stated in the FERC Orders, it will be difficult for the panels to make consistent determinations across the ERO Enterprise.
Hydro One Networks Inc.	Yes	As mentioned above, we strongly suggest and encourage that SDT to develop a reference or a guidance document that will provide guidance to Registered Entities, Regional Entities and the ERO on how an exception application should/would be processed.
Arizona Public Service Company	Yes	In accordance with WECC's position paper issued on October 5, 2011, AZPS agrees with WECC in that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests.
SRP	Yes	SRP agrees with WECC Staff comments.
WECC Staff	Yes	WECC is very concerned that there are no specific qualifications or requirements, either for the entities or for the Regional Entity, with respect to: o the determination of which studies need to be conducted; o the format of the study data that should be submitted; or o the key performance measures that should be evaluated. This vagueness will lead to inconsistency in studies run, data submitted, and measures of data evaluation. If this inconsistency occurs, it will result in a potentially subjective and discordant process on multiple levels for both the submitting entities and the Regional Entities. It may result in submitting entity having to run multiple studies in order to determine what will be acceptable proof, which is overly burdensome on both the

Organization	Yes or No	Question 7 Comment
		submitting entity requesting the exception and the Regional Entity reviewing the request. It also makes the consistency that FERC has requested difficult to assess and achieve. If the goal of the exceptions process is to result in consistent determinations across the regions, then WECC recommends that to the extent possible, the process be objective, clear, and include detailed instructions. The development of such an objective and detailed process is a difficult task and will require additional time. WECC believes it is better to not have an exceptions process in the interim period than to have an inefficient and overly burdensome process in place. To allow adequate time to complete the task of developing a detailed and consistent process WECC recommends that the Detailed Information to Support BES Exceptions Request be included in Phase II of the BES definition project.

Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to

Organization	Yes or No	Question 7 Comment
		reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Organization	Yes or No	Question 7 Comment
Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. In addition, NERC and the industry cannot wait until Phase 2 for the development of the exception process as it is an Order No. 743 directive that must be addressed by the FERC established deadline of January 25, 2012.		
Dominion	Yes	The Detailed Information to Support an Exception Request form has 2 sections; one for transmission facilities and another for generation facilities. Yet, the Project 2010-17 Definition of Bulk Electric System document uses other terms such as real and reactive power resources, dispersed power producing resources, static or dynamic devices, blackstart resources, radial systems, local networks (LN), and reactive power devices. Dominion suggests that the Detailed Information to Support an Exception Request form be revised to conform to the Project 2010-17 Definition of Bulk Electric System document through either use of some sort of 'selection' (checkbox, drop down, write in) or revision of transmission facilities and generation facilities to be more inclusive.
Response: The SDT is only determining the content of the technical criteria document. NERC will be responsible for addressing the format and user features of the final technical criteria document.		
TSGT G&T Tri-State Generation and Transmission Assn., Inc. Energy Mangement	Yes	TSGT believes that the proposed "Technical Principles for Demonstrating BES Exceptions Request" does not clearly define the basis for decisions to exclude or include, which will lead to inconsistent application by the Regions. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining how to assess the materials submitted, the current methodology leaves it to

Organization	Yes or No	Question 7 Comment
		each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO.

Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to

Organization	Yes or No	Question 7 Comment
		reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Organization	Yes or No	Question 7 Comment
Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.		
NERC Staff Technical Review	Yes	At a minimum, we believe there are some facilities which should not be excluded from the BES under any circumstances and a list of such facilities should be documented, including facilities such as (1) Elements that are relied on in the determination of an Interconnection Reliability Operating Limit (IROL); (2) Blackstart resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage, (3) Elements subject to Nuclear Plant Interface Requirements (NPIRs) as agreed to by a Nuclear Plant Generator Operator and a Transmission Entity defined in NUC-001, (4) Elements identified as required to comply with a NERC Reliability Standard by application of criteria defined within the standard (e.g., the test defined in PRC-023 to identify sub-200 kV Elements to which the standard is applicable), and (5) a generating unit that is designated as a must run unit to assure reliability of the BES. Also, to make the process of reviewing exception applications consistent and transparent some high level guidance should be developed as to how the information provided will be assessed by the Regional Entities and NERC. In addition to supporting the objectives of consistency and transparency, this also would provide benefit to entities submitting an exception application by allowing them to understand how the Required Information will be evaluated.
Response: The SDT notes that all BES definition exception requests are considered unique and will be handled on a case-by-case basis. In addition, there is no prohibition on what facilities can be included in an exception request. To say that an Element(s) can be automatically excluded or included on a continent-wide basis is contrary to the SDT's intent. While most of the items noted do reside on the exception request form, the SDT reminds the commenter that the proposed ERO Rules of Procedure state that "No single piece		

Organization	Yes or No	Question 7 Comment
		of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be

Organization	Yes or No	Question 7 Comment
supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.		

Organization	Yes or No	Question 7 Comment
Michigan Public Power Agency	Yes	The following revisions should be made to the procedures: 1. The Technical Review Panel (TRP) provided for in Section 5.3 should not include any staff from the host Regional Entity. 2. The Regional Entity should be required to include an attestation of a qualified individual or individuals to support the factual and technical bases for the decision. This is necessary for purposes of establishing a record in the event of an appeal. If a dispute is appealed, there must be someone at the Regional Entity level that serves as the witness supporting the Regional Entity decision. Currently, there is no accountability for the arguments and suppositions put forth by the Regional Entity; no individuals that stand behind the technical bases proffered in the Regional Entity's written decision. Requiring a qualified individual to attest to the facts and technical arguments relied upon in arriving at the decision will ensure that someone at the Regional Entity level is prepared to take responsibility for reviewing a decision before it is issued, to stand behind the assertions and conclusions reached by the Regional Entity, and whom the Submitting Party may cross examine at hearing. 3. A party seeking an exception should have the right to request a hearing and should not be limited to a paper process. 4. The procedures should not permit the TRP or the Regional Entity to make a decision based upon information that is outside of the record placed before it. That is, the TRP and the Regional Entity may not, on their own, conduct an investigation or seek information independently from what has been presented to it. If the TRP or the Regional Entity requires additional information, it must be requested and provided transparently, and the Submitting Party must have an opportunity to comment upon or challenge that information before the TRP or the Regional Entity relies upon it in any way. This is not currently happening at the Regional Entity and NERC level - decisions have been made based upon documents and information that are not part of the record; the information is not shared with the Submitting Party (the party challenging registration) prior to (or after) a decision is made.

Organization	Yes or No	Question 7 Comment
		5. Section 5.2.2. should be revised as follows: "Upon Acceptance of the Exception Request, the Regional Entity and Submitting Party (and Owner, if different) shall confer to establish milestones in order to complete the substantive review of the Exception Request within six months after Acceptance of the Exception Request or within an alternative time period under Section 5.0. The Regional Entity and the Submitting Party (and Owner, if different) shall also discuss whether and to what extent a reduced compliance burden is appropriate during the review period. At the conclusion of the review period, the Regional Entity shall issue a notice (in accordance with Sections 5.2.3) stating is Recommendation that the Exception Request be approved or disapproved."
Holland Board of Public Works	Yes	The following revisions should be made to the procedures: 1. The Technical Review Panel (TRP) provided for in Section 5.3 should not include any staff from the host Regional Entity. 2. The Regional Entity should be required to include an attestation of a qualified individual or individuals to support the factual and technical bases for the decision. This is necessary for purposes of establishing a record in the event of an appeal. If a dispute is appealed, there must be someone at the Regional Entity level that serves as the witness supporting the Regional Entity decision. Currently, there is no accountability for the arguments and suppositions put forth by the Regional Entity; no individuals that stand behind the technical bases proffered in the Regional Entity's written decision. Requiring a qualified individual to attest to the facts and technical arguments relied upon in arriving at the decision will ensure that someone at the Regional Entity level is prepared to take responsibility for reviewing a decision before it is issued, to stand behind the assertions and conclusions reached by the Regional Entity, and whom the Submitting Party may cross examine at hearing. 3. A party seeking an exception should have the right to request a hearing and should not be limited to a paper process. 4. The procedures should not permit the TRP or the Regional Entity to make a decision

Organization	Yes or No	Question 7 Comment
		based upon information that is outside of the record placed before it. That is, the TRP and the Regional Entity may not, on their own, conduct an investigation or seek information independently from what has been presented to it. If the TRP or the Regional Entity requires additional information, it must be requested and provided transparently, and the Submitting Party must have an opportunity to comment upon or challenge that information before the TRP or the Regional Entity relies upon it in any way. This is not currently happening at the Regional Entity and NERC level - decisions have been made based upon documents and information that are not part of the record; the information is not shared with the Submitting Party (the party challenging registration) prior to (or after) a decision is made. 5. Section 5.2.2. should be revised as follows: "Upon Acceptance of the Exception Request, the Regional Entity and Submitting Party (and Owner, if different) shall confer to establish milestones in order to complete the substantive review of the Exception Request within six months after Acceptance of the Exception Request or within an alternative time period under Section 5.0. The Regional Entity and the Submitting Party (and Owner, if different) shall also discuss whether and to what extent a reduced compliance burden is appropriate during the review period. At the conclusion of the review period, the Regional Entity shall issue a notice (in accordance with Sections 5.2.3) stating is Recommendation that the Exception Request be approved or disapproved."
Response: Your comments are not focused on the technical criteria document and they have been forwarded to the BES ROP team for consideration in their separate process.		
Central Hudson Gas & Electric Corporation	Yes	The 'Technical Principles for Demonstrating BES Exceptions' process was intended to establish technical exception 'criteria' which would be used by the industry to understand what facilities would qualify for inclusions and exclusions from the BES. What has been produced, however, is essentially a listing of 'electrical system indicators', identified on the form, which may be material to making a decision regarding, 'is it BES or not'. The thresholds (or acceptable values) for the indicators,

Organization	Yes or No	Question 7 Comment
		however, have not been determined. It is understood that in Phase II of the BES Definition development process, the SDT will attempt to address these issues but until that work has been completed, the industry will remain enmeshed in confusion and inefficient application of resources and funding. Without these criteria, it is very difficult to believe that this process can be transparent and consistent. Re: Question 4. (For Transmission Facilities)For the purposes of responding to this question, what constitutes the BES? It would seem that you must exclude the elements you are seeking exceptions for or else the exception request is rendered essentially worthless.

Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception application form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the application to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request.

Organization	Yes or No	Question 7 Comment
On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the application process. The SDT again points to the variations that will abound in the applications as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the application details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO panel for adjudication. Finally, the SDT would point to the SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
National Grid	Yes	We are assuming that "yes" answers on this checklist are not intended to result in automatic rejection of the application. We think the procedure would benefit from a general statement noting that all answers taken together will be considered to make clear that no single answer will necessarily be dispositive of the outcome.
Response: Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception application form will		

Organization	Yes or No	Question 7 Comment
mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved."		
Indeck Energy Services	Yes	As acknowledged in the response to Question 12 comments on the previous BES definition, the BES definition is expansive compared to the definition of the BPS in the FPA Section 215. The inclusion of the limited Exclusions is an attempt to remedy the situation. However, the Exclusions need to include a fifth one that if, based on studies or other assessments, it can be shown that any tranmission or generator element otherwise identified as part of the BES is not important to the reliability of the BPS, then that element should be excluded from the mandatory standards program. There has never been a study to show that elements, such as a 20 MW wind farm, 60 MW merchant generator (which operates infrequently in the depressed market) in a large BA (eg NYISO) or a radial transmission line connecting a small generator are important to the reliability of the BPS. They are covered by the mandatory standards program through the registration criteria. The BES Definition is the opportunity to permit an entity to demonstrate that an element is unimportant to reliability of the BPS. The SDT has identified a small subset of elements that it is willing to exclude. By their very nature, these exclusions dim the bright line that is the stated goal of this project. However, the SDT's foresight seems limited in its selections. Analytical studies are used to evaluate contingencies that could lead to the Big Three (cascading outages, instability or voltage collapse). Such a study showing that a transmission or generation element is bounded by the N-1 or N-2 contingency would exclude it from the BES definition. For example, in a BA with a NERC definition Reportable Disturbance of approximately 400 MW (eg NYISO), a 20 MW wind farm, 60 MW merchant generator or numerous other smaller facilities would be bounded by larger contingencies. It would take more than six 60 MW merchant generators with close location and common mode failure to even be a Reportable Disturbance, much less become the N-1 contingency for the Big Three. Exclusion E5 should be "E5 - Any facility that can be demonstrated to the Regional Entity by analytical study or other

Organization	Yes or No	Question 7 Comment
		assessment to be unimportant to the reliability of the BPS (with periodic reports by the Regional Entity to NERC of any such assessments)."
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
American Electric Power	No	AEP agrees with the overall approach demonstrated by the exception request form; however, its appropriateness will be largely dependent on the process eventually used for its implementation.AEP would like guidance on how moth-balled generation should be treated. Perhaps this could be added to the exception form as well.
Response: The SDT is not able to respond to specific requests related to potential future exception requests. Please use the BES definition and the exception request form, after its approval by the NERC Board of Trustees and FERC, for such a request. Also, please consider working with your Regional Entity to determine how moth-balled facilities should be treated.		
Snohomish County PUD Blachly-Lane Electric Cooperative Central Electric Cooperative (CEC) Clearwater Power Company	No	As a general matter, SNPD believes the SDT has provided a reasonable check list that will work in most cases to elicit necessary information from the entity submitting an Exception Request. With the added language suggested in our answers to the previous questions, we believe the proposed form will serve its intended purpose of ensuring that decisions regarding Exception Requests are based upon consistent information and are consistent with the requirements of the Federal Power Act and the BES Definition as developed by the Standards Drafting Team. SNPD also supports the Standards Drafting Team's determination to abandon its initial approach to

Organization	Yes or No	Question 7 Comment
(CPC) Consumer's Power Inc. (CPI) Douglas Electric Cooperative (DEC) Fall River Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (Lincoln) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) Umatilla Electric Cooperative West Oregon Electric Cooperative (WOEC) Coos-Curry Electric Coooperative City of Austin dba Austin Energy		technical criteria, which would have required adherence to specific numerical thresholds. SNPD agrees that this approach was not workable on a nationwide basis, and that the approach embodied in the current draft of the Technical Principles, which would require specific kinds of information on a generic basis but would leave engineering judgment about the significance of that information to the relevant RE, is more workable and provides appropriate deference to the experience and judgment of the REs.

Organization	Yes or No	Question 7 Comment
Kootenai Electric Cooperative		
BGE	No	No comment.
Farmington Electric Utility System	No	
ATC LLC	No	
Ameren	No	
Georgia System Operations Corporation	No	
Oncor Electric Delivery Company LLC	No	
Central Lincoln	No	
Long Island Power Authority	No	
Consumers Energy	No	
Orange and Rockland Utilities, Inc.	No	
Duke Energy	No	
NV Energy	No	
Exelon	No	

Organization	Yes or No	Question 7 Comment
Transmission	No	
PacifiCorp	No	
Pepco Holdings Inc	No	
Southern Company Generation	No	
Bonneville Power Administration	No	
Southwest Power Pool Standards Review Team	No	
ACES Power Marketing Standards Collaborators	No	
Northeast Power Coordinating Council	No	
SERC Planning Standards Subcommittee	No	
Response: Thank you for your support.		

END OF REPORT

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed

1. SAR posted for comment 12/17/10 – 1/21/11
2. SC authorized moving the SAR forward to standard development 3/25/11
3. First posting of definition 4/28/11 – 5/27/11
4. First posting of criteria 5/11/11 – 6/10/11

Description of Current Draft

This draft is the second posting of the revised definition of the Bulk Electric System (BES). It is for a 45-day formal comment and parallel voting period.

Anticipated Actions	Anticipated Date
45-day Formal Comment Period with Parallel Initial Ballot	8/26/11 – 10/10/11
Recirculation ballot	December 2011
BOT adoption	January 2011

Effective Dates

This definition shall become effective on the first day of the second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, the definition will go into effect on the first day of the second calendar quarter after Board of Trustees adoption. Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition.

Version History

Version	Date	Action	Change Tracking
1	TBD	Respond to FERC Order No. 743 to clarify the definition of the Bulk Electric System	N/A

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

Bulk Electric System (BES): Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. This does not include facilities used in the local distribution of electric energy.

Inclusions:

- **I1** - Transformers with primary and secondary terminals operated at 100 kV or higher unless excluded under Exclusion E1 or E3.
- **I2** - Generating resource(s) (with gross individual or gross aggregate nameplate rating per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.
- **I3** - Blackstart Resources identified in the Transmission Operator's restoration plan.
- **I4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above.
- **I5** –Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.

Exclusions:

- **E1** - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher and:
    a) Only serves Load. Or,
    b) Only includes generation resources, not identified in Inclusion I3, with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,
    c) Where the radial system serves Load and includes generation resources, not identified in Inclusion I3, with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

    Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.
- **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity

provided to the BES does not exceed75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.

- **E3** - Local networks (LN): A group of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the interconnected system. LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The LN is characterized by all of the following:
    a) Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ;
    b) Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN; and
    c) Not part of a Flowgate or transfer path: The LN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
- **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed

1. SAR posted for comment 12/17/10 – 1/21/11
2. SC authorized moving the SAR forward to standard development 3/25/11
3. First posting of definition 4/28/11 – 5/27/11
3.4. First posting of criteria 5/11/11 – 6/10/11

Description of Current Draft

This draft is the ~~first~~second posting of the revised definition of the Bulk Electric System (BES). It is for a ~~30~~45-day formal comment and parallel voting period.

Anticipated Actions	Anticipated Date
~~30-day Formal Comment Period~~	~~4/28/11~~
45-day Formal Comment Period with Parallel Initial Ballot	8/~~23~~26/11 – 10/10/11
Recirculation ballot	~~12/9/11~~December 2011
BOT adoption	~~12/30/11~~January 2011

Effective Dates

This definition shall become effective on the first day of the ~~first~~second calendar quarter~~, 24 months~~ after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, ~~all requirements~~ the definition will go into effect on the first day of the ~~first~~second calendar quarter~~, 24 months~~ after Board of Trustees adoption. Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition.

Version History

Version	Date	Action	Change Tracking
1	TBD	Respond to FERC Order No. 743 to clarify the definition of the Bulk Electric System	N/A

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

Bulk Electric System (BES): Unless modified by the lists shown below, ~~A~~all Transmission Elements operated at 100 kV or higher~~,~~ and Real Power and Reactive Power resources ~~as described below, and Reactive Power resources~~ connected at 100 kV or higher ~~unless such designation is modified by the list shown below~~. This does not include facilities used in the local distribution of electric energy.

Inclusions:

- **I1** - Transformers~~, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators,~~ with ~~two~~ primary and secondary ~~windings~~terminals ~~of~~operated at 100 kV or higher unless excluded under Exclusion~~s~~ E1 ~~and~~or E3.
  ~~I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above.~~
- **I~~3~~2** - Generating ~~units~~resource(s) ~~located at a single site with aggregate capacity greater than 75 MVA~~ (with gross individual or gross aggregate nameplate rating~~)~~ per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up ~~GSUs~~transformer(s)~~,~~ connected ~~through a common bus operated~~ at a voltage of 100 kV or above.
- **I~~4~~3** - Blackstart Resources ~~and the designated blackstart Cranking Paths~~ identified in the Transmission Operator's restoration plan ~~regardless of voltage~~.
- **I~~5~~4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a ~~system designed primarily for aggregating capacity~~collector system, connected ~~through~~at a common point ~~of interconnection to a system Element~~ at a voltage of 100 kV or above.
- **I5** –Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.

Exclusions:

- **E1** - ~~Any r~~Radial system~~s: which is described as connected~~ A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher ~~from a single Transmission source originating with an automatic interruption device~~ and:

a) Only ~~servings~~serves Load. ~~A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service.~~ Or,

b) Only ~~including~~includes generation resources, not identified in Inclusion~~s~~ ~~I2,~~ I3, ~~I4 and I5~~ with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,

c) ~~Is a combination of items (a.) and (b.) w~~Where the radial system serves Load and includes generation resources, not identified in Inclusion~~s~~ ~~I2,~~ I3, ~~I4 and I5.~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

- **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed ~~the criteria identified in Inclusions I2 or I3~~75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a ~~Balancing Authority or another~~ Generator Owner ~~/~~ or Generator Operator, or under terms approved by the applicable regulatory authority.
- **E3** - Local ~~Distribution N~~networks (L~~D~~N): A ~~G~~groups of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the ~~I~~interconnected ~~S~~system. L~~D~~N's emanate from multiple points of connection at 100 kV or higher~~are connected to the Bulk Electric System (BES) at more than one location solely~~ to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The L~~D~~N is characterized by all of the following:

~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault-interrupting devices;~~

a) Limits on connected generation: ~~Neither t~~The L~~D~~N~~, nor~~and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ~~(in aggregate), includes more than 75 MVA generation~~;

b) Power flows only into the ~~Local Distribution Network~~LN: ~~The generation within the LDN shall not exceed the electric Demand within the LDN~~ The LN does not transfer energy originating outside the LN for delivery through the LN; and

~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

c) Not part of a Flowgate or ~~T~~transfer ~~P~~path: The L~~D~~N does not contain a monitored Facility of a permanent ~~f~~Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection ~~as defined by the Regional Entity~~, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

- **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Implementation Plan for Project 2010-17: Definition of BES

Prerequisite Approvals

There are no other Reliability Standards or Standard Authorization Requests (SARs), in progress or approved, that must be implemented before this project can be implemented. However, this definition relies heavily on the fact that an approved exception process exists in the NERC Rules of Procedure.

Effective Dates

This definition shall become effective on the first day of the second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required the definition shall go into effect on the first day of the second calendar quarter after Board of Trustees adoption.

Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition.

The SDT realizes that Order 743 suggested a maximum of 18 months for implementation of a revised definition of the BES. The 24 month period cited here is based on the various rehearing requests filed by entities expected to be affected by the revised definition. Thus, the SDT believes that this is a more realistic timeframe in which to effect any changes.

The SDT believes that the timeframe shown is needed to:

- Effectively produce reasonable transition plans – As shown in Order 743, part of the overall process of revising the definition of BES is for the ERO and Regional Entities to develop transition plans on a region by region basis to accommodate any changes needed in those regions due to the revised definition. The transition plans will include any actions necessary for entities to achieve compliance on any issues brought about by the revised definition.
- Submit any necessary registration changes – While Order 743 states that a revised definition should provide clarity and not necessarily require major changes to registration; it is possible that the revised definition may cause some registration changes. Entities will need time to submit their changes and for those changes to work their way through the process.
- File for exceptions – The revised definition does not exist in a vacuum. There is a corresponding process for entities to request exceptions for specific equipment or configurations. This process will be defined in the NERC Rules of Procedure and will involve individual entities or the Regional Entities having to make a technical case to justify the exception. This process will take some time to complete and it would be expected that there will be an initial backlog of cases to process.
- Provide training – Entities will need to train their operators and personnel on changes to their operations brought about by the revised definition.

The existing definition of BES shall be retired at midnight of the day immediately prior to the effective date of the new definition of BES in the particular jurisdiction in which the new definition is becoming effective.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Implementation Plan for Project 2010-17: Definition of BES

Prerequisite Approvals

There are no other Reliability Standards or Standard Authorization Requests (SARs), in progress or approved, that must be implemented before this project can be implemented. However, this definition relies heavily on the fact that an approved exception process exists in the NERC Rules of Procedure.

~~Revision to Sections of Approved Standards and Definitions~~

~~There is one new definition associated with this project.~~

~~**Bulk Electric System (BES)**: All Transmission Elements operated at 100 kV or higher, Real Power resources as described below, and Reactive Power resources connected at 100 kV or higher unless such designation is modified by the list shown below.~~

~~**Inclusions:**~~

- ~~I1 - Transformers, other than Generator Step-up (GSU) transformers, including Phase Angle Regulators, with two windings of 100 kV or higher unless excluded under Exclusions E1 and E3.~~
- ~~I2 - Individual generating units greater than 20 MVA (gross nameplate rating) including the generator terminals through the GSU which has a high side voltage of 100 kV or above.~~
- ~~I3 - Multiple generating units located at a single site with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) including the generator terminals through the GSUs, connected through a common bus operated at a voltage of 100 kV or above.~~
- ~~I4 - Blackstart Resources and the designated blackstart Cranking Paths identified in the Transmission Operator's restoration plan regardless of voltage.~~
- ~~I5 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system through a common point of interconnection to a system Element at a voltage of 100 kV or above.~~

~~**Exclusions:**~~

- ~~E1 - Any radial system which is described as connected from a single Transmission source originating with an automatic interruption device and:~~
  - ~~a) Only serving Load. A normally open switching device between radial systems may operate in a 'make-before-break' fashion to allow for reliable system reconfiguration to maintain continuity of electrical service. Or,~~
  - ~~b) Only including generation resources not identified in Inclusions I2, I3, I4 and I5. Or,~~

  ~~Is a combination of items (a.) and (b.) where the radial system serves Load and includes generation resources not identified in Inclusions I2, I3, I4 and I5.~~
- ~~E2 - A generating unit or multiple generating units that serve all or part of retail Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed the criteria identified in Inclusions I2 or I3, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load pursuant to a binding obligation with a Balancing Authority or another Generator Owner/Generator Operator, or under terms approved by the applicable regulatory authority.~~

- ~~E3 - Local Distribution Networks (LDN): Groups of Elements operated above 100 kV that distribute power to Load rather than transfer bulk power across the Interconnected System. LDN's are connected to the Bulk Electric System (BES) at more than one location solely to improve the level of service to retail customer Load. The LDN is characterized by all of the following:~~

  ~~Separable by automatic fault interrupting devices: Wherever connected to the BES, the LDN must be connected through automatic fault interrupting devices;~~

  ~~a) Limits on connected generation: Neither the LDN, nor its underlying Elements (in aggregate), includes more than 75 MVA generation;~~

  ~~b) Power flows only into the Local Distribution Network: The generation within the LDN shall not exceed the electric Demand within the LDN;~~
  ~~Not used to transfer bulk power: The LDN is not used to transfer energy originating outside the LDN for delivery through the LDN; and~~

  ~~c) Not part of a Flowgate or Transfer Path: The LDN does not contain a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Quebec Interconnection, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).~~

- ~~—~~

~~Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.~~

Effective Dates

~~The effective date is the date entities are expected to meet the performance identified.~~

This definition shall become effective on the first day of the ~~first~~second calendar quarter~~, 24 months~~ after applicable regulatory approval. In those jurisdictions where no regulatory approval is required~~, all requirements~~ the definition shall go into effect on the first day of the ~~first~~second calendar quarter~~, 24 months~~ after Board of Trustees adoption.

Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition.

The SDT realizes that Order 743 suggested a maximum of 18 months for implementation of a revised definition of the BES. The 24 month period cited here is based on the various rehearing requests filed by entities expected to be affected by the revised definition. Thus, the SDT believes that this is a more realistic timeframe in which to effect any changes.

The SDT believes that the timeframe shown is needed to:

- Effectively produce reasonable transition plans – As shown in Order 743, part of the overall process of revising the definition of BES is for the ERO and Regional Entities to develop transition plans on a region by region basis to accommodate any changes needed in those regions due to the revised definition. The transition plans will include any actions necessary for entities to achieve compliance on any issues brought about by the revised definition.

- Submit any necessary registration changes – While Order 743 states that a revised definition should provide clarity and not necessarily require major changes to registration; it is possible that the revised definition may cause some registration changes. Entities will need time to submit their changes and for those changes to work their way through the process.
- File for exceptions – The revised definition does not exist in a vacuum. There is a corresponding process for entities to request exceptions for specific equipment or configurations. This process will be defined in the NERC Rules of Procedure and will involve individual entities or the Regional Entities having to make a technical case to justify the exception. This process will take some time to complete and it would be expected that there will be an initial backlog of cases to process.
- Provide training – Entities will need to train their operators and personnel on changes to their operations brought about by the revised definition.

The existing definition of BES shall be retired at midnight of the day immediately prior to ~~upon~~ the effective date of the new definition of BES in the particular jurisdiction in which the new definition is becoming effective.

Comment Form for 2nd Draft of Definition of BES (Project 2010-17)

Please **DO NOT** use this form to submit comments on the 2nd draft of the Definition of the Bulk Electric System (Project 2010-17). Use the electronic comment form **only** to submit comments. Comments must be submitted by **October 10, 2011.**

If you have questions please contact Ed Dobrowolski at ed.dobrowolski@nerc.net or by telephone at 609-947-3673.

Background Information
Definition of the BES (Project 2010-17)

The SDT responded to the comments received for the first posting of the definition for this project by clarifying the core definition, inclusions, and exclusions to meet the concerns of the industry. The SDT has also utilized a variety of other inputs including work that was done by regional entities such as WECC, NPCC, RFC, and FRCC in coming up with the present definition. Another input was FERC Orders No. 743 and 743a which provided several specific directives on clarifying the existing definition. It should be noted that the revised definition does not address functional entity registration or standards requirements applicability. Those are separate issues.

The core definition represents a true bright-line; but, it is clear that by itself, it does not cover all of the known situations and configurations that are needed for a complete definition. Therefore, the SDT developed several specific inclusions and exclusions that will be added to the core definition to complete it. At the present time, the SDT has drafted five specific inclusions and four specific exclusions.

Inclusions represent those items that are included as part of the Bulk Electric System (BES) where they would not have been included as part of the simple core definition. The reasons that the SDT has added these items are as follows:

- I1 – Since transformers have windings operating at different voltages, it was felt that clarification was required so as to more explicitly identify which transformers were to be included in the BES. The SDT believes that the present draft provides this needed clarification.
- I2 – This inclusion represents a merger of the original Inclusion I2 and the original Inclusion I3 concerning generation thresholds.
- I3 – Blackstart units are considered vital to the overall operation of the BES. Consequently, the SDT has included Blackstart Resources. However, due to industry comments, the SDT has deleted the inclusion of Cranking Paths.
- I4 – This item was added in order to accommodate the effects of variable generation on the BES. The intent of this configuration is to include variable generation (e.g., wind and solar resources) with an aggregate rating greater than 75 MVA and was considered different enough from what was proposed in Inclusion I2 as to warrant a separate inclusion statement in order to provide greater clarity in this area.
- I5 – This is a new inclusion brought about by industry comments to clarify the inclusion of Reactive Power devices.

In addition to inclusions, in order to complete the picture, specific exclusions also need to be considered. The SDT has currently drafted four specific exclusions:

- E1 – This item was added to address the basic issue of radial systems. Radial exclusion was part of the existing definition and was supported moving forward in all of the regional work as well as Order No. 743 (and Order No. 743a). The SDT has

clarified this exclusion in response to industry comments by deleting the automatic interruption device.
- E2 – This item was added to address the situation of behind-the-meter generation. The wording is basically extracted from the ERO Statement of Compliance Registry Criteria.
- E3 – Local networks were added to the exclusion list after considerable discussions among the SDT and various registered entities that have configurations meeting these conditions. The SDT believes that any network that simply supports distribution should be excluded from the BES. The SDT has clarified the language for the exclusion and added a 300 kV upper limit.
- E4 – The SDT has added an exclusion for Reactive Power devices used solely by retail customers for their own use as a result of comments received.

Several commenters objected to simply carrying through the generation and voltage thresholds from the ERO Statement of Compliance Registry Criteria as part of the revised definition. However, no respondents provided technical justifications for changing these values. Furthermore, the scope of this project deals mainly with responding to FERC Orders 743 and 743a which clearly stated that the intent of the order was to maintain the status quo and to only address those urgent issues identified in the order. Hence, the tight schedule that was provided in the order. After consulting with the NERC Board of Trustees and the NERC Standards Committee, the SDT has decided to forgo any attempt at changing generation or voltage thresholds at this time. There simply isn't enough time or resources to do those topics justice with the mandated schedule. Therefore, the focus of the SDT efforts will be to address the directives in Orders 743 and 743a. However, this does not mean that the issues will be dropped. Both the NERC Board of Trustees and the NERC Standards Committee have endorsed the idea that the Project 2010-17 SDT take a phased approach to this project with a new Standards Authorization Request (SAR) to address generation thresholds as well as several other issues that have arisen from SDT deliberations. Issues such as what is necessary for the reliable operation of the BES, whether the BES needs to be a contiguous, possible interconnection difference, who is a user of the BES, and correlation of the definition of BES and the ERO Statement of Compliance Registry Criteria will be addressed with this new SAR. The proposed SAR has been posted for information purposes only concurrent with the second posting of this project. A formal comment period will follow.

In parallel with the definition project, another team has been set up to develop a change to the NERC Rules of Procedure (RoP) to allow for entities to technically justify excluding Elements from the BES that might otherwise be included according to the proposed definition. This same process would be used by Registered Entities to justify including Elements in the BES that might otherwise be excluded according to the proposed definition. This RoP team will develop the process for seeking an exemption from the definition but the DBESSDT will develop the criteria necessary for applying for an exemption through the standards development process. The DBESSDT developed exception criteria is posted separately but simultaneously to the second posting of the definition.

You do not have to answer all questions. Enter All Comments in Simple Text Format.

Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

The SDT has asked one specific question for each specific aspect of the definition.

1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes:

   No:

   Comments:

2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes:

   No:

   Comments:

3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes:

   No:

   Comments:

4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes:

   No:

   Comments:

5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes:

   No:

   Comments:

6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes:

   No:

   Comments:

7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes:

   No:

   Comments:

8. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2 (behind-the-meter generation)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes:

   No:

   Comments:

9. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3 (local network)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

   Yes:

   No:

Comments:

10. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E4 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

    Yes:

    No:

    Comments:

11. Are there any other concerns with this definition that haven't been covered in previous questions and comments remembering that the exception criteria are posted separately for comment?

    Yes:

    No:

    Comments:

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

E-mail completed form to
maureen.long@nerc.net

Standard Authorization Request Form

Title of Proposed Standard: NERC Glossary of Terms - Phase 2: Revision of the Bulk Electric System definition.
Request Date:
SC Approval Date:

SAR Requester Information	**SAR Type** (*Check a box for each one that applies.*)	
Name: Project 2010-17 Definition of Bulk Electric System (BES) SDT	☐	New Standard
Primary Contact: Peter Heidrich (Manager of Reliability Standards, FRCC) , Project 2010-17 Definition of Bulk Electric System (BES) SDT Chair	☒	Revision to existing Standard
Telephone: (813) 207-7994 Fax: (813) 289-5646	☐	Withdrawal of existing Standard
E-mail: pheidrich@frcc.com	☐	Urgent Action

Purpose (Describe what the standard action will achieve in support of bulk power system reliability.)

Research possible revisions to the definition of Bulk Electric System (BES) (Phase 2) to address the issues identified through Project 2010-17 Definition of Bulk Electric System (BES) (Phase 1). The definition encompasses all Elements necessary for the reliable operation of the interconnected transmission network. The definition development may include other improvements to the definition as deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing a high quality and technically sound definition of the Bulk Electric System (BES).

Industry Need (Provide a justification for the development or revision of the standard, including an assessment of the reliability and market interface impacts of implementing or not implementing the standard action.)

This project supports the ERO's obligation to identify the Elements necessary for the reliable operation of the interconnected transmission network to ensure that the ERO, the Regional Entities, and the industry have the ability to properly identify the applicable entities and Elements subject to the NERC Reliability Standards.

Brief Description (Provide a paragraph that describes the scope of this standard action.)

Research possible revisions to the definition of Bulk Electric System (BES) developed in Phase 1 of this

project to provide a technically justifiable definition that identifies the appropriate electrical components necessary for the reliable operation of the interconnected transmission network. The definition development may include other improvements to the definition as deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing a high quality and technically sound definition of the Bulk Electric System (BES).

Detailed Description (Provide a description of the proposed project with sufficient details for the standard drafting team to execute the SAR.)

Research possible revisions to the definition of Bulk Electric System (BES) developed in Phase 1 of this project to provide a technically justifiable definition that identifies the appropriate electrical components necessary for the reliable operation of the interconnected transmission network. The definition development will include an analysis of the following issues, from a continent-wide and an interconnection-wide basis, which were identified by the drafting team during the development of Project 2010-17 Definition of the Bulk Electric System. Clarification of these issues will appropriately define which Elements are necessary for the reliable operation of the interconnected transmission network.

- Determine the reliability benefit of a contiguous BES
- Determine the appropriate 'points of demarcation' between Transmission, Generation, and Distribution
- Determine the appropriate threshold for Generation Resources which supports reliable operation of the Bulk Electric System (BES)
- Determine the scope and significance of the equipment which supports the reliable operation of the Bulk Electric System (BES)
- Clarify the relationship between the BES definition and the ERO Statement of Compliance Registry Criteria established in FERC Order 693

Phase 2 of the definition development may include other improvements to the definition as deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing a high quality and technically justifiable definition of the Bulk Electric System (BES).

Based on the potential revisions to the definition of the Bulk Electric System (BES) and an analysis of the application of, and the results from, the exception process, the drafting team will review and if necessary propose revisions to the 'Technical Principles' associated with the Rules of Procedure Exception Process to ensure consistency in the application of the definition and the exception process.

DRAFT

Reliability Functions

The Standard will Apply to the Following Functions *(Check box for each one that applies.)*		
☒	Reliability Assurer	Monitors and evaluates the activities related to planning and operations, and coordinates activities of Responsible Entities to secure the reliability of the bulk power system within a Reliability Assurer Area and adjacent areas.
☒	Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
☒	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports Interconnection frequency in real time.
☐	Interchange Authority	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
☒	Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
☒	Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within its portion of the Planning Coordinator's Area.
☒	Transmission Owner	Owns and maintains transmission facilities.
☒	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
☒	Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within the Transmission Planner Area.
☒	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
☒	Distribution Provider	Delivers electrical energy to the End-use customer.
☒	Generator Owner	Owns and maintains generation facilities.
☒	Generator Operator	Operates generation unit(s) to provide real and reactive power.
☐	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
☒	Load-Serving Entity	Secures energy and transmission service (and reliability-related services) to serve the End-use Customer.

DRAFT

Reliability and Market Interface Principles

Applicable Reliability Principles *(Check box for all that apply.)*	
☒	1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
☒	2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
☒	3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.
☒	4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented.
☒	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems.
☒	6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.
☒	7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis.
☒	8. Bulk power systems shall be protected from malicious physical or cyber attacks.

Does the proposed Standard comply with all of the following Market Interface Principles? *(Select 'yes' or 'no' from the drop-down box.)*
1. A reliability standard shall not give any market participant an unfair competitive advantage. Yes
2. A reliability standard shall neither mandate nor prohibit any specific market structure. Yes
3. A reliability standard shall not preclude market solutions to achieving compliance with that standard. Yes
4. A reliability standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes

Related Standards

Standard No.	Explanation

Related SARs

SAR ID	Explanation

Regional Variances

Region	Explanation
FRCC	
MRO	
NPCC	
SERC	
TRE	
RFC	
SPP	
WECC	

DRAFT

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

John Q. Anderson
Chair, NERC Board of Trustees

September 1, 2011

Mr. Allen Mosher
Chair, NERC Standards Committee

Re: Report Regarding the Status of the Bulk Electric System Definition Development Project

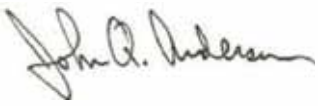
Dear Allen,

On behalf of the NERC Board of Trustees, I want to thank you and the drafting team for the early response relative to our inquiry on the status of the Bulk Electric System definition development project. The Standards Committee's report fulfills all of our expectations regarding the resolution that the Board approved at its August 4, 2011 meeting. It is gratifying to see that the industry has adopted a way forward that should enable NERC to meet the schedule set by the Federal Energy Regulatory Commission and we remain hopeful this highly important project will remain on track toward the January filing date.

The Trustees also recognize the industry has identified the generator threshold issue as one it believes important to defining the extent of the Bulk Electric System. It is also possible there will be future similar issues requiring deeper exploration. We believe the solution of separating out those elements requiring more thought and development time into separate phases is an appropriate solution. We support these additional efforts and look forward to future discussions related to them.

Should any additional issue arise that may impede the schedule, please work with the Board's Standards Oversight and Technology Committee to keep us informed and feel free to seek our guidance relative to proposed solutions.

Sincerely,



John Q. Anderson
Chair

cc: Mr. Pete Heidrich, Chair, BES Definition Drafting Team
NERC Board of Trustees

3353 Peachtree Road NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

August 24, 2011

John Q. Anderson
Chairman
NERC Board of Trustees

Dear Chairman Anderson:

At the NERC Board of Trustees August 4, 2011 meeting, the Board approved the following Resolution on Definition of Bulk Electric System:

> In furtherance of the Board's oversight of the standards development process and in anticipation of the Board's ultimate responsibility to determine whether the revised definition of "Bulk Electric System" that emerges from the standards development process should be approved and filed with the Federal Energy Regulatory Commission no later than January 25, 2012, as NERC's response to the directives in Order No. 743, the Board:
>
> (1) directs the Standards Committee and the Standard Drafting Team to consider the feedback heard at the August 4, 2011 board meeting regarding the development of the Bulk Electric System definition; and
>
> (2) further directs that the Standards Committee submit to the Board by September 9, 2011:
>
> (a) the draft of the proposed Bulk Electric System definition as it exists on that date;
>
> (b) the best justification that the Standard Drafting Team has prepared to support the change in generator threshold from 20 MVA to 75 MVA; and
>
> (c) an options paper that addresses possible options for moving forward with the development of the proposed definition and responding to the Commission by the January 25, 2012 deadline; and
>
> (3) expects the Standards Drafting Team to continue its work on the Bulk Electric System definition.

The Drafting Team (DT) for Project 2010-17 Definition of the Bulk Electric System met the week of August 7, 2011 and determined that it was highly unlikely that the DT could develop an adequate technical justification to support revision of the single unit generator threshold criteria (20 to 75 MVA) in the time frame established by Order 743. The team revised its proposed definition and provided us with an update to its action plan that reflects adoption of the guidance provided by the Member Representatives Committee and Board of Trustees.

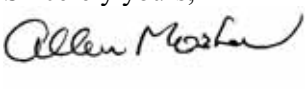
- Attachment A is a copy of the latest draft of the proposed definition of Bulk Electric System as of August 19, 2011. The revised definition is silent on generator threshold; there is no proposed change from 20 MVA to 75 MVA.
- Attachment B is a copy of the letter provided by the drafting team's chair, Peter Heidrich, on August 23, 2011 relative to the status of the project.
- Attachment C is a copy of the team's proposed action plan for moving this project forward to meet the applicable Commission directives by January 25, 2012. This includes splitting the

116-390 Village Blvd.
Princeton, NJ 08540
609.452.8060 | www.nerc.com

project into two phases, with phase 1 focused solely on meeting the Commission's relevant directives. Phase 2 will address other issues, including the generator threshold issue, raised by stakeholders or during drafting team deliberations.

It is our view that the drafting team's proposed course of action meets the intent of the Board's August 4 Resolution that the Standards Committee and the Standard Drafting Team consider the feedback heard at the August 4, 2011 Board meeting regarding the development of the Bulk Electric System definition and that the drafting team continue its work on the Bulk Electric System definition. The team expects to post its latest documents for a stakeholder comment period starting on August 25, 2011.

Sincerely yours,



Allen Mosher
Chair, Standards Committee

Cc: Herbert Schrayshuen
Standards Committee
BES Definition SDT

Project 2010-17 Definition of Bulk Electric System

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed

1. SAR posted for comment 12/17/10 – 1/21/11
2. SC authorized moving the SAR forward to standard development 3/25/11
3. First posting of definition 4/28/11 – 5/27/11
4. First posting of criteria 5/11/11 – 6/10/11

Description of Current Draft

This draft is the second posting of the revised definition of the Bulk Electric System (BES). It is for a 45-day formal comment and parallel voting period.

Anticipated Actions	Anticipated Date
30-day Formal Comment Period	April 28, 2011
45-day Formal Comment Period with Parallel Initial Ballot	September 2011
Recirculation ballot	December 2011
BOT adoption	January 2011

Effective Dates

This definition shall become effective on the first day of the second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, the definition will go into effect on the first day of the second calendar quarter after Board of Trustees adoption. Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition.

Version History

Version	Date	Action	Change Tracking
1	TBD	Respond to FERC Order No. 743 to clarify the definition of the Bulk Electric System	N/A

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

Bulk Electric System (BES): Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. This does not include facilities used in the local distribution of electric energy.

Inclusions:

- **I1** - Transformers with primary and secondary terminals operated at 100 kV or higher unless excluded under Exclusion E1 or E3.
- **I2** - Generating resource(s) (with gross aggregate nameplate rating per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.
- **I3** - Blackstart Resources identified in the Transmission Operator's restoration plan.
- **I4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above.
- **I5** –Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.

Exclusions:

- **E1** - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher and:
    a) Only serves Load. Or,
    b) Only includes generation resources, not identified in Inclusion I3, with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,
    c) Where the radial system serves Load and includes generation resources, not identified in Inclusion I3, with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

  Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

- **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.
- **E3** - Local networks (LN): A group of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the interconnected system. LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The LN is characterized by all of the following:
    a) Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ;
    b) Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN; and
    c) Not part of a Flowgate or transfer path: The LN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
- **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

FLORIDA RELIABILITY COORDINATING COUNCIL, INC.
1408 N. WESTSHORE BLVD., SUITE 1002
TAMPA, FLORIDA 33607-4512
PHONE 813.289.5644 • FAX 813.289.5646
WWW.FRCC.COM

August 23, 2011

Allen Mosher, Chair of NERC Standards Committee
Ben Li, Vice Chair of NERC Standards Committee
Herbert Schrayshuen, Vice President and Director of Standards, NERC

RE: Project 2010-17 Definition of the Bulk Electric System - Action Plan

Gentlemen;

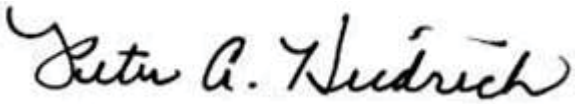
This letter provides the Standards Committee, the Board of Trustees and NERC staff with the Drafting Team's action plan for Project 2010-17 Definition of the Bulk Electric System (BES). The project is currently on schedule to complete the revision of the definition of the BES, the development of the associated Implementation Plan and all documents supporting the Rules of Procedure Exception Process by January 25, 2012, in response to the directives established by the Commission (FERC) in Order Nos. 743 and 743-A.

The drafting team submitted the following documents for quality review on Friday, August 19, 2011, in preparation for the next scheduled posting. The goal is to post the documents for stakeholder formal comment and initial ballot no later than September 2, 2011:

- Draft BES Definition
  - Responses to the initial posting of definition
  - Technical Justification for the Local Network exclusion (E3)
  - Second posting comment form for definition
- Draft Technical Principles for Demonstrating BES Exceptions (evidence document to support Rules of Procedure Process)
  - Responses to the initial posting of Technical Principles document
  - Second posting comment form for Technical Principles
- Draft Implementation Plan
- Table identifying how the team addressed applicable FERC directives
- Phase 2 SAR (to be posted for informational purposes only)

I have attached the latest action plan for successful completion of this project in phases which encompasses the MRC and BOT recommendations.

Sincerely,



Peter A. Heidrich
Chair, Project 2010-17 Definition of the Bulk Electric System Drafting Team

cc: NERC Board of Trustees
NERC Standards Committee

August 23, 2011 Action Plan for Completion of Project 2010-17 – Definition of Bulk Electric System

The Standard Drafting Team (SDT) for Project 2010-17 Definition of the Bulk Electric System met the week of August 7, 2011 and determined that the feasibility of developing an adequate technical justification for the revision of the single unit generator threshold criteria (20 to 75 MVA) is highly unlikely in the time frame established by Order No. 743 (filing deadline of January 25, 2012). Therefore the SDT adopted the recommendations of the Member Representatives Committee (MRC) and the NERC Board of Trustees (BOT) and developed the following plan to meet the schedule for addressing the directives established by the Commission (FERC) in Order Nos. 743 and 743-A while also addressing concerns raised by SDT members and concerns received from stakeholders through the standard development process.

- The SDT revised the draft definition to eliminate any change in the generation thresholds. To accomplish this, the SDT has chosen to remain silent as to the actual values associated with the generator thresholds for units and referenced the ERO Statement of Compliance Registry Criteria for additional clarification. This will ensure that the current 'status-quo' application of the BES definition and the registration process will continue as it is today.
- The SDT developed a second Standard Authorization Request (SAR) for the project (Project 2010-17 Definition of the Bulk Electric System) to establish a phased approach where *phase 1* addresses the directives from Order Nos. 743 and 743-A and *phase 2* will address the concerns raised by SDT members and stakeholders through the Standard Development Process.
- The SDT finalized the revised draft BES definition and all associated documents for a 45-day concurrent posting (formal comment period and initial ballot) scheduled to begin no later than September 2, 2011. The SDT also prepared a revised version of the "*Technical Principles for Demonstrating BES Exceptions*[1]*"* for posting (formal comment period and initial ballot) in parallel with the posting of the BES definition.

[1] The "*Technical Principles for Demonstrating BES Exceptions*" was developed to supplement the Rules of Procedure Exception Process by providing guidance to the ERO, the Regional Entities and the industry on the detailed information and evidence necessary to support a BES Definition exception request.

Local Network Exclusion

Introduction

The purpose of this document is to provide the justification for the definitional exclusion of local networks (LN) from the definition of the Bulk Electric System (BES) as proposed in NERC Standards Development Project 2010-17. Presented herein are technical, logical, and practical considerations that provide such justification for exclusion of these facilities from the Bulk Electric System.

Summary of Justification

The local network exclusion proposal is shown to be justified through the following facts:

1. In accordance with Commission Orders 743 and 743a on the matter of the revision of the Definition of the Bulk Electric System, the facilities used in the local distribution of electric energy are to be excluded;
2. The exclusion for local networks, as provided in the revised definition of the BES, ensures that a candidate for local network exclusion must satisfy all of the exclusion principles thus demonstrating that the candidate facilities are not performing a transmission function;
3. The limit on connected generation within the local network is consistent with the existing threshold above which a generating plant in aggregate becomes subject to owner and operator registration in the ERO Statement of Compliance Registry Criteria;
4. The voltage cap applied to the qualifications for a local network is established at 300 kV, which is consistent with the distinction being made between Extra High Voltage and High Voltage in the NERC Board of Trustees-approved Reliability Standard on transmission planning, TPL-001-2;
5. The power flow "shifts" that would occur on the elements of a local network are but a negligible fraction of that which distributes upon the BES elements for a given power transfer and is fully eclipsed by the Load in the local network; and
6. The interaction of the local network with the BES is similar in character to that of a radial facility.

Description of Local Network

Local networks are defined in the draft BES Definition as:

A group of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the interconnected system. LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The LN is characterized by all of the following:

a) *Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ;*
b) *Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN; and*
c) *Not part of a Flowgate or transfer path: The LN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).*

Local networks are present to provide local electrical distribution service and are not planned, designed, nor operated to benefit or support the balance of the interconnected electrical transmission network. Their purpose is to provide local distribution service, not to provide transfer capacity for the interconnected electric transmission network. Their design and operation is such that at the point of connection with the interconnected electric transmission network, their effect on that network is similar to that of a radial facility, particularly in that flow always moves in a direction that is from the BES into the facility. Any distribution of parallel flows into the local network from the BES, as governed by the fundamentals of parallel electric circuits, is negligible, and, more importantly, is overcome by the Load served by the local network, thereby ensuring that the net actual power flow direction will always be into the local network at all interface points. The presence of a local network is not for the operability of the interconnected electric transmission network; neither will the local network's separation or retirement diminish the reliability of the interconnected electric transmission network.

Commission Determination on Exclusion of Local Distribution – Relation to Local Network

In Order 743a, the Commission made it clear that facilities that are used in the local distribution of electric energy will be excluded from the Bulk Electric System. Such clarification was provided in both paragraphs 22 and 25 of the Order. The Commission agreed with certain commenters that facilities used in the local distribution of energy should be excluded from the revised Bulk Electric System definition.

In response to this facet of the Order, in developing the BES definition, the SDT has followed this guidance. Exclusion E3 was specifically designed to capture for exclusion those high voltage non-radial facilities being used for the local distribution of energy.

The exclusion characteristics in items a, b, and c above are further explained in the next section. These exclusion principles serve to ensure that facilities excluded under the local network exclusion (E3) are not necessary for the reliable operation of the interconnected electric transmission network and are instead used in the local distribution of energy.

Exclusion Principles

Of key importance is that Exclusion E3 in the draft BES definition requires the facilities of a candidate network to meet all of the characteristics listed in the exclusion. The SDT adopted this approach to ensure that none of the characteristics typical of interconnected electric transmission networks, or necessary for the operation of the interconnected electric transmission system, would be permissible in those facilities that are qualified for Exclusion E3. In the discussion below, it is shown that these characteristics successfully prevent exclusion of facilities necessary for operating an interconnected electric transmission network, and allow only facilities that are not necessary for such operation to be excluded from the BES.

A. *First Exclusion Principle: Limits on Connected Generation*

> *Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating);*

This characteristic places restrictions on the type and size of generation resources that can be connected within the candidate facility. By placing this generation restriction on the local network, it is ensured that that the candidate facility will not under any circumstance act as a host to generation that exceeds the existing aggregate generation threshold in the ERO Statement of Compliance Registry Criteria (SCRC) and that the candidate facility will not contain Blackstart Resources. The SDT submits that this characteristic minimizes the contribution and influence the local network may have over the neighboring Elements of the BES by limiting both the magnitude and the function of the connected generation. The threshold of 75 MVA was chosen in a manner to provide consistency with the criteria applied in the ERO's SCRC regarding the registration for entities owning and operating generation plants in aggregate.

B. *Second Exclusion Principle: Power Flow and Function*

> *Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN;*

This characteristic ensures that the real power flow direction at all connection points to the BES is into the candidate local network, thereby ensuring that the candidate facilities behave in a manner that is radial in character. Further, the local network is restricted as to its use; i.e., it cannot be used for "wheel" transactions, or the transfer of energy originating outside the local network for delivery through the local network. By restricting the flow direction to be exclusively into the network at its connection points to the BES and precluding the network from providing transmission wheeling service, this exclusion characteristic further ensures that the local network is providing only a distribution service, and is not contributing to, nor is necessary for, the reliable operation of the interconnected electric transmission network. Regarding the location of the connection points to the BES, Exclusion E3 specifies that local networks "emanate from multiple points of connection at 100 kV or higher…" These points of emanation, where the local network begins and the BES ends, are established on a case-by-

case basis, but will necessarily be the points, below 300 kV, at which all of the qualifying exclusion principles are satisfied. As an example, see Appendix 1 to this document, which provides, among other things, a single line diagram depicting a local network and its interface with the BES.

C. *Third Exclusion Principle: Flowgates and Transfer Paths*

> *Not part of a Flowgate or transfer path: The LN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or the Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).*

This characteristic further ensures that the candidate local network facilities do not contain nor comprise facilities of well-established flowgates and transfer paths throughout the Interconnections of North America. These transfer paths are customarily used to provide bulk power transfers within the Interconnections, and therefore, the function and purpose of any candidate facilities included in or among such paths extends beyond the distribution function. A number of interchange coordination Reliability Standards apply to these transfer paths and flowgates. The SDT feels that such facilities are necessary for the reliable operation of an interconnected electric transmission network and would not be excluded from the definition of the BES.

The Use of a 300 kV Cap is Appropriate for Local Network Exclusion

The selection of a 300 kV cap for the applicability of an exclusion for a local network was based upon recent NERC Standards Development work in Project 2006-02 "Assess Transmission Future Needs and Develop Transmission Plans." As conveyed in its work product, TPL-001-2, the Project 2006-02 SDT sets a voltage level of 300 kV to differentiate Extra High Voltage (EHV) facilities from High Voltage facilities acting as a threshold to distinguish between expected system performance criteria.[1] The Project 2010-17 SDT seeks to establish consistency in the limitations placed on the exclusion applicability for local network facilities, and has therefore adopted this 300 kV level to ensure that EHV facilities, which under the TPL-001-2 Standard are held to a higher standard of performance, are not subject to this exclusion.

There is Minimal Effect to Flow in the Local Network due to BES Power Transfer

Similar to the character of a radial facility, and in order to qualify for exclusion from the BES under Exclusion E3.b,a local network must only have power flow into the network at all connection points to the BES. As demonstrated below, while this flow at the connection points is always into the local

[1] Per footnote #3 in TPL-001-2, "Bulk Electric System (BES) level references include extra-high voltage (EHV) Facilities defined as greater than 300 kV and high voltage (HV) Facilities defined as the 300 kV and lower voltage Systems. The designation of EHV and HV is used to distinguish between stated performance criteria allowances for interruption of Firm Transmission Service and Non-Consequential Load Loss."

network, the magnitude of the flow at these connection points will exhibit very slight shifts as bulk power transactions are implemented on neighboring BES facilities. This occurs because local network facilities are electrically parallel to Elements comprising the BES, and hence, the local network will experience a small effect due to changes in power angle across the parallel network as BES dispatch and flow patterns change. However, such flow shift is shown to be minimal, and the resultant power flow at all BES interface points is dominated by the superimposed load flow serving the distribution Load connected within the local network. Again, Exclusion E3.b ensures that flow shall always be from the BES into the local network in order to qualify for exclusion.

In order to provide a realistic example of the electrical interaction between a typical local network and the BES, an electric system in the western United States was examined from a power transfer distribution factor (PTDF) perspective. In a PTDF analysis, the branch elements of an electrical network are examined on the basis of the percentage split of a given power flow as it propagates through the network. In the simplest example of two identical lines operated at the same voltage, arranged in parallel between a given sending bus and receiving bus, the total power transfer will divide equally among the two parallel line elements, and hence, each element would be found to have a 50% PTDF. In a more complicated network, the line elements will carry a portion of the total flow in a manner that is inversely proportional to their impedance; i.e., the lower the impedance of the network branch, the higher portion of the flow that will distribute along that branch.

The electric system in question is depicted in Appendix 1. The station name identifiers and the network topology (but not electrical connectivity) have been changed to respect the confidentiality of the information. In the represented system, a bulk power transfer was simulated, with a point of receipt (injection) at BES bus T9 and a point of delivery at the other end of the system at BES bus T10. With this simulated power transfer, power flow analysis tools were used to determine the distribution of this simulated transfer as it propagates across the various parallel branches of the network. As depicted in Appendix 1, the facilities that are presumed to be excluded via the local network exclusion (E3) are shown to carry negligible flow, with the largest PTDF at a mere 0.23% of the total transfer. Note that a PTDF analysis shows only the *incremental* shift in power flow and does not imply that this 0.23% actually flows in and then back out of the network. The power flow results demonstrate that the flow measured at the interface points of the BES continues to flow into the local network, and is essentially unchanged, as it is only shifted in magnitude by a mere 0.23% of the modeled transaction amount.

In addition to the PTDF analysis, another analysis of Line Outage Distribution Factors (LODF), examines the re-distribution of flow that occurs on parallel elements after a subject element is removed from service. For example, if a BES element is carrying 500 MW, and is taken out of service, LODF describes how that flow re-distributes among all parallel paths in a given network. LODF factors are measured in percent of the pre-outage flow on the outaged element. Conducting this analysis on the example network and modeling the worst case outage, which is the loss of the line element between BES buses T9 and T10, shows that the net shift in flow for the local network is 4.0% of the pre-outage flow, and the largest shift in flow on any of the individual local network elements is 2.7%. The flow direction at the interface points between the local network and the BES continues to be into the local network.

This degree of flow shift on the local network facilities is *de minimus*, and neither diminishes or improves the reliability of the parallel BES facilities. From both a PTDF and an LODF analysis perspective, the local network exhibits qualities equivalent to radial facilities in that the power flow emanates from the point of BES connection in one direction – the only difference being that in the case of the local network, in order to provide source reliability to the distribution Load, more than one connection is provided to the BES.

Appendix 1
Local Network Technical Justification
Power Transfer Distribution Factor Analysis

This appendix provides Power Transfer Distribution Factor (PTDF) and Line Outage Distribution Factor (LODF) analyses and assessments using a relevant power flow case used in actual operating studies in the Western Interconnection to assess reliable Operating Transfer Capability on a rated path in the Western Electricity Coordinating Council ("WECC"). The electrical system representation is accurate; however, the bus names and topology have been graphically rearranged to address any Critical Energy Infrastructure Information ("CEII") concerns.

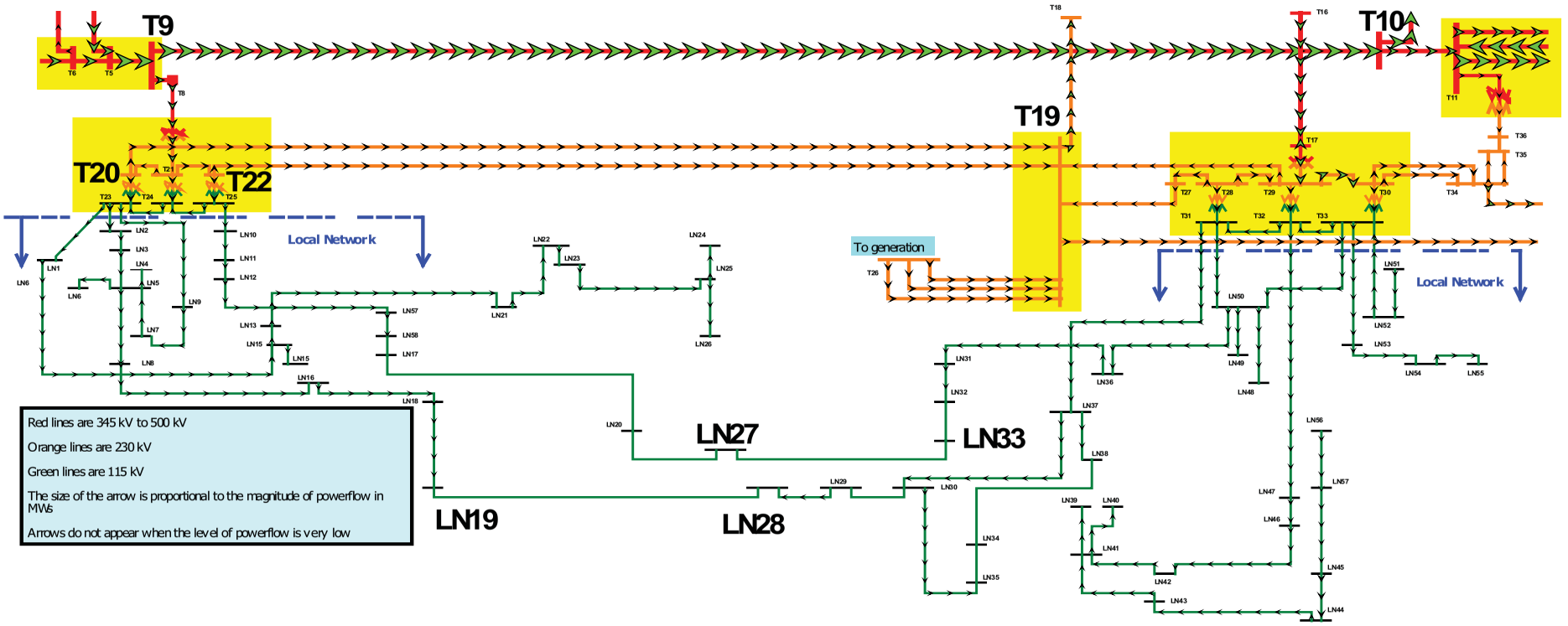
Although linear analyses, such as these, are relatively independent of actual power transfer levels, the modeled system conditions represented peak load demand and high power transfer conditions. The PTDF analyzes the injection of power from BES electrical bus T9 and delivering it to BES bus T10, which is consistent with the use of the BES transfer path. Based on the PTDF assessment, 92% of the power flow is transferred over the 500 kV line that directly connects BES buses T9 and T10. The remaining flow appears on the underlying 230 kV lines and adjacent 345 kV and 500 kV lines. The largest PTDF on any local network is 0.23 percent.

The LODF analysis considers the "worst-case" outage of the strongest (lowest impedance) transmission element, the line between BES buses T9 and T10. The LODF values that are computed represent the percentage of the pre-outage T9-T10 flow that re-distributes on each of the remaining branches. The analysis shows that the net shift in flow for the local network is 4.0% of the pre-outage flow, and the largest shift in flow on any of the individual local network elements is 2.7%. The 2.7% shift occurs on the local network branch between buses LN19 and LN28, and a 1.3% shift occurs on the branch between LN27 and LN33. The flow direction at the interface points between the local network and the BES continues to be into the local network.

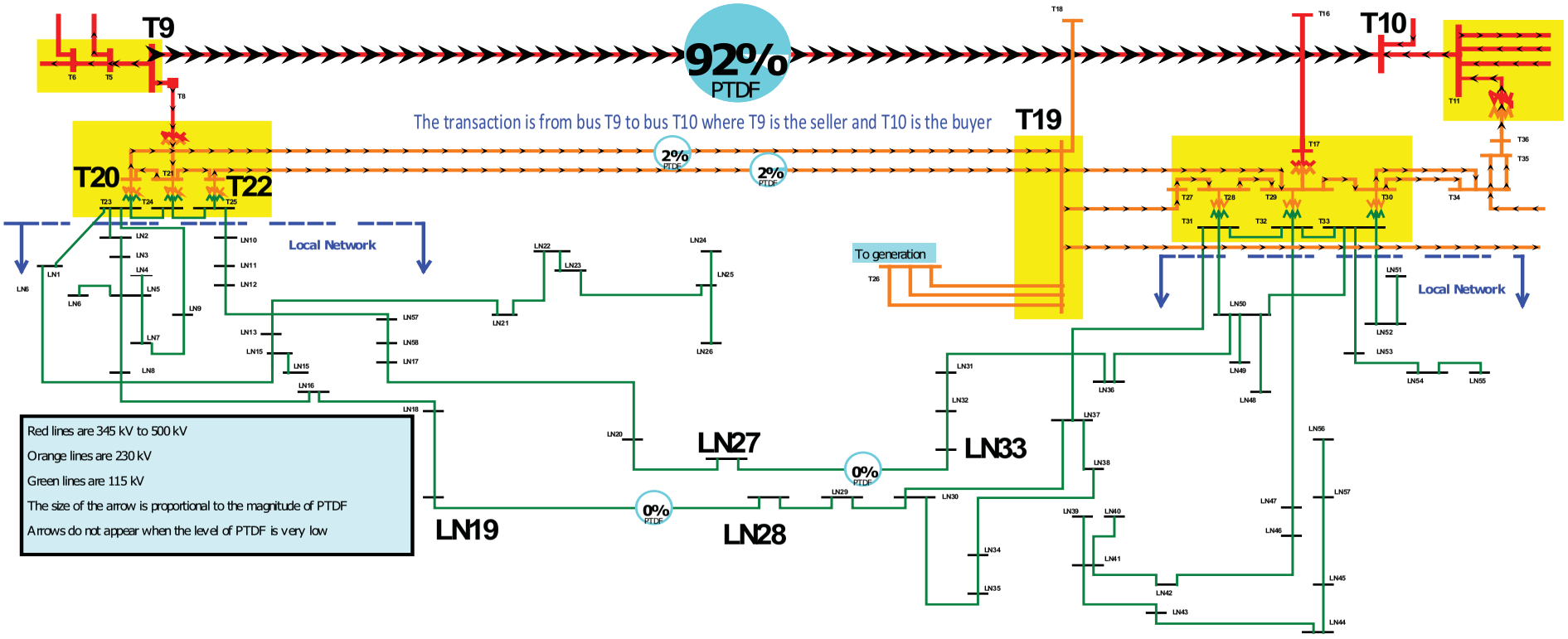
Below are three single line diagrams, which depict the 1) powerflow, 2) percentage distribution of flows for the PTDF analysis, and 3) the percent of flow distribution for the LODF analysis. In these diagrams, the local network elements are indicated by a green line color, and the local network station buses are indicated with an "LN" designation, for example, "LN23".

Following the single line diagrams are two tables: Table 1 - a tabulation of the PTDF values for the network, and Table 2 - depicting the LODF values for the T9-T10 line outage case.

The Powerflow Single Line



The Power Transfer Distribution Factors ("PTDF") Single Line



The Line Outage Distribution Factors ("LODF") Single Line identifying the revised PTDF values of the transmission line from T9 to T10 is opened

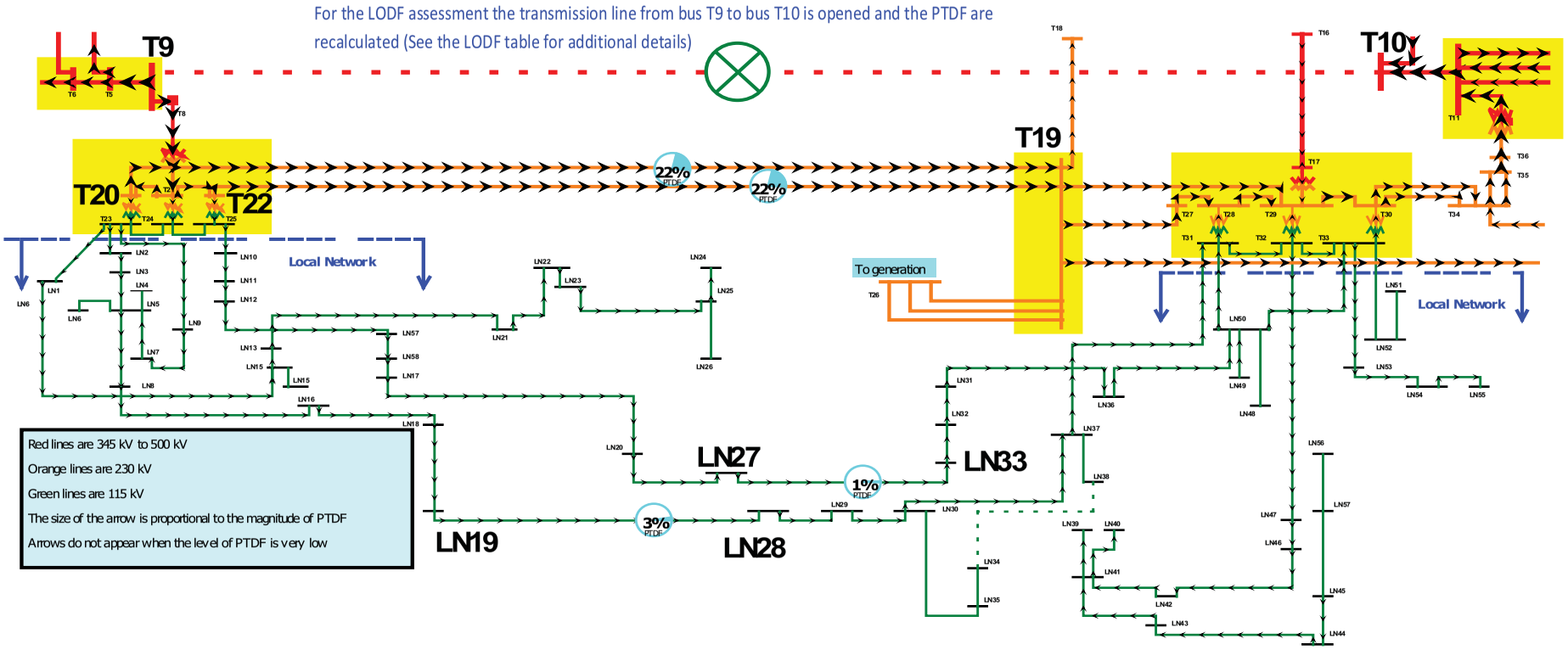


Table 1 - Power Flow Transfer Distribution Factor Results

Line PTDF Records				
From Name	To Name	% PTDF From	% PTDF To	Nom kV (Max)
T10	T9	-91.61	91.61	500
T10	T11	-5.4	5.4	500
T5	T9	-4.77	4.77	500
T11	T36	-4.13	4.13	230
T36	T35	-3.08	3.08	230
T12	T11	-2.4	2.4	500
T19	T20	-1.84	1.84	230
T19	T22	-1.81	1.81	230
T22	T21	-1.74	1.74	230
T34	T30	-1.3	1.3	230
T34	T30	-1.29	1.29	230
T41	T40	-0.57	0.57	230
T40	T39	-0.55	0.55	230
T37	T38	-0.49	0.49	230
LN16	LN8	-0.23	0.23	115
LN28	LN19	-0.23	0.23	115
LN19	LN18	-0.23	0.23	115
T30	T33	-0.11	0.11	115
LN50	LN36	-0.11	0.11	115
LN32	LN33	-0.11	0.11	115
LN31	LN32	-0.11	0.11	115
LN20	LN17	-0.11	0.11	115
LN12	LN11	-0.11	0.11	115
LN11	LN10	-0.11	0.11	115
LN3	LN2	-0.1	0.1	115
T29	T32	-0.09	0.09	115
T29	T17	-0.09	0.09	230
LN30	LN29	-0.09	0.09	115
LN9	T23	-0.08	0.08	115
LN5	LN7	-0.08	0.08	115
T28	T31	-0.07	0.07	115
T32	T31	-0.07	0.07	115
LN50	LN49	-0.07	0.07	115
LN53	T33	-0.06	0.06	115
LN55	LN54	-0.06	0.06	115
LN41	LN43	-0.06	0.06	115
T33	T32	-0.05	0.05	115
LN39	LN41	-0.05	0.05	115
T42	T39	-0.04	0.04	230
LN47	T32	-0.04	0.04	115
LN1	T23	-0.04	0.04	115
LN41	LN42	-0.04	0.04	115
LN25	LN23	-0.04	0.04	115

Line PTDF Records				
From Name	To Name	% PTDF From	% PTDF To	Nom kV (Max)
LN22	LN21	-0.04	0.04	115
LN13	LN15	-0.04	0.04	115
LN15	LN1	-0.04	0.04	115
LN45	LN57	-0.03	0.03	115
LN57	LN56	-0.03	0.03	115
LN50	LN48	-0.03	0.03	115
T1	T2	0	0	500
LN51	LN52	0	0	115
T33	LN52	0	0	115
LN4	LN5	0	0	115
LN6	LN5	0	0	115
LN38	LN37	0	0	115
LN30	LN35	0	0	115
LN35	LN34	0	0	115
LN38	LN34	0	0	115
LN24	LN27	0	0	115
LN26	LN25	0	0	115
T25	LN23	0	0	115
LN26	LN20	0	0	115
LN14	LN15	0	0	115
LN22	LN11	0	0	115
LN17	LN10	0	0	115
LN23	LN10	0	0	115
T25	T24	0.01	-0.01	115
T24	T23	0.02	-0.02	115
T6	T4	0.03	-0.03	500
T19	T26	0.03	-0.03	230
T19	T26	0.03	-0.03	230
T19	T26	0.03	-0.03	230
LN47	LN46	0.04	-0.04	115
LN46	LN42	0.04	-0.04	115
LN25	LN24	0.04	-0.04	115
LN22	LN23	0.04	-0.04	115
LN13	LN21	0.04	-0.04	115
LN53	LN54	0.06	-0.06	115
LN45	LN44	0.06	-0.06	115
LN44	LN43	0.06	-0.06	115
LN41	LN40	0.06	-0.06	115
LN9	LN7	0.08	-0.08	115
LN37	T31	0.09	-0.09	115
T16	T17	0.09	-0.09	345
LN30	LN37	0.09	-0.09	115
T20	T23	0.1	-0.1	115
LN3	LN5	0.1	-0.1	115
T24	LN2	0.1	-0.1	115

Line PTDF Records				
From Name	To Name	% PTDF From	% PTDF To	Nom kV (Max)
LN50	T31	0.11	-0.11	115
T22	T25	0.11	-0.11	115
LN57	LN58	0.11	-0.11	115
LN12	LN57	0.11	-0.11	115
LN31	LN36	0.11	-0.11	115
LN27	LN33	0.11	-0.11	115
LN20	LN27	0.11	-0.11	115
LN58	LN17	0.11	-0.11	115
T25	LN10	0.11	-0.11	115
LN50	T33	0.12	-0.12	115
T21	T24	0.12	-0.12	115
T19	T18	0.13	-0.13	230
LN5	LN8	0.23	-0.23	115
LN28	LN29	0.23	-0.23	115
LN16	LN18	0.23	-0.23	115
T2	T7	0.3	-0.3	500
T2	T7	0.34	-0.34	500
T37	T34	0.49	-0.49	230
T13	T12	0.59	-0.59	500
T14	T11	0.71	-0.71	500
T38	T39	0.78	-0.78	230
T27	T28	0.94	-0.94	230
T28	T29	1.1	-1.1	230
T4	T3	1.15	-1.15	500
T19	T29	1.21	-1.21	230
T19	T27	1.22	-1.22	230
T19	T38	1.26	-1.26	230
T1	T7	1.28	-1.28	500
T4	T1	1.28	-1.28	500
T34	T35	1.54	-1.54	230
T34	T35	1.54	-1.54	230
T21	T20	1.77	-1.77	230
T6	T2	2.34	-2.34	500
T5	T6	2.37	-2.37	500
T5	T4	2.4	-2.4	500
T29	T30	2.48	-2.48	230
T15	T11	2.97	-2.97	500
T12	T10	3	-3	500
T9	T8	3.62	-3.62	500
T8	T21	3.62	-3.62	230

Table 2 - Line Outage Distribution Factor Results (Outage of T9-T10)

Line LODF Records						
From Name	To Name	% LODF	MW From	MW To	CTG MW From	CTG MW To
T10	T9	-100	-1482.1	1483.7	0	1.6
T9	T8	-43.2	217.9	-217.8	857.5	-857.4
T8	T21	-43.2	217.8	-217.5	857.4	-857.1
T12	T10	-35.7	-937.2	937.2	-408.3	408.3
T15	T11	-35.4	1632.1	-1596.9	2156.2	-2120.9
T29	T30	-29.5	404.1	-404.1	841.8	-841.8
T5	T4	-28.6	-835.5	835.5	-411.4	411.4
T5	T6	-28.2	-873.5	873.5	-455.2	455.2
T6	T2	-27.8	-911.5	912.6	-499	500.1
T21	T20	-21	69	-69	380.8	-380.8
T34	T35	-18.3	29.2	-29.1	300.9	-300.9
T34	T35	-18.3	29.2	-29.1	300.9	-300.9
T4	T1	-15.3	-1783.5	1802.5	-1557.4	1576.4
T1	T7	-15.3	-1802.5	1802.5	-1576.4	1576.4
T19	T38	-15	107.3	-107	330.4	-330
T19	T27	-14.5	-53.1	53.2	162.3	-162.2
T19	T29	-14.4	-50.9	51	162.8	-162.7
T4	T3	-13.8	986	-985	1189.8	-1188.9
T28	T29	-13.1	155.8	-155.8	349.4	-349.4
T27	T28	-11.2	-154.7	154.7	11.3	-11.3
T38	T39	-9.2	326.8	-319.7	463.7	-456.6
T14	T11	-8.4	-1656.8	1684.2	-1532.1	1559.6
T13	T12	-7.1	-1308.7	1329.4	-1204.2	1224.8
T37	T34	-5.8	-219.8	220.1	-133.7	133.9
T2	T7	-4.1	-826.9	833.1	-766.2	772.4
T2	T7	-3.5	-714.3	719.6	-661.9	667.2
LN5	LN8	-2.7	21.8	-21.8	62.3	-62.3
LN16	LN18	-2.7	21.1	-21.1	61.6	-61.6
LN28	LN29	-2.7	-8.4	8.5	32.1	-32.1
T19	T18	-1.5	203.2	-202.5	225.6	-224.8
T22	T25	-1.4	83.1	-83	103.2	-103.1
T21	T24	-1.4	78.4	-78.3	99.1	-99
LN50	T33	-1.4	-38.6	38.7	-18.2	18.3
T25	LN10	-1.3	35.7	-35.7	54.4	-54.4
LN12	LN57	-1.3	22.3	-22.3	41	-41
LN57	LN58	-1.3	12.4	-12.4	31.1	-31.1
LN58	LN17	-1.3	0.1	-0.1	18.8	-18.8
LN20	LN27	-1.3	0.1	-0.1	18.8	-18.8
LN27	LN33	-1.3	0.1	-0.1	18.8	-18.8
LN31	LN36	-1.3	-20.3	20.3	-1.6	1.6
LN50	T31	-1.3	-36.7	36.7	-16.7	16.8
T24	LN2	-1.2	80.3	-80.2	98.3	-98.2
T20	T23	-1.2	77.4	-77.2	95.8	-95.7

LN3	LN5	-1.2	53.6	-53.5	71.6	-71.5
T16	T17	-1	449.4	-436.5	464.6	-451.7
Line LODF Records						
From Name	To Name	% LODF	MW From	MW To	CTG MW From	CTG MW To
LN9	LN7	-1	48.7	-48.6	63.3	-63.3
LN30	LN37	-1	-39.1	39.1	-24	24
LN37	T31	-1	-48.3	48.4	-33.2	33.3
LN45	LN44	-0.7	70.8	-70.8	81.3	-81.3
LN44	LN43	-0.7	67.7	-67.6	78.2	-78.1
LN53	LN54	-0.7	59.5	-59.5	69.6	-69.5
LN41	LN40	-0.7	53.2	-53.1	63.1	-63
LN46	LN42	-0.5	55.6	-55.6	63.5	-63.5
LN47	LN46	-0.5	55.8	-55.6	63.7	-63.5
LN13	LN21	-0.5	47.9	-47.9	55.7	-55.7
LN22	LN23	-0.5	24.6	-24.6	32.5	-32.5
LN25	LN24	-0.5	14.4	-14.4	22.2	-22.2
T6	T4	-0.4	38	-38	43.8	-43.8
T24	T23	-0.3	45.3	-45.3	49.4	-49.4
T19	T26	-0.3	-152.9	157.7	-148.1	153
T19	T26	-0.3	-152.9	157.7	-148.1	153
T19	T26	-0.3	-152.9	157.7	-148.1	153
T25	T24	-0.1	47.3	-47.3	48.7	-48.7
LN51	LN52	0	30.6	-30.5	30.6	-30.5
LN30	LN35	0	24.4	-24.4	24.4	-24.4
LN17	LN10	0	0	0	0	0
LN23	LN10	0	0	0	0	0
LN22	LN11	0	0	0	0	0
LN26	LN20	0	0	0	0	0
T25	LN23	0	0	0	0	0
LN24	LN27	0	0	0	0	0
LN35	LN34	0	0	0	0	0
LN38	LN34	0	0	0	0	0
T1	T2	0	0	0	0	0
LN38	LN37	0	-9.1	9.1	-9.1	9.1
LN26	LN25	0	-10.2	10.2	-10.2	10.2
LN14	LN15	0	-12.4	12.4	-12.4	12.4
T33	LN52	0	-22	22.1	-22.1	22.1
LN4	LN5	0	-22.4	22.4	-22.4	22.4
LN6	LN5	0	-33.9	33.9	-33.9	33.9
LN50	LN48	0.3	29.9	-29.9	25.4	-25.3
LN57	LN56	0.3	-17.2	17.3	-21.7	21.7
LN45	LN57	0.3	-37.6	37.6	-42	42
LN25	LN23	0.5	-24.6	24.6	-32.4	32.5
T42	T39	0.5	-28.5	30.5	-35.9	37.9
LN22	LN21	0.5	-38.1	38.1	-45.9	46
LN41	LN42	0.5	-48.9	48.9	-56.8	56.8
LN13	LN15	0.5	-51.6	51.6	-59.4	59.4
LN15	LN1	0.5	-64	64	-71.8	71.9

LN1	T23	0.5	-64	64	-71.9	71.9
LN47	T32	0.5	-66.5	66.6	-74.4	74.5
T33	T32	0.6	45.7	-45.7	36.4	-36.4
LN39	LN41	0.6	-46.7	46.8	-55.3	55.4
Line LODF Records						
From Name	To Name	% LODF	MW From	MW To	CTG MW From	CTG MW To
LN55	LN54	0.7	-50.6	50.7	-60.7	60.7
LN41	LN43	0.7	-58.7	58.8	-69.2	69.3
LN53	T33	0.7	-62.8	63	-72.9	73
T32	T31	0.8	65.9	-65.9	54.4	-54.4
T28	T31	0.9	125.9	-125.5	112.9	-112.5
LN50	LN49	0.9	61.9	-61.8	49.1	-49
T29	T32	1	136.8	-136.4	121.6	-121.1
LN30	LN29	1	-4.5	4.5	-19.7	19.7
LN5	LN7	1	-38.7	38.7	-53.4	53.4
LN9	T23	1	-58.4	58.5	-73	73.2
T29	T17	1	-436.1	436.5	-451.3	451.7
LN3	LN2	1.2	-61.9	62	-79.9	80
T30	T33	1.3	125.6	-125.3	105.9	-105.7
LN50	LN36	1.3	29.7	-29.7	11	-11
LN31	LN32	1.3	11.2	-11.2	-7.5	7.5
LN20	LN17	1.3	-0.1	0.1	-18.8	18.8
LN32	LN33	1.3	-0.1	0.1	-18.8	18.8
LN11	LN10	1.3	-35.7	35.7	-54.4	54.4
LN12	LN11	1.3	-35.6	35.7	-54.3	54.4
LN28	LN19	2.7	-2.1	2.1	-42.6	42.6
LN19	LN18	2.7	-12.6	12.6	-53.1	53.1
LN16	LN8	2.7	-21.7	21.8	-62.3	62.3
T37	T38	5.8	219.8	-219.8	133.7	-133.7
T40	T39	6.6	-221.1	222.8	-318.7	320.4
T41	T40	6.8	-308.2	309.9	-408.2	409.9
T34	T30	15.4	-138.7	138.7	-366.6	366.7
T34	T30	15.5	-139.7	139.7	-369.2	369.2
T22	T21	20.7	-70.2	70.2	-377.3	377.3
T19	T22	21.5	-90.4	90.7	-409.8	410
T19	T20	21.9	-91.6	91.9	-416.3	416.6
T12	T11	28.6	-392.2	392.2	-816.5	816.5
T36	T35	36.7	-58.2	58.2	-601.7	601.7
T11	T36	49.2	65.3	-64.8	-663.5	664
T5	T9	56.8	1709	-1701.6	866.6	-859.1
T10	T11	64.3	544.9	-544.9	-408.3	408.3

Standards Announcement

Project 2010-17 Definition of Bulk Electric System

Two Ballot Windows Now Open September 30 – October 10, 2011

Now available at: https://standards.nerc.net/CurrentBallots.aspx

Two ballots windows are now open for Project 2010-17 Definition of Bulk Electric System (BES). The first is for the definition of Bulk Electric System, and the second is for a draft application form titled *Detailed Information to Support an Exception Request* referenced in the Rules of Procedure Exception Process. Both ballots are open through **8 p.m. Eastern on Monday, October 10, 2011**.

The revised definition of Bulk Electric System, draft application form titled *Detailed Information to Support an Exception Request*, associated implementation plan and several informational documents have been posted on the project page at http://www.nerc.com/filez/standards/Project2010-17_BES.html.

Instructions for Balloting Revisions

Members of each of the two ballot pools associated with this project may log in and submit their votes for both the definition and the *Detailed Information to Support an Exception Request* from the following page: https://standards.nerc.net/CurrentBallots.aspx.

Special Instructions for Submitting Comments With a Ballot

Comments submitted with ballots are extremely valuable to help the drafting team revise its work. In an effort to reduce the burden on stakeholders providing comments, the drafting team requests that all comments (both those submitted with a ballot and those submitted by stakeholders not balloting) be submitted through the electronic comment forms posted at:
https://www.nerc.net/nercsurvey/Survey.aspx?s=e82643bb1de1434c9834c69757faa8d0
https://www.nerc.net/nercsurvey/Survey.aspx?s=9995ac42ce2644d9aebc87f58dd166ad

This will ensure that stakeholders only provide a single set of comments, but have an opportunity to notify the drafting team if they have provided comments.

When submitting a ballot with comments, submit the comments through the electronic form and then simply record a "Comments submitted" in the comments field of the ballot to indicate that comments were submitted.

Please note that comments submitted during the formal comment period and the ballot use the same electronic form, and it is NOT necessary for ballot pool members to submit more than one set of comments (one during the comment period and a second with a ballot).

Next Steps

The drafting team will consider all comments received, and decide whether to make additional revisions to the definition and *Detailed Information to Support an Exception Request*. The drafting team is working to meet the regulatory deadline in FERC Orders 743 and 743A (filing by January 25, 2012).

The Standards Committee and NERC Board of Trustees have recommended that the drafting team address issues such as generation thresholds in a second phase of this project. This approach will ensure that the drafting team has sufficient time to adequately consider and develop a sound technical basis for an approach, and will allow the drafting team to meet the regulatory deadline in FERC Orders 743 and 743A (filing by January 25, 2012). The drafting team has posted a **draft** Supplemental Standards Authorization Request (SAR) for information purposes only; the SAR will be posted for comment at a future time. Additional information about the project, including a Fact Sheet and additional informational documents, has been posted on the project webpage at http://www.nerc.com/filez/standards/Project2010-17_BES.html.

Project Background

On November 18, 2010 FERC issued Order 743 (amended by Order 743A) and directed NERC to revise the definition of Bulk Electric System so that the definition encompasses all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. Additional specificity will reduce ambiguity and establish consistency across all Regions in distinguishing between BES and non-BES Elements and Facilities.

In addition, NERC was directed to develop a process for identifying any Elements or Facilities that should be excluded from the BES. NERC is working to address these directives with two activities – the definition of Bulk Electric System is being revised through the standard development process and a BES Definition Exception Process is being developed as proposed modifications to the Rules of Procedure. The proposed modifications have been posted for a comment period through October 27, 2011. The work of the BES Definition Exception Process has been publicly posted at: http://www.nerc.com/filez/standards/Rules_of_Procedure-RF.html.

For more information or assistance, please contact Monica Benson, Standards Process Administrator, at monica.benson@nerc.net or at 404-446-2560.

North American Electric Reliability Corporation
116-390 Village Blvd.
Princeton, NJ 08540
609.452.8060 | www.nerc.com

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standards Announcement

Project 2010-17 BES Definition
Two Ballot Pool Windows Open August 26 – September 26, 2011
Two Formal Comment Periods Open August 26 – October 10, 2011
Two Ballot Windows Open September 30 – October 10, 2011

Available tomorrow at: https://standards.nerc.net/BallotPool.aspx

The Definition of Bulk Electric System Standard Drafting Team (DBES SDT) has posted a second draft of the Definition of Bulk Electric System (BES) and associated implementation plan for a formal 45-day comment period, through **8 p.m. Eastern on Monday, October 10, 2011**.

The Definition of Bulk Electric System Standard Drafting Team (DBES SDT) has also posted a draft application form titled *Detailed Information to Support an Exception Request* referenced in the Rules of Procedure Exception Process for a formal 45-day comment period, through **8 p.m. Eastern on Monday, October 10, 2011**. (Note that the information contained in this draft form includes revisions made to the *Technical Principles for Supporting BES Exceptions* that was posted for comment in May and June 2011.)

A separate team is working with NERC to draft a new Appendix 5C to NERC's Rules of Procedure to address the process for requesting BES exceptions. This team will be posting the Rules of Procedure changes for stakeholder comment in September. The comment period for the Rules of Procedure changes will overlap the comment period for the definition and application form, to provide an opportunity for stakeholders to review all three documents to understand how they will work together.

Clean and redline versions of the definition and associated implementation plan, along with a technical justification for the Local Network exclusion and a clean version of the application form titled *Detailed Information to Support an Exception Request* have been posted on the project page at: http://www.nerc.com/filez/standards/Project2010-17_BES.html. The format of the application form titled *Detailed Information to Support an Exception Request* has changed substantially since the first posting, making a redline impractical, so none has been provided.

The Standards Committee and NERC Board of Trustees have recommended that the drafting team address issues such as generation thresholds in a second phase of this project. This approach will ensure that the drafting team has sufficient time to adequately consider and develop a sound technical basis for an approach, and will allow the drafting team to meet the regulatory deadline in FERC Orders 743 and 743a (filing by January 25, 2012). The drafting team has posted a **draft** Supplemental Standards Authorization Request (SAR) for information purposes only; the SAR will be posted for comment at a future time.

Ballot Pools Forming

During the first 30 days of the comment period, two separate ballot pools will be formed: one for balloting the Definition of Bulk Electric System, and a second for balloting the application form titled *Detailed Information to Support an Exception Request*. The ballot pool windows will be open from **Friday, August 26 through 8 a.m. Eastern on Monday, September 26, 2011**.

During the final 10 days of the comment period, two separate initial ballots will be conducted, one for the Definition of the Bulk Electric System, and a second for the application form titled *Detailed Information to Support an Exception Request*. The ballot windows will begin on Friday, September 30th and end at 8 p.m. Eastern on Monday, October 10, 2011.

Instructions for Joining Ballot Pools

Registered Ballot Body members must join each of the ballot pools to be eligible to vote in the upcoming ballots at the following page: https://standards.nerc.net/BallotPool.aspx

During the pre-ballot window, members of each ballot pool may communicate with one another by using their "ballot pool list server." (Once the balloting begins, ballot pool members are prohibited from using the ballot pool list servers.) The list servers for this project are:

- Definition of BES ballot:
  bp-2010-17_BES_Def_in@nerc.com
- *Detailed Information to Support an Exception Request* form:
  bp-2010-17_TechInfo_BES_in@nerc.com

Instructions for Submitting Comments

Please use this electronic comment form to submit comments on the Definition of Bulk Electric System. Please use this separate electronic comment form to submit comments on the draft form application form titled *Detailed Information to Support an Exception Request*.

If you experience any difficulties in using either of these electronic forms, please contact Monica Benson at monica.benson@nerc.net. An off-line, unofficial copy of each comment form is posted on the project page:

Background

On November 18, 2010 FERC issued Order 743 (amended by Order 743A) and directed NERC to revise the definition of Bulk Electric System so that the definition encompasses all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. Additional specificity will reduce ambiguity and establish consistency across all Regions in distinguishing between BES and non-BES Elements and Facilities.

In addition, NERC was directed to develop a process for identifying any Elements or Facilities that should be excluded from the BES. NERC is working to address these directives with two activities – the definition of Bulk Electric System (BES) is being revised through the standard development process and a BES Definition Exception Process is being developed as a proposed modification to the Rules of Procedure. The work of the BES Definition Exception Process has been publicly posted at: http://www.nerc.com/filez/standards/Rules_of_Procedure-RF.html. The Rules of Procedure team expects to post the next draft of its proposed addition to the Rules of Procedure (Appendix 5C – BES Exception Process) in September.

For more information or assistance, please contact Monica Benson, Standards Process Administrator, at monica.benson@nerc.net or at 404-446-2560.

North American Electric Reliability Corporation
116-390 Village Blvd.
Princeton, NJ 08540
609.452.8060 | www.nerc.com

Standards Announcement

Project 2010-17 Definition of Bulk Electric System

Two Ballot Windows Now Open September 30 – October 10, 2011

Now available at: https://standards.nerc.net/CurrentBallots.aspx

Two ballots windows are now open for Project 2010-17 Definition of Bulk Electric System (BES). The first is for the definition of Bulk Electric System, and the second is for a draft application form titled *Detailed Information to Support an Exception Request* referenced in the Rules of Procedure Exception Process. Both ballots are open through **8 p.m. Eastern on Monday, October 10, 2011**.

The revised definition of Bulk Electric System, draft application form titled *Detailed Information to Support an Exception Request*, associated implementation plan and several informational documents have been posted on the project page at http://www.nerc.com/filez/standards/Project2010-17_BES.html.

Instructions for Balloting Revisions

Members of each of the two ballot pools associated with this project may log in and submit their votes for both the definition and the *Detailed Information to Support an Exception Request* from the following page: https://standards.nerc.net/CurrentBallots.aspx.

Special Instructions for Submitting Comments With a Ballot

Comments submitted with ballots are extremely valuable to help the drafting team revise its work. In an effort to reduce the burden on stakeholders providing comments, the drafting team requests that all comments (both those submitted with a ballot and those submitted by stakeholders not balloting) be submitted through the electronic comment forms posted at:
https://www.nerc.net/nercsurvey/Survey.aspx?s=e82643bb1de1434c9834c69757faa8d0
https://www.nerc.net/nercsurvey/Survey.aspx?s=9995ac42ce2644d9aebc87f58dd166ad

This will ensure that stakeholders only provide a single set of comments, but have an opportunity to notify the drafting team if they have provided comments.

When submitting a ballot with comments, submit the comments through the electronic form and then simply record a "Comments submitted" in the comments field of the ballot to indicate that comments were submitted.

Please note that comments submitted during the formal comment period and the ballot use the same electronic form, and it is NOT necessary for ballot pool members to submit more than one set of comments (one during the comment period and a second with a ballot).

Next Steps

The drafting team will consider all comments received, and decide whether to make additional revisions to the definition and *Detailed Information to Support an Exception Request*. The drafting team is working to meet the regulatory deadline in FERC Orders 743 and 743A (filing by January 25, 2012).

The Standards Committee and NERC Board of Trustees have recommended that the drafting team address issues such as generation thresholds in a second phase of this project. This approach will ensure that the drafting team has sufficient time to adequately consider and develop a sound technical basis for an approach, and will allow the drafting team to meet the regulatory deadline in FERC Orders 743 and 743A (filing by January 25, 2012). The drafting team has posted a **draft** Supplemental Standards Authorization Request (SAR) for information purposes only; the SAR will be posted for comment at a future time. Additional information about the project, including a Fact Sheet and additional informational documents, has been posted on the project webpage at http://www.nerc.com/filez/standards/Project2010-17_BES.html.

Project Background

On November 18, 2010 FERC issued Order 743 (amended by Order 743A) and directed NERC to revise the definition of Bulk Electric System so that the definition encompasses all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. Additional specificity will reduce ambiguity and establish consistency across all Regions in distinguishing between BES and non-BES Elements and Facilities.

In addition, NERC was directed to develop a process for identifying any Elements or Facilities that should be excluded from the BES. NERC is working to address these directives with two activities – the definition of Bulk Electric System is being revised through the standard development process and a BES Definition Exception Process is being developed as proposed modifications to the Rules of Procedure. The proposed modifications have been posted for a comment period through October 27, 2011. The work of the BES Definition Exception Process has been publicly posted at: http://www.nerc.com/filez/standards/Rules_of_Procedure-RF.html.

For more information or assistance, please contact Monica Benson, Standards Process Administrator, at monica.benson@nerc.net or at 404-446-2560.

North American Electric Reliability Corporation
116-390 Village Blvd.
Princeton, NJ 08540
609.452.8060 | www.nerc.com

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standards Announcement

Project 2010-17 BES Definition
Two Ballot Pool Windows Open August 26 – September 26, 2011
Two Formal Comment Periods Open August 26 – October 10, 2011
Two Ballot Windows Open September 30 – October 10, 2011

Available tomorrow at: https://standards.nerc.net/BallotPool.aspx

The Definition of Bulk Electric System Standard Drafting Team (DBES SDT) has posted a second draft of the Definition of Bulk Electric System (BES) and associated implementation plan for a formal 45-day comment period, through **8 p.m. Eastern on Monday, October 10, 2011**.

The Definition of Bulk Electric System Standard Drafting Team (DBES SDT) has also posted a draft application form titled *Detailed Information to Support an Exception Request* referenced in the Rules of Procedure Exception Process for a formal 45-day comment period, through **8 p.m. Eastern on Monday, October 10, 2011**. (Note that the information contained in this draft form includes revisions made to the *Technical Principles for Supporting BES Exceptions* that was posted for comment in May and June 2011.)

A separate team is working with NERC to draft a new Appendix 5C to NERC's Rules of Procedure to address the process for requesting BES exceptions. This team will be posting the Rules of Procedure changes for stakeholder comment in September. The comment period for the Rules of Procedure changes will overlap the comment period for the definition and application form, to provide an opportunity for stakeholders to review all three documents to understand how they will work together.

Clean and redline versions of the definition and associated implementation plan, along with a technical justification for the Local Network exclusion and a clean version of the application form titled *Detailed Information to Support an Exception Request* have been posted on the project page at: http://www.nerc.com/filez/standards/Project2010-17_BES.html. The format of the application form titled *Detailed Information to Support an Exception Request* has changed substantially since the first posting, making a redline impractical, so none has been provided.

The Standards Committee and NERC Board of Trustees have recommended that the drafting team address issues such as generation thresholds in a second phase of this project. This approach will ensure that the drafting team has sufficient time to adequately consider and develop a sound technical basis for an approach, and will allow the drafting team to meet the regulatory deadline in FERC Orders 743 and 743a (filing by January 25, 2012). The drafting team has posted a **draft** Supplemental Standards Authorization Request (SAR) for information purposes only; the SAR will be posted for comment at a future time.

Ballot Pools Forming

During the first 30 days of the comment period, two separate ballot pools will be formed: one for balloting the Definition of Bulk Electric System, and a second for balloting the application form titled *Detailed Information to Support an Exception Request*. The ballot pool windows will be open from **Friday, August 26 through 8 a.m. Eastern on Monday, September 26, 2011**.

During the final 10 days of the comment period, two separate initial ballots will be conducted, one for the Definition of the Bulk Electric System, and a second for the application form titled *Detailed Information to Support an Exception Request*. The ballot windows will begin on Friday, September 30th and end at 8 p.m. Eastern on Monday, October 10, 2011.

Instructions for Joining Ballot Pools

Registered Ballot Body members must join each of the ballot pools to be eligible to vote in the upcoming ballots at the following page: https://standards.nerc.net/BallotPool.aspx

During the pre-ballot window, members of each ballot pool may communicate with one another by using their "ballot pool list server." (Once the balloting begins, ballot pool members are prohibited from using the ballot pool list servers.) The list servers for this project are:

- Definition of BES ballot:
  bp-2010-17_BES_Def_in@nerc.com
- *Detailed Information to Support an Exception Request* form:
  bp-2010-17_TechInfo_BES_in@nerc.com

Instructions for Submitting Comments

Please use this electronic comment form to submit comments on the Definition of Bulk Electric System. Please use this separate electronic comment form to submit comments on the draft form application form titled *Detailed Information to Support an Exception Request*.

If you experience any difficulties in using either of these electronic forms, please contact Monica Benson at monica.benson@nerc.net. An off-line, unofficial copy of each comment form is posted on the project page:

Background

On November 18, 2010 FERC issued Order 743 (amended by Order 743A) and directed NERC to revise the definition of Bulk Electric System so that the definition encompasses all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. Additional specificity will reduce ambiguity and establish consistency across all Regions in distinguishing between BES and non-BES Elements and Facilities.

In addition, NERC was directed to develop a process for identifying any Elements or Facilities that should be excluded from the BES. NERC is working to address these directives with two activities – the definition of Bulk Electric System (BES) is being revised through the standard development process and a BES Definition Exception Process is being developed as a proposed modification to the Rules of Procedure. The work of the BES Definition Exception Process has been publicly posted at: http://www.nerc.com/filez/standards/Rules_of_Procedure-RF.html. The Rules of Procedure team expects to post the next draft of its proposed addition to the Rules of Procedure (Appendix 5C – BES Exception Process) in September.

For more information or assistance, please contact Monica Benson, Standards Process Administrator, at monica.benson@nerc.net or at 404-446-2560.

North American Electric Reliability Corporation
116-390 Village Blvd.
Princeton, NJ 08540
609.452.8060 | www.nerc.com

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standards Announcement

Project 2010-17 Definition of Bulk Electric System Initial Ballot Results

Now available

Ballot Results for Definition of Bulk Electric System

The two ballots windows for Project 2010-17 Definition of Bulk Electric System (BES): the first for the definition of Bulk Electric System and associated implementation plan, and the second for the draft application form titled Detailed Information to Support an Exception Request referenced in the Rules of Procedure Exception Process closed at 8 p.m. Eastern on Monday, October 10, 2011.

Voting statistics for each ballot are listed below, and the Ballot Results Web page provides a link to the detailed results.

BES Definition	**Technical Criteria to Support a BES Exception Request**
Quorum: 92.97%	Quorum: 89.53%
Approval: 71.68%	Approval: 64.03%

Next Steps

The drafting team will consider all comments received, and decide whether to make additional revisions to the definition of Bulk Electric System, the associated implementation plan, and the application form titled *Detailed Information to Support an Exception Request* referenced in the Rules of Procedure Exception Process. The drafting team is working to meet the regulatory deadline established in FERC Orders 743 and 743A (filing by January 25, 2012).

The Standards Committee and NERC Board of Trustees have recommended that the drafting team address issues such as generation thresholds in a second phase of this project. This approach will ensure that the drafting team has sufficient time to adequately consider and develop a sound technical basis for an approach, and will allow the drafting team to meet the regulatory deadline in FERC Orders 743 and 743A (filing by January 25, 2012). The drafting team has posted a **draft** Supplemental Standards Authorization Request (SAR) for information purposes only; the SAR will be posted for comment at a future time. Additionally, the drafting team has posted a Fact Sheet, which provides an up to date review of the project scope, project plan - phased approach, current status and upcoming events, on the project webpage.

Project Background

On November 18, 2010 FERC issued Order 743 (amended by Order 743A) and directed NERC to revise the definition of Bulk Electric System so that the definition encompasses all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. Additional specificity will reduce ambiguity and establish consistency across all Regions in distinguishing between BES and non-BES Elements and Facilities.

In addition, NERC was directed to develop a process for identifying any Elements or Facilities that should be excluded from the BES. NERC is working to address these directives with two activities – the definition of Bulk Electric System is being revised through the standard development process and a BES Definition Exception Process is being developed as proposed modifications to the Rules of Procedure. The proposed modifications have been posted for a comment period through October 27, 2011. The work of the BES Definition Exception Process has been publicly posted at: http://www.nerc.com/filez/standards/Rules_of_Procedure-RF.html.

Standards Development Process

The Standard Processes Manual contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate. For more information or assistance, please contact Monica Benson at monica.benson@nerc.net.

For more information or assistance, please contact Monica Benson, Standards Process Administrator, at monica.benson@nerc.net or at 404-446-2560.

North American Electric Reliability Corporation
116-390 Village Blvd.
Princeton, NJ 08540
609.452.8060 | www.nerc.com

Ballot Results	
Ballot Name:	Project 2010-17 BES Definition_Initial Ballot_in
Ballot Period:	9/30/2011 - 10/10/2011
Ballot Type:	Initial
Total # Votes:	410
Total Ballot Pool:	441
Quorum:	**92.97 % The Quorum has been reached**
Weighted Segment Vote:	71.68 %
Ballot Results:	**The SDT will review comments to determine the next process step.**

Summary of Ballot Results

Segment	Ballot Pool	Segment Weight	Affirmative # Votes	Affirmative Fraction	Negative # Votes	Negative Fraction	Abstain # Votes	No Vote
1 - Segment 1.	102	1	59	0.641	33	0.359	6	4
2 - Segment 2.	11	1	5	0.5	5	0.5	1	0
3 - Segment 3.	125	1	88	0.793	23	0.207	3	11
4 - Segment 4.	35	1	28	0.903	3	0.097	3	1
5 - Segment 5.	86	1	51	0.689	23	0.311	4	8
6 - Segment 6.	51	1	34	0.739	12	0.261	2	3
7 - Segment 7.	1	0.1	1	0.1	0	0	0	0
8 - Segment 8.	11	0.9	8	0.8	1	0.1	1	1
9 - Segment 9.	12	1	5	0.5	5	0.5	0	2
10 - Segment 10.	7	0.6	5	0.5	1	0.1	0	1
Totals	**441**	**8.6**	**284**	**6.165**	**106**	**2.435**	**20**	**31**

Individual Ballot Pool Results

Segment	Organization	Member	Ballot	Comments
1	Ameren Services	Kirit Shah	Negative	View
1	American Electric Power	Paul B. Johnson	Negative	View
1	American Transmission Company, LLC	Andrew Z Pusztai	Negative	View
1	Arizona Public Service Co.	Robert Smith	Affirmative	View
1	Associated Electric Cooperative, Inc.	John Bussman	Negative	View
1	Austin Energy	James Armke	Abstain	
1	Balancing Authority of Northern California NCR11118	Kevin Smith	Negative	View
1	Baltimore Gas & Electric Company	Gregory S Miller	Affirmative	View

1	BC Hydro and Power Authority	Patricia Robertson	Abstain	
1	Beaches Energy Services	Joseph S Stonecipher	Affirmative	
1	Black Hills Corp	Eric Egge	Affirmative	
1	Bonneville Power Administration	Donald S. Watkins	Negative	
1	Brazos Electric Power Cooperative, Inc.	Tony Kroskey	Abstain	
1	CenterPoint Energy Houston Electric	Dale Bodden	Negative	View
1	Central Electric Power Cooperative	Michael B Bax	Negative	
1	Central Maine Power Company	Kevin L Howes	Negative	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Affirmative	
1	Colorado Springs Utilities	Paul Morland	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative	View
1	Consumers Power Inc.	Stuart Sloan	Affirmative	View
1	CPS Energy	Richard Castrejana	Affirmative	
1	Dairyland Power Coop.	Robert W. Roddy	Affirmative	
1	Dayton Power & Light Co.	Hertzel Shamash		
1	Dominion Virginia Power	Michael S Crowley	Negative	View
1	Duke Energy Carolina	Douglas E. Hils	Affirmative	
1	East Kentucky Power Coop.	George S. Carruba	Affirmative	
1	Entergy Services, Inc.	Edward J Davis	Affirmative	
1	FirstEnergy Corp.	William J Smith	Affirmative	View
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Negative	
1	Florida Power & Light Co.	Mike O'Neil	Affirmative	
1	Gainesville Regional Utilities	Luther E. Fair	Affirmative	View
1	Georgia Transmission Corporation	Harold Taylor	Affirmative	
1	Great River Energy	Gordon Pietsch	Affirmative	View
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon	Affirmative	
1	Hydro One Networks, Inc.	Ajay Garg	Negative	View
1	Hydro-Quebec TransEnergie	Bernard Pelletier	Negative	View
1	Idaho Power Company	Ronald D. Schellberg	Affirmative	
1	Imperial Irrigation District	Tino Zaragoza	Affirmative	
1	International Transmission Company Holdings Corp	Michael Moltane	Affirmative	
1	KAMO Electric Cooperative	Walter Kenyon	Negative	
1	Kansas City Power & Light Co.	Michael Gammon	Affirmative	
1	Lakeland Electric	Larry E Watt	Affirmative	
1	Lee County Electric Cooperative	John W Delucca	Affirmative	
1	Long Island Power Authority	Robert Ganley	Negative	View
1	Los Angeles Department of Water & Power	Ly M Le		
1	Lower Colorado River Authority	Martyn Turner	Negative	View
1	M & A Electric Power Cooperative	William Price	Negative	
1	Manitoba Hydro	Joe D Petaski	Affirmative	View
1	MEAG Power	Danny Dees	Negative	View
1	Memphis Light, Gas and Water Division	Allan Long	Affirmative	
1	Metropolitan Water District of Southern California	Ernest Hahn	Affirmative	View
1	Mid-Continent Area Power Pool	Larry E. Brusseau	Abstain	
1	MidAmerican Energy Co.	Terry Harbour	Negative	View
1	Minnkota Power Coop. Inc.	Richard Burt	Affirmative	View
1	Muscatine Power & Water	Tim Reed	Affirmative	View
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Negative	
1	National Grid	Saurabh Saksena		
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Negative	
1	New York Power Authority	Arnold J. Schuff	Negative	View
1	North Carolina Electric Membership Corp.	Gary Ofner	Affirmative	View
1	Northeast Missouri Electric Power Cooperative	Kevin White	Negative	
1	Northeast Utilities	David Boguslawski	Affirmative	View
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative	
1	NorthWestern Energy	John Canavan	Affirmative	
1	Ohio Valley Electric Corp.	Robert Mattey	Negative	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Affirmative	
1	Omaha Public Power District	Doug Peterchuck	Negative	View
1	Oncor Electric Delivery	Brenda Pulis	Affirmative	
1	Orlando Utilities Commission	Brad Chase	Affirmative	View
1	Otter Tail Power Company	Daryl Hanson	Affirmative	

1	PECO Energy	Ronald Schloendorn	Affirmative	
1	Platte River Power Authority	John C. Collins	Negative	View
1	Portland General Electric Co.	John T Walker	Affirmative	
1	Potomac Electric Power Co.	David Thorne	Affirmative	View
1	PPL Electric Utilities Corp.	Brenda L Truhe	Affirmative	
1	Progress Energy Carolinas	Brett A Koelsch	Affirmative	
1	Public Service Company of New Mexico	Laurie Williams		
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Affirmative	
1	Public Utility District No. 1 of Okanogan County	Dale Dunckel	Affirmative	
1	Puget Sound Energy, Inc.	Denise M Lietz	Affirmative	View
1	Rochester Gas and Electric Corp.	John C. Allen	Negative	View
1	Sacramento Municipal Utility District	Tim Kelley	Negative	View
1	Salt River Project	Robert Kondziolka	Negative	View
1	Santee Cooper	Terry L Blackwell	Affirmative	
1	Seattle City Light	Pawel Krupa	Affirmative	View
1	Sho-Me Power Electric Cooperative	Denise Stevens	Negative	
1	Sierra Pacific Power Co.	Rich Salgo	Affirmative	View
1	Snohomish County PUD No. 1	Long T Duong	Affirmative	View
1	South California Edison Company	Steven Mavis	Negative	
1	South Texas Electric Cooperative	Richard McLeon	Affirmative	
1	Southwest Transmission Cooperative, Inc.	James Jones	Affirmative	View
1	Sunflower Electric Power Corporation	Noman Lee Williams	Affirmative	View
1	Tampa Electric Co.	Beth Young	Affirmative	
1	Tennessee Valley Authority	Larry Akens	Affirmative	View
1	Transmission Agency of Northern California	Bryan Griess	Affirmative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Negative	View
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Vermont Electric Power Company, Inc.	Kim Moulton	Abstain	
1	Westar Energy	Allen Klassen	Negative	
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Wolverine Power Supply Coop., Inc.	Michelle Denike	Abstain	
2	Alberta Electric System Operator	Mark B Thompson	Affirmative	View
2	BC Hydro	Venkataramakrishnan Vinnakota	Abstain	
2	California ISO	Richard K Vine	Affirmative	View
2	Electric Reliability Council of Texas, Inc.	Charles B Manning	Affirmative	View
2	Independent Electricity System Operator	Barbara Constantinescu	Negative	View
2	ISO New England, Inc.	Kathleen Goodman	Negative	View
2	Midwest ISO, Inc.	Marie Knox	Negative	View
2	New Brunswick System Operator	Alden Briggs	Negative	View
2	New York Independent System Operator	Gregory Campoli	Affirmative	
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative	
2	Southwest Power Pool, Inc.	Charles Yeung	Negative	View
3	AEP	Michael E Deloach		
3	Alameda Municipal Power	Douglas Draeger	Affirmative	
3	Ameren Services	Mark Peters		
3	APS	Steven Norris	Affirmative	
3	Associated Electric Cooperative, Inc.	Chris W Bolick	Negative	View
3	Atlantic City Electric Company	NICOLE BUCKMAN	Affirmative	
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain	
3	Benton Rural Electric Association	Clint Gerkensmeyer	Affirmative	
3	Big Bend Electric Cooperative, Inc.	Benjamin Friederichs	Affirmative	View
3	Blachly-Lane Electric Co-op	Bud Tracy	Affirmative	View
3	Blue Ridge Electric	James L Layton	Affirmative	View
3	Bonneville Power Administration	Rebecca Berdahl	Negative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Affirmative	View
3	Central Electric Power Cooperative	Ralph J Schulte	Negative	
3	Central Hudson Gas & Electric Corp.	Thomas C Duffy	Affirmative	View
3	Central Lincoln PUD	Steve Alexanderson	Affirmative	View
3	City of Austin dba Austin Energy	Andrew Gallo	Negative	View
3	City of Bartow, Florida	Matt Culverhouse	Affirmative	
3	City of Cheney	Joe Noland	Affirmative	View
3	City of Clewiston	Lynne Mila		
3	City of Farmington	Linda Jacobson	Negative	View
3	City of Garland	Ronnie C Hoeinghaus	Abstain	
3	City of Green Cove Springs	Gregg R Griffin	Affirmative	View

3	City of McMinnville	John C Dietz	Affirmative	
3	City of Redding	Bill Hughes	Affirmative	
3	City of Ukiah	Colin Murphey	Affirmative	
3	Clatskanie People's Utility District	Brian Fawcett	Affirmative	View
3	Clay Electric Cooperative	Howard M. Mott Jr.	Affirmative	View
3	Clearwater Power Co.	Dave Hagen	Affirmative	View
3	Cleco Corporation	Michelle A Corley	Affirmative	
3	Colorado Springs Utilities	Lisa Cleary	Affirmative	
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	View
3	Constellation Energy	CJ Ingersoll	Affirmative	View
3	Consumers Energy	Richard Blumenstock	Negative	View
3	Consumers Power Inc.	Roman Gillen	Affirmative	View
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Affirmative	View
3	Cowlitz County PUD	Russell A Noble	Affirmative	View
3	CPS Energy	Jose Escamilla	Affirmative	
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Dominion Resources Services	Michael F. Gildea	Negative	View
3	Douglas Electric Cooperative	Dave Sabala	Affirmative	View
3	Duke Energy Carolina	Henry Ernst-Jr	Affirmative	
3	East Kentucky Power Coop.	Patrick Woods	Affirmative	
3	Fall River Rural Electric Cooperative	Bryan Case	Affirmative	View
3	Fayetteville Public Works Commission	Allen R Wallace	Affirmative	
3	FirstEnergy Energy Delivery	Stephan Kern	Affirmative	View
3	Flathead Electric Cooperative	John M Goroski	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Affirmative	View
3	Florida Power Corporation	Lee Schuster	Affirmative	
3	Georgia Systems Operations Corporation	William N. Phinney	Affirmative	View
3	Grays Harbor PUD	Wesley W Gray	Affirmative	
3	Great River Energy	Sam Kokkinen	Affirmative	
3	Harney Electric Cooperative, Inc.	Shane Sweet	Affirmative	
3	Holland Board of Public Works	William Bush	Affirmative	View
3	Hydro One Networks, Inc.	David Kiguel	Negative	View
3	Idaho Falls Power	Richard Malloy	Affirmative	
3	Imperial Irrigation District	Jesus S. Alcaraz	Affirmative	
3	JEA	Garry Baker	Affirmative	
3	KAMO Electric Cooperative	Theodore J Hilmes	Negative	
3	Kansas City Power & Light Co.	Charles Locke	Affirmative	
3	Kissimmee Utility Authority	Gregory D Woessner		
3	Kootenai Electric Cooperative	Dave Kahly	Affirmative	View
3	La Plata Electric Association	Ronald Meier	Affirmative	
3	Lakeview Light & Power	Robert Truesdell	Affirmative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Affirmative	View
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Affirmative	View
3	Lincoln Electric System	Jason Fortik	Affirmative	View
3	Lost River Electric Cooperative	Richard Reynolds		
3	Louisville Gas and Electric Co.	Charles A. Freibert	Affirmative	
3	M & A Electric Power Cooperative	Stephen D Pogue	Negative	
3	Manitoba Hydro	Greg C. Parent	Affirmative	View
3	Manitowoc Public Utilities	Thomas E Reed	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik		
3	Mission Valley Power	Kerry Wiedrich	Affirmative	
3	Mississippi Power	Jeff Franklin	Affirmative	View
3	Modesto Irrigation District	Jack W Savage	Negative	View
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Negative	View
3	Muscatine Power & Water	John S Bos	Affirmative	View
3	Nebraska Public Power District	Tony Eddleman	Negative	View
3	New York Power Authority	Marilyn Brown	Negative	View
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Abstain	
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann	Negative	
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	Northern Lights Inc.	Jon Shelby	Affirmative	View
3	Northern Wasco County People's Utility District (PUD)	Paul Titus	Affirmative	
3	NW Electric Power Cooperative, Inc.	David McDowell	Negative	
3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Affirmative	View
3	Omaha Public Power District	Blaine R. Dinwiddie	Negative	

3	Orange and Rockland Utilities, Inc.	David Burke	Negative	
3	Oregon Trail Electric Cooperative	ned ratterman	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Affirmative	View
3	Owensboro Municipal Utilities	Thomas T Lyons	Affirmative	
3	Pacific Gas and Electric Company	John H Hagen	Affirmative	View
3	PacifiCorp	John Apperson		
3	Platte River Power Authority	Terry L Baker	Negative	View
3	Potomac Electric Power Co.	Robert Reuter	Affirmative	
3	Progress Energy Carolinas	Sam Waters	Affirmative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller		
3	Public Utility District No. 1 of Clallam County	David Proebstel	Affirmative	
3	Public Utility District No. 1 of Franklin County	Linda Esparza	Affirmative	
3	Public Utility District No. 2 of Grant County	Greg Lange	Affirmative	View
3	Raft River Rural Electric Cooperative	Heber Carpenter	Affirmative	View
3	Rayburn Country Electric Coop., Inc.	Eddy Reece		
3	Rutherford EMC	Thomas M Haire	Affirmative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Negative	View
3	Salem Electric	Anthony Schacher	Affirmative	View
3	Salmon River Electric Cooperative	Ken Dizes		
3	Salt River Project	John T. Underhill	Negative	View
3	Santee Cooper	James M Poston	Affirmative	
3	Seattle City Light	Dana Wheelock	Affirmative	View
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Sho-Me Power Electric Cooperative	Jeff L Neas	Negative	
3	South Carolina Electric & Gas Co.	Hubert C Young	Affirmative	
3	Southern California Edison Co.	David Schiada		
3	Springfield Utility Board	Jeff Nelson	Affirmative	View
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L Donahey	Affirmative	
3	Tennessee Valley Authority	Ian S Grant	Affirmative	View
3	Tri-State G & T Association, Inc.	Janelle Marriott	Negative	View
3	Umatilla Electric Cooperative	Steve Eldrige	Affirmative	View
3	Vigilante Electric Cooperative	Dave Alberi	Affirmative	
3	West Oregon Electric Cooperative, Inc.	Marc Farmer	Affirmative	View
3	Wisconsin Electric Power Marketing	James R Keller	Affirmative	View
3	Xcel Energy, Inc.	Michael Ibold	Affirmative	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power	Kevin Koloini	Affirmative	
4	American Public Power Association	Allen Mosher	Affirmative	View
4	Arkansas Electric Cooperative Corporation	Ronnie Frizzell	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache	Affirmative	View
4	City of Clewiston	Kevin McCarthy		
4	City of Redding	Nicholas Zettel	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	View
4	Consumers Energy	David Frank Ronk	Negative	View
4	Flathead Electric Cooperative	Russ Schneider	Affirmative	
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	View
4	Fort Pierce Utilities Authority	Thomas Richards	Affirmative	View
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	View
4	Illinois Municipal Electric Agency	Bob C. Thomas	Affirmative	View
4	Imperial Irrigation District	Diana U Torres	Affirmative	
4	Indiana Municipal Power Agency	Jack Alvey	Affirmative	
4	Integrys Energy Group, Inc.	Christopher Plante	Abstain	
4	LaGen	Richard Comeaux	Abstain	
4	Madison Gas and Electric Co.	Joseph DePoorter	Affirmative	View
4	Modesto Irrigation District	Spencer Tacke	Negative	View
4	National Rural Electric Cooperative Association	Barry R. Lawson	Abstain	
4	North Carolina Eastern Municipal Power Agency	Cecil Rhodes	Affirmative	
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	View
4	Oklahoma Municipal Power Authority	Ashley Stringer	Affirmative	
4	Old Dominion Electric Coop.	Mark Ringhausen	Affirmative	
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Affirmative	View
4	Public Power Council	Nancy Baker	Affirmative	
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	View

4	Sacramento Municipal Utility District	Mike Ramirez	Negative	View
4	Seattle City Light	Hao Li	Affirmative	View
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Transmission Access Policy Study Group	William Gallagher	Affirmative	
4	Western Montana Electric G&T	William Drummond	Affirmative	
5	AEP Service Corp.	Brock Ondayko	Negative	View
5	AES Corporation	Leo Bernier	Affirmative	
5	Amerenue	Sam Dwyer	Negative	
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Associated Electric Cooperative, Inc.	Brad Haralson	Negative	
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Black Hills Corp	George Tatar	Affirmative	
5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla		
5	Bonneville Power Administration	Francis J. Halpin	Negative	View
5	BrightSource Energy, Inc.	Chifong Thomas	Negative	View
5	City and County of San Francisco	Daniel Mason	Affirmative	
5	City of Austin dba Austin Energy	Jeanie Doty	Negative	View
5	City of Grand Island	Jeff Mead	Abstain	
5	City of Redding	Paul Cummings	Affirmative	View
5	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Max Emrick	Affirmative	
5	City of Tallahassee	Brian Horton	Affirmative	
5	Cleco Power	Stephanie Huffman	Affirmative	
5	Cogentrix Energy, Inc.	Mike D Hirst	Affirmative	
5	Colorado Springs Utilities	Jennifer Eckels	Affirmative	
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Affirmative	View
5	Constellation Power Source Generation, Inc.	Amir Y Hammad	Affirmative	
5	Consumers Energy Company	David C Greyerbiehl	Negative	View
5	Covanta Energy	Samuel Cabassa		
5	CPS Energy	Robert Stevens	Affirmative	
5	Detroit Edison Company	Christy Wicke	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Negative	View
5	Duke Energy	Dale Q Goodwine	Affirmative	
5	Dynegy Inc.	Dan Roethemeyer	Negative	View
5	East Kentucky Power Coop.	Stephen Ricker	Affirmative	
5	Electric Power Supply Association	John R Cashin		
5	Entegra Power Group, LLC	Kenneth B Parker	Affirmative	
5	Exelon Nuclear	Michael Korchynsky	Affirmative	
5	ExxonMobil Research and Engineering	Martin Kaufman	Negative	
5	Florida Municipal Power Agency	David Schumann	Affirmative	View
5	Great River Energy	Preston L Walsh	Affirmative	View
5	Green Country Energy	Greg Froehling	Affirmative	
5	Imperial Irrigation District	Marcela Y Caballero	Affirmative	
5	Indeck Energy Services, Inc.	Rex A Roehl	Negative	View
5	Invenergy LLC	Alan Beckham		
5	JEA	John J Babik	Affirmative	
5	Kissimmee Utility Authority	Mike Blough	Affirmative	
5	Lakeland Electric	James M Howard	Affirmative	View
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver		
5	Lower Colorado River Authority	Tom Foreman	Affirmative	
5	Manitoba Hydro	S N Fernando	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Negative	View
5	Michigan Public Power Agency	Gary Carlson	Affirmative	View
5	MidAmerican Energy Co.	Christopher Schneider	Negative	View
5	Muscatine Power & Water	Mike Avesing	Abstain	
5	Nebraska Public Power District	Don Schmit	Negative	View
5	New York Power Authority	Gerald Mannarino	Negative	View
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Affirmative	View
5	Northern Indiana Public Service Co.	William O. Thompson		
5	Occidental Chemical	Michelle R DAntuono	Affirmative	View
5	Oklahoma Gas and Electric Co.	Kim Morphis	Affirmative	
5	Omaha Public Power District	Mahmood Z. Safi	Negative	View
5	Ontario Power Generation Inc.	Colin Anderson	Negative	View

5	Orlando Utilities Commission	Richard Kinas		
5	Otter Tail Power Company	Stacie Hebert	Affirmative	
5	PacifiCorp	Sandra L. Shaffer	Affirmative	
5	Platte River Power Authority	Roland Thiel	Negative	View
5	Portland General Electric Co.	Gary L Tingley		
5	PowerSouth Energy Cooperative	Tim Hattaway	Affirmative	
5	PPL Generation LLC	Annette M Bannon	Affirmative	
5	Progress Energy Carolinas	Wayne Lewis	Affirmative	
5	PSEG Fossil LLC	Mikhail Falkovich	Affirmative	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Negative	View
5	Puget Sound Energy, Inc.	Tom Flynn	Affirmative	
5	Sacramento Municipal Utility District	Bethany Hunter	Negative	View
5	Salt River Project	Glen Reeves	Negative	
5	Santee Cooper	Lewis P Pierce	Affirmative	
5	Seattle City Light	Michael J. Haynes	Affirmative	View
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	View
5	Southern California Edison Co.	Denise Yaffe	Affirmative	
5	Southern Company Generation	William D Shultz	Affirmative	View
5	Tampa Electric Co.	RJames Rocha	Affirmative	
5	Tenaska, Inc.	Scott M Helyer	Affirmative	
5	Tennessee Valley Authority	David Thompson	Affirmative	
5	Tri-State G & T Association, Inc.	Barry Ingold	Negative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	
5	Westar Energy	Bo Jones	Negative	View
5	Wisconsin Electric Power Co.	Linda Horn	Affirmative	View
5	Wisconsin Public Service Corp.	Leonard Rentmeester	Affirmative	
6	AEP Marketing	Edward P. Cox	Negative	View
6	Ameren Energy Marketing Co.	Jennifer Richardson	Negative	
6	APS	RANDY A YOUNG	Affirmative	
6	Associated Electric Cooperative, Inc.	Brian Ackermann	Negative	
6	Bonneville Power Administration	Brenda S. Anderson	Negative	
6	City of Austin dba Austin Energy	Lisa L Martin	Negative	View
6	City of Redding	Marvin Briggs	Affirmative	
6	Cleco Power LLC	Robert Hirchak	Affirmative	
6	Colorado Springs Utilities	Lisa C Rosintoski	Affirmative	
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Affirmative	View
6	Constellation Energy Commodities Group	Brenda Powell	Affirmative	View
6	Dominion Resources, Inc.	Louis S. Slade	Negative	View
6	Duke Energy Carolina	Walter Yeager	Affirmative	
6	Exelon Power Team	Pulin Shah	Affirmative	
6	FirstEnergy Solutions	Kevin Querry	Affirmative	View
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative	View
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	View
6	Florida Power & Light Co.	Silvia P. Mitchell		
6	Great River Energy	Donna Stephenson	Affirmative	
6	Imperial Irrigation District	Cathy Bretz	Affirmative	
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Affirmative	
6	Lakeland Electric	Paul Shipps	Affirmative	
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Manitoba Hydro	Daniel Prowse	Affirmative	View
6	MidAmerican Energy Co.	Dennis Kimm	Negative	View
6	Muscatine Power & Water	John Stolley	Affirmative	
6	New York Power Authority	William Palazzo	Negative	View
6	North Carolina Municipal Power Agency #1	Matthew Schull	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	NRG Energy, Inc.	Alan Johnson	Abstain	
6	Omaha Public Power District	David Ried	Negative	View
6	Orlando Utilities Commission	Claston Augustus Sunanon	Affirmative	View
6	PacifiCorp	Scott L Smith	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Negative	View
6	PPL EnergyPlus LLC	Mark A Heimbach	Affirmative	
6	Progress Energy	John T Sturgeon	Affirmative	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Affirmative	
6	Public Utility District No. 1 of Chelan County	Hugh A. Owen	Affirmative	
6	Sacramento Municipal Utility District	Claire Warshaw	Negative	View
6	Salt River Project	Steven J Hulet	Negative	View

6	Santee Cooper	Michael Brown	Affirmative	
6	Seattle City Light	Dennis Sismaet	Affirmative	View
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Snohomish County PUD No. 1	William T Moojen	Affirmative	View
6	South California Edison Company	Lujuanna Medina		
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Affirmative	
6	Tenaska Power Services Co.	John D Varnell	Abstain	View
6	Tennessee Valley Authority	Marjorie S. Parsons	Affirmative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney		
6	Xcel Energy, Inc.	David F. Lemmons	Affirmative	
7	Siemens Energy, Inc.	Frank R. McElvain	Affirmative	View
8		Edward C Stein	Affirmative	
8		Merle Ashton	Affirmative	
8		Roger C Zaklukiewicz	Affirmative	
8		James A Maenner	Affirmative	
8	INTELLIBIND	Kevin Conway		
8	JDRJC Associates	Jim Cyrulewski	Negative	
8	Montana Consumer Counsel	Larry Nordell	Abstain	View
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Affirmative	View
8	Transmission Strategies, LLC	Bernie M Pasternack	Affirmative	
8	Utility Services, Inc.	Brian Evans-Mongeon	Affirmative	
8	Volkmann Consulting, Inc.	Terry Volkmann	Affirmative	
9	Alabama Public Service Commission	John Free	Affirmative	
9	California Energy Commission	William M Chamberlain	Affirmative	View
9	Central Lincoln PUD	Bruce Lovelin	Affirmative	View
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Negative	View
9	Michigan Public Service Commission	Donald J Mazuchowski		
9	National Association of Regulatory Utility Commissioners	Diane J Barney	Negative	View
9	New Hampshire Public Utilities Commission	Michael Harrington		
9	New York State Department of Public Service	Thomas Dvorsky	Negative	View
9	Oregon Public Utility Commission	Jerome Murray	Affirmative	View
9	Pennsylvania Public Utility Commission	darren gill	Negative	
9	Public Service Commission of South Carolina	Philip Riley	Negative	View
9	Utah Public Service Commission	Ric Campbell	Affirmative	
10	New York State Reliability Council	Alan Adamson	Affirmative	View
10	Northeast Power Coordinating Council, Inc.	Guy V. Zito	Affirmative	View
10	ReliabilityFirst Corporation	Anthony E Jablonski	Affirmative	View
10	SERC Reliability Corporation	Carter B. Edge	Affirmative	
10	Southwest Power Pool RE	Stacy Dochoda		
10	Texas Reliability Entity, Inc.	Donald G Jones	Negative	View
10	Western Electricity Coordinating Council	Steven L. Rueckert	Affirmative	View

Legal and Privacy : 609.452.8060 voice : 609.452.9550 fax : 116-390 Village Boulevard : Princeton, NJ 08540-5721
Washington Office: 1120 G Street, N.W. : Suite 990 : Washington, DC 20005-3801

Account Log-In/Register

Copyright © 2010 by the North American Electric Reliability Corporation. : All rights reserved.
A New Jersey Nonprofit Corporation

Individual or group. (113 Responses)
Name (82 Responses)
Organization (82 Responses)
Lead Contact (31 Responses)
Contact Organization (31 Responses)
Question 1 (108 Responses)
Question 1 Comments (113 Responses)
Question 2 (103 Responses)
Question 2 Comments (113 Responses)
Question 3 (102 Responses)
Question 3 Comments (113 Responses)
Question 4 (101 Responses)
Question 4 Comments (113 Responses)
Question 5 (99 Responses)
Question 5 Comments (113 Responses)
Question 6 (103 Responses)
Question 6 Comments (113 Responses)
Question 7 (106 Responses)
Question 7 Comments (113 Responses)
Question 8 (97 Responses)
Question 8 Comments (113 Responses)
Question 9 (104 Responses)
Question 9 Comments (113 Responses)
Question 10 (102 Responses)
Question 10 Comments (113 Responses)
Question 11 (103 Responses)
Question 11 Comments (113 Responses)

Group
Gerald Beckerle
Ameren
Yes
The SERC OC Standards Review Group agrees to the clarifying changes to the core definition in general; however, we maintain that 200kV and above is the correct bright line for the Bulk Electric System.
Yes
We agree in general with the revisions to the specific inclusions for transformers in I1; however, we believe the transformer voltage level should be 200kV or above.
Yes
We agree in general with the revisions to I2 for generation; however, we maintain that 200kV and above is the correct bright line for the Bulk Electric System.
No
We agree with the changes but believe clarity would be added by changing the word "identified" to "designated".
Yes
No
We feel that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common point.
Yes
We suggest the wording "non-retail generation' should be clarified with an explanation of why it is used in this exclusion.
No

Clarification needs to be provided for what is meant by E2 (ii), regarding generation on the customer’s side of the retail meter; otherwise we have trouble developing a position on this question.
No
We would agree with the exclusion if the wording of the exclusion includes the following phrase (in quotation marks) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN “under normal operating conditions”.
Yes
Yes
The definition of the BES is referenced in several existing standards and the Statement of Compliance Registry Criteria. The SERC OC standards Review Group is concerned how this revised definition will impact entity registration, i.e., how will the revised definition be integrated into the Compliance Registry Criteria. The implementation plan should include how the integration is going to occur. The Rules of Procedure exception process should be further defined or referenced in this definition. “The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review Group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers.”
Individual
Doug Hohlbaugh
FirstEnergy Corp.
Yes
However, consider changing the last sentence to read "This does not include facilities operated at less than 100kV, unless modified below, which are are used in the local sub-transmission and distribution of electric energy."
Yes
Yes
Yes
We agree with the team's conclusion to remove cranking paths from the BES definition since NERC (i.e. EOP standards) specifically address reliability matters associated with cranking paths. Although we believe item I3 (blackstart unit) is unnecessary as part of the BES Definition, we will not object to its inclusion. A blackstart unit is a facility necessary for BES restoration, but not necessarily required to be included within the BES Definition.
Yes
Yes
While we do not object to I5, we question its need based on item I2 and believe I2 also covers this item
Yes
No
We suggest striking item "ii"
Yes
Yes
Yes
FE supports the SDT's phased project approach which was well articulated in the NERC BES Definition Fact Sheet
Individual

John Bee
Exelon
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
No
Individual
Gary Carlson
Michigan Public Power Agency
Yes
The Michigan Public Power Agency (MPPA) believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. MPPA therefore strongly supports the new definition, although our support is conditioned on: (1) A workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. MPPA strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher"). (2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, MPPA supports use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. § 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate – "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. § 824o(a)(4) – will originate. At the same time, level-of-service issues arising in

local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. § 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). MPPA also believes the use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. MPPA believes this was one of the many key elements addressed by FERC in Order No. 743 and reinforced by FERC Order No. 743A and has been missing from the previous definition as well as the original definition being used since Compliance efforts commenced in June, 2007 . Because of this lack of clarity MPPA has had numerous discussions with the region regarding all 17 of our member's connection to the TO/TOP in Michigan. Our discussions have resulted in defending 6 of our members specifically from the "Bright Line definition" path while having no tools in our tool box to substantiate our exclusion. When a small municipality with a peak load of 12.6 MW and no generation must be defended from a TO and/or TOP registration just because of its connection to it's TO/TOP the process requires needed adjustment for clarity. This was too small to even qualify as a DP under the Statement of Compliance Registry Criteria but must have to defend itself from a TO/TOP registration issue. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. A member of MPPA has been involved in a registration issue and it has a 3rd party study conducted by a nation consulting firm showing for the MISO area, generation levels of 100 MVA and 300 MVA aggregate or above are below the standard calculation mathematical significant impact criteria for static and dynamic planning protocol. MPPA recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, MPPA agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, MPPA is prepared to support the BES definition as proposed by the SDT. While MPPA strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Eastern Interconnection. That being said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Eastern Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, MPPA will support the SDT's proposal. Finally, we suggest that the SDT address the circumstances when a facility is covered by both an Inclusion and an Exclusion. We note that some of the inclusions already contain language addressing this question. For example, Inclusion 1 indicates that transformers falling within the specified parameters are part of the BES ". . . unless excluded under Exclusions E1 or E3." Where it is not already included, similar language should be included in the other Inclusions and/or Exclusions to explain whether the SDT intends the Inclusions or the Exclusions to predominate in situations where facilities might be covered by both. We suggest clarifying language in our comments to I1 and I4 below.

Yes

MPPA supports the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As MPPA understands it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100 kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution

loads, and which therefore function as distribution rather than transmission facilities. MPPA believes the SDT's intent would be clarified by adding a sentence at the end of Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100 kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. There are many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. MPPA has some members who have been forced to sell of such assets in the hopes of remove the necessity for a TO/TOP registration path in this region. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2."

Yes

MPPA supports the changes made in Inclusion 2 and believe that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. MPPA also supports the SDT's proposal for a Phase II of the BES Definition process that would examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less due process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC ¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase II through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little due process. MPPA also believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, § 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase II should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes to include generation in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this

language is intended to be a placeholder for the results of the technical analysis that would occur in Phase II but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100 kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria.. The "materiality threshold" is intended to refer to the generator threshold developed in Phase II. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase II without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase II process based upon the technical analysis planned for Phase II, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase II is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase II are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase II on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase II under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of

100 kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100 kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100 kV or above." MPPA and its members believe it is essential that regional entities and NERC recognize that "facilities used in the local distribution of electric energy" are not included in the definition of BES, regardless of the gross individual or gross aggregate nameplate rating of generation resources. While the addition of the second sentence in the core definition makes this clarification, MPPA and its members believes it is necessary that regional entities and NERC recognize that neither this Inclusion nor any of the Inclusions may be used as a basis to compel registration and compliance in such instances, regardless of the size of the generators. The statutory exemption of facilities used in the local distribution of electric energy is not limited by generator number or capacity. NERC's definitions cannot impose limitations that are not set forth in the statute. For purposes of the exclusion of facilities that might otherwise meet the definition of BES, the thresholds for determining what generating resources constitute BES facilities should be modified from the current levels (gross individual nameplate capacity of 20 MVA or gross aggregate nameplate rating of 75 MVA). MPPA and its members would support modification of the thresholds to not less than 100 MVA (gross individual capacity) and 300 MVA (gross aggregate nameplate).

Yes

Yes

Yes

MPPA supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e, "resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," which is discussed in more detail in our response to Question 3. This language, or some equivalent, will preserve the SDT's ability to revise the 75 MVA threshold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a LN. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be established by the SDT in Phase II. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase ". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.

No

MPPA has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Finally, MPPA believes the

appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase II process. Without such analysis either: 1) no threshold except for those connected at 100kV, or: 2) of .95 power factor of a 20 MVA generator, or 6 MVAr and use the fact that most Facility Connection Requirements require a power factor in the range of between 0.85 – 0.9 lagging to 0.9 – 0.95 leading for a generator. Hence, a 20 MVA generator (the smallest to meet the registry criteria) will need to absorb a minimum of 6 MVAr and use that as the technical justification.

Yes

MPPA and its members continue to support the radial system exclusion, which is necessary as a legal matter, because, for example, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. But we believe that further clarification is necessary. First, the deletion of "originating with an automatic interruption device" is a step in the right direction. However, "emanates from a single point of connection" could be too narrowly interpreted (i.e., multiple buses within a single substation could be viewed as multiple points of connection). MPPA and its members proposes the following modification: "emanates from a single substation connected to the BES at 100 kV or higher …". Entities whose only connection emanates from a single substation and otherwise meet the BES definition should not be denied exclusion under E1 solely because they connect to multiple buses within a single substation. Additionally, adoption of "E3- Local Networks" renders specious any argument that clams that connecting to multiple buses within a single suvstation makes a material difference for reliability purposes since local networks would have multiple connections anyway. Additionally, it is not clear why it is necessary to include the note at the end of the revised definition. ("A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.") This rasies questions as to what "normally open" means, and wheither the only evidence demonstrating what "normally open" means will be prints or one-line diagrams. Further, it is not entirely clear what is meant by the language "does not affect this exclusion". If the note remains, it should be modified to read something like, "a normally open switching device between radial systems does not prevent application of this exclusion." Finally, the generation threshold limit in E1(b) and E1(c) should be revised as discussed in response to Q1. Specifically, the proposed threshold of 75 MVA for this exclusion should be raised to not lessd than 300 MVA in both E1(b) and E1 (c).

Yes

MPPA and its members support the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, MPPA and its members urge the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term "Qualifying Aggregate Generation Resources" or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN.

Yes

MPPA and its members strongly supports the categorical exclusion of Local Networks ("LNs") from the BES. We believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement, discussed in our response to Question 1, to exclude all facilities used in the local distribution of electric power. LNs are, of course, probably the most common form of local distribution facility. Further, the conversion of radial systems to local distribution networks should be

encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers will ultimately benefit from the path chosen by the SDT. MPPA and its members also support specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, MPPA supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." Snohomish supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. MPPA believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making a "group of contiguous transmission Elements operated at or above 100 kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100 kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. MPPA also believes that subparagraphs (a) and (b) are redundant in the sense that whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LDN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system – power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is

meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to mean generation that is used by retail customers located within a LN rather than being exported and sold on wholesale markets outside the LN. We therefore suggest that the SDT replace the phrase "non-retail generation" with the phrase "generation sold in wholesale markets and transmitted outside the LN." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. Finally, MPPA believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN."

Yes

Yes, MPPA and its members support the revised language because retail reactive devices are used to

address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
No
MPPA and its members extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. MPPA strongly supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, MPPA is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that MPPA and its members specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. MPPA supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to come into compliance with newly-applicable Reliability Standards. MPPA and its members also supports the 24-month transition period for the reasons laid out by the SDT.
Individual
Richard Malloy
Idaho Falls Power
Yes
We generally support the changes made.
Yes
We support the language as drafted.
No
Reliance upon the Registry Criteria falls back to the 20MVA threshold. We believe this threshold is very low and unnecessarily draws in small entities for which there is no impact to the BES. We understand the barriers and the volume of tenchnical evidence required for any change and we therefore have no alternative language to suggest.
Yes
We support the inclusion as drafted.
No
As drafted, it appears to draw in all generation resources that sum to 75 MVA or higher. We question then if there is value of categorizing every wind turbine on a >75MVA wind farm as a BES asset and, what would be the unintended consequences. Perhaps language delineating the point of aggregation as the demarcation point of a BES asset would better serve.
Yes
We have no comments.
Yes
We support the exclusion as drafted.
Yes
We support the exclusion as drafted.
Yes
We support the exclusion as drafted.
Yes

We have no comments.
No
Individual
Anthony Jablonski
ReliabilityFirst
No
This seems very confusing, but should be clear and easy enough for anyone to pickup, read, understand, apply and arrive at the same conclusion. The term local distribution needs to be either defined or have some guidance provided on what it is intended to cover. A suggestion for defining distribution would be that radials and local networks makeup distribution facilities. Radials usually terminate at distribution or customer substations and local networks are primarily used for distribution also. The Commission granted NERC the ability to define distribution in Order 743-A, paragraphs 67-71. It is not clear if the BES is meant to be a contiguous system or not from the language in the revised definition. ReliabilityFirst Staff believes that the BES should be contiguous, and therefore, any facilities needed to connect real and reactive resources to the BES need to be included. To maintain reliability, the BES cannot have pockets of generation that are not connected to the BES via BES facilities. ReliabilityFirst Staff believes that without including the paths from BES generators in the BES, the reliable operation of the system could be jeopardized if the paths are unavailable due to non-compliance to Reliability Standards. For example, wind farm collector systems at voltages operated at less than 100 kV should be included in the BES for the above reason.
Yes
Yes
No
Blackstart Resource is a defined NERC term, but as outlined in the definition, it could be read to include the transmission assets that also make up the resource as part of the TOP plan. Is that the intent? ReliabilityFirst Staff also feels that without including the Cranking Paths, the reliable operation of the system could be jeopardized if a restoration is required and the Cranking Paths are unavailable due to non-compliance to Reliability Standards.
No
The term "Dispersed Power Producing Resource" is not a defined term and needs further clarification. However, I4 is not needed and is already included in I2. I4 does not add any additional facilities that are not already included in I2. How are "dispersed power producing resources" different from "generating resources" described in I2? If the intent of I4 is to include wind generators but exclude wind farm collector systems in the BES, ReliabilityFirst Staff disagrees. To maintain reliability, the BES cannot have pockets of generation that are not connected to the BES via BES facilities. ReliabilityFirst Staff believes that without including the paths from BES generators in the BES, the reliable operation of the system could be jeopardized if the paths are unavailable due to non-compliance to Reliability Standards. For example, wind farm collector systems at voltages operated at less than 100 kV should be included in the BES for the above reason. I4 could be deleted.
Yes
No
The term radial must be specifically defined in this application. ReliabilityFirst Staff believes this to mean a true radial in the sense that an adverse impact by the radial facilities does NOT affect or impact BES facilities. In the first sentence the word "Element" is capitalized but "transmission" is not, we believe both terms should be capitalized. The phrase "single point of connection" should have guidance so that everyone reading this definition reads the single point of interconnection the same. Some have read this phrase to be a single substation, while others have read this phrase to be one and only one line or supply (i.e. interconnection point), which is it? The "Note" we disagree with. In any and all cases if there is any operation or use of the BES, the facilities should be included. By the wording of this exclusion, one cannot determine if taps (sections of line from a BES transmission line

to a single substation) are intended to be included in the BES or not. More specifically, where does the radial facility begin and the BES end? This determination was clearer in the previous version of the definition with the use of the language "…originating with an automatic interruption device…".
No
It is not clear why "ii" is needed. If the net generation exceeds 75 MVA, then it is included in the BES whether or not there are ancillary services provided for that generation. Would customer owned generation less than a net of 75 MVA but greater than 20 MVA be included in the BES if item ii was not met?
No
ReliabilityFirst Staff proposes to use the LN exclusion as part of the definition of what elements make up the facilities used in the local "distribution" of electric energy and could be included in the Exception Process as a criterion for exclusion.
Yes
Yes
This definition needs to be clear and easy enough for anyone to pickup, read, understand, apply and arrive at the same conclusion on whether the facility or element is included or excluded. This definition leaves room for continued debate and interpretation. To help make this definition clearer, ReliabilityFirst Staff has provided a redline version of the core definition under a separate cover (file titled "Bulk Electric System definition by RFC Staff 10-4-2011").
Group
David Taylor
NERC
No
The sentence, "This does not include facilities used in the local distribution of electricity," is a commentary or statement of objective rather than a definition of what facilities comprise the BES. Including such information that does not define the facilities to be included or excluded will be a source of confusion in applying the definition. The BES definition as proposed by the SDT may in fact include such facilities and as stated in paragraph 37 of Order 743: "Determining where the line between "transmission" and "local distribution" lies, which includes an inquiry into which lower voltage "transmission" facilities are necessary to operate the interconnected transmission system, should be part of the exemption process the ERO develops." If the drafting team believes that Exclusions E1 through E4 in the definition are sufficient to not include any facilities used in the local distribution of electricity then those exclusions, and not the aforementioned sentence in the "core definition," define the facilities that are not included (i.e., the sentence is unnecessary).
Yes
Yes
The drafting team's proposed approach for Inclusion I2 (generation), including the reference to the ERO Statement of Compliance Registry Criteria, is generally acceptable given the scope of this project and the breaking of the project into two phases. Thresholds for generator MVA rating and interconnection voltage should be considered in the second phase of this project.
No
The cranking path(s) identified in the Transmission Operator's restoration plan should be included in the BES definition.
Yes
Yes
No
While we appreciate the improvement in the text for Exclusion E1, but we continue to believe that E1 should require (i) the normally open switch must not be used to make a parallel connection if the normally switch is operated at 100 kV or higher and (ii) an automatic interrupting device that is part

of the BES must be provided at the point of interconnection between the radial system and the BES.
Yes
No
While we appreciate the improvement in the text of Exclusion E3, but we continue to believe that E3 should require automatic interrupting devices that are part of the BES must be provided at the points of interconnection between the Local Network and the BES.
Yes
No
Individual
Colin Anderson
Ontario Power Generation Inc.
No
OPG continues to question the need for the changes required (and costs imposed) as a result of this new definition. This is particularly true in the NPCC region where an impact based methodology is being used to determine the set of BES elements. A very clear 100kV bright line, as proposed in this draft, will dramatically increase the list of generation elements that must meet reliability standards, without a corresponding increase in wide-area reliability. OPG recommends that the work planned for phase II, technical justification of the generation and voltage thresholds, should be completed before implementing the new definition of BES.
Yes
No
OPG does not agree that the question of the 20 MVA (single) versus 75 MVA (aggregate) threshold should be deferred until a subsequent phase of the standard development process ("Phase II"). This question should be resolved now. In general, key elements of the development process should not be parsed out into multiple phases, in hopes that "Standard Development Fatigue" will eliminate critics of the approach. Further, selecting the generator terminals as the boundary for BES within the generating station means that the Isolated Phase Bus (IPB), which connects the generator terminals to the Low Voltage (LV) terminals of the generator step-up (GSU) transformer, is now included as a BES element. The IPB is operated at low voltage, no more than 22kV, so including it as a BES element is going beyond the FERC order 743 and 743a. OPG strongly recommends that the BES boundary be moved to the LV terminals of the GSU transformer.
No
To assure availability of the generation blackstart resources identified in the Transmission Operator’s Power System Restoration Plan the generators are tested according to the requirements of reliability standard EOP-009. Blackstart resources are only required post LOBES (Loss of Bulk Electric System) and in many cases do not contribute to the reliability of the BES under normal operating conditions. OPG recommends that this inclusion be removed from the new definition of BES.
Yes
No
OPG recommends that the wording of this inclusion be made clear that the BES boundary extends to the Low Voltage terminals of the transformer, used in the interface connection, and does not include the static or dynamic reactive power source itself unless it is directly connected to the BES.
No
Non-retail generation needs to be properly defined in the text of the exclusion.
Yes
No

Non-retail generation needs to be properly defined in the text of the exclusion.
Yes
Yes
Further to comments submitted in Question #1, OPG disagrees in general with proceeding to implement a 100 kV brightline definition in the absence of a properly quantified cost/benefit analysis. Entities are being asked to incur a high cost for no demonstrated benefit in wide-area reliability.
Group
Guy Zito
Northeast Power Coordinating Council
Yes
No
More specific description is needed for the equipment intended to be included in I1. For example, is it intended to include autotransformers, PARs, primary, secondary, tertiary windings, etc.? There will be difficulty applying the definition to facilities without this detail. Suggest rewording to: All transformers (including auto-transformers, voltage regulators, and phase angle regulators and all windings) with primary and secondary terminals operated at or above 100kV, and generator step-up (GSU) transformers with one terminal operated at or above 100KV, unless excluded by E1 or E3.
No
In deference to direction given to the Drafting Team, Inclusion I2 should remove the reference to the Statement of Compliance Registry Criteria. The current language induces circular arguments without a true governing document. The definition should drive what appears in the registration criteria. I2 should be revised to read: "Generating resources with a gross nameplate rating of 20MVA or greater, or generating plant/facility connected at a common bus, with an aggregate nameplate rating of 75MVA or greater and is directly connected to a BES Element." This is consistent with the proposed I2 and the current Compliance Registry Criteria. Ultimately the definition should be the governing document and provide the details of what generation should be included. It is understood that Phase 2 of this project will address this.
No
Eliminating I3 should be considered based on the availability and performance expectations of black start resources being ensured by existing standards, and unless they meet the BES definition under the I2 inclusion they do not have any reliability impact on BES operation. If I3 is retained, suggest rewording Inclusion I3 to read as follows: Black start resources material to and designated as part of the Transmission Operator's restoration plan.
No
Suggest the term "common point" needs clarification and/or definition (is risk of single mode failure intended, i.e. where all the resources could be lost for a single event?). Suggest the following wording: "connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 KV or above." Dispersed power producing sources such as wind and solar should not be included as BES elements because of the variable and intermittent nature of these resources. If these dispersed power producing resources had dedicated energy storage facilities only then that could make them BES elements. Generally the collector systems for these resources (from the bulk transmission system reliability perspective) do not differ from distribution systems which are excluded from the BES.
No
Technical studies need to be conducted to confirm reactive resource impacts on the reliability of the BES. The inclusion of reactive resources is a significant expansion of the current BES definition and therefore requires technical justification for inclusion. Inclusion I5 as written is confusing with a reference to Inclusion I1 in the definition. Suggest removing references to reactive resources from Phase 1 until technical justification can be demonstrated (as part of Phase 2).
No
E1 can be simplified by not dividing in three subsets of a, b and c. The end result is that a Radial system is excluded if it does not have more than 75 MVA aggregate non-retail generation. There

seems to be an error with reference to I3. Black start unit paths are not designated as BES and were taken out in this version under I3 so E1 and E3 should not reference I3. This contradicts the radial or LN exclusion from I3. Suggest deleting the reference to I3 in E1 and E3 because this reference is in contradiction to I3. I3 does not require a path to be BES, but it implied that a radial cannot be excluded if there is a black start unit on the radial. Further clarification is needed to the language in the Note referring to the "Normally Open switch". The E1 reference Note should be re-worded to state "Radial systems shall be assessed with all normally open switching devices in their open positions." Explanatory figures should be included to illustrate the system configurations addressed. Black start unit paths must be considered in the construction of E1. In E1c, what is meant by "non-retail"?
No
Why are references to Balancing Authority, Generator Owner, and Generator Operator included in E2 which is part of the BES definition? The wording of Exclusion E2 should be consistent with the Statement of Compliance Registry Criteria in Section III.c.4.
No
What is the technical justification for 300kv and higher? Local Network is capitalized (network not capitalized at the beginning of E3) throughout E3, yet it is not defined in the NERC Glossary. The installed generation limit in a Local Network should be addressed in Phase 2. Any studies supporting E3 should be made available.
No
Consider using other wording to replace "retail". The statement "owned or operated by the retail customer" is confusing and arguably inaccurate and should be revised. Refer to comments related to reactive resources for Question 6 regarding Inclusion I5. Retail and non-retail generation should be defined.
Yes
Technical bases have not been provided for the proposed definition of the BES. Additionally, the cost impacts have not been assessed and weighed against the potential benefits of this proposal. There is confusion arising from the construction and interactions of the Inclusion, and Exclusion sections. System diagrams, put in a separate guidance document, would help in understanding. The situation of using Exceptions to understand Exclusions must be avoided. Suggest consider incorporating Inclusions directly, and leave the Exclusions as is format wise. The Implementation period discusses a 24 month timeframe(the Order suggests 18) from when the standard becomes effective to begin Compliance obligations. If construction is required to become compliant or meet performance requirements with standards, or CIP Version 5 standards increase the amount of BES assets this will be insufficient when considering budgeting, designing, siting requirements, and permitting. Concern exists over the paradigm that the definition should "mirror" the NERC Compliance Registry Criteria regarding who is registered. Some RSC members believe the definition should drive any changes to the registry criteria and not the criteria perpetuating the thresholds in the definition. However, there is a need to confirm that Phase 2 of this project will address this. The Inclusions and Exclusions listed need clarifications and perhaps diagrams and accompanying guidelines to clarify and explain the intent.
Individual
Thomas C. Duffy
Central Hudson Gas & Electric Corporation
Yes
Yes
Yes
Yes
Yes

Yes
Yes
Yes
No
Under the proposed definition, clause E3.b. stipulates that 'power only flows into the Local Network (LN): The LN does not transfer energy originating outside the LN for delivery through the LN.' Clearly, this is a bright line. The Local Network Exclusion document, however, describes that 'power flow "shifts"' of 'negligible fraction' are acceptable. Further, the document acknowledges that parallel flows through the LN, 'as governed by the fundamentals of parallel circuits' will occur. Finally, the document goes on to exhibit that flows through the LN, however minimal, will result from both power transfer distribution factor (PTDF) and line outage distribution factor (LODF) analysis. If this is the case, what bright line criterion should be applied for this Exclusion Principal if no maximum PTDF and/or LODF are specified?
Yes
Yes
Due to the movement to a phased BES definition development process and assuming the definition is approved as proposed, there is an urgent need for NERC to provide clear guidance to Registered Entities regarding how to proceed with facilities and address changes to the NERC Compliance Registry registration obligations brought in/on by the application of the new definition. The problem stems from a likely scenario whereby the affected Registered Entities may be faced with an Implementation Plan and an Exception Request Procedure which must be completed prior to the completion of the Phase II definition development process. If that is the case, many Registered Entities will be confronted with either (1) spending large amounts of human and financial resources, not yet acquired, to address facilities/procedures necessary to address possible new compliance obligations only to find their efforts rendered unnecessary by the results produced in Phase II or, (2) waiting until the results of Phase II are provided and risking being found non-compliant and subject to substantial penalties in the future. Neither option can be viewed as a desirable, or for that matter, an acceptable position to be placed in.
Group
Charles Long
Entergy Services, Inc.
Yes
Yes
Yes
We are concerned that the generator MVA limits are too low and strongly support addressing this issue in Phase 2 of this project.
Yes
Yes
Yes
Yes
The SDT needs to clarify what is meant by "non-retail generation." Is this what is commonly referred to as "customer owned" or "behind-the-meter" generation?
Yes

Yes
The term "non-retail generation" in E3a should be changed to simply "generation."
Yes
No
The comments expressed herein represent a consensus of the views of the above-named members of the SERC EC Planning Standards Subcommittee only and should not be construed as the position of SERC Reliability Corporation, its board, or its officers”
Individual
Manny Robledo
City of Anaheim
No
The City of Anaheim recommends either changing the E1 (b) language back to that of the previous BES definition draft, i.e. 75 MVA or above connected at 100 kV or above, or limit the amount of generation allowed within a Radial Element or Local Network to 300 MVA or less, which is the amount of uncontrolled load loss that constitutes a reportable "disturbance" pursuant to EOP-004 and DOE Form OE-417. If DOE and NERC do not consider a 300 MW uncontrolled loss of load a reportable event, then why would the potential loss of a 75 MVA of non-critical generator connected at 69 kV make a Radial Element or Local Network critical to the reliability of the BES? The current ERO Statement of Compliance Criteria does not require GO/GOP registration for generation connected below 100 kV as long as it's not critical to the reliability of the BES, i.e. black start, etc., even if the amount of generation is greater than 75 MVA. There is good reason for this because the mere loss of 75 MVA generator would not affect the reliability of a system as big as the Western Interconnection, at all, and a fault at say 69 kV would have sufficient impedance not to affect the BES from an electrical perspective.
Yes
Yes
Yes
Yes
This is OK because the 75 MVA is connected at 100 kV or above.
Yes
No
The City of Anaheim recommends either changing the E1 (b) language back to that of the previous BES definition draft, i.e. 75 MVA or above connected at 100 kV or above, or limit the amount of generation allowed within a Radial Element or Local Network to 300 MVA or less, which is the amount of uncontrolled load loss that constitutes a reportable "disturbance" pursuant to EOP-004 and DOE Form OE-417. If DOE and NERC do not consider a 300 MW uncontrolled loss of load a reportable event, then why would the potential loss of a 75 MVA of non-critical generator connected at 69 kV make a Radial Element or Local Network critical to the reliability of the BES? The current ERO Statement of Compliance Criteria does not require GO/GOP registration for generation connected below 100 kV as long as it's not critical to the reliability of the BES, i.e. black start, etc., even if the amount of generation is greater than 75 MVA. There is good reason for this because the mere loss of 75 MVA generator would not affect the reliability of a system as big as the Western Interconnection, at all, and a fault at say 69 kV would have sufficient impedance not to affect the BES from an electrical perspective.
No
Again, 75 MVA should be increased to 300 MVA in E2 for the reasons stated in response to Question 7.

No
Again, 75 MVA should be increased to 300 MVA in E2 for the reasons stated in response to Question 7.
Yes
No
Individual
Deborah J Chance
Chevron U.S.A. Inc.
Yes
Yes. Very good progress was made in the process. The initial overly broad language was inadvertently including parties that are not necessary to meet the NERC and FERC goals. The current language has clarified some of the ambiguities.
Yes
No
It is not logical to allow an aggregate of 75 MVA at a single site for multiple generators while maintaining 20 MVA for a single generator. Further, if a party exceeds export of 75 MVA to meet an emergency condition on the grid, it should not be a triggering event for BES definition. Parties should be concerned with keeping the grid operational rather than the adverse effect of exceeding 75 MVA.
Yes
Yes
Yes
Yes
This is very important exclusion for an entity operating in remote areas of the country that provides distribution service to third parties where utilities are unable or unwilling to serve. While the distribution is at a low voltage, the power was initially received by the operating entity at a high voltage.
Yes
This is a very important exclusion for Combined Heat and Power facilities that utilize large amounts of steam and power, and secure and/or provide their own operating reserves.
Yes
This provision complements E1 in defining the difference between distribution and transmission
Yes
No
Individual
Alice Ireland
Xcel Energy
In general, Xcel Energy supports the changes to the core definition of Bulk Electric System. Some additional clarification may be required as suggested below under the individual Inclusions or Exclusions.

No
Xcel Energy believes that this inclusion is still a little vague and could use some clarification. For instance, if a wind farm has an aggregated capacity greater than 75 MVA (and therefore meets Inclusion I4) exactly what facilities are included as part of the BES, every turbine, all distribution transformers and cables, etc. If all equipment is included, what level of detail is required of this BES facility for modeling purposes, and who is responsible for modeling this system. Or, is the intent to only include the facilities at the common point of connection, whereby the facility could be modeled as 1 large facility?
No
Xcel Energy believes that some more definition is required to clarify the intent of the note under Exclusion E1 related to normal open switching device. A direct statement would remove any ambiguity, such as "a normally open switch in a system that could be interconnected or experience loop flows will be considered (BES/non BES)".
Individual
Edwin Tso
Metropolitan Water District of Southern California
Yes
Metropolitan Water District of Southern California ("MWDSC") generally supports the core definition of the Bulk Electric System as proposed. However, some of the proposed Inclusions and Exclusions need to be clarified as identified in questionnaires #6 and #10 below.
Yes
Yes
Yes
Yes
No
Inclusion 5 should be changed to be consistent with the core definition and to clarify Reactive Power devices. Under I5, the additional phrase "or through a dedicated transformer with a high side voltage of 100 kV or higher," appears to conflict with the core definition's phrase "and Real Power and Reactive Power resources connected at 100 kV or higher". For example, if you have a device connected to a 69Kv system which is used solely for an end-user's load, but the 69kv system is transformed up to a 115kV system, such device could be included as BES or you would have to define what is meant by "dedicated. If Reactive Power is meant to agree with the definition under NERC's Glossary of Terms, there should be consistency and less verbiage. MWDSC also agrees with WECC's comment that there should be some minimum threshold for Reactive Power devices similar to that identified for generating resources in Inclusion 2. MWDSC recommends that Inclusion 5 be changed as follows: I5 - "Reactive Power devices dedicated to support the BES that are connected at 100kV or higher, or through a transformer that is designated in Inclusion I1."
Yes
Yes
Yes

No
Exclusion 4 appears to limit the devices just to retail customers. However, any end-user load, including wholesale or retail, should be included. NERC's Glossary of Terms uses the phrase "end-use customer", not retail customers to describe loads. MWDSC recommends that Exclusion 4 be changed as follows: E4 - Reactive Power devices owned and operated by an end-use customer solely for its own use.
No
Individual
Greg Rowland
Duke Energy
Yes
No
For clarity regarding 3 and 4 winding transformers, it should say "primary and at least one secondary terminal operated at 100 kV or higher.
Yes
Yes
Yes
No
Need to add the exception for exclusions under E1 or E3, and also reword to exclude devices connected to a transformer winding less than 100 kV unless that is the only connection to that winding. Suggested rewording of I5 : "Unless excluded under Exclusions E1 or E3, static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage or 100 kV or higher, or through a transformer winding less than 100 kV that is designated in Inclusion I1 if the winding does not have any circuits or load connected to it." This would eliminate having to include a capacitor connected to the 69 kV winding of a three winding BES transformer such as 230/138/69 kV if that winding had other connections such as 69 kV circuits. The voltage threshold of 100 kV and above should capture devices connected to 100 kV or higher windings of transformers designated in Inclusion I1.
Yes
Yes
Yes
Yes
No
Individual
David Proebstel
Clallam County PUD No.1
Yes
The Public Utility District No. 1 of Clallam County ("CLPD") believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. CLPD therefore strongly supports the new definition, although our support is conditioned on: (1) a workable

Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. CLPD strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, CLPD supports use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. § 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate – "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. § 824o(a)(4) – will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. § 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). For similar reasons, Clallam believes use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. Clallam recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, Clallam agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process.As long as Phase II proceeds expeditiously, Clallam is prepared to support the BES definition as proposed by the SDT. While Clallam strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our II proceeds expeditiously, Clallam is prepared to support the BES definition as proposed by the SDT. While Clallam strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, Clallam believes a 200-kV threshold would be more appropriate for WECC than a 100-kV threshold. In addition, a 200-kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no

technical analysis to support this view is therefore incorrect. That being said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, Clallam will support the SDT's proposal and will not further pursue its claims regarding the 200-kV threshold.

Yes

We support the SDT's changes to the first Inclusionbecause it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As we understand it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100 kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. We believe the SDT's intent would be clarified by adding a sentence at the end of Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100 kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. Many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. As the Phase II process moves forward, we commend to the SDT the extensive work performed on the point of demarcation question by the WECC BESDTF. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2."

Yes

CLPD supports the changes made in Inclusion 2 and believe that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support that aspect of the SDT's proposal for a Phase II of the BES Definition process that would examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach becauseif the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less due process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC ¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase II through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established,

they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little due process. CLPD believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, § 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase II should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes that generation be included in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase II but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100 kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating unitsthat are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance RegistryCriteria.. The "materiality threshold" is intended to refer to the generator threshold developed in Phase II. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase II without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase II process based upon the technical analysis planned for Phase II, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase II is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase II are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase II on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability

Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase II under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100 kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100 kV or above."

Yes

CLPD supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.

Yes

CLPD supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e, "resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," which is discussed in more detail in our response to Question 3. This language, or some equivalent, will preserve the SDT's ability to revise the 75 MVA threshold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a LN. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be established by the SDT in Phase II. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.

No

CLPD has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity

threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Finally, CLPD believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase II process.

Yes

CLPD continues to support the radial system exclusion, which is necessary as a legal matter, because, for example, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term "transmission Elements" in the initial paragraph should be changed to "Elements." Radial systems are not transmission systems and including the word "transmission" in the Radial System exclusion is therefore unnecessary and confusing. (2) Subparagraph (b) of Exclusion 1 refers to"generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). We urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," discussed in more detail in our response to Question 3. This language, or some equivalent, will preserve the SDT's ability to revise the 75 MVA threshhold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. (3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshhold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC's Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted. (4) The "Note" as drafted by the SDT indicates that "a normally open switching device between radial systems" will not serve to disqualify the Radial from exclusion under Exclusion 1. As noted above, CLPD strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d), rather than a note, because treatment as a "note" suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: (d) Normally-open switching devices between radial elements as depicted and properly identified on system one-line diagrams does not affect this exclusion. This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.

Yes

CLPD supports the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, CLPD urges the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term "Qualifying Aggregate Generation Resources" or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System

or LN.

Yes

CLPD strongly supports the categorical exclusion of Local Networks ("LNs") from the BES. We believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement, discussed in our response to Question 1, to exclude all facilities used in the local distribution of electric power. LNs are, of course, probably the most common form of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers will ultimately benefit from the path chosen by the SDT. CLPD also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, CLPD supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." Clallam supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. CLPD believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making a "group of contiguous transmission Elements operated at or above 100 kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100 kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. CLPD also believesthat subparagraphs (a) and (b) are redundant in the sense that whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LDN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system – power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another

way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to be the equivalent of generation that is located behind the retail meter, usually but not always owned by the customer and used to serve the customer's own load. We therefore suggest that the SDT replace the term "non-retail generation" with "generation located behind the retail customer's meter." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. Finally, CLPD believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Teamconcluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the

assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN."
Yes
Yes, CLPD supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
No
CLPD extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. CLPD strongly supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, CLPD is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that CLPD specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. CLPD supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to come into compliance with newly-applicable Reliability Standards. CLPD also supports the 24-month transition period for the reasons laid out by the SDT.
Individual
Richard Salgo
NV Energy
Yes
The core definition is simpler than the prior version. We support the addition of the last sentence regarding the exclusion of facilities used in the local distribution of electric energy.
Yes
The changes made to I1 (Transformers) appropriately resolves several of the industry concerns about three-winding transformers as well as an inadvertent use of the word "and" rather than "or".
No
While we do not agree with making specific reference and linkage to the generator thresholds of the SCRC, it is understood that a timely justification of any alternative threshold was not possible. It is of paramount importance that the subject of generation thresholds be addressed in subsequent development of this Definition. We are of the opinion that generation ought to be considered as a "user" of the BES, not necessarily a part of the BES, similar in concept to the way Load uses the BES. Using this concept, the BES would be restricted to the "wires" type facilities. Standards would nevertheless be applicable to generators that use the BES, so no gap in reliability would exist.
Yes
Yes
Yes
The SDT has appropriately captured the necessary inclusion of high voltage transmission reactive

resources.
Yes
There may be an opportunity to consolidate the sub-items of E1 into a single inclusion statement in order to simplify this exclusion designation. We propose the following replacement option: "E1 - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher and serves any combination of load and/or generation, provided that the generation resources are not identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating)."
Yes
Yes
Yes
No
Group
Ian Grant
Tennessee Valley Authority
Yes
TVA agrees to the clarifying changes to the core definition in general; however, we maintain that 200kV and above is the correct bright line for the Bulk Electric System, and requests that the Phase 2 for the project use 200kV and above or develop a transmission voltage and/or an MVA threshold that is technically based.
Yes
TVA agrees in general with the revisions to the specific inclusions for transformers in I1; however, we believe the low side transformer voltage level should be 200kV or above, and requests that the Phase 2 for the project use 200kV and above or develop a transmission voltage and/or an MVA threshold that is technically based.
Yes
TVA agrees in general with the revisions to I2 for generation; however, we maintain that 200kV and above is the correct bright line for generation connected to the Bulk Electric System, and requests that the Phase 2 for the project use 200kV and above or develop a transmission voltage and/or an MVA threshold that is technically based.
No
TVA agrees with the changes but believe clarity would be added by changing the word "identified" to "designated".
Yes
No
TVA feels that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVAR (gross aggregate nameplate rating) connected through a common point at a voltage of 200kV or above, and requests that the Phase 2 for the project use 75 MVAR connected at 200kV or above or develop a transmission voltage and/or an MVAR threshold that is technically based.
Yes
TVA suggests the wording "non-retail generation' should be clarified with an explanation of why it is used in this exclusion.
No
Clarification needs to be provided for what is meant by E2 (ii), regarding generation on the customer's side of the retail meter; otherwise we have trouble developing a position on this question.
No
TVA would agree with the exclusion if the wording of the exclusion includes the following phrase (in

italics) added at the end of E3 b): "Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN under normal operating conditions; and"
Yes
Yes
The definition of the BES is referenced in several existing standards and the Statement of Compliance Registry Criteria. TVA is concerned with this revised definition's impact on entity registrations, i.e., how will the revised definition be integrated into the Compliance Registry Criteria. The implementation plan should include how the integration is going to occur. The 24 month period for new facilities that are to become BES elements as a result of this definition is very important to successful implementation of the definition. An period shorter that 24 months would be very problematic for the industry.
Individual
Jerome Murray
Oregon Public Utility Commission Staff
No
Reference to NERC Statement of Compliance Registry Criteria (SCRC) needs to be eliminated from the BES Definition. This circularity must be eliminated. Proposed revised language is: "I2 - Generating resource(s) with a gross individual nameplate rating greater than 20 MVA or with a gross aggregate nameplate rating greater than 75 MVA including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above."
Yes
Yes
Yes
Individual
Mary Jo Cooper
Z Global Engineering and Energy Solutions
Yes
We support these changes however feel that further clarification needs to be made regarding the E1 Note. This note currently states "Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion" This note is not clear. We recommend that the note is rewritten to be clear that a normally open switching device should not be viewed as normally closed as the regions are currently doing. Possible language: "Note: A normally open switching device between radial systems, as depicted on prints or oneline diagrams, for example, does not classify the two or more radial lines as a loop line. The exclusion will still apply."}"
Yes
Yes
Yes

Yes
Yes
Yes
As stated in comment one. I recommend the Note is rewritten: "Note – A normally open switching device between radial systems, as depicted on prints or oneline diagrams, for example, does not classify the two or more radial lines as a loop line. The exclusion will still apply."
Yes
Yes
Yes
No
Individual
Eric Salsbury
Consumers Energy
Yes
Yes
Yes
Yes
Yes
We agree, but would like further clarification on what wind farm equipment (e.g., collector systems or other equipment) would be considered a part of the BES. Is the system designed for aggregating capacity considered to be part of the dispersed plant or part of the BES.
No
This inclusion appears to pull small generators that have an AVR that are connected to 138 kV into the BES. These generators are primarily intended to provide real power.
No
In general we agree, but believe the word "transmission" should be removed from "A group of contiguous transmission Elements…"
Yes
No
In general we agree, but believe the word "transmission" should be removed from "A group of contiguous transmission Elements…"
Yes
No
Individual
Tracy Richardson

Springfield Utility Board
Yes
SUB particularly agrees with the addition of, "This does not include facilities used in the local distribution of electric energy." to the BES draft definition.
Yes
SUB supports and appreciates the change in language from, "unless excluded under Exclusions E1 and E3" to "Exclusion E1 or E3". This makes it clear that Radial System or Local Network transformers should not be considered BES facilities, regardless of operating voltage.
No SUB comment as this is not currently applicable to SUB's operations.
No SUB comment as this is not currently applicable to SUB's operations.
No SUB comment as this is not currently applicable to SUB's operations.
Yes
SUB agrees in general, but does not agree that ALL reactive resources should be automatically included in the BES Definition. For example, is a local network (100 kV or above), which is otherwise excluded, but has a reactive device used for power factor correction (100 kV or above), still excluded? There are a significant number of reactive resources that are used to serve systems that provide service primarily to load, with either no or a minimal amount of generation. If this section is included, the Exclusion language needs to be modified to exclude those reactive resources from the BES that are radial serving only load or local networks that serve load (with less than 75MVa of generation). SUB does not agree with the language referring to only those "retail customer" reactive power devices for Exclusion E.4. This is too narrow and does not accurately reflect the use of reactive power devices installed by registered entities when retail customers do not "fix" their reactive power issues on their own. SUB recommends that the language in I5 and E4 be consistent, and that "retail customer" should include Registered Entities as well as end users. This present language is overly broad and, absent modifications to the BES definition, will generate a significant amount of paperwork. SUB suggests the following language change: I5 –Static or dynamic devices dedicated to supplying or absorbing Reactive Power that: a)are connected at 100 kV or higher and are not part of a radial system or area network that are excluded from the BES, or; b)are connected through a dedicated transformer with a high-side voltage of 100 kV or higher and are not part of a radial system or area network that are excluded from the BES, or; c)are connected through a transformer that is designated in Inclusion I1 and are not part of a radial system or area network that are excluded from the BES .
Yes
SUB supports a radial system exclusion.
No SUB comments as this is not currently applicable to SUB's operations.
Yes
SUB strongly supports the exclusion of Local Networks from the BES. SUB particularly agrees with the addition of, "LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to customer Load and not to accommodate bulk power transfer across the interconnected system." language to the draft E3 Exclusion, as well as the LN characterization being more clearly defined. SUB is concerned that the E3 Exclusion does not specify that these power flows would be "under normal operating conditions" and specify if all power flow is considered. SUB recommends that unscheduled power flow should not be considered, but that it is applicable only to scheduled power flow. While SUB supports the exclusion of LNs from the BES, we believe there is additional work that needs to done regarding the Local Network Exclusion Technical Justification. Without specific parameters, determining inclusions and exclusions will be left to the discretion of too many. This will create ambiguity and inconsistency of application.
Yes
Reactive power devices used to serve radial networks or Local Networks are often owned and operated by the registered entity (not the "retail customer") to address Area Network – wide reactive power issues. This language should read: "E4. Reactive power devices that are within a radial system excluded under E1 or within a local network excluded under E3" If the current draft language is left as it is, there will likely be a lot of unnecessary paperwork to exclude reactive power devices within radial system or local networks from the BES through the exclusion process. SUB suggests that the language in the E4 Exclusion be consistent with that in the I5 Inclusion.

Yes
When submitting BES Definition comments, SUB would suggest a "not-applicable", "no-impact" or "abstain" option in addition to "yes" or "no". In some cases, the draft language has no impact on an entity's system, yet that entity's selection of "yes" or "no" may imply agreement or disagreement rather than expressing lack of applicability. This could skew the perception of agreement or disagreement, and create a potential issue for those who are directly impacted by the changes.
Individual
Kerry Wiedrich
Mission Valley Power
Yes
Mission Valley Power - We agree with the changes. We must point out that the overall flow, or how one proceeds through the inclusions and exclusions is not clear. Can an item that meets an inclusion be subsequently excluded? If so, this needs to be explicitly stated. So far, we only have the flow chart produced by the ROP team that indicates otherwise (http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf). This was made evident by the question at the 9/28 webinar regarding an I5 capacitor on an E3 local network. The questioner thought the capacitor was BES per I5, but the answer was that it was excluded per E3. We can find no support for the answer given. The listing of specific exclusions within I1 (exception proves the rule) argues for questioner's stance that the capacitor is BES as written. Also, if included items could subsequently be excluded, they would be no different from any other item that met the voltage threshold of 100kV. There would be no need for any of the inclusions if all possible outputs from the inclusion tests go to the same exclusion test inputs. We strongly support the addition of the language regarding local distribution facilities, as it matches congressional intent to leave the regulation of these facilities to state and local authorities.
Yes
Mission Valley Power - Comments: Mission Valley Power strongly agrees with this inclusion as written. It is consistent with the recent PRC-004 and PRC-005 interpretation and the NERC definition of Transmission. We believe the recent changes to this inclusion add clarity.
No
Mission Valley Power - Referencing the Criteria which in turn references the BES definition creates a circular definition. Mission Valley Power encourages the adoption of specific thresholds that are technically justified. We also note that the Criteria and its revisions do not go through the standards development process, so that thresholds may change with little warning and without triggering an implementation plan for facilities that may be swept into the BES as a result.
Yes
Mission Valley Power - We agree with the removal of the voltage language, since the inclusions and exclusions apply only to equipment over 100 kV.
Yes
Mission Valley Power agrees both with the inclusion and with the revised language. The revised language removes the need to provide a separate definition for "Collector System".
No
Mission Valley Power - While we agree that reactive devices of sizable capacity connected at 100 kV or higher are needed for BES reliability, Mission Valley Power fails to see why this inclusion is needed as they are already captured by the 100 kV threshold. We would propose instead to eliminate this inclusion and substitute an exclusion for smaller capacity devices. If the SDT really believes an inclusion for reactive devices is needed, we suggest the SDT provide a technically justified capacity limit within the inclusion. In addition we suggest also including the phrase "…unless excluded under Exclusion E1, E2 or E4" similar to that in I1. Please see the answer to Q1 above Q10 below.
No
Mission Valley Power notes that a new term has been introduced, "non-retail generation," with no definition provided. The answer to the question on this during the 9/28 webinar indicated that non-retail generation was behind the retail customer's meter. We can see no reason why the net-metered PV systems should count toward the aggregate limit (exceeding the limit means no exclusion) while a non-blackstart thermal plant doesn't (the radial system is excluded if any amount of load is present).

We have also heard the SDT meant just the opposite of what was stated in the webinar. We ask that a reasonable definition for non-retail be provided within the BES definition document. We strongly agree that radial systems should be excluded and that the presence of normally open switching devices between radial systems should not cause them to be considered non-radial. Such a result would cause the removal of these devices to the detriment of the local level of service. We note that the singular "A normally open switching device" is used and suggest that an allowance be made for the possibility of multiple devices. "Normally open switching devices…"
Yes
No
Mission Valley Power - : We strongly agree that local networks should be excluded, since they act much like the radial systems excluded in E1 while providing a higher level of service to customers. These networks should not be discouraged in the name of reliability. We again object to the introduction of the new confusing term "non-retail generation" with no definition provided.
No
Mission Valley Power - : We strongly agree that local networks should be excluded, since they act much like the radial systems excluded in E1 while providing a higher level of service to customers. These networks should not be discouraged in the name of reliability. We again object to the introduction of the new confusing term "non-retail generation" with no definition provided.
Yes
Mission Valley Power - In order to help meet the fast approaching target date, Mission Valley Power will be voting affirmative in this ballot, with the hope these comments will be addressed in Phase II. If the ballot should fail, please address these comments in this phase. Thanks to the team for their good work.
Individual
Denise M. Lietz
Puget Sound Energy
Yes
This draft of the defintion is very much improved. We appreciate the work of the Standard Development Team and its efforts to increase the clarity of this important definition. For additional clarity, the first paragraph should read "Unless specifically excluded under the list of exclusions below or included or excluded through the Procedure for Requesting and Receiving an Exception from the Application of the NERC Definition of Bulk Electric System, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher, including those Transmission Elements described in the list of inclusions below." The sentence "This does not include facilities used in the local distribution of electric energy." should be removed from the first paragraph. Because this issue is specifically addressed in exclusions E1 and E3, the inclusion of this general sentence here is unnecessary and could even be ambiguous (raising the question of whether additional Transmission Elements might be excluded even if not described in E1 or E2).
Yes
Inclusion I1 references primary and secondary terminals of transformers, while Inclusions I2 and I5 reference the high-side of transformers. The SDT should consider using consistent terminology throughout the definition for this concept.
Yes
The term "per" should be replaced by "greater than the levels specified for a Generator Owner/Operator in". For a definition of this importance, the term "per" is too vague.
Yes
Yes
Yes
Yes

The language addressing generation resources in sections b and c of E1 could be more clear (an example of clearer language is section a of E3). At the least, the language in these two sections should be revised to read "... includes generation resources that are not identified in Inclusion I3 and that do not have an aggregate capacity exceeding 75 MVA ...".
Yes
Yes
Yes
No
Individual
Chris de Graffenried
Consolidated Edison Co. of NY, Inc.
No
• Please clarify the phrase "facilities used in local distribution" as used in the 'core' BES Definition. What is the purpose of this phrase in the BES Definition? How does the SDT propose that an entity demonstrate that a facility is used in local distribution? • Does this phrase "facilities used in local distribution" establish a jurisdictional boundary which takes precedence over all other parts of the BES Definition and Designations? • If this phrase does not take precedence over the remainder of the BES Definition and Designations, i.e., perhaps only over some parts BES Definition and Designations, or over none of the BES Definition and Designations, then what was the drafting teams understanding of and intent with regard to "facilities used in local distribution?" • What are Entities supposed to do with respect to "facilities used in local distribution" identified by State and Provincial regulators? • How has NERC assured that the posted BES Definition and Designations meet the intent of the Commission to establish an exemption process that avoids identifying "facilities used in local distribution" as part of the BES (¶37 and ¶39 below)? Recommendations: If "facilities used in local distribution" are to be excluded on jurisdictional grounds, then • The last sentence in the Core definition should be revised as follows: "This does not include facilities used in the local distribution of electric energy, as identified by a jurisdictional governmental authority." • We strongly recommend that the BES SDT adopt the FERC Seven Factor test as a proven basis for establishing the boundary between jurisdictional Transmission and non-jurisdictional "facilities used in local distribution." Supporting Discussion: In FERC Order 743-A the Commission stated 69. We agree … that the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes" By adopting this FERC Seven Factor test, the BES SDT will have fulfilled its obligation to respond to these FERC mandates relating to "local distribution" as stated in FERC Order 743: "Determining where the line between 'transmission' and 'local distribution' lies," (¶37), "To the extent that any individual line would be considered to be local distribution, that line would not be considered part of the bulk electric system" (¶39), to establish "[A] means to track and review facilities that are classified as local distribution to ensure accuracy and consistent application of the definition" (¶119). Supporting References: FERC Order 743 observed some believe that "the Commission's [and by extension NERC's] proposal exceeds its jurisdiction by encompassing local distribution facilities that are not necessary for operating the interconnected transmission network." [FERC Order 743, ¶27.] In this regard FERC Order 743 states: At ¶37, Congress specifically exempted "facilities used in the local distribution of electric energy" from the definition. … Determining where the line between "transmission" and "local distribution" lies, which includes an inquiry into which lower voltage "transmission" facilities are necessary to operate the interconnected transmission system, should be part of the exemption process the ERO develops. And at ¶39, To the extent that any individual line would be considered to be local distribution, that line would not be considered part of the bulk electric system. And at ¶119, … [W]e believe that it would be beneficial for the ERO in maintaining a list of exempted facilities, to consider including a means to track and review facilities that are classified as local distribution to ensure accuracy and consistent application of the definition. Similarly, the ERO could track exemptions for radial facilities. [Emphasis added] Note that in ¶119 the Commission clearly distinguishes between "radial facilities" and "local distribution" just as it

differentiates between jurisdictional radials and non-jurisdictional local distribution facilities in footnote 82: 82 As discussed further below, the Commission uses the term "exclusion" herein when discussing facilities expressly excluded by the statute (i.e., local distribution) and the term "exemption" when referring to the exemption process NERC will develop for use with facilities other than local distribution that may be exempted from compliance with the mandatory Reliability Standards for other reasons. FERC Order 743-A suggests: 69. We agree with Consumers Energy, Portland General and others that the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes …"

No

We suggest using wording from the Statement of Compliance Registry Criteria: Any generator regardless of size which is material to … [Ref: Statement of Compliance Registry Criteria, III.c.3-Blackstart] Define "material to" as a generator listed as a necessary part of the TOP-defined minimum system to restore the BES. This term "material to" should exclude Blackstart-capable generators not necessary for BES restoration or only used for local distribution system restoration. Wording Recommendation: Following the words "identified in" add the words "and material to" so that the new Inclusion reads: I3 - Blackstart Resources identified in and material to the Transmission Operator's restoration plan.

No

Normally, static and dynamic devices supply Reactive Power (VARs) to or absorb VARs from the surrounding system. By their nature, VARs do not travel far, e.g., miles. So, VARs by their nature only produce local impacts. Please explain the meaning of the phrase "dedicated to supplying or absorbing Reactive Power," with emphasis on explaining why the term "dedicated" was employed? How does an Entity determine if a particular static or dynamic device is "dedicated" to the BES? What Guidance documents can the BES SDT provide describing "dedicated" static and dynamic devices?

Yes

Please define the term "non-retail generation."

Yes

Con Edison shares the concerns raised by the State of New York Department of Public Service (NYPSC) in its September 12, 2011 letter to NERC Chairman Anderson. The NYPSC expressed concern that the proposed BES Definition "would impose significant costs, costs that New York ratepayers will be expected to bear, with little or no increase in reliability benefits." The BES definition is being revised without an assessment of costs or benefits. The SDT is encouraged to work with NERC Staff to perform such an assessment prior to providing the revised BES definition to the NERC Board. Regional Entities share this concern with cost effectiveness. In NPCC, the Board of Directors directed NPCC Staff to develop a methodology to assess the cost and benefit of Standards. This NPCC Cost Effectiveness Analysis Procedure (CEAP) establishes a process to address those concerns. The CEAP introduces two assessments of the estimated industry-wide costs of requirements into that Standard's development process. The procedure adds supporting information and background for the NPCC stakeholders, ballot body and the NPCC Board of Directors. Moreover, during a 2010 FERC technical conference the Commission recognized that "reliability does not come without cost." As a result, significant interest was expressed in development of a process to identify the costs for draft reliability Standards and the ability of the proposed standards to achieve the reliability objective(s) sought in a cost effective manner. We understand that it is a NERC priority to define adequate level of reliability and use it as the basis for determining the cost effectiveness of a proposed rule. While this has not yet been finalized, NERC could use this proposed standard as a test case for determining the relationship between costs and benefits.

Individual

Gail Shaw

Tillamook PUD
Yes
We strongly support the addition of the language regarding local distribution facilities, as it matches congressional intent to leave the regulation of these facilities to state and local authorities.
Yes
Tillamook PUD strongly agrees with this inclusion as written. It is consistent with the recent PRC-004 and PRC-005 interpretation and the NERC definition of Transmission. We believe the recent changes to this inclusion add clarity.
No
Referencing the Criteria which in turn references the BES definition creates a circular definition. Tillamook PUD encourages the adoption of specific thresholds that are technically justified. We also note that the Criteria and its revisions do not go through the standards development process, so that thresholds may change with little warning and without triggering an implementation plan for facilities that may be swept into the BES as a result.
Yes
Tillamook PUD agrees with the removal of the voltage language since the inclusions and exclusions only apply to equipment over 100 kV.
Yes
Tillamook PUD agrees both with the inclusion and with the revised language. The revised language removes the need to provide a separate definition for "Collector System".
No
While we agree that reactive devices of sizable capacity connected at 100 kV or higher are needed for BES reliability, Tillamook PUD fails to see why this inclusion is needed as they are already captured by the 100 kV threshold. We would propose instead to eliminate this inclusion and substitute an exclusion for smaller capacity devices. If the SDT really believes an inclusion for reactive devices is needed, we suggest the SDT provide a technically justified capacity limit within the inclusion. In addition we suggest also including the phrase "…unless excluded under Exclusion E1, E2 or E4" similar to that in I1.
No
Tillamook PUD notes that a new term has been introduced, "non-retail generation," with no definition provided. The answer to the question on this during the 9/28 webinar indicated that non-retail generation was behind the retail customer's meter. We can see no reason why the net-metered PV systems should count toward the aggregate limit (exceeding the limit means no exclusion) while a non-blackstart thermal plant doesn't (the radial system is excluded if any amount of load is present). We have also heard the SDT meant just the opposite of what was stated in the webinar. We ask that a reasonable definition for non-retail be provided within the BES definition document. We strongly agree that radial systems should be excluded and that the presence of normally open switching devices between radial systems should not cause them to be considered non-radial. Such a result would cause the removal of these devices to the detriment of the local level of service. We note that the singular "A normally open switching device" is used and suggest that an allowance be made for the possibility of multiple devices. "Normally open switching devices…"
Yes
No
We strongly agree that local networks should be excluded, since they act much like the radial systems excluded in E1 while providing a higher level of service to customers. These networks should not be discouraged in the name of reliability. We again object to the introduction of the new confusing term "non-retail generation" with no definition provided.
No
Any device that might be excluded under E4 has already been included per I5. Unless I5 is removed, or rewritten as suggested above; this exclusion will exclude nothing.
Yes
If Tillamook PUD had signed up to ballot in time, we would be voting yes with the hope that these

comments would be addressed in Phase II. If the ballot fails, please address these comments in this phase.
Individual
Thad Ness
American Electric Power
Yes
Yes
No
AEP is a proponent of cross-referencing related documents to avoid elements from becoming out of sync, however, rather than having the BES Definition document reference the ERO Statement of Compliance Registry Criteria, perhaps it should be the other way around. This definition document undergoes a more thorough industry development and review process. The ERO Statement of Compliance Registry Criteria does not get specific in regards to device types. The BES Definition document is a more appropriate place to designate inclusion criteria.
Yes
No
We believe more clarity is needed as to where exactly the "common point" is, for example in the case of a wind farm. This first common point could be interpreted as the output voltage of the wind generator, would be less than the 100kv threshold and thereby could (unintentionally?) exclude the facility as a whole. If this was unintentional, we recommend rewording I4 in a manner similar to I2.
No
I5 only specifies voltage limits, and makes no mention of reactive limits. We suggest that the drafting team consider adding reactive capacity to these criteria as well.
No
AEP supports the concept of the exclusion of radial systems, however further clarification is needed regarding whether or not the source equipment is included as part of the radial system (for example, ring bus or breaker and a half bus configurations). Regarding the following text: "Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion." We interpret this as not including two radial lines which could be tied together through a normally open switch, are we correct? Additional clarity may be needed regarding this note.
No
It appears an entity with less than 75 MVA would not have been included as part of the earlier inclusions. Is it necessary to note this threshold once again in the exclusion section? Might it be possible to add some of the "behind the meter load" to the inclusion section to reduce the amount of both the inclusions and exclusions? Doing so would likely provide more clarity to the standard.
Yes
No
Does this refer to distribution level or reactive power resources? If so, it would appear these are not included as part of I5. Or instead, does this refer to customer equipment at BES voltages? If it is the latter, we recommend E4 be reworded to state "Reactive Power devices that meet the Inclusion criteria of I5 that are owned and operated by the retail customer solely for its own use..."
Yes
There needs to be some clarification regarding the default status of an asset, as well as the order and priority of the inclusion and exclusion classifications within the definition. First, prior to any evaluation by virtue of the definition, is an asset by default excluded from the BES, or rather, it is included? In addition, once the definition is used to evaluate an asset which has both inclusion attributes and exclusion attributes, which of the two classifications has greater weight? For example, if an asset is first included by the BES definition inclusion criteria can it then be excluded by BES definition

exclusion criteria? Or instead, if an asset is first excluded by BES definition exclusion criteria can it then be included by the BES definition inclusion criteria? AEP's recommendation is that an asset, by default, not be considered part of the BES. Next, the asset would be evaluated by the inclusion criteria as specified within the definition. Next, any asset explicitly included by the inclusion criteria is then evaluated using the exclusion criteria. Once the entity has made their determination based on the definition, exception requests could then be made to include or exclude assets as appropriate. We believe our interpretation is what is implied by the draft definition, however, this needs to be explicitly communicated within the definition itself.
Individual
Joe Petaski
Manitoba Hydro
Yes
Manitoba Hydro agrees in general with the changes made to the core definition but the sentence 'This does not include facilities used in the local distribution of electric energy' should be removed as it is covered under Exclusion E3 and reduces the clarity of the core definition.
Yes
Yes
No
Inclusion I3 should specifically state that only the Blackstart Resources specified through EOP-005-2 R1.4 are included in the BES since "Transmission Operator restoration plan' is not a NERC defined term. Suggested wording: "I3 - Blackstart Resources identified through EOP-005-2 R1.4"
Yes
Manitoba Hydro agrees with I4 but it does create a discrepancy between the BES Definition and the Registration Criteria Document. The Registration Criteria document should be updated and I2 and I4 should be combined into a single Inclusion.
Yes
Yes
Manitoba Hydro agrees with E1 but the wording of the note regarding 'normally open switching devices' is unclear. In the Industry Webinar on September 28th, the Drafting Team made it clear that the note means that if an element can be connected to the BES from multiple points but under normal operating conditions it is only connected to the BES at a single point by means of normally open switches, then the element is still excluded from the BES provided it meets either the E1 a, b, or c criteria. The team also noted that the discretion to operate the normally open switching devices in the best interests of reliability rests with the operating entity. Suggested wording: "Note: The ability to connect a group of contiguous transmission Elements from multiple connection points of 100kV or higher through normally open switching devices does not negate this Exclusion. " As well, part c) of E1 should be changed to "c) Only serves Load and includes…"
Yes
Manitoba Hydro agrees with E2 but suggests that the phrase 'A generating unit or multiple generating units' be replaced with 'Generating resource(s)' for clarity and consistency.
No
Manitoba Hydro agrees with the Local Network Exclusion but disagrees with the drafting team's removal of the requirement to have protective devices protecting the BES from the LN. We suggest that the following requirement is re-inserted into E3 to meet the LN Exclusion: "a) Wherever connected to the BES, the LN must be connected with a Protection System."
Yes
No
Group

Janet Smith
Arizona Public Service Company
No
Individual
Robert Ganley
Long Island Power Authority
Yes
Need to define the term "local distribution"
Yes
Yes
Yes
Yes
Need to define the term "common point"
Yes
Yes
Need to clarify what is a "single point of interconnection" e.g. is it a bus section or a substation
Yes
No
Main paragraph and items E3b and E3c adequately define a Local Network. It seems like the intent to exclude non bulk distribution systems would still be included because of E3a. E3a should be eliminated. If not eliminated, need to define the term "underlying Elements".
Yes
Exclusion should identify a maximum value.
No
Individual
John A. Gray
The Dow Chemical Company
Yes
The Dow Chemical Company (“Dow) is an international chemical and plastics manufacturing firm and a leader in science and technology, providing chemical, plastic, and agricultural products and services to many essential consumer markets throughout the world. Dow and certain of its worldwide affiliates and subsidiaries, including Union Carbide Corporation, own and operate electrical facilities at a

number of industrial sites within the U.S., principally, in Texas and Louisiana. The electrical facilities at these various industrial sites are configured similarly and perform similar functions. In most cases, a tie line or lines connect the industrial site to the electric transmission grid. Power is delivered from the electric transmission grid to the industrial site through the tie line(s). Lines "behind-the-meter" within the industrial site then deliver power to individual manufacturing plants within the site. Additionally, cogeneration facilities, some of which are well over 75 MW in size, are located at a number of industrial sites owned by Dow and its subsidiaries. These cogeneration facilities generate power that is distributed within the industrial site and used for manufacturing plant operations. In some instances, excess power not required for plant operations is delivered back into the electric transmission grid through the tie line(s) connecting the industrial site to the grid. While the tie lines and some of the internal lines at these industrial sites operate at 100kV or higher, they do not perform anything that resembles a transmission function. Rather than transmit power long distances from generation to load centers, the tie lines and internal lines perform primarily an end user distribution function consisting of the distribution of power brought in from the grid or generated internally to different plants within each industrial site. In some cases, the facilities also perform an interconnection function to the extent they enable power from cogeneration facilities to be delivered into the grid. The voltage of the tie lines and internal lines at these industrial sites is dictated by the load and basic configuration of each site. Higher voltage lines are used when necessary to meet applicable load requirements or to reduce line losses. That does not mean that such lines perform a transmission function. At some sites, Dow is registered as a Generation Owner and Generation Operator. At other sites, the applicable Regional Entity has found that such registration is not required because of the relatively small amount of power supplied to the grid from the applicable cogeneration resources, even though those cogeneration resources have an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating). Tie lines (to the grid) and internal lines at an industrial site that operate at 100kV or higher should be excluded from the BES definition if, due to the relatively small amount of power supplied to the grid from the generation resources at the site, the owner of those generation resources is not required to be registered as a Generation Owner and the operator of those generation resources is not required to be registered as a Generation Operator. At sites where the owner of the generation resources is registered as a Generation Owner and the operator of those generation resources is registered as a Generation Operator, the internal lines (between the generation resources and the manufacturing plants) that operate at 100kV or higher should be excluded from the BES definition, because they are distribution and not transmission facilities. The lines interconnecting the generation resources at such sites to the transmission grid should be included in the BES definition, but the owner and operator of such interconnection lines should not be registered as a Transmission Owner or Transmission Operator. In no instance has a Regional Entity determined that Dow or any subsidiary should be registered as a Transmission Owner or Transmission Operator. Instead, such interconnection lines should be considered as part of the generation resource and Generation Owners and Generation Operators should be subject to reliability standards specifically developed for such interconnection lines. Dow is strongly opposed to any BES definition that would result in either the tie lines or the internal lines at industrial sites being subject to the mandatory reliability standards applicable to Transmission Owners and Transmission Operators. Complying with reliability standards would cause Dow and its subsidiaries to incur substantial compliance costs and create potential exposure to penalties in the future for noncompliance. Perhaps such costs and exposure could be justified if subjecting these facilities to compliance with reliability standards resulted in a material increase in reliability of the BES, but there is no reason to believe that will be the case. In fact, the opposite might be true. The tie lines and internal lines at industrial sites owned by Dow and its subsidiaries have been operated for decades as end user distribution and interconnection facilities, and practices and procedures have developed over the years that have enabled such operations to achieve a high degree of reliability for such sites. Requiring these facilities to now operate in a different manner as transmission facilities may well result in a degradation of the reliability of the manufacturing plants located at such sites. For example, outages would have to be coordinated with the RTO, which may not be interested in coordinating such outages with scheduled manufacturing plant outages. In light of these considerations, Dow agrees with the proposed revisions to the core definition, particularly the proposal to include a sentence expressly excluding facilities used in the local distribution of electric energy, provided it is understood that end user-owned delivery facilities located "behind-the-meter" are, regardless of voltage level, presumptively outside the scope of this definition.

Yes

No
Comments: Dow agrees with the proposed revisions to Inclusion I2, particularly the proposal to expressly reference the ERO Statement of Compliance Registry Criteria, but the following phrase should be added at the end "unless excluded under Exclusion E2".
Yes
No
It is not clear how "Dispersed power producing resources" differ from "Generating Resource (s)" in I2. Inclusion I4 should clarify this. We suggest that the phrase "Variable Energy Resources" be used instead of "Dispersed power producing resources". Variable Energy Resources should be defined as "Resources producing electricity using wind or solar energy." The following phrase should be added at the end "unless excluded under Exclusion E2".
No
The phrase "or through a dedicated transformer with a high-side voltage of 100 kV or higher" is inconsistent with I1 and would bring Reactive Power Equipment that is lower than 100Kv into the BES definition. This phrase should be deleted. The following phrase should be added at the end "unless excluded under Exclusion E4".
Yes
Dow generally agrees with the proposed revisions to Exclusion E1, but believes that several additional clarifying revisions should be made. First, the phrase "a single point of connection" in the introductory sentence should be revised to read "a single point of connection (including multiple connections to the same ring bus or different buses where the energy normally flows in the same direction)". This revision is intended to ensure that radial systems include arrangements involving multiple parallel lines that are designed to operate as a single radial system, but that nevertheless connect at the grid ring bus or different buses on the grid for reliability. Second, for this same reason, an additional (i.e., second) note should be added to the end of Exclusion E1 that reads as follows: "Note, a normally closed switching device that enables multiple lines emanating from the same grid ring bus or different grid buses to operate as a single radial system does not affect this exclusion." Third, in "c)," the phrase "with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating)" is confusing and potentially inconsistent to the extent that "non-retail generation" may be different from "gross nameplate rating." The apparent intent of the clause is to exclude radial systems that serve both load and generation, provided the generation capacity made available to the transmission grid does not exceed 75 MVA. Dow would recommend that the phrase be revised to read "where the net capacity provided to the transmission grid does not exceed 75 MVA." This revision would provide greater clarity and is consistent with the language used in Exclusion E2.
Yes
Dow generally agrees with the proposed revisions to Exclusion E2, but believes that a clarifying revision should be made. Substitute "transmission grid" for "BES" in the phrase "provided to the BES" to insure that the measurement is to the grid.
Yes
Dow is uncertain whether end user-owned, behind-the-meter delivery facilities of the sort it has described above would fall within the scope of the core BES definition proposed by NERC. To date, none of the Regional Entities has suggested that Dow should register as a Transmission Owner or Transmission Operator with respect to any of these Dow-owned delivery facilities. If a literal application of the proposed BES Definition would, because of their voltage level or for any other reason, include such facilities, then Dow has an interest in assuring that the E3 exclusion for "local network" facilities is structured to embrace them. To that end, Dow would propose, first, the elimination of the 300 Kv cap for these facilities. Dow has systems that operate above 300 Kv due solely to the capacity of the lines to supply power over the distance required at our large manufacturing sites. Second, for the same reasons discussed above (in response to question #7), the phrase "do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating)" in "a)" should be changed to "the net capacity provided to the transmission grid does not exceed 75 MVA." Third, the introductory phrase in "b)" -- "Power flows only into the LN" -- is inconsistent with the recognition in "a)" (as amended pursuant to Dow's above suggestion) that

power may flow out of an LN and into the transmission grid if there is generation connected to the LN and the 75 MVA limit is observed. Dow recommends either deleting the introductory clause or correcting it to read "Power is not transferred through the LN."
No
The term "solely" should be replaced by the term "primarily". All devices to control Reactive power behind-the-meter arguably provide some benefit to the transmission grid.
No
Group
Jonathan Hayes
Southwest Power Pool
No
The last sentence of the core states that no distribution facilities will be included, but some of these facilities could be included due to blackstart resources. We don't disagree with the idea of removing distribution facilities, but would like to see some clarification or qualifier.
Yes
Yes
Yes
No
We believe that the removal of the wording "single site" in I2 would remove the need to cover dispersed power producing resources in I4. What is the reason for keeping I4 in this version? Also we understand that 75MVA is held in I4 because of no direct link to the registry criteria, but feel that this number could change in phase two of the project which would create unnecessary work in the future.
No
We understand that this inclusion is used to capture those devices other than generation resources, but the language leads us to believe that it could include all generators used to supply or absorb reactive power. We would suggest that I5 be changed to read " –Static or dynamic devices specifically used for supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.
No
Why was the defined term for "T"ransmission dropped in this version of the definition? This should be kept in this version of the definition as well.
No
This number could change in phase two of the project which would create unnecessary work in the future.
Yes
No
This particular Exclusion doesn't address the qualifier as to the impact to the BES. We request that it emulate the language provided for E2 (behind the meter gen) and classified for this specific exclusion.
Yes
A reference needs to be made to the ROP changes which also provide a mechanism whereby Elements may be excluded/included in the BES. Without that reference the proposed definition does not completely include all means for exceptions/inclusions. We would suggest the definition be expanded to say '...modified by the list shown below or as provided by Appendix 5C of the NERC Rules of Procedure. We submitted this in the original posting and the response received was that it was inadvertently left out and that it would be placed back in. We don't see the reference in this draft of the definition.

Individual
Rick Hansen
City of St. George
Yes
The core definition is acceptable as long as the concerns for inclusion and exclusion are addressed as outlined in the other comments.
Yes
No
The basis for the Compliance Registry Criteria generation levels for inclusion seems to be arbitrary with little or no justification. As currently proposed, a small 20 MVA generator must comply with same requirements as large units of several hundred MVA of generation capacity. Phase 2 of the BES project may help address the issue but in the meantime many facilities must comply with numerous standards with little or no benefit to the reliability of the actual BES. No timeline for Phase 2 is indicated. Finding a bright line number for the generation levels on a per unit or overall plant basis will be a difficult task, but the present MVA levels of the Registration Criteria are very low for automatic inclusion. The compliance requirements of an entity should match the impact to the system.
Yes
No
This language follows the 75 MVA plant requirements from the Registration Criteria. See comments to question 3 (for I2) above. Additional detail is needed to clarify exactly at what point in the dispersed system the BES starts and what is not BES.
No
A reasonable minimum value for inclusion should be added. As presently written all static or dynamic devices would be included in the BES regardless of size.
No
Radial systems should be excluded as generally outlined in E1, however the generation levels (of 75 MVA) are too restrictive. The primary criteria should be, does power flow into the radial system? If there is always flow into the radial system, generation levels should not prevent exclusion from the BES.
No
Same basic comments and concerns as question #7.
No
The exclusion of Local Networks should be provided, however the generation level limits are too restrictive. As long as the power flow is into the system the generation level of the local network shouldn't matter as long as it is being used to serve local load. E3a should be deleted from the definition, or at least some higher level of allowed generation should be included. Another possibility would be a ratio of local load to local generation. Areas with local generation serving local load will have similar characteristics or affects to the BES system as were used in the Local Network justification paper (Appendix 1) included with the documents. If some reasonable level of local generation was added to the example system it is unlikely that the affects to the BES flows would change from what was presented in the example.
Yes
Yes
The small utility exclusion issues discussed in the first draft of the documents are not included (draft 1 proposed E4) nor addressed in the draft 2 documentation. Under the present definition many small utilities with local generation to serve its own local load will be required to register for additional functions, or at a minimum go through a long, expensive, time consuming process to get an individual exclusion from the BES. The topics that have been postponed to Phase 2 of the project are critical to and will have a direct impact to many utilities. Phase 2 needs to have specific shorter than normal

timelines established, similar to what Phase 1 has had. The present definition and standards in general makes little or no consideration for the actual impact of an entity or facility on the bulk system. As such small utilities with a few miles of 115 kV or 138 kV lines and some generation are required to meet the same requirements as large utilities with 100's or 1,000's of miles of 345 kV or 500 kV lines and that operate very large generation plants of several hundred MVA of capacity. All utilities support reliability improvement, but the requirements and associated costs need to match their actual impact to the overall system.
Group
Frank Gaffney
Florida Municipal Power Agency
Yes
FMPA appreciates the SDT's work on this project. For the most part, FMPA supports what it believes to be the intent of the proposed language. The proposed specific exclusion of facilities used in the local distribution of electric energy is appropriate and consistent with Section 215 of the Federal Power Act. However, we have suggestions to better carry out what we believe to be the SDT's intent. The first sentence can be read as: "… all … Real Power and Reactive Power resources connected at 100 kV or higher", which is surely not what the SDT intends. The basic problem is that Inclusions I2 and I4 do not modify the first sentence, e.g., from a set theory perspective, the set described by the first sentence includes the sets described in inclusions I2 and I4; hence, I2 and I4 do not modify the first sentence. From a literal reading, this would cause any size generator connected at 100 kV to be included, which is surely not the intent of the SDT. For similar reasons, the core definition and Inclusion I5 now has the effect of including all generators connected at 100 kV since a generator is a "dynamic device … supplying or absorbing Reactive Power". The word "dedicated" in I5 is not sufficient in FMPA's mind to unambiguously exclude generators from this statement. FMPA suggests the following wording to address these issues: "Transmission Elements (not including elements used in the local distribution of electric energy) and Real Power and Reactive Power resources as described in the list below, unless excluded by Exclusion or Exception: a. Transmission Elements other than transformers and reactive resources operated at 100 kV or higher. b. Transformers with primary and secondary terminals operated at 100 kV or higher. c. Generating resource(s) (with gross individual or gross aggregate nameplate rating per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above. d. Blackstart Resources identified in the Transmission Operator's restoration plan. e. Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above, but not including generation on the retail side of the retail meter. f. Non-generator static or dynamic devices dedicated to supplying or absorbing more than 6 MVAr of Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in bullet 2 above."
Yes
Please see comments to Question 1
Yes
Please see comments to Question 1
Yes
Please see comments to Question 1
Yes
We recommend clarifying that the dispersed power resources covered by this inclusion do not include generators on the retail side of the retail meter. Specifically, we recommend that the Inclusion read: "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100kV or above, but not including generation on the retail side of the retail meter."
To help clarify and to avoid inclusion of de minimis reactive resources, we propose a size threshold of 6 MVAr consistent with the smallest size generator included in the BES at a 0.95 power factor, which is a common leading power factor used in Facility Connection Requirements for generators. In other

words, 6 MVAr is consistent with typically the least amount of MVAr required to be absorbed by the smallest generator meeting the registry criteria.

Yes

FMPA supports the exclusion of radial systems from the BES Definition. Such systems are generally not "necessary for operating an interconnected electric transmission network," the standard in Orders 743 and 743-A. We have several suggestions to clarify the proposed language for this Exclusion. Proposed Exclusion E1 refers to "[a] group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher." We appreciate the SDT's clarification of the point of connection requirement, but the term "a single point of connection" should be further defined (more clearly than just by voltage), and should be generic enough to encompass the various bus configurations. It is not the case, for example, that each individual breaker position in a ring bus is a separate point of connection for this purpose; in that situation, a bus at one voltage level at one substation should be considered "a single point of connection." Some examples of configurations that should be considered a single point of connection for this purpose are at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf, Examples 1-6. Although the core definition (appropriately) refers to "Transmission Elements" (with a capital "T"), proposed Exclusion E1 refers to "transmission Elements" (with a lowercase "t"). To avoid confusion, either "Transmission" should be capitalized in both locations, or the word "transmission" should simply be deleted from Exclusion E1, leaving a "group of contiguous Elements." We understand that the lack of capitalization may have been a deliberate choice by the SDT in an attempt to avoid confusion that SDT members believe exists in the Glossary definition. If the Glossary definition of Transmission is unclear—which FMPA does not necessarily believe is the case—the answer is not to simply abandon the Glossary definition in favor of an entirely undefined term; it is to submit a SAR to improve the Glossary definition. Exclusion E1(c) refers to "an aggregate capacity of non-retail generation less than or equal to 75 MVA." "Non-retail generation" is potentially ambiguous, because it could be read as distinguishing between generation that will be sold at wholesale and generation that is used by the retail provider to meet retail load. On the understanding that the intent is in fact to describe generation behind the end-user meter, sometimes referred to as "behind-the-second-meter generation," we suggest the following revision: "an aggregate generation capacity less than or equal to 75 MVA, not including generation on the retail customer's side of the retail meter." Exclusion E1 concludes with a "Note": "A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion." The Note should not specify the types of evidence required to prove a normally open switch, and the phrase "as depicted on prints or one-line diagrams" should be deleted. This phrase is equivalent to a "Measure" in a standard and should not be embedded in the equivalent of a "Requirement." Since the phrase only gives an "example," it does not in fact add anything to the Note, but may lead to confusion over what sort of evidence is required.

Yes

Yes

: FMPA supports the exclusion of Local Networks from the BES. Such systems are generally not "necessary for operating an interconnected electric transmission network," the standard in Orders 743 and 743-A. However, we have several suggestions to clarify the proposed language for this Exclusion. Exclusion E3(c) states: "Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN." This statement is unclear because the two parts mean different things. FMPA proposes rewriting this sentence to state: "Power flows only into the LN, that is, at each individual connection at 100 kV or higher, the pre-contingency flow of power is from outside the LN into the LN for all hours of the previous 2 years" to help clarify the intent. Two years is suggested because it is the time period set out in the draft exception application form for which an applicant should state whether power flows through an Element to the BES. FMPA' comments in response to Question 7 above regarding "points of connection at 100kV or higher" and "non-retail generation" are applicable to Exclusion E3 as well. The term "bulk power," which occurs twice in Exclusion E3, is vague and could be read incorrectly as a reference to the statutorily-defined "bulk-power system," which is not, we think, the SDT's intent. The word "bulk" should be deleted, so that the Exclusion simply refers to transferring "power" across the interconnected system. FMPA raised this concern in response to the last posting of the BES Definition. In response, the SDT removed some instances of "bulk power" but left the remaining two, stating that "the SDT believes it provides

conceptual value to the exclusion principle." The SDT does not state what conceptual value the term is intended to provide; on the assumption that it relates to a distinction between transferring power from local generation to serve local load, and transferring power over longer distances, FMPA suggests, as an alternative to simply deleting the word "bulk," that the Exclusion be revised to refer to "transfers of power from non-LN generation to non-LN load."

Yes

Individual

Donald E. Nelson

Massachusetts Department of Public Utilities

No

The Massachusetts Department of Public Utilities ("MA DPU") appreciates the opportunity to provide comments on the second draft definition of the Bulk Electric System ("BES"). Massachusetts is the largest state by population and load in New England. It comprises 46% of both the region's population and electricity consumption. Generating plants located in Massachusetts represent 42% of New England's capacity and our capitol city, Boston, is the largest load center in the region. Some of the revisions since the last posting of the draft BES definition have improved the proposed language. However, the MA DPU has a number of concerns regarding both the substance of the definition and the process for developing this standard: 1) Phased Approach. While well-intentioned, separating the BES definition project into two separate phases is problematic from both a procedural and substantive perspective. While we recognize that the filing due date is rapidly approaching, the BES definition cannot be considered in a vacuum, divorced from the concerns raised by a number of parties in response to past postings of the BES definition. The issues NERC has identified for consideration during the proposed "Phase 2" are inseparable from the development of the BES definition (e.g., generation thresholds, technical justification for the 100 kV threshold) and should be squarely addressed before a definition is adopted and ratepayers incur costs related to compliance with mandates that may or may not be revised through the second phase of the project. The importance of considering concerns before adopting a definition is heightened by the proposed two-year implementation requirement. This short implementation period almost guarantees that entities will commit resources shortly after adoption of the definition to ensure compliance within the mandated period. In other words, ratepayers will bear costs related to compliance irrespective of any change resulting from the Phase 2 process or the exception process. Expediency, while understandable given the filing deadline, must be balanced against the risk that a multi-phased approach could lead to significant consumer costs without attendant meaningful reliability benefits. 2) Cost-Benefit Analysis. A cost impact analysis should be performed as part of developing any reliability standard. However, the development of the BES definition has failed to consider the cost impacts of the definition (and its inclusions and exclusions) and has not weighed these impacts against identified benefits that the definition would achieve. The MA DPU supported the May 21, 2011 comments from the New England States Committee on Electricity ("NESCOE") on the last posting of the BES definition. In these comments, NESCOE stated that "any new costs a revised definition imposes – which fall ultimately on consumers – should provide meaningful reliability benefits." A cost-benefit analysis should be integral to the development of a BES definition and, indeed, any reliability standard. This analysis should include a probabilistic risk assessment examining the likelihood of an event and the costs and risks resulting from such event, which should be weighed against the costs of complying with the proposed reliability measures. 3) Technical Justification. In addition to performing a cost-benefit analysis, a technical basis must be provided to justify a proposed reliability standard. However, the proposed BES definition does not provide a technical justification for the 100 kV threshold, the threshold for generation resources, or other elements of the definition. As stated above, while well-intentioned and understandable, deferring this technical justification to a later and separate phase of the project is a flawed and potentially costly approach. Providing a technical justification for a reliability standard is a core function of standards development and should be addressed at the forefront of the process rather than relegated to a separate phase largely undertaken after a standard is filed. In Order 743, the Federal Energy Regulatory Commission ("FERC" or "the Commission") directed NERC to revise the BES definition. Revision to Electric Reliability Organization Definition of Bulk Electric System, Order No. 743A, 134 FERC ¶ 61,210 (Mar. 17, 2011) at P 8, citing to Revision to Electric Reliability

Organization Definition of Bulk Electric System, Order No. 743, 133 FERC ¶ 61,150 (2010). The Commission stated that one way NERC could address the technical and policy concerns FERC had identified would be to institute a "bright-line threshold that includes all facilities operated at or above 100 kV except defined radial facilities, and establish an exemption process and criteria for excluding facilities [NERC] determines are not necessary for operating the interconnected transmission network." Id. at P 8. However, the Commission made clear in Order 743 that NERC may propose an alternative proposal and that the 100 kV threshold is an "initial line of demarcation" to be refined through exclusions and exemptions. Id. at PP 8, 40. Accordingly, unless and until NERC provides a technical justification for its approach, the Standard should use the 100 kV threshold concept in a way that is consistent with the Commission's guidance. Specifically, the two criteria that bound the BES definition are (1) the statutory exclusion of facilities used in local distribution, and (2) the requirement that the facilities included be "necessary for reliable operation" of the interconnected transmission system. A definition that recognizes these limits, coupled with an efficient and transparent exception process, would appear to meet the Commission's expectations. For these reasons, absent a technical justification for imposing a 100 kV threshold, the MA DPU supports the revised core definition offered by NESCOE in comments filed on this 2nd Draft: "All Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher that are necessary for the reliable operation of the interconnected transmission network, including but not limited to the facilities listed below as Inclusions, and excluding (1) facilities that are used in the local distribution of electric energy, and (2) the facilities and systems listed below as Exclusions. Other Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." The definition of the BES is critical to NERC's role as ERO and will have a significant impact on system reliability and cost to consumers. While FERC had concerns that the existing definitions for the bulk power system were under-inclusive, the proposed Standard, as drafted, risks erring in the opposite direction and appears inconsistent with the Commission's guidance in this area.
No
The MA DPU supports the revised Inclusion I1 language that treats Exclusions E1 and E3 as alternative exclusions, either of which may qualify as an exclusion. However, specificity is needed regarding what equipment is included in I1 (e.g., autotransformers, PARs, primary, secondary, tertiary windings).
No
Failing to establish a known MVA rating at this stage is problematic. The BES definition cannot be considered in a vacuum, and adjusting or establishing thresholds such as MVA ratings will create regulatory uncertainty and may result in additional costs and unnecessary system upgrades. Additionally, Inclusion I2 should remove the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document regarding generation that is included in the BES.
No
The inclusion should be revised to specify that only those blackstart units that are "material to" the BES are included in the definition.
No
The aggregate 75 MVA of connected generation does not appear to be adequately supported by technical analysis and appears, on its face, as too low. Among our concerns is that such a low level will have a potential adverse impact on the development of renewable generation resources. In addition, the inclusion needs to be clarified in order that entities have clear guidance on what is meant by "common point of interconnection."
No
The inclusion of all devices that supply reactive power to the BES is unnecessary and will result in unjustified costs to the ratepayer. Static devices (fixed capacitors) should remain excluded from the BES as they are dispatched by operations personnel, and if one fixed capacitor bank fails, the operator can replace its impact by switching in another fixed bank. This represents routine operation of the system. On the other hand, dynamic devices may be important to maintaining voltage stability of the system. These installations typically are rated to supply or absorb 75 MVA or more to or from the BES. Therefore, the MA DPU suggests that dynamic reactive power devices rated at 75 MVA or more could be included in the BES. Further, revised inclusion I5 is a new inclusion that lacks definition

(and appears to be redundant with the general BES definition). NERC should provide technical justification for the additional language under Inclusion I5.
Yes
The aggregate 75 MVA of connected generation appears too low and would benefit from additional technical justification.
Yes
While the MA DPU generally supports Exclusion E2, no information has been provided by NERC demonstrating that the 75 MVA rating is based on any sound technical analysis.
Yes
The MA DPU generally supports this exclusion but believes it is too narrow. As noted in the response to question 7, Exclusion E3 should likely allow a higher level of aggregate generation MVA on a Local Network. In addition, local networks should not necessarily be ineligible for Exclusion E3 simply because an amount of power may transfer out of the network at times. NERC's draft technical network exclusions document should be amended such that local networks would be permitted to qualify for network exclusions under E3 if power flowing out of the network is minimal and would not likely adversely impact the BES.
Yes
While we are generally supportive of this exclusion, the term "retail" needs to be clarified (i.e., are retail customers of all sizes intended to be excluded?).
No
Individual
David Burke
Orange and Rockland Utilities, Inc.
Yes
Yes
Minimum Power system and material? NERC registry criteria for generation section "3C3"
No
Should also mention "unless excluded under Exclusion E1 or E3".
No
Please clarify on "single point of connection". It seems like less confusion if "single source" is used here instead of "single point of connection".
No
We know that N-1 is assumed when power-flow study is performed, however, N-1 should be mentioned here for clarification.
Yes
Individual
Bud Tracy
Blachly-Lane Electric Cooperative (BLEC)
Yes
The Blachly-Lane Electric Cooperative (BLEC) believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. BLEC therefore supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being

developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. BLEC strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100kV or higher and Real Time and Reactive Power resources connected at 100kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for "facilities used in the local distribution of electric energy." As the starting point for the BES definition, BLEC supports the use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. § 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate – "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. § 824o(a)(4) – will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. § 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). BLEC thanks the SDT for the excellent work to include this sentence. For similar reasons, BLEC believes the use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used in NERC Reliability Standards, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. BLEC recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, BLEC agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, BLEC is prepared to support the BES definition as proposed by the SDT. While BLEC supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, BLEC believes a 200kV threshold would be more appropriate for WECC than a 100kV threshold. In addition, a 200kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view are therefore incorrect. That said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, BLEC will support the SDT's proposal.

Yes

We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As we understand it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. We believe the SDT's intent would be clarified by adding a sentence at the end of Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. Many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus, and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. As the Phase II process moves forward, we commend to the SDT the extensive work performed on the point of demarcation question by the WECC BESDTF. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2."

Yes

BLEC supports the changes made in Inclusion 2 and believes that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support the SDT's proposal for a Phase II of the BES Definition process that would examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC ¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase II through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little process. BLEC believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC

is intended only to identify "candidates for registration." SCRC at p.3, § 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase II should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes that generation be included in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase II but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria.. The "materiality threshold" is intended to refer to the generator threshold developed in Phase II. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase II without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase II process based upon the technical analysis planned for Phase II, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase II is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase II are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase II on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase II under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating

as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100kV or above."

Yes

BLEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.

Yes

BLEC supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e, "resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," which we discuss in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a Local Network. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be established by the SDT in Phase II. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase ". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.

No

BLEC has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Third, BLEC believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase II process. Finally, BLEC believes this issue should be addressed in Phase 2 since there is not technical justification or analysis done to determine the thresholds. BLEC strongly believes that there should be technical justification for thresholds for this issue and all other issues.

Yes
BLEC continues to strongly support the radial system exclusion, which is necessary as a legal matter, because, among other reasons, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term "transmission Elements" in the initial paragraph should be changed to "Elements." Radial systems are not transmission systems and including the word "transmission" in the Radial System exclusion is therefore unnecessary and confusing. (2) Subparagraph (b) of Exclusion 1 refers to "generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). We urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," discussed in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshhold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. (3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshhold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC's Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted. (4) The "Note" as drafted by the SDT indicates that "a normally open switching device between radial systems" will not serve to disqualify the Radial from exclusion under Exclusion 1. As discussed above, BLEC strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d), rather than a note, because treatment as a "note" suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: (d) Normally-open switching devices between radial elements as depicted and identified on system one-line diagrams does not affect this exclusion. This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.
BLEC supports the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, BLEC urges the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term "Qualifying Aggregate Generation Resources" or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN.
Yes
BLEC strongly supports the exclusion of Local Networks ("LNs") from the BES. The conversion of radial systems to local networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs,

however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers would ultimately benefit. BLEC also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, BLEC supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." BLEC supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. BLEC believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making a "group of contiguous transmission Elements operated at or above 100kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. BLEC also believes that subparagraphs (a) and (b) are redundant, because whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system – power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to be the equivalent of generation that is located behind the retail meter, usually but not always owned by the customer and used to serve the customer's own

load. We therefore suggest that the SDT replace the term "non-retail generation" with "generation located behind the retail customer's meter." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. BLEC also believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours, a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN." Finally, we note that the LN exclusion must not operate in any way as a substitution for the statutory prohibition on including "facilities used in the local distribution of electric energy" in the BES. Therefore, even with the LN exclusion, the SDT must retain this statutory language in the core definition of the BES, as discussed in our answer to Question One. If a certain piece of equipment is a "facility used in the local distribution of electric energy," then it is not part of the BES in the first instance, and so consideration

of the LN Exclusion, or of any other Exclusion, any Inclusion, or any Exception, would be both unnecessary and uncalled for.
Yes
BLEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
No
BLEC extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. BLEC supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, BLEC is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that BLEC specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. BLEC supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to come into compliance with newly-applicable Reliability Standards. BLEC also supports the 24-month transition period for the reasons laid out by the SDT.
Group
Steve Rueckert
WECC
Yes
Yes
Yes
Yes
WECC agrees with the inclusion of the blackstart units, but does not agree with the deletion of the cranking path from the I3. The cranking path should be included in the definition since the NERC standards EOP-005 and CIP-002 R1.2.4 require documenting the cranking path. The revised CIP-002-4 Standard identifies the cranking path as a critical asset in Attachment 1 (1.5).
Yes
WECC seeks further clarification on Inclusion 4. Several comments were submitted in the last round of comments whether each individual wind turbine in a wind farm, will be included in the BES. WECC believes the language change to I4 by the SDT did not address this issue. The current language in I4 could be interpreted as each individual turbine (example 1MW) would be part of the BES. WECC believes that I4 is not intended to include each individual wind turbine in a wind farm as a BES element but rather to include the point at which the aggregation becomes large enough to meet the aggregate capacity threshold of 75 MVA. WECC recommends the SDT modify the language in I4 to clarify this issue.
Yes
WECC believes I5 should be modified to identify a minimum Reactive Power threshold for static or dynamic devices similar to the threshold identified for generating resources in I2. As worded, any size

device dedicated to supplying or absorbing Reactive Power that is conected at 100 kV or higher, no matter how small, would be included in the BES.
Yes
The use of the word “affect” in the note may cause problems with interpretation by users. WECC suggests replacing the term "affect" with “alter”.
Yes
E2 is inconsistent with Section III.c. of the NERC Statement of Compliance Registry Criteria and is in conflict with I2. As written, E2 uses a net capacity threshold of 75MVA, which does not distinguish between a single generating unit and multiple generating units. The threshold in the NERC Statement of Compliance Registry Criteria for a single generating unit is 20MVA. As a result, E2 would appear to exclude generators from 20MVA to 75MVA that serve any amount of retail load behind the meter. WECC recommends replacing “(i) the net capacity provided to the BES does not exceed 75 MVA” with “(i) the net capacity provided to the BES does not exceed the individual or gross nameplate ratings provided in the NERC Statement of Compliance Registry Criteria.” WECC’s recommended change makes E2 consistent with I2 and the SDT’s plan to address generator thresholds in Phase II.
Yes
Yes
Yes
Following are additional comments not covered in previous questions: • Under the section “Effective Dates”: There may be confusion with the statement “Compliance Obligations for Elements included by definition shall begin 24 months after the applicable effective data of the definition.” The phrase “included by definition” can be interpreted broadly. • WECC notes that a generation threshold of 75MVA is specified in Exclusions E1, E2, and E3. WECC believes that generation thresholds for Exclusions should be addressed in Phase II when generation thresholds for Inclusions are being considered.
Individual
Roger Meader
Coos-Curry Electric Cooperative (CCEC)
Yes
The Coos-Curry Electric Cooperative (CCEC) believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System (“BES”) that markedly improves both the existing definition and the SDT’s previous proposal. CCEC therefore supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. CCEC strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase “Unless modified by the lists shown below” to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., “all Transmission Elements operated at 100kV or higher and Real Time and Reactive Power resources connected at 100kV or higher”) and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for “facilities used in the local distribution of electric energy.” As the starting point for the BES definition, CCEC supports the use of the phrase “all Transmission Elements” and the qualifying sentence: “This does not include facilities used in the local distribution of electric energy.” This language helps ensure that FERC, NERC, and the Regional Entities (“REs”) will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act (“FPA”). In Section 215(a)(1), Congress unequivocally excluded “facilities used in the local distribution of electric energy” from the keystone “bulk-power system” definition. 16 U.S.C. § 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the

high-voltage interstate transmission system, where the reliability problems Congress intended to regulate – "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. § 824o(a)(4) – will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. § 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). CCEC thanks the SDT for the excellent work to include this sentence. For similar reasons, CCEC believes the use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used in NERC Reliability Standards, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. CCEC recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, CCEC agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, CCEC is prepared to support the BES definition as proposed by the SDT. While CCEC supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, CCEC believes a 200kV threshold would be more appropriate for WECC than a 100kV threshold. In addition, a 200kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view are therefore incorrect. That said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, CCEC will support the SDT's proposal.

Yes

We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As we understand it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. We believe the SDT's intent would be clarified by adding a sentence at the end of Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. Many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations

and undue costs. For example, distribution-only utilities commonly own the switches, bus, and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. As the Phase II process moves forward, we commend to the SDT the extensive work performed on the point of demarcation question by the WECC BESDTF. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2."

Yes

CCEC supports the changes made in Inclusion 2 and believes that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support the SDT's proposal for a Phase II of the BES Definition process that would examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC ¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase II through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little process. CCEC believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, § 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase II should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes that generation be included in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase II but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the

materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria.. The "materiality threshold" is intended to refer to the generator threshold developed in Phase II. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase II without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase II process based upon the technical analysis planned for Phase II, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase II is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase II are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase II on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase II under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100kV or above."

Yes

CCEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.

Yes

CCEC supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e, "resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," which we discuss in more detail in our response to

Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a Local Network. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be established by the SDT in Phase II. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase ". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.

No

CCEC has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Third, CCEC believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase II process. Finally, CCEC believes this issue should be addressed in Phase 2 since there is not technical justification or analysis done to determine the thresholds. CCEC strongly believes that there should be technical justification for thresholds for this issue and all other issues.

Yes

CCEC continues to strongly support the radial system exclusion, which is necessary as a legal matter, because, among other reasons, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term "transmission Elements" in the initial paragraph should be changed to "Elements." Radial systems are not transmission systems and including the word "transmission" in the Radial System exclusion is therefore unnecessary and confusing. (2) Subparagraph (b) of Exclusion 1 refers to "generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). We urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," discussed in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshhold in Phase II, with the result of Phase II

included in the BES Definition by operation rather than requiring further revision of the Definition. (3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshhold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC's Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted. (4) The "Note" as drafted by the SDT indicates that "a normally open switching device between radial systems" will not serve to disqualify the Radial from exclusion under Exclusion 1. As discussed above, CCEC strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d), rather than a note, because treatment as a "note" suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: (d) Normally-open switching devices between radial elements as depicted and identified on system one-line diagrams does not affect this exclusion. This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.

Yes

CCEC supports the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, CCEC urges the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term "Qualifying Aggregate Generation Resources" or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN.

Yes

CCEC strongly supports the exclusion of Local Networks ("LNs") from the BES. The conversion of radial systems to local networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers would ultimately benefit. CCEC also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, CCEC supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." CCEC supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. CCEC believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making a "group of contiguous transmission Elements operated at or above 100kV" the starting point for identifying a LN would be improved by

deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. CCEC also believes that subparagraphs (a) and (b) are redundant, because whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system – power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to be the equivalent of generation that is located behind the retail meter, usually but not always owned by the customer and used to serve the customer's own load. We therefore suggest that the SDT replace the term "non-retail generation" with "generation located behind the retail customer's meter." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. CCEC also believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be

BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours, a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN." Finally, we note that the LN exclusion must not operate in any way as a substitution for the statutory prohibition on including "facilities used in the local distribution of electric energy" in the BES. Therefore, even with the LN exclusion, the SDT must retain this statutory language in the core definition of the BES, as discussed in our answer to Question One. If a certain piece of equipment is a "facility used in the local distribution of electric energy," then it is not part of the BES in the first instance, and so consideration of the LN Exclusion, or of any other Exclusion, any Inclusion, or any Exception, would be both unnecessary and uncalled for.

Yes

CCEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.

No

CCEC extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. CCEC supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, CCEC is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not

be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that CCEC specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. CCEC supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to come into compliance with newly-applicable Reliability Standards. CCEC also supports the 24-month transition period for the reasons laid out by the SDT.
Individual
Kathleen Goodman
ISO New England Inc
Yes
The second sentence is unclear with respect to its intent. If it's intended to cover the exclusion described in E3, the sentence is not needed. If it's intended to mean something else, it is unclear as to what is intended and likely should be deleted.
No
I1 needs to be clarified such that it is clear on whether this includes autotransformers, phase angle regulators, and devices which have a tertiary winding. Using the tertiary winding as an example, it is not clear whether the tertiary winding itself is considered BES, especially if it is serving a radial system as described in E1.
Yes
No
The SDT has interpreted the FERC Directive to revise the BES definition in a manner that goes beyond the mandate of ensuring that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT states that operation is interpreted as being under both normal and emergency conditions. However, loss of all electric power is the end state condition when all normal and emergency remediating actions have failed to prevent a collapse of the grid. System restoration involves the use of blackstart generators that are not resources necessary for operating the electrical grid but rather a means to recover following (not part of the emergency itself) an extreme emergency. The SDT should simply refer to the current Compliance Registry, which, for now, appears to adequately deal with the issue of how to treat Blackstart resources. I3 states "Blackstart Resources identified in the Transmission Operator's restoration plan". This is contrary to the preferred language that is part of the approved ERO Statement of Compliance Registry, III.C.3 that states, "Any generator, regardless of size, that is a blackstart unit material to (emphasis added) and designated as part of a transmission operator entity's restoration plan". This language is necessary to distinguish between those Blackstart Resources that are depended upon to restore the BES following an emergency ("Key Facilities") as compared to those Blackstart Resources that are used to restore power to customer load. Additionally, discussions with others during the preparation of comments have revealed that some interpret this requirement to include the GSU. We do not interpret this in this manner, but this should be clarified to avoid confusion.
No
I4 is unclear as to whether or not the collector system (or system designed primarily for aggregating capacity) itself is BES or just the resource. "Utilizing a system designed primarily for aggregating capacity" needs to be more clearly defined to account for multiple systems that may exist out of one common point. A suggestion would be to modify the end of the sentence to say "connected at any common point." I4 will allow for significant amounts of dispersed power producing resources to be excluded from the BES. This includes wind resources which are increasing in numbers and having a significant impact on system operations. It does not seem appropriate that having ten 70 MVA (total of 700 MVA) installations each with their own connection to a 115 kV bus should fall outside of the BES. As currently written, they would fall outside of the inclusion if they do not utilize the same collector system. It is unclear whether or not supplemental equipment associated with the dispersed

power producing resources is included in the BES. As an example, many wind resources are being interconnected utilizing supplemental dynamic and static reactive devices which are crucial to the operation of these resources. The dynamic devices are often controlling themselves and static reactive devices, which may or may not be connected above 100 kV. Leaving these devices out of the BES definition seems to be a potential gap.
Yes
No
The term "single point" is not clear. A better explanation is necessary. For example, the same bus in a bus/branch model should suffice as a "single point". There should not be a requirement to be at the same node as found in a nodal model. The term "a group of contiguous transmission elements" is ambiguous and needs to be clarified. The "Non-retail" qualifier in E1.c) should be deleted. It adds confusion to the exclusion and is not defined.
No
Exclusion E2 is confusing as written and seems counter intuitive. As an example, a 400 MW generator which is behind the meter with a 400 MW load could be excluded. This generator could have a significant impact on the performance of the system and yet it is excluded. As a simple example, loss of the 400 MW generator would require that the 400 MW load be supplied from the system, possibly leading to low voltages and thermal overloads. Additionally, a machine of this size could adversely impact the dynamic response of the system, leading to damping concerns or unit instability. If E2 is to be retained, it is not clear under what load conditions should the load at the facility be measured. Load levels, and resulting net flows to the system, can be significantly different between seasons, time of day, and the status of end user equipment at large industrial/manufacturing sites. The term "Retail Customer Load" needs to be defined. The Balancing Authority should not be included as an entity providing this service. In general the Statement of Compliance Registry has provided the preferred language to use here (Page 9, [Exclusions: second paragraph).
No
E3 could result in many large load pockets being excluded from the BES definition and should be deleted. Assuming that it is retained, we offer the following additional comments. The term "a group of contiguous transmission elements" is ambiguous and needs to be clarified. Please clarify in the exclusion if the flows into the LN as described in E3.b) are pre-contingency flows only. Please clarify the system conditions (time of year, peak or off-peak) that should be considered in determining of flow is only into the LN. The "Non-retail" qualifier in E3.a) should be deleted.
No
The term "retail customer" is unclear and will lead to confusion. This exclusion should be removed as there are many instances where a generator may be using the reactive power device to meet other interconnection requirements and the reactive device should be held to the same BES requirements as the generator.
Yes
There are a number of possible scenarios where an element falls under both an inclusion and exclusion. The definition is unclear as to whether or not this would have the element be BES or not. During the webinar an example was given about a static shunt device meeting the requirements of I5, but is part of a radial network. The response during the webinar was that this would be excluded. If this is correct, it means that an exclusion takes precedence over an inclusion. Is this always the case? This needs to be clarified and stated somewhere in this document. To be consistent with regard to the terms "Operated at 100 kV" and "Connected at 100 kV ", we suggest that reference to generators should state, "Connected at a transmission element operated at 100 kV". This will avoid confusion in cases where a generator is connected to a transmission element rated at 100 kV but operated at a lower voltage.
Individual
Dave Markham
Central Electric Cooperatve (CEC)
Yes
The Central Electric Cooperative (CEC) believes the SDT continues to make substantial progress

towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. CEC therefore supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. CEC strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100kV or higher and Real Time and Reactive Power resources connected at 100kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for "facilities used in the local distribution of electric energy." As the starting point for the BES definition, CEC supports the use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. § 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate – "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. § 824o(a)(4) – will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. § 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). CEC thanks the SDT for the excellent work to include this sentence. For similar reasons, CEC believes the use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used in NERC Reliability Standards, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. CEC recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, CEC agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, CEC is prepared to support the BES definition as proposed by the SDT. While CEC supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, CEC believes a 200kV threshold would be more appropriate for WECC than a 100kV threshold. In addition, a 200kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view are therefore incorrect. That said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions

Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, CEC will support the SDT's proposal.
Yes
We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As we understand it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. We believe the SDT's intent would be clarified by adding a sentence at the end of Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. Many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus, and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. As the Phase II process moves forward, we commend to the SDT the extensive work performed on the point of demarcation question by the WECC BESDTF. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2."
Yes
CEC supports the changes made in Inclusion 2 and believes that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support the SDT's proposal for a Phase II of the BES Definition process that would examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC ¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase II through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little process. CEC believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site.

Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, § 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase II should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes that generation be included in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase II but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria.. The "materiality threshold" is intended to refer to the generator threshold developed in Phase II. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase II without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase II process based upon the technical analysis planned for Phase II, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase II is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase II are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase II on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase II under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific

thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100kV or above."

Yes

CEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.

Yes

CEC supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e, "resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," which we discuss in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a Local Network. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be established by the SDT in Phase II. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase ". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.

No

CEC has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Third, CEC believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase II process. Finally, CEC

believes this issue should be addressed in Phase 2 since there is not technical justification or analysis done to determine the thresholds. CEC strongly believes that there should be technical justification for thresholds for this issue and all other issues.
Yes
CEC continues to strongly support the radial system exclusion, which is necessary as a legal matter, because, among other reasons, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term "transmission Elements" in the initial paragraph should be changed to "Elements." Radial systems are not transmission systems and including the word "transmission" in the Radial System exclusion is therefore unnecessary and confusing. (2) Subparagraph (b) of Exclusion 1 refers to "generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). We urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," discussed in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshhold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. (3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshhold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC's Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted. (4) The "Note" as drafted by the SDT indicates that "a normally open switching device between radial systems" will not serve to disqualify the Radial from exclusion under Exclusion 1. As discussed above, CEC strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d), rather than a note, because treatment as a "note" suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: (d) Normally-open switching devices between radial elements as depicted and identified on system one-line diagrams does not affect this exclusion. This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.
Yes
CEC supports the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, CEC urges the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term "Qualifying Aggregate Generation Resources" or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN.
Yes

CEC strongly supports the exclusion of Local Networks ("LNs") from the BES. The conversion of radial systems to local networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers would ultimately benefit. CEC also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, CEC supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." CEC supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. CEC believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making a "group of contiguous transmission Elements operated at or above 100kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. CEC also believes that subparagraphs (a) and (b) are redundant, because whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system – power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term

"Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to be the equivalent of generation that is located behind the retail meter, usually but not always owned by the customer and used to serve the customer's own load. We therefore suggest that the SDT replace the term "non-retail generation" with "generation located behind the retail customer's meter." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. CEC also believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours, a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN." Finally, we note that the LN exclusion must not operate in any way as a substitution for the statutory prohibition on including "facilities used in the local

distribution of electric energy" in the BES. Therefore, even with the LN exclusion, the SDT must retain this statutory language in the core definition of the BES, as discussed in our answer to Question One. If a certain piece of equipment is a "facility used in the local distribution of electric energy," then it is not part of the BES in the first instance, and so consideration of the LN Exclusion, or of any other Exclusion, any Inclusion, or any Exception, would be both unnecessary and uncalled for.

Yes

CEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.

No

CEC extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. CEC supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, CEC is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that CEC specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. CEC supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to come into compliance with newly-applicable Reliability Standards. CEC also supports the 24-month transition period for the reasons laid out by the SDT.

Individual

Dave Hagen

Clearwater Power Company (CPC)

Yes

The Clearwater Power Company (CPC) believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. CPC therefore supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. CPC strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100kV or higher and Real Time and Reactive Power resources connected at 100kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for "facilities used in the local distribution of electric energy." As the starting point for the BES definition, CPC supports the use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C.

§ 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate – "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. § 824o(a)(4) – will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. § 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). CPC thanks the SDT for the excellent work to include this sentence. For similar reasons, CPC believes the use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used in NERC Reliability Standards, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. CPC recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, CPC agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, CPC is prepared to support the BES definition as proposed by the SDT. While CPC supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, CPC believes a 200kV threshold would be more appropriate for WECC than a 100kV threshold. In addition, a 200kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view are therefore incorrect. That said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, CPC will support the SDT's proposal.

Yes

We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As we understand it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. We believe the SDT's intent would be clarified by adding a sentence at the end of Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. Many different configurations of transformers and other equipment that may lie at the

juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus, and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. As the Phase II process moves forward, we commend to the SDT the extensive work performed on the point of demarcation question by the WECC BESDTF. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2."

Yes

CPC supports the changes made in Inclusion 2 and believes that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support the SDT's proposal for a Phase II of the BES Definition process that would examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC ¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase II through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little process. CPC believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, § 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase II should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes that generation be included in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase II but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a

Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria.. The "materiality threshold" is intended to refer to the generator threshold developed in Phase II. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase II without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase II process based upon the technical analysis planned for Phase II, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase II is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase II are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase II on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase II under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100kV or above."

Yes

CPC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.

Yes

CPC supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e. "resources with aggregate capacity greater than 75 MVA (gross aggregate

nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," which we discuss in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a Local Network. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be established by the SDT in Phase II. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase ". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.

No

CPC has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Third, CPC believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase II process. Finally, CPC believes this issue should be addressed in Phase 2 since there is not technical justification or analysis done to determine the thresholds. CPC strongly believes that there should be technical justification for thresholds for this issue and all other issues.

Yes

CPC continues to strongly support the radial system exclusion, which is necessary as a legal matter, because, among other reasons, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term "transmission Elements" in the initial paragraph should be changed to "Elements." Radial systems are not transmission systems and including the word "transmission" in the Radial System exclusion is therefore unnecessary and confusing. (2) Subparagraph (b) of Exclusion 1 refers to "generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). We urge the SDT to replace this language with the defined term "Qualifying Aggregate

Generation Resources," discussed in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshhold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. (3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshhold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC's Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted. (4) The "Note" as drafted by the SDT indicates that "a normally open switching device between radial systems" will not serve to disqualify the Radial from exclusion under Exclusion 1. As discussed above, CPC strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d), rather than a note, because treatment as a "note" suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: (d) Normally-open switching devices between radial elements as depicted and identified on system one-line diagrams does not affect this exclusion. This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.

Yes

CPC supports the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, CPC urges the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term "Qualifying Aggregate Generation Resources" or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN.

Yes

CPC strongly supports the exclusion of Local Networks ("LNs") from the BES. The conversion of radial systems to local networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers would ultimately benefit. CPC also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, CPC supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." CPC supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. CPC believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core

language of Exclusion 3, we believe the language making a "group of contiguous transmission Elements operated at or above 100kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. CPC also believes that subparagraphs (a) and (b) are redundant, because whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system – power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to be the equivalent of generation that is located behind the retail meter, usually but not always owned by the customer and used to serve the customer's own load. We therefore suggest that the SDT replace the term "non-retail generation" with "generation located behind the retail customer's meter." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. CPC also believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to

re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours, a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN." Finally, we note that the LN exclusion must not operate in any way as a substitution for the statutory prohibition on including "facilities used in the local distribution of electric energy" in the BES. Therefore, even with the LN exclusion, the SDT must retain this statutory language in the core definition of the BES, as discussed in our answer to Question One. If a certain piece of equipment is a "facility used in the local distribution of electric energy," then it is not part of the BES in the first instance, and so consideration of the LN Exclusion, or of any other Exclusion, any Inclusion, or any Exception, would be both unnecessary and uncalled for.

Yes

CPC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.

No

CPC extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. CPC supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, CPC is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES

Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that CPC specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. CPC supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to come into compliance with newly-applicable Reliability Standards. CPC also supports the 24-month transition period for the reasons laid out by the SDT.

Individual

Eric Lee Christensen

Snohomish County PUD

Yes

The Public Utility District No. 1 of Snohomish County ("SNPD") believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. SNPD therefore strongly supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. SNPD strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, SNPD supports use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. § 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate – "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. § 824o(a)(4) – will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. § 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). For similar reasons, Snohomish believes use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. Snohomish recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to

conduct such an analysis within the time available. Accordingly, Snohomish agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, Snohomish is prepared to support the BES definition as proposed by the SDT. While Snohomish strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, Snohomish believes a 200-kV threshold would be more appropriate for WECC than a 100-kV threshold. In addition, a 200-kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view is therefore incorrect. That being said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, Snohomish will support the SDT's proposal and will not further pursue its claims regarding the 200-kV threshold. Finally, we suggest that the SDT address the circumstance when an Element is covered by both an Inclusion and an Exclusion. We note that some of the inclusions already contain language addressing this question. For example, Inclusion 1 indicates that transformers falling within the specified parameters are part of the BES ". . . unless excluded under Exclusions E1 or E3." Where it is not already included, similar language should be included in the other Inclusions and/or Exclusions to explain whether the SDT intends the Inclusions or the Exclusions to predominate in situations where facilities might be covered by both. We suggest clarifying language in our responses to Questions 2 and 5.

Yes

We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As we understand it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100 kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. We believe the SDT's intent would be clarified by adding a sentence at the end of Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100 kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. Many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. As the Phase II process moves forward, we commend to the SDT the extensive work performed on the point of demarcation question by the WECC BESDTF. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the

transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2."

Yes

SNPD supports the changes made in Inclusion 2 and believe that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support the SDT's proposal for a Phase II of the BES Definition process to examine the technical justification for these thresholds and to establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less due process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC ¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase II through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little due process. SNPD also believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, § 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase II should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes to include generation in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase II but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100 kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: "For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria." "For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria." The "materiality threshold" is intended to refer to the generator threshold developed in Phase II. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about

generator thresholds to the technical analysis that will occur in Phase II without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase II process based upon the technical analysis planned for Phase II, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase II is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase II are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase II on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Hence, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase II under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100 kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100 kV or above." Finally, as discussed further in our answer to Questions 5 and 6, SNPD believes more clarity may be achieved by collapsing Inclusion 5, addressing Reactive Power resources, and Inclusion 4, which addresses dispersed renewable resources, into a single Inclusion that addresses "power producing resources" (the language used in current Inclusion 4).

Yes

SNPD supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.

Yes

SNPD supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e, "resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," which is discussed in more detail in our response to Question 3. This language, or some equivalent, will preserve the SDT's ability to revise the 75 MVA threshold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in

Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a LN. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be established by the SDT in Phase II. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase ". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.

No

SNPD has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Finally, SNPD believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase II process.

Yes

SNPD continues to support the radial system exclusion, which is necessary as a legal matter, because, for example, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term "transmission Elements" in the initial paragraph should be changed to "Elements." Radial systems are not transmission systems and including the word "transmission" in the Radial System exclusion is therefore unnecessary and confusing. (2) Subparagraph (b) of Exclusion 1 refers to "generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). We urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," discussed in more detail in our response to Question 3. This language, or some equivalent, will preserve the SDT's ability to revise the 75 MVA threshhold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. (3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshhold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC's Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted. (4) The "Note" as drafted by the SDT indicates that "a normally open switching device between radial systems" will not serve to disqualify the Radial from exclusion under Exclusion 1. As noted above, SNPD strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d),

rather than a note, because treatment as a "note" suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: "d) Normally-open switching devices between radial elements as depicted and identified on system one-line diagrams does not affect this exclusion." This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.

Yes

SNPD supports the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, SNPD urges the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term "Qualifying Aggregate Generation Resources" or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN.

Yes

SNPD strongly supports the categorical exclusion of Local Networks ("LNs") from the BES. We believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement, discussed in our response to Question 1, to exclude all facilities used in the local distribution of electric power. LNs are, of course, probably the most common form of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers will ultimately benefit from the path chosen by the SDT. SNPD also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, SNPD supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." Snohomish supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. SNPD believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making a "group of contiguous transmission Elements operated at or above 100 kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100 kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the

term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. SNPD also believes that subparagraphs (a) and (b) are redundant in the sense that whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LDN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system – power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to mean generation that is used by retail customers located within a LN rather than being exported and sold on wholesale markets outside the LN. We therefore suggest that the SDT replace the phrase "non-retail generation" with the phrase "generation sold in wholesale markets and transmitted outside the LN." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. Finally, SNPD believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability

standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN."

Yes

Yes, SNPD supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.

No

SNPD extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. SNPD strongly supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, SNPD is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that SNPD specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. SNPD supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to come into compliance with newly-applicable Reliability Standards. SNPD also supports the 24-month transition period for the reasons laid out by the SDT.

Group

Chris Higgins
Transmission Reliability Program
Yes
Yes
Yes
BPA agrees with the I2 changes and feels that they are excellent.
Yes
Yes
BPA suggests adding, "Including generating terminals of the high side" as clarifying language to the end of the sentence. (Specifically where the 100kV is to be measured as clarified in I2). BPA believes that Inclusion 4 is not intended to include each individual wind turbine/generator unit in a wind farm as a BES element, but rather to include the point at which the aggregation becomes large enough to meet the aggregate capacity threshold of 75 MVA.
Yes
No
BPA believes that a system left connected in a network configuration, via use of a normally open switch for temporary network connection, without the protections afforded through the standards that apply to BES should be limited to less than 24 hours. BPA believes that the term "non-retail generation" in E1(c) should be clearly defined. In addition, BPA believes that there needs to be a means to isolate the radial system from the BES during a fault on the radial system by means of a automatic fault interrupting device. Automatic fault interrupting device should be a defined term.
Yes
BPA believes that if E2 is intended to exclude behind-the-meter generation, the phrase "on the customer's side of the retail meter" should immediately follow "generating units" in the first line. Otherwise, the phrase could be seen as modifying "retail customer Load."
No
BPA has several concerns regarding Exclusion E3. First, BPA strongly believes that Exclusion E3 must retain the requirement that the local network (LN) be separable from the BES by an automatic fault interrupting device wherever the LN interconnects with the BES. BPA believes that this is necessary in order to protect both the BES and the LN during faults, especially if there is any possibility that backfeed could occur. BPA recommends retaining the original language: Separable by automatic fault interrupting devices: Wherever connected to the BES, the LN must be connected through automatic fault interrupting devices. In addition, as stated in our comments in May, 2011, "automatic fault interrupting device" should be a defined term. BPA strongly believes that Exclusion E3 should not be allowed for any facilities above 200kV instead of the 300kV limit in shown in the current proposal. Networks operated above 200kV have significant fault duties, carry much more power, and have a greater potential for cascading if something does not operate properly than networks operated below 200kV. Therefore, BPA believes that these networks should be part of the BES. BPA believes the term "non-retail generation" in E3(a) should also be defined.
Yes
No
Individual
Roman Gillen
Consumer's Power Inc.
Yes
The Consumers Power (CPI) believes the SDT continues to make substantial progress towards a clear

and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. CPI therefore supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. CPI strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100kV or higher and Real Time and Reactive Power resources connected at 100kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for "facilities used in the local distribution of electric energy." As the starting point for the BES definition, CPI supports the use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. § 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate – "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. § 824o(a)(4) – will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. § 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). CPI thanks the SDT for the excellent work to include this sentence. For similar reasons, CPI believes the use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used in NERC Reliability Standards, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. CPI recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, CPI agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, CPI is prepared to support the BES definition as proposed by the SDT. While CPI supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, CPI believes a 200kV threshold would be more appropriate for WECC than a 100kV threshold. In addition, a 200kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view are therefore incorrect. That said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions

Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, CPI will support the SDT's proposal.

Yes

We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As we understand it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. We believe the SDT's intent would be clarified by adding a sentence at the end of Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. Many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus, and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. As the Phase II process moves forward, we commend to the SDT the extensive work performed on the point of demarcation question by the WECC BESDTF. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2."

Yes

CPI supports the changes made in Inclusion 2 and believes that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support the SDT's proposal for a Phase II of the BES Definition process that would examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC ¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase II through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little process. CPI believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site.

Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, § 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase II should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes that generation be included in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase II but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria.. The "materiality threshold" is intended to refer to the generator threshold developed in Phase II. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase II without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase II process based upon the technical analysis planned for Phase II, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase II is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase II are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase II on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase II under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific

thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100kV or above."

Yes

CPI supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.

Yes

CPI supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e, "resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," which we discuss in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a Local Network. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be established by the SDT in Phase II. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase ". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.

No

CPI has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Third, CPI believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase II process. Finally, CPI

believes this issue should be addressed in Phase 2 since there is not technical justification or analysis done to determine the thresholds. CPI strongly believes that there should be technical justification for thresholds for this issue and all other issues.
Yes
CPI continues to strongly support the radial system exclusion, which is necessary as a legal matter, because, among other reasons, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term "transmission Elements" in the initial paragraph should be changed to "Elements." Radial systems are not transmission systems and including the word "transmission" in the Radial System exclusion is therefore unnecessary and confusing. (2) Subparagraph (b) of Exclusion 1 refers to "generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). We urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," discussed in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshhold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. (3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshhold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC's Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted. (4) The "Note" as drafted by the SDT indicates that "a normally open switching device between radial systems" will not serve to disqualify the Radial from exclusion under Exclusion 1. As discussed above, CPI strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d), rather than a note, because treatment as a "note" suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: (d) Normally-open switching devices between radial elements as depicted and identified on system one-line diagrams does not affect this exclusion. This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.
Yes
CPI supports the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, CPI urges the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term "Qualifying Aggregate Generation Resources" or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN.
Yes

CPI strongly supports the exclusion of Local Networks ("LNs") from the BES. The conversion of radial systems to local networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers would ultimately benefit. CPI also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, CPI supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." CPI supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. CPI believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making a "group of contiguous transmission Elements operated at or above 100kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. CPI also believes that subparagraphs (a) and (b) are redundant, because whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system – power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term

"Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to be the equivalent of generation that is located behind the retail meter, usually but not always owned by the customer and used to serve the customer's own load. We therefore suggest that the SDT replace the term "non-retail generation" with "generation located behind the retail customer's meter." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. CPI also believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours, a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN." Finally, we note that the LN exclusion must not operate in any way as a substitution for the statutory prohibition on including "facilities used in the local

distribution of electric energy" in the BES. Therefore, even with the LN exclusion, the SDT must retain this statutory language in the core definition of the BES, as discussed in our answer to Question One. If a certain piece of equipment is a "facility used in the local distribution of electric energy," then it is not part of the BES in the first instance, and so consideration of the LN Exclusion, or of any other Exclusion, any Inclusion, or any Exception, would be both unnecessary and uncalled for.

Yes

CPI supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.

No

CPI extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. CPI supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, CPI is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that CPI specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. CPI supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to come into compliance with newly-applicable Reliability Standards. CPI also supports the 24-month transition period for the reasons laid out by the SDT.

Individual

Dave Sabala

Douglas Electric Cooperative (DEC)

Yes

The Douglas Electric Cooperative (DEC) believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. DEC therefore supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. DEC strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100kV or higher and Real Time and Reactive Power resources connected at 100kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for "facilities used in the local distribution of electric energy." As the starting point for the BES definition, DEC supports the use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C.

§ 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate – "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. § 824o(a)(4) – will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. § 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). DEC thanks the SDT for the excellent work to include this sentence. For similar reasons, DEC believes the use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used in NERC Reliability Standards, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. DEC recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, DEC agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, DEC is prepared to support the BES definition as proposed by the SDT. While DEC supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, DEC believes a 200kV threshold would be more appropriate for WECC than a 100kV threshold. In addition, a 200kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view are therefore incorrect. That said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, DEC will support the SDT's proposal.

Yes

We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As we understand it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. We believe the SDT's intent would be clarified by adding a sentence at the end of Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. Many different configurations of transformers and other equipment that may lie at the

juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus, and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. As the Phase II process moves forward, we commend to the SDT the extensive work performed on the point of demarcation question by the WECC BESDTF. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2."

Yes

DEC supports the changes made in Inclusion 2 and believes that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support the SDT's proposal for a Phase II of the BES Definition process that would examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC ¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase II through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little process. DEC believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, § 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase II should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes that generation be included in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase II but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a

Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria.. The "materiality threshold" is intended to refer to the generator threshold developed in Phase II. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase II without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase II process based upon the technical analysis planned for Phase II, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase II is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase II are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase II on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase II under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100kV or above."
Yes
DEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Yes
DEC supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e. "resources with aggregate capacity greater than 75 MVA (gross aggregate

nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," which we discuss in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a Local Network. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be established by the SDT in Phase II. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase ". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.

No

DEC has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Third, DEC believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase II process. Finally, DEC believes this issue should be addressed in Phase 2 since there is not technical justification or analysis done to determine the thresholds. DEC strongly believes that there should be technical justification for thresholds for this issue and all other issues.

Yes

DEC continues to strongly support the radial system exclusion, which is necessary as a legal matter, because, among other reasons, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term "transmission Elements" in the initial paragraph should be changed to "Elements." Radial systems are not transmission systems and including the word "transmission" in the Radial System exclusion is therefore unnecessary and confusing. (2) Subparagraph (b) of Exclusion 1 refers to "generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). We urge the SDT to replace this language with the defined term "Qualifying Aggregate

Generation Resources," discussed in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshhold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. (3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshhold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC's Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted. (4) The "Note" as drafted by the SDT indicates that "a normally open switching device between radial systems" will not serve to disqualify the Radial from exclusion under Exclusion 1. As discussed above, DEC strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d), rather than a note, because treatment as a "note" suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: (d) Normally-open switching devices between radial elements as depicted and identified on system one-line diagrams does not affect this exclusion. This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.
Yes
DEC supports the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, DEC urges the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term "Qualifying Aggregate Generation Resources" or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN.
Yes
DEC strongly supports the exclusion of Local Networks ("LNs") from the BES. The conversion of radial systems to local networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers would ultimately benefit. DEC also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, DEC supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." DEC supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. DEC believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core

language of Exclusion 3, we believe the language making a "group of contiguous transmission Elements operated at or above 100kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. DEC also believes that subparagraphs (a) and (b) are redundant, because whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system – power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to be the equivalent of generation that is located behind the retail meter, usually but not always owned by the customer and used to serve the customer's own load. We therefore suggest that the SDT replace the term "non-retail generation" with "generation located behind the retail customer's meter." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. DEC also believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to

re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours, a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN." Finally, we note that the LN exclusion must not operate in any way as a substitution for the statutory prohibition on including "facilities used in the local distribution of electric energy" in the BES. Therefore, even with the LN exclusion, the SDT must retain this statutory language in the core definition of the BES, as discussed in our answer to Question One. If a certain piece of equipment is a "facility used in the local distribution of electric energy," then it is not part of the BES in the first instance, and so consideration of the LN Exclusion, or of any other Exclusion, any Inclusion, or any Exception, would be both unnecessary and uncalled for.

Yes

DEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.

No

DEC extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. DEC supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, DEC is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES

Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that DEC specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. DEC supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to come into compliance with newly-applicable Reliability Standards. DEC also supports the 24-month transition period for the reasons laid out by the SDT.
Individual
Bryan Case
Fall River Rural Electric Cooperative (FALL)
Yes
The Fall River Rural Electric Cooperative (FALL) believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. FALL therefore supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. FALL strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100kV or higher and Real Time and Reactive Power resources connected at 100kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for "facilities used in the local distribution of electric energy." As the starting point for the BES definition, FALL supports the use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. § 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate – "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. § 824o(a)(4) – will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. § 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). FALL thanks the SDT for the excellent work to include this sentence. For similar reasons, FALL believes the use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used in NERC Reliability Standards, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. FALL recognizes

that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, FALL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, FALL is prepared to support the BES definition as proposed by the SDT. While FALL supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, FALL believes a 200kV threshold would be more appropriate for WECC than a 100kV threshold. In addition, a 200kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view are therefore incorrect. That said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, FALL will support the SDT's proposal.

Yes

We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As we understand it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. We believe the SDT's intent would be clarified by adding a sentence at the end of Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. Many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus, and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. As the Phase II process moves forward, we commend to the SDT the extensive work performed on the point of demarcation question by the WECC BESDTF. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2."

Yes

FALL supports the changes made in Inclusion 2 and believes that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support the SDT's proposal for a Phase II of the BES

Definition process that would examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC ¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase II through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little process. FALL believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, § 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase II should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes that generation be included in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase II but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria.. The "materiality threshold" is intended to refer to the generator threshold developed in Phase II. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase II without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase II process based upon the technical analysis planned for Phase II, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase II is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and

clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase II are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase II on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase II under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100kV or above."

Yes

FALL supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.

Yes

FALL supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e, "resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," which we discuss in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a Local Network. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be

established by the SDT in Phase II. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase ". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.

No

FALL has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Third, FALL believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase II process. Finally, FALL believes this issue should be addressed in Phase 2 since there is not technical justification or analysis done to determine the thresholds. FALL strongly believes that there should be technical justification for thresholds for this issue and all other issues.

Yes

FALL continues to strongly support the radial system exclusion, which is necessary as a legal matter, because, among other reasons, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term "transmission Elements" in the initial paragraph should be changed to "Elements." Radial systems are not transmission systems and including the word "transmission" in the Radial System exclusion is therefore unnecessary and confusing. (2) Subparagraph (b) of Exclusion 1 refers to "generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). We urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," discussed in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshhold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. (3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshhold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC's Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted. (4) The "Note" as drafted by the SDT indicates that "a normally open switching device between radial systems" will not serve to disqualify the Radial from exclusion under Exclusion 1. As discussed above, FALL strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d), rather than a note, because treatment as a "note" suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: (d) Normally-open switching devices between radial elements as depicted and identified on system one-line diagrams does not affect this exclusion. This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.

Yes
FALL supports the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, FALL urges the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term "Qualifying Aggregate Generation Resources" or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN.
Yes
FALL strongly supports the exclusion of Local Networks ("LNs") from the BES. The conversion of radial systems to local networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers would ultimately benefit. FALL also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, FALL supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." FALL supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. FALL believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making a "group of contiguous transmission Elements operated at or above 100kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. FALL also believes that subparagraphs (a) and (b) are redundant, because whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and

dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system – power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to be the equivalent of generation that is located behind the retail meter, usually but not always owned by the customer and used to serve the customer's own load. We therefore suggest that the SDT replace the term "non-retail generation" with "generation located behind the retail customer's meter." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. FALL also believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the

Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours, a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN." Finally, we note that the LN exclusion must not operate in any way as a substitution for the statutory prohibition on including "facilities used in the local distribution of electric energy" in the BES. Therefore, even with the LN exclusion, the SDT must retain this statutory language in the core definition of the BES, as discussed in our answer to Question One. If a certain piece of equipment is a "facility used in the local distribution of electric energy," then it is not part of the BES in the first instance, and so consideration of the LN Exclusion, or of any other Exclusion, any Inclusion, or any Exception, would be both unnecessary and uncalled for.

Yes

FALL supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.

No

FALL extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. FALL supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, FALL is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that FALL specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. FALL supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to come into compliance with newly-applicable Reliability Standards. FALL also supports the 24-month transition period for the reasons laid out by the SDT.

Individual

Rick Crinklaw

Lane Electric Cooperative (LEC)

Yes

The Lane Electric Cooperative (LEC) believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. LEC therefore supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. LEC strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100kV or higher and Real Time and Reactive Power resources connected at 100kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for "facilities used in the local distribution of electric energy." As the starting point for the BES definition, LEC supports the use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. § 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate – "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. § 824o(a)(4) – will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. § 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). LEC thanks the SDT for the excellent work to include this sentence. For similar reasons, LEC believes the use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used in NERC Reliability Standards, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. LEC recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, LEC agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, LEC is prepared to support the BES definition as proposed by the SDT. While LEC supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, LEC believes a 200kV threshold would be more appropriate for WECC than a 100kV threshold. In addition, a 200kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view are therefore incorrect. That said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the

core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, LEC will support the SDT's proposal.
Yes
We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As we understand it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. We believe the SDT's intent would be clarified by adding a sentence at the end of Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. Many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus, and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. As the Phase II process moves forward, we commend to the SDT the extensive work performed on the point of demarcation question by the WECC BESDTF. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2."
Yes
LEC supports the changes made in Inclusion 2 and believes that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support the SDT's proposal for a Phase II of the BES Definition process that would examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC ¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase II through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little process. LEC believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is

currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, § 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase II should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes that generation be included in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase II but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria.. The "materiality threshold" is intended to refer to the generator threshold developed in Phase II. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase II without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase II process based upon the technical analysis planned for Phase II, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase II is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase II are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase II on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase II under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the

SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100kV or above."

Yes

LEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.

Yes

LEC supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e, "resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," which we discuss in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a Local Network. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be established by the SDT in Phase II. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase ". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.

No

LEC has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Third, LEC believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be

subject to the same technical analysis that will cover generators in the Phase II process. Finally, LEC believes this issue should be addressed in Phase 2 since there is not technical justification or analysis done to determine the thresholds. LEC strongly believes that there should be technical justification for thresholds for this issue and all other issues.

Yes

LEC continues to strongly support the radial system exclusion, which is necessary as a legal matter, because, among other reasons, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term "transmission Elements" in the initial paragraph should be changed to "Elements." Radial systems are not transmission systems and including the word "transmission" in the Radial System exclusion is therefore unnecessary and confusing. (2) Subparagraph (b) of Exclusion 1 refers to "generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). We urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," discussed in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshhold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. (3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshhold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC's Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted. (4) The "Note" as drafted by the SDT indicates that "a normally open switching device between radial systems" will not serve to disqualify the Radial from exclusion under Exclusion 1. As discussed above, LEC strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d), rather than a note, because treatment as a "note" suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: (d) Normally-open switching devices between radial elements as depicted and identified on system one-line diagrams does not affect this exclusion. This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.

Yes

LEC supports the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, LEC urges the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term "Qualifying Aggregate Generation Resources" or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN.

Yes
LEC strongly supports the exclusion of Local Networks ("LNs") from the BES. The conversion of radial systems to local networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers would ultimately benefit. LEC also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, LEC supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." LEC supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. LEC believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making a "group of contiguous transmission Elements operated at or above 100kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. LEC also believes that subparagraphs (a) and (b) are redundant, because whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system – power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and

7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to be the equivalent of generation that is located behind the retail meter, usually but not always owned by the customer and used to serve the customer's own load. We therefore suggest that the SDT replace the term "non-retail generation" with "generation located behind the retail customer's meter." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. LEC also believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours, a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN." Finally, we note that the LN exclusion must not operate

in any way as a substitution for the statutory prohibition on including "facilities used in the local distribution of electric energy" in the BES. Therefore, even with the LN exclusion, the SDT must retain this statutory language in the core definition of the BES, as discussed in our answer to Question One. If a certain piece of equipment is a "facility used in the local distribution of electric energy," then it is not part of the BES in the first instance, and so consideration of the LN Exclusion, or of any other Exclusion, any Inclusion, or any Exception, would be both unnecessary and uncalled for.
Yes
LEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
No
LEC extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. LEC supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, LEC is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that LEC specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. LEC supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to come into compliance with newly-applicable Reliability Standards. LEC also supports the 24-month transition period for the reasons laid out by the SDT.
Individual
Michael Henry
Lincoln Electric Cooperative (LEC)
Yes
The Lincoln Electric Cooperative (LEC) believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. LEC therefore supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. LEC strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100kV or higher and Real Time and Reactive Power resources connected at 100kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for "facilities used in the local distribution of electric energy." As the starting point for the BES definition, LEC supports the use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in

the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. § 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate – "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. § 824o(a)(4) – will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. § 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). LEC thanks the SDT for the excellent work to include this sentence. For similar reasons, LEC believes the use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used in NERC Reliability Standards, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. LEC recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, LEC agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, LEC is prepared to support the BES definition as proposed by the SDT. While LEC supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, LEC believes a 200kV threshold would be more appropriate for WECC than a 100kV threshold. In addition, a 200kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view are therefore incorrect. That said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, LEC will support the SDT's proposal.

Yes

We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As we understand it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. We believe the SDT's intent would be clarified by adding a sentence at the end of Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is

necessary. Many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus, and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. As the Phase II process moves forward, we commend to the SDT the extensive work performed on the point of demarcation question by the WECC BESDTF. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2."
Yes
LEC supports the changes made in Inclusion 2 and believes that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support the SDT's proposal for a Phase II of the BES Definition process that would examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC ¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase II through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little process. LEC believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, § 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase II should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes that generation be included in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase II but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross

nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria.. The "materiality threshold" is intended to refer to the generator threshold developed in Phase II. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase II without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase II process based upon the technical analysis planned for Phase II, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase II is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase II are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase II on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase II under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100kV or above."

Yes

LEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.

Yes

LEC supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA

generation threshold (i.e, "resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," which we discuss in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a Local Network. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be established by the SDT in Phase II. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase ". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.

No

LEC has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Third, LEC believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase II process. Finally, LEC believes this issue should be addressed in Phase 2 since there is not technical justification or analysis done to determine the thresholds. LEC strongly believes that there should be technical justification for thresholds for this issue and all other issues.

Yes

LEC continues to strongly support the radial system exclusion, which is necessary as a legal matter, because, among other reasons, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term "transmission Elements" in the initial paragraph should be changed to "Elements." Radial systems are not transmission systems and including the word "transmission" in the Radial System exclusion is therefore unnecessary and confusing. (2) Subparagraph (b) of Exclusion 1 refers to "generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate

rating)"). We urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," discussed in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshhold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. (3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshhold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC's Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted. (4) The "Note" as drafted by the SDT indicates that "a normally open switching device between radial systems" will not serve to disqualify the Radial from exclusion under Exclusion 1. As discussed above, LEC strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d), rather than a note, because treatment as a "note" suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: (d) Normally-open switching devices between radial elements as depicted and identified on system one-line diagrams does not affect this exclusion. This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.

Yes

LEC supports the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, LEC urges the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term "Qualifying Aggregate Generation Resources" or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN.

Yes

LEC strongly supports the exclusion of Local Networks ("LNs") from the BES. The conversion of radial systems to local networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers would ultimately benefit. LEC also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, LEC supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." LEC supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. LEC believes further improvement of the

language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making a "group of contiguous transmission Elements operated at or above 100kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. LEC also believes that subparagraphs (a) and (b) are redundant, because whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system – power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to be the equivalent of generation that is located behind the retail meter, usually but not always owned by the customer and used to serve the customer's own load. We therefore suggest that the SDT replace the term "non-retail generation" with "generation located behind the retail customer's meter." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. LEC also believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we

believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours, a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN." Finally, we note that the LN exclusion must not operate in any way as a substitution for the statutory prohibition on including "facilities used in the local distribution of electric energy" in the BES. Therefore, even with the LN exclusion, the SDT must retain this statutory language in the core definition of the BES, as discussed in our answer to Question One. If a certain piece of equipment is a "facility used in the local distribution of electric energy," then it is not part of the BES in the first instance, and so consideration of the LN Exclusion, or of any other Exclusion, any Inclusion, or any Exception, would be both unnecessary and uncalled for.

Yes

LEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.

No

LEC extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. LEC supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, LEC is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team

will continue to move forward with developing an Exceptions Process that will complement the BES Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that LEC specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. LEC supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to come into compliance with newly-applicable Reliability Standards. LEC also supports the 24-month transition period for the reasons laid out by the SDT.

Individual

Jon Shelby

Northern Lights Inc. (NLI)

Yes

The Northern Lights (NLI) believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. NLI therefore supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. NLI strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100kV or higher and Real Time and Reactive Power resources connected at 100kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for "facilities used in the local distribution of electric energy." As the starting point for the BES definition, NLI supports the use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. § 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate – "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. § 824o(a)(4) – will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. § 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). NLI thanks the SDT for the excellent work to include this sentence. For similar reasons, NLI believes the use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used in NERC Reliability Standards, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an

analysis would be conducted as part of the current standards development process. NLI recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, NLI agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, NLI is prepared to support the BES definition as proposed by the SDT. While NLI supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, NLI believes a 200kV threshold would be more appropriate for WECC than a 100kV threshold. In addition, a 200kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view are therefore incorrect. That said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, NLI will support the SDT's proposal.

Yes

We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As we understand it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. We believe the SDT's intent would be clarified by adding a sentence at the end of Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. Many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus, and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. As the Phase II process moves forward, we commend to the SDT the extensive work performed on the point of demarcation question by the WECC BESDTF. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2."

Yes

NLI supports the changes made in Inclusion 2 and believes that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the

BES definition. We also support the SDT's proposal for a Phase II of the BES Definition process that would examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC ¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase II through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little process. NLI believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, § 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase II should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes that generation be included in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase II but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria.. The "materiality threshold" is intended to refer to the generator threshold developed in Phase II. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase II without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase II process based upon the technical analysis planned for Phase II, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase II is completed. Third, the definitions can be

incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase II are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase II on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase II under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100kV or above."

Yes

NLI supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.

Yes

NLI supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e, "resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," which we discuss in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a Local Network. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be

established by the SDT in Phase II. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase ". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.

No

NLI has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Third, NLI believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase II process. Finally, NLI believes this issue should be addressed in Phase 2 since there is not technical justification or analysis done to determine the thresholds. NLI strongly believes that there should be technical justification for thresholds for this issue and all other issues.

Yes

NLI continues to strongly support the radial system exclusion, which is necessary as a legal matter, because, among other reasons, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term "transmission Elements" in the initial paragraph should be changed to "Elements." Radial systems are not transmission systems and including the word "transmission" in the Radial System exclusion is therefore unnecessary and confusing. (2) Subparagraph (b) of Exclusion 1 refers to "generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). We urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," discussed in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshhold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. (3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshhold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC's Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted. (4) The "Note" as drafted by the SDT indicates that "a normally open switching device between radial systems" will not serve to disqualify the Radial from exclusion under Exclusion 1. As discussed above, NLI strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d), rather than a note, because treatment as a "note" suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: (d) Normally-open switching devices between radial elements as depicted and identified on system one-line diagrams does not affect this exclusion. This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.

Yes
NLI supports the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, NLI urges the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term "Qualifying Aggregate Generation Resources" or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN.
Yes
NLI strongly supports the exclusion of Local Networks ("LNs") from the BES. The conversion of radial systems to local networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers would ultimately benefit. NLI also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, NLI supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." NLI supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. NLI believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making a "group of contiguous transmission Elements operated at or above 100kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. NLI also believes that subparagraphs (a) and (b) are redundant, because whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and

dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system – power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to be the equivalent of generation that is located behind the retail meter, usually but not always owned by the customer and used to serve the customer's own load. We therefore suggest that the SDT replace the term "non-retail generation" with "generation located behind the retail customer's meter." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. NLI also believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011).

Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours, a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN." Finally, we note that the LN exclusion must not operate in any way as a substitution for the statutory prohibition on including "facilities used in the local distribution of electric energy" in the BES. Therefore, even with the LN exclusion, the SDT must retain this statutory language in the core definition of the BES, as discussed in our answer to Question One. If a certain piece of equipment is a "facility used in the local distribution of electric energy," then it is not part of the BES in the first instance, and so consideration of the LN Exclusion, or of any other Exclusion, any Inclusion, or any Exception, would be both unnecessary and uncalled for.
Yes
NLI supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
No
NLI extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. NLI supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, NLI is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that NLI specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. NLI supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to come into compliance with newly-applicable Reliability Standards. NLI also supports the 24-month transition period for the reasons laid out by the SDT.
Individual
Randy MacDonald
NBPT

Yes
• When an exclusion and inclusion principles overlap which takes precedence? For example I5 may be excluded if in a LN (E3) • The Local Network Exclusion criterion does not appear to consider voltage support and the effects of shifting of load or impacts due to a loss of load. The 75 MW generation threshold has no technical basis. The LN exclusion should allow for studies demonstrating no through flow benefit regardless if there is. • 75 MW Generation has no technical justification. • Black Start resources should not be included in all GO/GOP standards except for those standards specific to black start units.
Individual
Ray Ellis
Okanogan County Electric Cooperative (OCEC)
Yes
The Okanogan County Electric Cooperative (OCEC) believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. OCEC therefore supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. OCEC strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100kV or higher and Real Time and Reactive Power resources connected at 100kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for "facilities used in the local distribution of electric energy." As the starting point for the BES definition, OCEC supports the use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. § 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate – "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. § 824o(a)(4) – will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. § 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). OCEC thanks the SDT for the excellent work to include this sentence. For similar reasons, OCEC believes the use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used in NERC Reliability Standards, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards

development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. OCEC recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, OCEC agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, OCEC is prepared to support the BES definition as proposed by the SDT. While OCEC supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, OCEC believes a 200kV threshold would be more appropriate for WECC than a 100kV threshold. In addition, a 200kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view are therefore incorrect. That said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, OCEC will support the SDT's proposal.

Yes

We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As we understand it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. We believe the SDT's intent would be clarified by adding a sentence at the end of Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. Many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus, and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. As the Phase II process moves forward, we commend to the SDT the extensive work performed on the point of demarcation question by the WECC BESDTF. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2."

Yes
OCEC supports the changes made in Inclusion 2 and believes that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support the SDT's proposal for a Phase II of the BES Definition process that would examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC ¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase II through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little process. OCEC believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, § 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase II should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes that generation be included in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase II but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria.. The "materiality threshold" is intended to refer to the generator threshold developed in Phase II. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase II without having to revise the BES Definition at the end of that process. That is, the definitions are designed to

allow the SDT to include revised thresholds in the definition at the conclusion of the Phase II process based upon the technical analysis planned for Phase II, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase II is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase II are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase II on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase II under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100kV or above."
Yes
OCEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Yes
OCEC supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e, "resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," which we discuss in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit.

causing the local distribution system to be improperly denied status as a Local Network. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be established by the SDT in Phase II. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase ". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.

No

OCEC has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Third, OCEC believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase II process. Finally, OCEC believes this issue should be addressed in Phase 2 since there is not technical justification or analysis done to determine the thresholds. OCEC strongly believes that there should be technical justification for thresholds for this issue and all other issues.

Yes

OCEC continues to strongly support the radial system exclusion, which is necessary as a legal matter, because, among other reasons, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term "transmission Elements" in the initial paragraph should be changed to "Elements." Radial systems are not transmission systems and including the word "transmission" in the Radial System exclusion is therefore unnecessary and confusing. (2) Subparagraph (b) of Exclusion 1 refers to "generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). We urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," discussed in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshhold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. (3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshhold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC's Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted. (4) The "Note" as drafted by the SDT indicates that "a normally open switching device between radial systems" will not serve to disqualify the Radial from exclusion under Exclusion 1. As discussed above, OCEC strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d), rather than a note, because treatment as a "note" suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: (d) Normally-open switching devices between

radial elements as depicted and identified on system one-line diagrams does not affect this exclusion. This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.
Yes
OCEC supports the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, OCEC urges the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term "Qualifying Aggregate Generation Resources" or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN.
Yes
OCEC strongly supports the exclusion of Local Networks ("LNs") from the BES. The conversion of radial systems to local networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers would ultimately benefit. OCEC also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, OCEC supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." OCEC supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. OCEC believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making a "group of contiguous transmission Elements operated at or above 100kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. OCEC also believes that subparagraphs (a) and (b) are redundant, because whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects

more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system – power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to be the equivalent of generation that is located behind the retail meter, usually but not always owned by the customer and used to serve the customer's own load. We therefore suggest that the SDT replace the term "non-retail generation" with "generation located behind the retail customer's meter." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. OCEC also believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task

Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours, a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN." Finally, we note that the LN exclusion must not operate in any way as a substitution for the statutory prohibition on including "facilities used in the local distribution of electric energy" in the BES. Therefore, even with the LN exclusion, the SDT must retain this statutory language in the core definition of the BES, as discussed in our answer to Question One. If a certain piece of equipment is a "facility used in the local distribution of electric energy," then it is not part of the BES in the first instance, and so consideration of the LN Exclusion, or of any other Exclusion, any Inclusion, or any Exception, would be both unnecessary and uncalled for.

Yes

OCEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.

No

OCEC extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. OCEC supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, OCEC is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that OCEC specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. OCEC supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to come into compliance with newly-applicable Reliability Standards. OCEC also supports the 24-month transition period for the reasons laid out by the SDT.

Individual
Donald Jones
Texas Reliability Entity
No
We feel that the Cranking Path should be included in the BES definition. Inclusion of the Cranking Path is vital to a functional, sustainable and reliable system restoration (and restoration plan) regardless of where the Cranking Path is located. CIP-002-4 Attachment 1 recognizes the critical nature of the Cranking Path.
No
There should be language that includes UFLS, UVLS, or load fully removable for Reserves even in a local network to avoid a lapse in reliability in operation of the BES. Even if it is to be included in any Phase 2 work, it should be mentioned here to avoid gaps.
Yes
(1) It is unclear exactly what is intended by "non-retail generation" in Exclusion E1(c). We suggest that the term be explained or defined in the BES definition or in a collateral document. This term does not have a commonly understood unambiguous meaning in our Region. (2) Phase 2 has to be completed or explicitly defined/scoped to fully capture all of the components necessary for reliable operation of the BES.
Individual
Diane Barney
New York State Dept of Public Service
No
The core definition is still deficient due to a lack of technical support for basing the BES definition on 100 kV and for lack of any cost/benefit analysis.
No
• I1 lacks specificity that can lead to confusion and required clarifications. Suggested wording change: All transformers (including auto-transformers, voltage regulators, and phase angle regulators and all windings) with primary and secondary terminals operated at or above 100 kV, and generator step-up (GSU) transformers with one terminal operated at or above 100 kV, unless excluded by E1 or E3.
No
In I2, there is a reference to the Statement of Compliance Registry Criteria. However, the Statement references the BES definition. This circular logic results in a fatally flawed definition. The statement reference should be replaced with the actual intended words.
No
I4 reference to a "common point" lacks clarity that can lead to confusion and required clarifications. Suggested wording change: … connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 kV or above."
No
I5 – which has been newly added and significantly expands the BES definition – should be dropped due to lack of technical justification.

Yes
• Per NERC's obligations under the Energy Power Act of 2005 to provide FERC technical advice, no technical justification has been provided for basing the BES definition on the 100 kV and MVA thresholds. • No cost analysis on either the reliability benefits of the overall definition or on the implementation plan has been performed to determine whether the likely high cost of the definition to ratepayers is justified. • The definition of the BES should be the driver for the application of all other NERC reliability standards and criteria. The definition uses the Statement of Compliance Registry Criteria as a driver of the definition when the reverse should be taking place; contents of the Statement should be driven by the BES definition.
Individual
Rick Paschall
Pacific Northwest Generating Cooperative (PNGC)
Yes
The Pacific Northwest Generating Cooperative (PNGC) believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. PNGC therefore supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. PNGC strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100kV or higher and Real Time and Reactive Power resources connected at 100kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for "facilities used in the local distribution of electric energy." As the starting point for the BES definition, PNGC supports the use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. § 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate – "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. § 824o(a)(4) – will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. § 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). PNGC thanks the SDT for the excellent work to include this sentence. For similar reasons, PNGC believes the use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used in NERC Reliability Standards, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. PNGC recognizes

that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, PNGC agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, PNGC is prepared to support the BES definition as proposed by the SDT. While PNGC supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, PNGC believes a 200kV threshold would be more appropriate for WECC than a 100kV threshold. In addition, a 200kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view are therefore incorrect. That said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, PNGC will support the SDT's proposal.

Yes

We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As we understand it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. We believe the SDT's intent would be clarified by adding a sentence at the end of Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. Many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus, and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. As the Phase II process moves forward, we commend to the SDT the extensive work performed on the point of demarcation question by the WECC BESDTF. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2."

Yes

PNGC supports the changes made in Inclusion 2 and believes that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support the SDT's proposal for a Phase II of the BES

Definition process that would examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC ¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase II through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little process. PNGC believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, § 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase II should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes that generation be included in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase II but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria.. The "materiality threshold" is intended to refer to the generator threshold developed in Phase II. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase II without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase II process based upon the technical analysis planned for Phase II, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase II is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and

clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase II are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase II on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase II under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100kV or above."

Yes

PNGC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.

Yes

PNGC supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e, "resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," which we discuss in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a Local Network. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be

established by the SDT in Phase II. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase ". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.

No

PNGC has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Third, PNGC believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase II process. Finally, PNGC believes this issue should be addressed in Phase 2 since there is not technical justification or analysis done to determine the thresholds. PNGC strongly believes that there should be technical justification for thresholds for this issue and all other issues.

Yes

PNGC continues to strongly support the radial system exclusion, which is necessary as a legal matter, because, among other reasons, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term "transmission Elements" in the initial paragraph should be changed to "Elements." Radial systems are not transmission systems and including the word "transmission" in the Radial System exclusion is therefore unnecessary and confusing. (2) Subparagraph (b) of Exclusion 1 refers to "generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). We urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," discussed in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshhold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. (3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshhold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC's Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted. (4) The "Note" as drafted by the SDT indicates that "a normally open switching device between radial systems" will not serve to disqualify the Radial from exclusion under Exclusion 1. As discussed above, PNGC strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d), rather than a note, because treatment as a "note" suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: (d) Normally-open switching devices between radial elements as depicted and identified on system one-line diagrams does not affect this exclusion. This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.

Yes
PNGC supports the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, PNGC urges the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term "Qualifying Aggregate Generation Resources" or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN.
Yes
PNGC strongly supports the exclusion of Local Networks ("LNs") from the BES. The conversion of radial systems to local networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers would ultimately benefit. PNGC also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, PNGC supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." PNGC supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. PNGC believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making a "group of contiguous transmission Elements operated at or above 100kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. PNGC also believes that subparagraphs (a) and (b) are redundant, because whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and

dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system – power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to be the equivalent of generation that is located behind the retail meter, usually but not always owned by the customer and used to serve the customer's own load. We therefore suggest that the SDT replace the term "non-retail generation" with "generation located behind the retail customer's meter." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. PNGC also believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the

Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours, a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN." Finally, we note that the LN exclusion must not operate in any way as a substitution for the statutory prohibition on including "facilities used in the local distribution of electric energy" in the BES. Therefore, even with the LN exclusion, the SDT must retain this statutory language in the core definition of the BES, as discussed in our answer to Question One. If a certain piece of equipment is a "facility used in the local distribution of electric energy," then it is not part of the BES in the first instance, and so consideration of the LN Exclusion, or of any other Exclusion, any Inclusion, or any Exception, would be both unnecessary and uncalled for.
Yes
PNGC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
No
PNGC extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. PNGC supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, PNGC is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that PNGC specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. PNGC supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to come into compliance with newly-applicable Reliability Standards. PNGC also supports the 24-month transition period for the reasons laid out by the SDT.
Individual
Heber Carpenter
Raft River Rural Electric Cooperative (RAFT)
Yes

The Raft River Rural Electric Cooperative (RAFT) believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. RAFT therefore supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. RAFT strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100kV or higher and Real Time and Reactive Power resources connected at 100kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for "facilities used in the local distribution of electric energy." As the starting point for the BES definition, RAFT supports the use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. § 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate – "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. § 824o(a)(4) – will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. § 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). RAFT thanks the SDT for the excellent work to include this sentence. For similar reasons, RAFT believes the use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used in NERC Reliability Standards, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. RAFT recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, RAFT agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, RAFT is prepared to support the BES definition as proposed by the SDT. While RAFT supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, RAFT believes a 200kV threshold would be more appropriate for WECC than a 100kV threshold. In addition, a 200kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view are therefore incorrect. That said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the

core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, RAFT will support the SDT's proposal.

Yes

We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As we understand it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. We believe the SDT's intent would be clarified by adding a sentence at the end of Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. Many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus, and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. As the Phase II process moves forward, we commend to the SDT the extensive work performed on the point of demarcation question by the WECC BESDTF. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2."

Yes

RAFT supports the changes made in Inclusion 2 and believes that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support the SDT's proposal for a Phase II of the BES Definition process that would examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC ¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase II through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little process. RAFT believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation

Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, § 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase II should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes that generation be included in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase II but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria.. The "materiality threshold" is intended to refer to the generator threshold developed in Phase II. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase II without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase II process based upon the technical analysis planned for Phase II, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase II is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase II are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase II on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase II under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good

starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100kV or above."

Yes

RAFT supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.

Yes

RAFT supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e, "resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," which we discuss in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a Local Network. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be established by the SDT in Phase II. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase ". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.

No

RAFT has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Third, RAFT believes the

appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase II process. Finally, RAFT believes this issue should be addressed in Phase 2 since there is not technical justification or analysis done to determine the thresholds. RAFT strongly believes that there should be technical justification for thresholds for this issue and all other issues.

Yes

RAFT continues to strongly support the radial system exclusion, which is necessary as a legal matter, because, among other reasons, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term "transmission Elements" in the initial paragraph should be changed to "Elements." Radial systems are not transmission systems and including the word "transmission" in the Radial System exclusion is therefore unnecessary and confusing. (2) Subparagraph (b) of Exclusion 1 refers to "generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). We urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," discussed in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshhold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. (3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshhold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC's Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted. (4) The "Note" as drafted by the SDT indicates that "a normally open switching device between radial systems" will not serve to disqualify the Radial from exclusion under Exclusion 1. As discussed above, RAFT strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d), rather than a note, because treatment as a "note" suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: (d) Normally-open switching devices between radial elements as depicted and identified on system one-line diagrams does not affect this exclusion. This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.

Yes

RAFT supports the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, RAFT urges the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term "Qualifying Aggregate Generation Resources" or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System

or LN.
Yes
RAFT strongly supports the exclusion of Local Networks ("LNs") from the BES. The conversion of radial systems to local networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers would ultimately benefit. RAFT also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, RAFT supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." RAFT supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. RAFT believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making a "group of contiguous transmission Elements operated at or above 100kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. RAFT also believes that subparagraphs (a) and (b) are redundant, because whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system – power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater

than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to be the equivalent of generation that is located behind the retail meter, usually but not always owned by the customer and used to serve the customer's own load. We therefore suggest that the SDT replace the term "non-retail generation" with "generation located behind the retail customer's meter." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. RAFT also believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours, a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be

revised to read: "Except in unusual circumstances, power flows only into the LN." Finally, we note that the LN exclusion must not operate in any way as a substitution for the statutory prohibition on including "facilities used in the local distribution of electric energy" in the BES. Therefore, even with the LN exclusion, the SDT must retain this statutory language in the core definition of the BES, as discussed in our answer to Question One. If a certain piece of equipment is a "facility used in the local distribution of electric energy," then it is not part of the BES in the first instance, and so consideration of the LN Exclusion, or of any other Exclusion, any Inclusion, or any Exception, would be both unnecessary and uncalled for.

Yes

RAFT supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.

No

RAFT extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. RAFT supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, RAFT is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that RAFT specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. RAFT supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to come into compliance with newly-applicable Reliability Standards. RAFT also supports the 24-month transition period for the reasons laid out by the SDT.

Individual

Marc Farmer

West Oregon Electric Cooperative

Yes

The West Oregon Electric Cooperative (WOEC) believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. WOEC therefore supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. WOEC strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100kV or higher and Real Time and Reactive Power resources connected at 100kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for "facilities used in the local distribution of electric energy." As the starting point for the BES definition, WOEC supports the use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional

Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. § 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate – "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. § 824o(a)(4) – will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. § 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). WOEC thanks the SDT for the excellent work to include this sentence. For similar reasons, WOEC believes the use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used in NERC Reliability Standards, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. WOEC recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, WOEC agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, WOEC is prepared to support the BES definition as proposed by the SDT. While WOEC supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, WOEC believes a 200kV threshold would be more appropriate for WECC than a 100kV threshold. In addition, a 200kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view are therefore incorrect. That said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, WOEC will support the SDT's proposal.
Yes
We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As we understand it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. We believe the SDT's intent would be clarified by adding a sentence at the end of Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at

the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. Many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus, and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. As the Phase II process moves forward, we commend to the SDT the extensive work performed on the point of demarcation question by the WECC BESDTF. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2."
Yes
WOEC supports the changes made in Inclusion 2 and believes that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support the SDT's proposal for a Phase II of the BES Definition process that would examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC ¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase II through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little process. WOEC believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, § 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase II should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes that generation be included in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase II but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying

Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria.. The "materiality threshold" is intended to refer to the generator threshold developed in Phase II. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase II without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase II process based upon the technical analysis planned for Phase II, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase II is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase II are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase II on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase II under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100kV or above."
Yes
WOEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.

Yes

WOEC supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e, "resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," which we discuss in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a Local Network. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be established by the SDT in Phase II. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase ". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.

No

WOEC has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Third, WOEC believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase II process. Finally, WOEC believes this issue should be addressed in Phase 2 since there is not technical justification or analysis done to determine the thresholds. WOEC strongly believes that there should be technical justification for thresholds for this issue and all other issues.

Yes

WOEC continues to strongly support the radial system exclusion, which is necessary as a legal matter, because, among other reasons, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term "transmission Elements" in the initial paragraph should be changed to "Elements." Radial

systems are not transmission systems and including the word "transmission" in the Radial System exclusion is therefore unnecessary and confusing. (2) Subparagraph (b) of Exclusion 1 refers to "generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). We urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," discussed in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshhold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. (3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshhold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC's Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted. (4) The "Note" as drafted by the SDT indicates that "a normally open switching device between radial systems" will not serve to disqualify the Radial from exclusion under Exclusion 1. As discussed above, WOEC strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d), rather than a note, because treatment as a "note" suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: (d) Normally-open switching devices between radial elements as depicted and identified on system one-line diagrams does not affect this exclusion. This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.

Yes

WOEC supports the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, WOEC urges the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term "Qualifying Aggregate Generation Resources" or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN.

Yes

WOEC strongly supports the exclusion of Local Networks ("LNs") from the BES. The conversion of radial systems to local networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers would ultimately benefit. WOEC also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, WOEC supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." WOEC supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load

while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. WOEC believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making a "group of contiguous transmission Elements operated at or above 100kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. WOEC also believes that subparagraphs (a) and (b) are redundant, because whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system – power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to be the equivalent of generation that is located behind the retail meter, usually but not always owned by the customer and used to serve the customer's own load. We therefore suggest that the SDT replace the term "non-retail generation" with "generation located behind the retail customer's meter." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. WOEC also believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that

allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours, a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN." Finally, we note that the LN exclusion must not operate in any way as a substitution for the statutory prohibition on including "facilities used in the local distribution of electric energy" in the BES. Therefore, even with the LN exclusion, the SDT must retain this statutory language in the core definition of the BES, as discussed in our answer to Question One. If a certain piece of equipment is a "facility used in the local distribution of electric energy," then it is not part of the BES in the first instance, and so consideration of the LN Exclusion, or of any other Exclusion, any Inclusion, or any Exception, would be both unnecessary and uncalled for.

Yes

WOEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.

No

WOEC extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. WOEC supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, WOEC is encouraged that the

20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that WOEC specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. WOEC supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to come into compliance with newly-applicable Reliability Standards. WOEC also supports the 24-month transition period for the reasons laid out by the SDT.
Individual
John Seelke
PSEG Services Corp
Yes
Yes
Yes
Yes
Yes
Yes
Yes
1. If a 50 MVA generator that is included per I2 is connected to an excluded radial system, would the generator be excluded or included per E1b)? If yes, then the language "unless excluded under Exclusion E1 and E3" in I1 needs to be added to I2, I4, and I5. 2. Non-retail generation in E1c) was described behind-the-meter generation in the Webinar. The term "non-retail generation" should be defined because one could infer that generation defined by E2 is "retail generation." Also, is the 75 MVA limit intended apply to the generator (as stated) or its net capacity as defined in E2? If it means the generator MVA, does that mean that generation excluded in E2 cannot exceed 75 MVA when connected to an excluded radial system? 3. In general, the definition needs to better define the impact that "exclusion" has on a different "inclusion" or "exclusion."
Yes
Yes
Yes
No
Group
Bruce Wertz

Power Utility Compliance Consultants
Yes
However, one of the FERC directives in Order 743 charged NERC with delineating the difference between transmission and distribution. The Inclusions and Exclusions are a step in that direction, but this subject will need more consideration in Phase II.
Yes
No
Since an aggregate of 75 MVA is allowed at a single site, there is no basis for maintaining the 20 MVA for a single generator. The proposed MOD-026 assigns thresholds by region that are much higher than 20 MVA for modeling purposes. Since modeling generally would require more granularity than what is necessary for the reliable operation of the interconnected transmission system (BES), the SDT might want to review the threshold basis for NERC Project 2007-09 (Generator Verification).
Yes
Yes
To distinguish this Inclusion from Inclusion I2, the SDT might want to clarify that the collection system (usually at voltage below 100 KV anyway) is not part of the BES—just the resources and any transformers included by I1, if this is indeed the intent of this Inclusion.
Yes
Yes
This is a much needed change from the first posting, as this will maintain the status quo referred to in the introduction text.
Yes
Yes
This Exclusion and Exclusion E1 aid in the delineation of distribution versus transmission.
Yes
This is a needed exception to Inclusion I5 as these reactive power resources are used by retail customers for power factor correction at their own facilities in order avoid imposed power factor penalties.
Yes
It might be worthwhile to explain the relationship (timeline) between the BES Definition implementation plan and the compliance implementation plan proposed in the BES RoP team’s new Appendix 5C for the NERC Rules of Procedure.
Individual
Sylvain Clermont
Hydro-Quebec TransEnergie
No
The proposed revision to the definition maintaining this bright line of 100 kV would expand significantly what is considered to be BES in HQT's case (the amount of added facilities could be ten times more). Since the main structure of Quebec system is included in the BES where the best norms and standards apply, the inclusion in the BES of sub-systems at lower voltage and including generation will not bring significant impact on the reliable operation of the interconnected system, because of the nature of the Quebec Interconnection. Furthermore for HQT's system, the proposed BES definition combined with the exception procedure are presently incompatible or at least inconsistent with the regulatory framework applicable in Quebec. The proposed changes have not address this concern, neither the SDT's responses to our previous comments last May (Q.1 and 12). We reiterate that the definition and the exception procedure shall be determined by Quebec's regulator, the Régie de l'Énergie du Québec, (Quebec Energy Board) which has the responsibility to ensure that electric power transmission in Quebec is carried out according to the reliability standards

it adopts. Per se, it would be necessary that E1 and E3 grant exclusions with much higher level of generation. It would also be necessary to allow for several levels of application for the Reliability Standards, in accordance with the Régie de l'énergie du Québec approach: the Bulk Power System (BPS) as determined using an impact-based methodology, the Main Transmission System (MTS), and other parts of Regional System. Standards related to the protection system (PRC-004-1 and PRC-005-1) and those related to the design of the transmission system (TPL 001-0 to TPL-004-0) shall be applicable to the first level, but all other reliability standards shall be applied to the second level, the MTS. The MTS definition is somewhat different than the Bulk Electric System definition, and it includes elements that impact the reliability of the grid, supply-demand balance and interchanges. We argue that it would be necessary for NERC to address the regulatory issues outside ot the present context of the SDT and ROP team.
Yes
We believe that automatic inclusion of such generation and the path to connect them to the BES would bring a great amount of facilities in the BES. Generation should be considered on a different level such as "BES Support Elements" and provisions should be made so that some specific reliability standards would apply to them.
Yes
Same comment than Q. 3. Also, since the path to connect the dispersed generation is often done at distribution voltage, that lower voltage path should not be included in BES.
No
No
Even with the modification proposed, it is too much restrictive to refuse exclusion of radial system when they have generator or multiple generating units of aggregate capacity greater than 75 MVA, especially when a system is able to function reliably with the loss of generation much higher than this amount. To count on the exception procedure to exclude radial system with greater generation is risky since no specific criteria have been given to guide such exclusion. In most cases for radial or local system including generation, the path that connects the generation should not be included in the BES. Generators should be allowed to be considered "BES support elements" and reliability standards should apply to them in specific.
Same comment than Q7.
Yes
Yes
In the Implementation plan, it is given only 24 months for compliance after applicable regulatory approval. Considering the possibility that a proposed transition plan may involve commissioning of long term projects, a provision for such situation should be made with longer delay.
Individual
Michael Falvo
Independent Electricity System Operator
Yes
Yes
Yes
While we agree with Inclusion I2, we suggest removing the parentheses enclosing the text "with gross individual…" since their inclusion may lead to an erroneous reading of provision to include generators that do not meet ERO Statement of Compliance Registry Criteria.
No

We thank the SDT for excluding the cranking paths from the BES definition, a point we had raised in our comments to the previous posting. However, we had also disagreed with the inclusion of Blackstart Resources and reiterate our view that their inclusion is superfluous given there is already a designation specific for system restoration covered by an existing standard, to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. We therefore suggest removing Inclusion I3 entirely.
Yes
The revised Inclusion I4 does indeed clarify that there is no requirement for a contiguous BES path from the dispersed generation resources to the point of interconnection to the BES.
Yes
The provisions of Inclusion I5 fully address the concerns we expressed in our previous comments.
No
We support the provisions of E1 in principle but require clarification of some issues and suggest alternative wording in some cases. It is unclear if the connection voltage of generation referred to in E1.b affects whether a radial system could be excluded under E1 although from the context it appears that it would. For clarity we suggest appending “connected at 100 kV or higher.” Please provide in the BES definition document an explanation of “non-retail” and “retail” generation used in E1.c. Additionally, despite the fact the revisions to Inclusion I3 (Blackstart Resources) removed any reference to Cranking Paths, Exclusion 1 (b) and (c) both indicate that the exclusion of a radial system would not be allowed if generation identified in I3 were connected to it. This implies that the Cranking Path for this Blackstart Resource would have to be BES. This appears to be an inconsistency. We suggest removing the phrase “not identified in Inclusion I3” in both instances. We disagree with notion that the capacity of generation connected to a radial system ought to determine whether that radial system should be classified as BES. Firstly, it is a given that the generation connected to the subject radial that meets the registry criteria would already be captured within the core BES definition and Inclusion I2. The function served by a radial that is of importance in the current context is that of delivering surplus power to the rest of the bulk power system and so, the impact on the BES of loss of the radial system or its connected generation needs to be considered. In our view, the “BES-status” of the radial itself is immaterial and so too is the aggregate capacity of generation resources connected to it. Detailed arguments regarding impact on the BES can be made in support of an application for an exclusion under the Exception Process, but it would be beneficial to avoid unnecessarily including a radial merely because it has more than 75 MVA of qualifying generation connected to it, without equal consideration of the connected load. To put a “bright line” on the consideration of impact referred to above, we suggest: In E1 (b): Replace "an aggregate capacity less than or equal to 75 MVA (gross nameplate rating)" with "a net capacity provided to the BES of less than or equal to 75 MVA." In E1 (c): Replace "an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating)" with "a net capacity of non-retail generation provided to the BES of 75 MVA." This wording would be consistent with E2 (i). Finally the word “affect” stated in the note accompanying E1 lends itself to mis-interpretation. We therefore suggest the following revision to achieve greater clarity: “This exclusion applies to radial systems connected by a normally open switch.”
Yes
No
Consistent with our comments in response to Q7, we propose removing E3 (a) since, as explicitly described in E3 (b), one of the characteristic of the LN is that power flows only into the LN. The level of generation contained within the LN is therefore immaterial, particularly where the most onerous contingency or system operating condition occurring within the LN, results in acceptable BES performance as defined by the applicable criteria of the NERC transmission planning standards. The generation connected within the LN that meets the registry criteria would already be captured within the definition of the BES as provided for in Inclusion I2.
Yes
Yes

We wish to also express our support for phased approach proposed in the draft supplemental SAR. Development of the revised BES definition is an important and complex undertaking. The product of this work is fundamental to establishing the applicability of NERC Reliability Standards. The issues identified for attention in Phase 2 of this project warrant careful investigation and as such allowing additional time to properly research and stakeholder them is justified. The draft Implementation Plan for the BES definition sates "Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition." We are concerned that the stated implementation period may be insufficient time to (1) prepare and file exception requests and have these assessed; and (2) in cases where these exception requests are not approved, to develop and complete transition plans for newly identified BES Elements and Facilities, particularly where those plans require major investments for the procurement, installation and commissioning of additional equipment. We therefore propose the following alternative wording for the Implementation Plan: "Compliance obligations for elements included by the definition shall be evaluated and an implementation schedule established within 24 months." Throughout the document various phrases are used to describe generating units/resource, viz. "generation resources", "generating resources", "generating unit" and "power producing resources". Please review these to identify and address any possible inconsistencies.
Individual
John Allen
Rochester Gas & Electric and New York State Electric & Gas
No
The second sentence, "This does not include facilities used in the local distribution of electric energy," is vague and not sufficiently clear for northeast industry expert colleagues to be certain of what is "not included." This sentence seems to apply only to distribution facilities that have already been classified based on the FERC "Seven Factor Test" in Order 888. If so, this sentence be re-written as follows for clarity: "This does not include facilities classified as distribution facilities." For US entities, this classification is clearly delineated in our annual FERC Form 1 filing.
No
We generally agree, but suggest modification to the language of Inclusion I1 to clarify its application for transformers with more than two windings: "Transformers with two or more terminals operated at 100 kV or higher, unless excluded under Exclusion E1 and E3." Based on this wording, transformer tertiary windings would also be BES – is that the intent?
No
Inclusion I2 should remove the reference to the Statement of Compliance Registry Criteria. The definition should stand on its own. I2 should be revised to read: "Generators with a gross nameplate rating of 20 MVA or greater, or a generating plant/facility connected at a common bus, with a gross aggregate nameplate rating of 75 MVA or greater and is directly connected at a voltage of 100 kV or above. BES includes the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above." This is consistent with the proposed I2 and the current Compliance Registry Criteria.
No
Inclusion I3 should be changed to include the phrase, "material to," currently in the Statement of Compliance Registry Criteria (Section 3C3). Based on the definition wording, the Generator Step-Up transformer (GSU) would not be BES if the generator would not otherwise already be included as BES under another definition provision.
No
The term "common point" needs clarification and/or definition. (e.g., is it intended to apply to the risk of single mode failure, where all the resources could be lost for a single event?) Some northeast industry expert colleagues interpret I2 to mean the collector system itself needs to be 100 kV or above in order to be BES. I2 seems to not include the collector system itself in BES. I4 be restated as follows: "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system connected at a common point. BES includes the interconnecting substation with the step-up transformer(s) connected at a voltage of 100 kV or above." [alternatively, replace the bold italics with, "generator terminals through the high-side of"] Also note that some wind collector systems require supplemental dynamic reactive resources or

special control system to met reliability standards. As written, these reactive resources or controls may not be considered to be BES.
Yes
There is no such thing as "supplying or absorbing Reactive Power" but the intended meaning is sufficiently clear since it is industry 'shorthand'. Suggest alternative wording: "Static or dynamic Reactive Power resources that are connected at 100 kV or higher, or…"
No
E1 needs to be revised to make it less confusing. "Radial systems" leaves the impression that E1 is not simply a "radial line exclusion", because of the plural and the word "systems." Northeast industry expert colleagues are not clear at all what this sentence specifies: "A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher." • Does E1 apply only to a single radial transmission line (and its associated "group of Elements")? • Alternatively, does E1 apply to multiple radial lines "emanating from" the same substation regardless of the bus configuration – would a ring bus or a two-bus system that is connected with a tie breaker be considered as "a single point of connection"? This definition is not clear. Clarity is imperative. E1(c) should define or replace the term "non-retail". Industry needs clarity on exactly what generation this applies to, in order to properly apply this definition. The Note referring to the "Normally Open switch" needs further clarification. As written, it seems to conflict with FERC order 743, paragraph 55: "While commenters would like to expand the scope of the term "radial" to exclude certain transmission facilities such as tap lines and secondary feeds via a normally open line, we are not persuaded that such categorical exemption is warranted." E1 should be restated as follows: "Radial systems: A single transmission line or transformer not otherwise identified in the Inclusions above, with a single point of connection of 100 kV or higher and: a) Only serves Load. Or, b) Only includes generation resources, not identified in the Inclusions above. Or, c) Both serves Load and only includes generation resources, not identified in the Inclusions above.
No
E2 should be consistent with the Statement of Compliance Registry Criteria. References to Balancing Authority, Generator Owner, and Generator Operator should not be included in the BES definition. "Net capacity" is unclear – must flow never exceed 75 MVA on an instantaneous or integrated hourly energy basis per either design or operating experience? There is a potential for hundreds of MW to be interconnected at a customer facility, with the "net capacity" (= flow into the transmission system? Instantaneous? Annual average? On an integrated hourly basis at any hour?) being less than 75 MVA – are hundreds of MW of generation "not material" to BES reliability? The conditions under which direction of flow (i.e., "net capacity") is assessed are critical, but E2(i) is silent on this. In E2(ii), the "and", "or", and "or" are not clear – what are the necessary terms of the referenced "binding obligation" and what is an "applicable regulatory authority"? Are "standby" and "back-up" and "maintenance" power services independently defined and provided by a GOP, GO, or BA? Northeast industry expert colleagues do not understand the relevance of E2(ii) to BES reliability. E2 should be restated as follows: "A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the meter if the flow to or from the BES never exceeds 75 MVA"
No
"Local Network" is capitalized (network not capitalized at the beginning of E3) throughout E3, yet it is not defined in the NERC Glossary. This exclusion is vague. This exclusion applies to a network with "multiple points of connection" with the purpose "to improve the level of service to retail customer load" – this phrase is intent-based and not reliability-based – most/all transmission "improves service" compared to it not being there. In essence, this exclusion can be obtained if a portion of the network: 1. Doesn't have significant generation (again, "non-retail" phrase is unclear) 2. Power only flows "into" this portion of the network, and not (ever? Even under any TPL design contingencies?) "out." Is this considering only pre-contingency steady state conditions? During contingency conditions and for the period following a contingency the LN could supply power to other parts of the network depending on the nature of the contingency. The conditions under which direction of flow is assessed are critical, but E3(b) is silent on this. 3. This portion of the network is not part of a monitored transmission interface This "Local Network Exclusion" is supported by a technical analysis which relied on transfer distribution factors (see http://www.nerc.com/docs/standards/sar/bes_definition_technical_justification_local_network_20110

819.pdf on the NERC BES Definition standard page http://www.nerc.com/filez/standards/Project2010-17_BES.html). This transfer distribution factor (TDF) method was rejected by FERC in Order 743. Paragraph 85 of the Order states: "Given the questionable and inconsistent exclusions of facilities from the bulk electric system by the material impact assessment and the variable results of the Transmission Distribution Factor test proposed in NPCC's compliance filing in Docket No. RC09-3, there are no grounds on which to reasonably assume that the results of the material impact assessment are accurate, consistent, and comprehensive.93 Additionally, we have noted how the results of multiple material impact tests can vary depending on how the test is implemented." Unless E3 is made more specific and clear, it should be stricken.

No

Consider using other wording to replace "retail".

Yes

If the definition and inclusions and exclusions are not sufficiently specific and clear, stakeholders will flood NERC and RROs with interpretation requests and/or apply the definition and its inclusions or exclusions incorrectly. Explanatory figures with one-line diagrams should be developed and shared to illustrate the system configurations included and excluded in this BES Definition. This would be very helpful for definition clarity. This should be done as part of an "Application Guide" for the BES Definition – this has precedence in CIP-002 version 5. Attached is a sample set of one-line diagrams with interpretations based upon the inclusions and exclusions developed by Northeast Power Coordinating Council members for discussion purposes as an example, but note that there is not a uniform agreement on these diagrams based on the BES Definition as written, due to lack of clarity.

Group

David Kiguel

Hydro One Newtoeks Inc.

No

Although we agree with the concept and commend the SDT for developing explicit inclusions and exclusions as part of the definition, we believe there are several outstanding issues and concerns listed as our response to Q11 that need to be addressed by the SDT and by NERC as the ERO.

Yes

No

We do not agree with the thresholds of 20 MVA for a single unit and 75 MVA aggregate at a plant, carried forward from the compliance registry. We understand the suggested phased approach and expect that the issue will be dealt with at that future time. With the exception of units that are must runs for reliability reasons, we suggest that the SDT should consider units smaller than 75 MVA or x MVA is designated as BES support element and not BES element. These units should only be required to comply with a handful of relevant NERC Standards. For example, • Voltage and frequency ride through capability • Voltage control (AVR, etc.) • Underfrequency trip setting • Protection relay setting coordination • Data submission for modeling; verification of capability and model These smaller and geographically dispersed generating resources should neither be designated as BES element nor be required to have its connection path be designated as BES. We suggest removing the parentheses enclosing the text "with gross individual…" since their inclusion may lead to an erroneous reading of provision to include generators that do not meet ERO Statement of Compliance Registry Criteria.

No

We agree with the SDT in excluding the cranking paths from the BES definition, a point we had raised in our comments to the previous posting. We also disagree with the inclusion of blackstart resources and reiterate our view that their inclusion is superfluous given there is already a designation specific for system restoration covered by an existing standard, to recognize their reliability impacts and to ensure their expected performance. NERC Standard EOP-005-2 stipulates the requirements for testing blackstart resources and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. We therefore suggest completely removing Inclusion I3. We suggest the SDT to drop I3 on the basis that: • The availability and performance expectations of blackstart resources are ensured by existing related standards; and • Unless they meet the BES definition under inclusion

I2, there is no perceived reliability value in everyday operation of the BES.
No
Although we agree with the I4 concept, we suggest that the SDT should consider that this category primarily includes wind and solar farms and their collector system. We believe these facilities should not be included as BES elements but rather as supporting elements (see comments under I2) for the following reasons: a) Any additional benefit of classifying these resources as BES is insignificant for the reliability of supply (capacity and energy), considering the intermittent and widely variable nature of these resources. The planning and operational standards and practices make sure that their unavailability or unexpected (sudden) loss, which are significantly more likely due to the natural elements than those due to mechanical or electrical causes, will not jeopardize the reliability of the supply; and b) The reliability of the aspects of the collector system of these resources (their impact on reliability of the bulk transmission system) is not different from that of distribution systems (load serving feeders) which are excluded from the BES. We agree with the revised portion of Inclusion I4 which does indeed clarify that there is no requirement for a contiguous BES path from the dispersed generation resources to the point of interconnection to the BES.
Yes
No
Although we agree with the exclusion of radial systems, we believe that the reliability of the interconnected transmission network should not be determined by the amount of installed generation on the radial system. We believe that the generation limit is restrictive and has little or no technical basis. It is not the size of a unit on the radial system that should determine the reliability impact on the BES but more importantly its location, configuration and system characteristics such as reliability must run unit. We believe that there is no reason to divide E1 in three subsets of a, b and c. The end result is that a radial system is excluded if it does not have more than 75 MW of aggregate non-retail generation. However, consistent with E2 we suggest replacing "an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating)" with "a maximum net capacity of non-retail generation provided to the BES of 75 MVA." We suggest deleting the references to I3 in E1 and E3 because we believe that this reference is in contradiction to I3 and probably an oversight and should be corrected. I3 does not require path to be BES but it implies here that a radial system cannot be excluded if there is a Blackstart unit on it.
Yes
No
We agree with the exclusion concept of LN. However, the reliability of the interconnected transmission network should not be determined by the amount of installed generation in the local network. We believe that the generation limit is restrictive and has little or no technical basis. It is not the size of a unit in the LN that will determine the reliability impact on the BES but more importantly its location, configuration and system characteristics such as reliability must run unit. We suggest that the SDT should address this in phase 2 to increase the installed generation limit in a LN. We suggest deleting the references to I3 in E1 and E3 because we believe that this reference is in contradiction to I3 and probably an oversight and should be corrected. I3 does not require a path to be BES but it implies here that a radial system cannot be excluded if there is a Blackstart unit on it.
Yes
Yes
• The definition of the Bulk Electric System (BES) is a foundational construct for the North American Electric Reliability Corporation (NERC). FERC Orders 743 and 743-A do not mandate a 100 kV approach. Instead, it states that a 100 kV bright line threshold is one approach to defining the BES. It further states that only “some” 115/138 kV facilities are necessary for the reliable operation of the bulk system. We believe that if one subset issue (such as 20 MVA vs. 75 MVA) of the entire definition, requires more time and resources to arrive at the correct answer, the much larger and more fundamental issue of how to define BES should not have been dismissed without the appropriate analysis before another definition is proposed to be adopted by the ERO. • The proposed definition, in combination with other new and/or modified Reliability Standards such as newly modified and

approved TPL Standards will require significant system upgrades with high dollar investments. We are deeply concerned that a) no such assessment has been undertaken by the SDT and/or the ERO and b) the proposed definition of the BES is not based on a technical analysis that will enhance the reliability of the interconnected transmission network. o The NERC as the ERO should at least undertake a cost and incremental reliability benefit analysis for its proposed definition of BES. Furthermore, cost impacts and reliability benefit assessments of the BES definition coupled with other new and modified reliability standards (such as the TPL Standards) must also be undertaken and weighed against the potential benefits, if any, of this or any proposal. Not providing such an assessment but using the 100 kV level as a starting point for the BES definition, gives no assurances of benefits for any stakeholder including respective governmental and regulatory authorities and rate payers in Canada or the USA. o The proposed definition would significantly increase the population of BES elements. Many of the standards requirements for these new elements will introduce administrative burden and operating expenses. This would impose significant costs, costs that ratepayers will have to bear, with little or no gain in reliability benefits for the interconnected transmission system. We suggest that the resulting BES definition must identify incremental reliability benefits by the ERO for the interconnected transmission network based on sound technical analysis to justify the change to those who will pay for any required system upgrades – the ratepayer. • The draft Implementation Plan for the BES definition states "Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition." We are concerned that the stated implementation period will give insufficient time to complete transition plans for newly identified BES Elements and Facilities, where those plans require approval, procurement, installation and commissioning of additional equipment. We believe a period of 60 months at a minimum is more appropriate. Finally, we believe that the SDT proposed approach for exception criteria is reasonable recognizing that one method/criteria can not be applicable to everyone and every situation within the ERO footprint. However, we believe that there is a huge gap and lack of any transparency on how the exception application will be evaluated and processed. We strongly suggest that the SDT develop a reference or a guidance document as part of the RoP that should provide guidance to Registered Entities, Regional Entities and the ERO on how an exception application should be processed. Else, (a) it will pose a challenge for each of the entities including ERO, and (b) may introduce Regional discretion and be perceived as having no transparency for the registered entities.
Individual
Steve Eldrige
Umatilla Electric Cooperative (UEC)
Yes
The Umatilla Electric Cooperative (UEC) believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. UEC therefore supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. UEC strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100kV or higher and Real Time and Reactive Power resources connected at 100kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for "facilities used in the local distribution of electric energy." As the starting point for the BES definition, UEC supports the use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. § 824o(a)(1). Including the same language in the definition helps ensure that entities involved in

enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate – "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. § 824o(a)(4) – will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. § 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). UEC thanks the SDT for the excellent work to include this sentence. For similar reasons, UEC believes the use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used in NERC Reliability Standards, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. UEC recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, UEC agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, UEC is prepared to support the BES definition as proposed by the SDT. While UEC supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, UEC believes a 200kV threshold would be more appropriate for WECC than a 100kV threshold. In addition, a 200kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view are therefore incorrect. That said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, UEC will support the SDT's proposal.

Yes

We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As we understand it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. We believe the SDT's intent would be clarified by adding a sentence at the end of Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. Many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the

transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus, and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. As the Phase II process moves forward, we commend to the SDT the extensive work performed on the point of demarcation question by the WECC BESDTF. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2."

Yes

UEC supports the changes made in Inclusion 2 and believes that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support the SDT's proposal for a Phase II of the BES Definition process that would examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC ¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase II through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little process. UEC believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, § 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase II should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes that generation be included in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase II but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES

Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria.. The "materiality threshold" is intended to refer to the generator threshold developed in Phase II. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase II without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase II process based upon the technical analysis planned for Phase II, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase II is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase II are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase II on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase II under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100kV or above."

Yes

UEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.

Yes

UEC supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e, "resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term

"Qualifying Aggregate Generation Resources," which we discuss in more detail in our response to Question 3. This language will preserve the SDT's ability to revise the 75 MVA threshold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a Local Network. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be established by the SDT in Phase II. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase ". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.

No

UEC has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Third, UEC believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase II process. Finally, UEC believes this issue should be addressed in Phase 2 since there is not technical justification or analysis done to determine the thresholds. UEC strongly believes that there should be technical justification for thresholds for this issue and all other issues.

Yes

UEC continues to strongly support the radial system exclusion, which is necessary as a legal matter, because, among other reasons, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term "transmission Elements" in the initial paragraph should be changed to "Elements." Radial systems are not transmission systems and including the word "transmission" in the Radial System exclusion is therefore unnecessary and confusing. (2) Subparagraph (b) of Exclusion 1 refers to "generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). We urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," discussed in more detail in our response to Question 3. This language will

preserve the SDT's ability to revise the 75 MVA threshhold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. (3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshhold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC's Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted. (4) The "Note" as drafted by the SDT indicates that "a normally open switching device between radial systems" will not serve to disqualify the Radial from exclusion under Exclusion 1. As discussed above, UEC strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d), rather than a note, because treatment as a "note" suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: (d) Normally-open switching devices between radial elements as depicted and identified on system one-line diagrams does not affect this exclusion. This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.

Yes

UEC supports the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, UEC urges the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term "Qualifying Aggregate Generation Resources" or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN.

Yes

UEC strongly supports the exclusion of Local Networks ("LNs") from the BES. The conversion of radial systems to local networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers would ultimately benefit. UEC also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, UEC supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." UEC supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. UEC believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making a "group of contiguous transmission

Elements operated at or above 100kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. UEC also believes that subparagraphs (a) and (b) are redundant, because whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system – power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to be the equivalent of generation that is located behind the retail meter, usually but not always owned by the customer and used to serve the customer's own load. We therefore suggest that the SDT replace the term "non-retail generation" with "generation located behind the retail customer's meter." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. UEC also believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph

(a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours, a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN." Finally, we note that the LN exclusion must not operate in any way as a substitution for the statutory prohibition on including "facilities used in the local distribution of electric energy" in the BES. Therefore, even with the LN exclusion, the SDT must retain this statutory language in the core definition of the BES, as discussed in our answer to Question One. If a certain piece of equipment is a "facility used in the local distribution of electric energy," then it is not part of the BES in the first instance, and so consideration of the LN Exclusion, or of any other Exclusion, any Inclusion, or any Exception, would be both unnecessary and uncalled for.

Yes

UEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.

No

UEC extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. UEC supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, UEC is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not

be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that UEC specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. UEC supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to come into compliance with newly-applicable Reliability Standards. UEC also supports the 24-month transition period for the reasons laid out by the SDT.
Individual
Steve Alexanderson
Central Lincoln
Yes
We agree with the changes. We must point out that the overall flow, or how one proceeds through the inclusions and exclusions is not clear. Can an item that meets an inclusion be subsequently excluded? If so, this needs to be explicitly stated. So far, we only have the flow chart produced by the ROP team that indicates otherwise (http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf). This was made evident by the question at the 9/28 webinar regarding an I5 capacitor on an E3 local network. The questioner thought the capacitor was BES per I5, but the answer was that it was excluded per E3. We can find no support for the answer given. The listing of specific exclusions within I1 (exception proves the rule) argues for questioner's stance that the capacitor is BES as written. Also, if included items could subsequently be excluded, they would be no different from any other item that met the voltage threshold of 100kV. There would be no need for any of the inclusions if all possible outputs from the inclusion tests go to the same exclusion test inputs. We strongly support the addition of the language regarding local distribution facilities, as it matches congressional intent to leave the regulation of these facilities to state and local authorities.
Yes
Central Lincoln strongly agrees with this inclusion as written. It is consistent with the recent PRC-004 and PRC-005 interpretation and the NERC definition of Transmission. We believe the recent changes to this inclusion add clarity.
No
Referencing the Criteria which in turn references the BES definition creates a circular definition. Central Lincoln encourages the adoption of specific thresholds that are technically justified. We also note that the Criteria and its revisions do not go through the standards development process, so that thresholds may change with little warning and without triggering an implementation plan for facilities that may be swept into the BES as a result.
Yes
We agree with the removal of the voltage language, since the inclusions and exclusions apply only to equipment over 100 kV.
Yes
Central Lincoln agrees both with the inclusion and with the revised language. The revised language removes the need to provide a separate definition for "Collector System".
No
While we agree that reactive devices of sizable capacity connected at 100 kV or higher are needed for BES reliability, Central Lincoln fails to see why this inclusion is needed as they are already captured by the 100 kV threshold. We would propose instead to eliminate this inclusion and substitute an exclusion for smaller capacity devices. If the SDT really believes an inclusion for reactive devices is needed, we suggest the SDT provide a technically justified capacity limit within the inclusion. In addition we suggest also including the phrase "…unless excluded under Exclusion E1, E2 or E4" similar to that in I1. Please see the answer to Q1 above Q10 below.
No
Central Lincoln notes that a new term has been introduced, "non-retail generation," with no definition

provided. The answer to the question on this during the 9/28 webinar indicated that non-retail generation was behind the retail customer's meter. We can see no reason why the net-metered PV systems should count toward the aggregate limit (exceeding the limit means no exclusion) while a non-blackstart thermal plant doesn't (the radial system is excluded if any amount of load is present). We have also heard the SDT meant just the opposite of what was stated in the webinar. We ask that a reasonable definition for non-retail be provided within the BES definition document. We strongly agree that radial systems should be excluded and that the presence of normally open switching devices between radial systems should not cause them to be considered non-radial. Such a result would cause the removal of these devices to the detriment of the local level of service. We note that the singular "A normally open switching device" is used and suggest that an allowance be made for the possibility of multiple devices. "Normally open switching devices…"
Yes
No
We strongly agree that local networks should be excluded, since they act much like the radial systems excluded in E1 while providing a higher level of service to customers. These networks should not be discouraged in the name of reliability. We again object to the introduction of the new confusing term "non-retail generation" with no definition provided.
No
Please see Central Lincoln's answers to Q1 and Q6. Any device that might be excluded under E4 has already been included per I5. Unless I5 is removed, or rewritten as suggested above; this exclusion will exclude nothing.
Yes
We note that the SAR for Phase II, like that for Phase I, does not include all entity types. We see no reason to maintain dual definitions for the different entity types, and the resulting confusion. In order to help meet the fast approaching January target date, Central Lincoln will be voting affirmative in this ballot, with the hope these comments will be addressed in Phase II. If the ballot should fail, please address these comments in this phase. Thanks to the team for their good work.
Individual
Allan Long
Memphis Light, Gas and Water Division
Yes
Yes
We believe further clarification is needed to limit BES transformers only to those serving the transmission system and not distribution loads, such as excluding transformers with one or both terminals operating below 100 kV.
Yes
We are in general agreement with this inclusion, except that there is no threshold for reactive resources as there is for generators and transformers. We recommend that a minimum level be established for this equipment, such as 100 MVAr, or that studies be conducted to determine an appropriate threshold.
Yes
Yes
Yes

No
We appreciate the work the drafting team has done in preparing this document.
Individual
Shane Sweet
Harney Electric Cooperative, Inc.
Yes
HEC agrees with the changes by the SDT. Although HEC believes that there needs to be explicit language stating whether or not an item that meets inclusion can be overridden by an exclusion. An example of this was given during the Webinar on 9/28 regarding a Capacitor included under I5 yet excluded under E3 according to the NERC representative.
Yes
HEC agrees with the inclusions to I1 and believes that add clarity to the definition.
No
HEC would like to see the inclusion of specific thresholds that are technically justified.
Yes
HEC agrees with the inclusions to the core definition.
Yes
HEC agrees with the inclusions and revised language to the definition
No
HEC believes this inclusion should include a technically justified capacity limit on reactive resources to warrant inclusion.
Yes
HEC strongly agrees that radial systems should be excluded from the BES and that the presence of a normally open switching device between radial systems should not cause them to be considered non-radial
Yes
Yes
HEC believes that local networks should be excluded from the BES and agrees with exclusions to the definition.
Yes
HEC agrees with E4.
No
Group
Joe Tarantino
Braun Blasing McLaughlin, PC
Yes
In an effort to avoid potential confusion and provide clarity we believe the following sentence "This does not include facilities used in the local distribution of electric energy" more appropriately fits under the "exclusions," rather than "inclusions," section.
Yes
We believe additional clarification of transformers that are to be included may be achieved with respect to auto transformers, phase angle regulators and generator step-up transformers by adding the following recommended sentence: "All transformers (including autotransformers, voltage regulators, and phase angle regulators) with primary and secondary terminals operated at or above 100kV, unless excluded by E1 or E3."
No
We recommend removing the reference of the ERO Statement of Compliance Registry Criteria (Registry Criteria). The BES Definition should be the governing document and independent of ERO registration requirements. The definition should drive what appears in the Registry Criteria.

Additionally, we support using the BES Phase 2 technical analysis to identify and provide technical support for determining the appropriate minimum MVA rating that a single unit, or the aggregation of multiple units, must meet to be considered part of the BES.
Yes
We recommend rewording Inclusion I3 as follows: "Only Primary Blackstart resources designated as part of the Transmission Operator's restoration plan." We have concerns that making all Blackstart generation either primary or secondary BES elements will create an incentive to remove those secondary Blackstart capable units in order to avoid BES inclusion. Making the primary Blackstart unit the only BES element will remove this incentive. In so doing, this will allow the secondary Blackstart units to remain in the Transmission Operator's plan and training program as an alternate tool for the Transmission Operator to restore the system.
Yes
Yes
However, appropriate MVAr level should be established. Reactive resources should be treated similar to generation criteria and included in the technical studies associated with the Phase 2 technical analysis in order to establish the appropriate MVAr level included as BES.
Yes
For the E1 reference "Note," we would benefit from additional clarification identifying the treatment of a normally open switch and offer the following: "Radial systems shall be assessed with all normally open switching devices in their open positions." The wording in Exclusion 1-c should more clearly reflect what is intended by using the term "non-retail generation." Also, as with the technical justification for Inclusions I2 and I4, it is recommended that the generation threshold, i.e. gross nameplate values, be deferred to Phase 2.
Yes
It is preferred to hold reference to gross nameplate rating/threshold values until generation technical justification is completed as part of Phase 2; these studies should apply to any real or reactive power threshold reference. For Exclusion E3-b using the phrase "[p]ower flows only into the LN" is too restrictive. An allowable MW threshold of LN power producing resources should be deferred to the Phase 2 BES technical analysis. Where no generation is present in the LN, it is recommended that an allowance for residual flow through the LN.
Yes
Individual
Russell Noble
Cowlitz County PUD
Yes
Cowlitz County PUD No. 1 (Cowlitz) commends the SDT for the simplified concise core definition. However, Cowlitz believes that only Real and Reactive Power resources necessary for the support of the BES should be included. Therefore, Cowlitz suggests the core definition or the Inclusions section state this. This will allow basis for demonstrating resource Elements should be excluded from the BES through the Rules of Procedure exception process. This is not to say that owners of non-BES resource Elements should not be registered, as such entities may still have an obligation to contribute BES Reliability functions. Cowlitz votes affirmative and believes the above concern can be addressed in Phase II.
Yes
Cowlitz supports the SDT's efforts to simplify this inclusion. However, Cowlitz suggests the following change to clarify the inclusive nature of the use of "and:" Transformers with primary and secondary terminals both operated at 100 kV or higher…
Yes
Cowlitz also strongly supports Phase II to address the lack of technical justification of the MVA bright

line criteria.
Yes
Yes
However, Cowlitz suggests Inclusion 4 be made parallel with Inclusion 2: …(greater than the gross aggregate name plate rating per the ERO Statement of Compliance Registry Criteria) utilizing…
No
Cowlitz has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Finally, Cowlitz believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase II process.
Yes
Yes
Cowlitz is concerned that Exclusion 2 will place local distribution utilities in a difficult position; under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation. With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN. However, Cowlitz understands the difficulty of pressing the argument at this time for any generation that is connected directly through a dedicated step-up transformer to Elements at or greater than 100 kV.
Yes
Cowlitz strongly supports the categorical exclusion of Local Networks ("LNs") from the BES. This exclusion will allow conversion of radial systems to LNs without compliance impact, and should be encouraged rather than discouraged as networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. The decision of whether to network radial systems should be made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers will ultimately benefit from the path chosen by the SDT. Cowlitz believes that the word "transmission" does not add clarity to the Exclusion; simply stating "Elements" is sufficient. This will allow for a gradual acceptance that transmission is not defined by a certain voltage, but more a medium in which electrical power is efficiently transported from power resources to load centers where it is distributed. The old convention of transmission versus distribution no longer fits in the current regulatory environment, and as such should be retired. Cowlitz also believes that subparagraphs (a) and (b) are redundant; subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. However, Cowlitz also believes that removing (a) will complicate FERC's acceptance of this exclusion. Therefore this should be addressed in Phase II. Cowlitz is confused by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to mean generation that is not connected through a dedicated step-up transformer to voltages at or above 100 kV, is consumed by the retail customer's load, or consumed within the LN rather than being physically exported and sold to markets outside the LN. Cowlitz suggests that the SDT rewrite subparagraph (a) to read "Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusion I3 and does not have any generation net power flow greater than 75 MVA across any single retail revenue metering point into an Element operated at

or greater than 100 kV.”
Yes
No
Cowlitz appreciates the opportunity to comment, and the hard work of the SDT.
Individual
Brian Evans-Mongeon
Utility Services, Inc.
Yes
Upon reflection of the core definition and BES Inclusion Designations, Utility Services believes that there is an unintended redundancy between the two. Utility Services would like to suggest that the portion of the core definition that refers to the Real and Reactive Power resources be removed from the core and to leave the Inclusions as is.
Yes
Utility Services supports the comments offered by other commenters who suggest that transformers and other related devices be mentioned in the inclusion.
Yes
Yes
Utility Services supports suggestions by others that request that the language of the Inclusion use the exact language of the SCRC III.3.c. Leaving the language as is will likely increase the number of black start facilities beyond those currently applicable.
Yes
Yes
Yes
Utility Services is very concerned that the "single point of connection" lacks clarity and applications need to be identified. Utility Services suggests that the SDT publish illustrative one-line diagrams to aid the industry in determining when the designations are best applied.
Yes
Utility Services suppports the comments offered by others suggesting that the language be revised to be identical to the language in the SCRC.
Yes
Yes
Yes
Utility Services would like to raise the question of whether SCRC III.3.d (the so-called "Generator Materiality" clause)is incorporated within the BES Inclusion Designations. One theory suggests that given that I2 is designed to deal with III.3.a and III.3.b and I3 reflects the need to incorporate black start generation; then generators under the materiality clause are not identified with the inclusion criteria. However, the second theory suggests that resources identifed through I2 reflect the entire III.c.1-4 language of the SCRC, then the generators in the material clause are captured under I2. But if this is the case, then I3 is redundant to I2 and does not need to separately addressed.
Group
Jean Nitz
ACES Power Marketing
Yes
Yes

Yes
We'd prefer to see the language from the ERO Statement of Compliance Registry Criteria repeated within the BES Definition itself instead of referencing an outside document. As it stands right now, the Compliance Registry Criteria needs to stay intact for Phase I of this project. That makes the Compliance Registry Criteria reliant on the BES Definition and vice versa. We understand that the Statement of Compliance Registry Criteria may be reviewed/revised at the same time Phase 2 of this project is being developed, therefore we agree with Inclusion I2 of this draft.
No
Blackstart Resources can actually be on the distribution system. There is still the question of whether the distribution system would then be subjected to the enforceable standards. If so, there would most likely be a significant cost increase associated with tracking compliance for these distribution systems without a commensurate increase in reliability since Blackstart Resources are rarely used. This could very well cause entities to un-designate Blackstart Resources on distribution systems to avoid these distribution systems from becoming part of the BES. The same rationale that was used for eliminating cranking paths could also be applied to Blackstart Resources.
Yes
Further clarification on what "dispersed power" means would be helpful. How does it compare to distributed generation?
Yes
We understand the SDT's logic behind not setting any threshold values for reactive resources during Phase 1 of this project. Ample time and effort should be given to developing the technical justification behind such values. However, we encourage the SDT to consider adding threshold values in Phase 2 of the project to provide even more clarity to this inclusion.
Yes
The term "non-retail generation" used in Exclusion E1 (item c) and again in E3 (item a) should be clarified (see comments for question 8 below). The Note after item c should also be clarified to indicate that closing a normally open switch doesn't affect this exclusion.
Yes
"A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter" sounds a lot like "non-retail generation" that is used in E1 and E3 which was described in the webinar as generation that resides on the customer side of the retail meter and is used to supply energy to that customer's load and is owned by the customer. Is E2 assuming that this generation is not owned by the customer? Also, part ii) adds to the confusion. Conceptually we agree with this exclusion but further clarification is preferred.
No
The term "non-retail generation" used in Exclusion E1 (item c) and again in E3 (item a) should be clarified. The following applies to E3 (item c): A flowgate should not be used to limit applicability of E3. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the "permanent" adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First, flowgates are created to manage congestion. The IDC is more of a congestion management tool than a reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve

IROLs that have been violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The characteristics of the flowgate make it a good proxy for estimating how much contractual use has been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROLs, many simply are not.
Yes
No
Individual
Martyn Turner
LCRA Transmission Services Corporation
Yes
No
LCRA TSC supports the inclusion of transformers (with both the primary and secondary windings operated at 100-kV or higher) in the BES definition; however, additional clarification is suggested. The term transformers needs to be further defined with respect to function (auto transformers, phase angle regulators, generator step-up transformers, etc.). Similarly, a separate definition for "Transformer" could be developed and included in the NERC Glossary of Terms.
No
Yes
No
LCRA TSC suggests consistency between this inclusion criteria and the criteria used in I2 for "generation".
No
This inclusion conflicts with exclusion E4. Which one takes priority?
No
The current wording is unclear with respect to the treatment of normally open switching devices. LCRA TSC suggests the following language to replace the existing language on the note to E1: "Two radial systems connected by a normally open, manually operated switching device, as depicted on prints or one-line diagrams for example, may be considered as radial systems under this exclusion." The current wording is unclear with respect to "non-retail generation". The sudden loss of large, radial-supplied load may result in reliability deficiencies. LCRA TSC suggests stating a load level or a load capacity in the exclusion.
No
Yes
No
This exclusion conflicts with inclusion item I5. Which one takes priority?
Yes
LCRA TSC supports the direction the standards drafting team taking with this project on the BES Definition and encourages further clarification as noted in these comments for proper application.
Individual
Saurabh Saksena
National Grid
No
While we agree that the BES should not include facilities used in the local distribution of energy, we

feel that this is already captured in Exclusion E3. Stating it in the core definition is confusing, and should be eliminated. We suggest removing "This does not include facilities used in the distribution of electric energy" from the core definition.
Yes
Yes
Yes
Yes
We agree with Inclusion I4, however we feel that the inclusion could be interpreted in some different ways. This inclusion could be interpreted to exclude dispersed generation greater than 75 MVA if the first common point is less than 100 kV. To eliminate any confusion in the interpretation of this inclusion, we suggest this wording: Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected to a Transmission Element at 100 kV or above, utilizing a system designed primarily for aggregating capacity which includes all transformers between the generator(s) and the Transmission Element.
No
We see some potential conflicts between this inclusion and the exclusions. Without some additional wording, it seems like some devices that are in a Local Distribution Network would be considered BES. In addition, reference to a transformer in Inclusion I1 is not necessary since the definition includes "all Transmission Elements operated at 100 kV", thus by definition and I5, those connected to 100 kV and higher are already included. We suggest: Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100kV or higher unless the device is in an area excluded from BES by Exclusion E1 or E3, or through a dedicated transformer with a high-side voltage of 100kV or higher, unless excluded by Exclusion E4.
Yes
Yes
We agree with this exclusion, but the intention of point (i), the net capacity provided to the BES does not exceed 75 MVA, is not clear. We suggest this wording: "the net capacity provided to the BES for 90% of the hours of the year does not exceed 75 MVA".
Yes
We agree with Exclusion E3 on local networks, however we suggest this clarification to the first sentence: A group of contiguous transmission Elements operated at or above 100kV but less than 300kV that distribute power to Load rather than transfer bulk power across the interconnected system under normal ("all-lines-in") configuration and conditions. We also suggest the following clarification to part c, so that the IROLs don't get overlooked: Not part of Flowgate, transfer path, or an Interconnected Reliability Operating Limit (IROL). The LN does not contain a monitored Facility of a permanent Flowgate in the Easter Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec Interconnection, and is not a monitored Facility included in an IROL.
Yes
Yes
The proposed implementation period in the draft definition is too short. The new BES definition will likely result in increased operational costs during the implementation period that will ultimately be borne by customers. Implicit in the Commission's directive to change the BES definition is the Commission's determination that the benefits of this change, including consistency among the regions, outweigh the ratepayer impacts. However, National Grid remains concerned that the ratepayer impacts have not been fully taken into account. The implementation period is a tool that can allow NERC to meet the Commission's directive while softening any resulting ratepayer impacts. Implementation can and should be staged in order to mitigate and even out rate increases. National Grid suggests that the implementation period be flexible to allow entities who anticipate that large

and/or expensive upgrades to the BES will be necessary to meet compliance can submit an alternate implementation plan to spread compliance and the associated rate changes over a longer period; we would suggest a minimum of 7 years. This time period was also recognized as a reasonable implementation time period in the recent TPL-001-2 for those portions of the standard that would also result in plans that would require siting, permitting and construction activities. This BES definition is likely to have similar impacts for some entities and allowing for an implementation timeline with the definition change enables achievement of the goals while recognizing the realities of constructing facilities in today's environment.
Group
Louis Slade
EMP & NERC Compliance
Yes
Dominion agrees with the clarifying changes provided that the use of the capitalized terms "Transmission" and "Elements" mean that an Element that is radial is not part of the BES regardless of whether it is specifically included in the Exclusions (E1 through E4).
Yes
The proposed changes are much clearer than proposed language in the 1st draft of this BES definition.
Yes
Dominion interprets the revised language to exclude generating resources connected at less than 100 kV. If this interpretation is not accurate, then Dominion does not support the revised language.
Yes
Yes
No
The language in the last part of Inclusion I5 "….or through a transformer that is designated in Inclusion I1" introduces ambiguity. Specifically, it is not clear how implememtation of this language would result in the inclusion of any Static or dynamic device that is not already included. Dominion suggests that the language in I5 be revised to read "Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or connected through a dedicated transformer with at least one terminal voltage of 100 kV or higher." Dominion understands that the SDT intended for this Inclusion to not address generators or power producing resources because they are covered elsewhere (I2 and I4) and requests that the SDT confirm this understanding.
No
Dominion does not agree that exclusion of a radial should be based upon the aggregate capacity of generation. A radial serving only generation should be excluded just as it is for load (as proposed by the SDT in 1a). No reliability gaps exist since the owner and/or operator of generation (with an individual with gross individual or gross aggregate nameplate rating per the ERO Statement of Compliance Registry Criteria) must comply with applicable reliability standards. Dominion requests that the SDT provide technical justification for E1a and E1b as it did for E3, and explain the intent of the footnote in E1.
No
Dominion supports exclusion for behind-the-meter generation, (if connected at >100 kV) if the load behind the meter (to which that generation is intended to support) does not rely on generation outside that metered point for purposes of back-up energy or any type of ancillary services at any time. The proposed language appears to suggest that standby, back-up, and maintenance power services are always required. There are alternative means to provide these services, such as reducing load to match 'reliability services' provided by the available behind-the-meter generation. Further, even if standby, back-up, and maintenance power services are always required, the exclusion criteria obligation should be placed on the retail load, not the generation outside the metered point
No
Dominion could support if E3a were eliminated.

Yes

Yes

As a general policy, Dominion believes that attempting to precisely refine the definition of the BES may not be the best way to insure BES reliability. Instead, industry effort should be focused on developing specific reliability standard requirements targeted toward solving problems that need to be addressed. Stated differently, every Element that could have an impact on the BES does not need to be included in the definition of the BES. NERC's Functional Model addresses the broad range of functions performed by the electric utility industry. When reliability concerns are identified and can best be addressed via a standard, modifying the requirements in that standard as applicable to that functional model should occur rather than attempting to modify the BES definition. Effort spent on developing specific reliability standard requirements mentioned above is superior to the industry engaging in definitional debates that do not address to the underlying reliability drivers. It is not essential that each reliability standard explicitly apply to each registered entity. The existing reliability requirements, as applied to the various functional entities require communication of information necessary to insure there are no reliability gaps, either directly or indirectly among the various entities. The existing standards typically have a hierarchy wherein: • Planners (PA, TP) receive information predominately from the owners (GO, DP, TO) and those that represent end-use customers (LSE and PSE); • Reliability entities (BA, RC and TOP) receive information predominately from operating entities (GOP, TOP) and those that represent end-use customers (LSE and PSE); • Planners provide reliability assessments to Reliability entities (BA, RC and TOP) and receive feedback on these reliability assessments (including validity of assumptions and result); and • Reliability entities (BA, RC and TOP) give instructions (including when necessary directives) to operating entities (GOP, TOP) and those that represent end-use customers (LSE and PSE). This is how the industry has historically operated, how it operates today and why the standards in place today are structured as they are. Reliability is best served when the standards themselves contain the appropriate requirements and are applied to either an Element or Facility or to the appropriate functional entity (DP, GO, GOP, LSE, TO, TOP, etc.). Definitional boundaries can create the potential for false positives in reliability and, in fact, may be detrimental to reliability in the longer term if they impose additional compliance burdens without closing a reliability gap.

Individual

Jennifer Flandermeyer

Kansas City Power & Light Company

No

There is no established basis for the generation thresholds referenced through the ERO Statement of Compliance Registry Criteria in Appendix 5B and the specificity of 75 MVA in the proposed BES definition. The objectives identified in the Phase 2 SAR for the definition of the Bulk Electric System include establishing an engineering basis for the generation thresholds. Phase 2 will be critical in refining and improving the Bulk Electric System definition and bringing additional clarity to the definition.

Yes

No

Nameplate rating of the generator is not a reflection of what can be actually injected into the transmission system with resulting electrical impacts on transmission loading and behavior. Recommend the BES definition be based on a generators established net accredited generating capacity instead of what it could do by nameplate rating. In addition, many generators do not achieve their nameplate rating due to limitations imposed by the limitations and capabilities of their turbine/boiler capabilities. Using the nameplate rating will not allow the exclusion of some generators that should be excluded. Recommend the following language: Generating resource(s) with a net accredited capability per the ERO Statement of Compliance Registry Criteria and including the generator terminals through the high-side of the step-up transformer(s), connected at a voltage of 100 kV or above.

Yes

No
It is not clear that it is the injection at the collection point that is the defining point for the injection. Nameplate rating of the generator is not a reflection of what can be actually injected into the transmission system with resulting electrical impacts on transmission loading and behavior. Recommend the BES definition be based on a generating resource(s) established net accredited generating capacity at the common point instead of what it could do by nameplate rating that may not be achievable. Recommend the following language: Dispersed power producing resources utilizing a system designed primarily for aggregating capacity connected through a common point at a voltage of 100 kV or above with aggregate net accredited capacity at the common point of greater than 75 MVA.
Yes
No
Nameplate rating of the generator is not a reflection of what can be actually injected into the transmission system with resulting electrical impacts on transmission loading and behavior. Recommend the BES definition be based on a generating resource(s) established net accredited generating capacity instead of what it could do by nameplate rating that may not be achievable. Recommend the following change to the b) and c) parts of E1: b) Only includes generation resources not identified in Inclusion I3 with an aggregate net accredited capacity less than or equal to 75 MVA. Or, c) Where the radial system serves Load and includes generation resources not identified in Inclusion I3 with an aggregate net accredited capacity of non-retail generation less than or equal to 75 MVA.
No
Any facilities that are customer owned regardless of size or configuration are not under the jurisdiction or responsibility of the Registered Entity and should not be considered as included with a Registered Entity.
No
Although the Technical Justification Local Network guidance document is helpful in explaining the principles and concepts involved with determination of what constitutes a Local Network, criteria needs to be established regarding the impacts of LODF and PTDF that will clearly define what constitutes a Local Network to avoid debate and controversy.
Yes
No
Individual
Darryl Curtis
Oncor Electric Delivery Company LLC
Yes
Yes
Yes
Yes
Yes
Yes
Yes

Yes
Yes
Yes
No
Group
Mark Conner
Bill Middaugh
Yes
We believe that the new definition is a good clarification.
Yes
No
1. The parenthetical phrase regarding the ERO SCRC is not clear. Is the intent that the inclusion applies to any generating resource that is required to register as a Generator or Generator Operator per the ERO SCRC? Or was a reference to the 75 MVA threshold inadvertently omitted? It also seems that it wouldn't need to be in parentheses, just make it a phrase in the sentence. 2. The wording of the sentence after the parenthetical phrase is also worded awkwardly. Suggest changing it to "including the generator terminals and all electrical equipment up to and including the high side of generator step up transformers, if they are connected at a voltage of 100 kV or higher.
Yes
Yes
No
There should be a limitation on what reactive components needs to be included. The limits could be based on capacity of the units or on the voltage step that occurs upon switching of the device.
Yes
Yes
No
1. b) should be reworded to "Normally there is power flow only into the LN: The LN is not normally used to transfer power originating outside of the LN for delivery through the LN." There could be conditions inside the LN, such as large loads shut down for maintenance, which would allow the parallel transmission Elements to allow power to flow through the LN. Those conditions would have no negative or adverse effect on the BES. 2. Capitalize "Network" at the beginning of the Exclusion.
Yes
No
Group
David Thorne
Pepco Holdings Inc
Yes
Yes

No
The definition should not reference the ERO Statement of Compliance Registry Criteria; rather the actual generation threshold criteria should be listed in the definition itself. This way the definition can stand on it's own without having to refer to another document for applicability. Also, the wording should be changed to read "including the generator terminals through the high side of any dedicated generator step-up transformer(s), connected at a voltage of 100kV or above." Otherwise, the present wording could ensnare distribution facilities (similar to the cranking path argument in I3) if a 21 MVA generator was connected on a distribution line with no dedicated generator step-up transformer. In that case the distribution line and substation feeder transformer might be construed to be in scope.
Yes
Agree with the SDT decision to delete the inclusion of Black Start Cranking Paths.
No
The SDT reworded Inclusion I4 to use the phrase "utilizing a system designed primarily for aggregating capacity". This was to address a concern that the previous definition could ensnare distributed generation or small generators in a distribution system. We agree with the intent of this modification. I4 was intended solely to address wind and solar farms that use a collector system to aggregate their capacity. Therefore, to provide better clarity on the intent of this Inclusion, perhaps it would be better to specifically mention these examples in the wording: "Dispersed power producing resources (such as wind and solar farms, etc.) which utilize a system designed primarily for aggregating capacity, where the capacity is greater than 75MVA (gross aggregate nameplate rating) and the facility is connected at a common point at a voltage of 100kV or above."
No
Agree in principle. However, the last phrase "or through a transformer that is designated in Inclusion I1" is unnecessary, since if the resource were connected through a transformer meeting Inclusion I1 it would by nature be connected at 100kV or higher.
No
1) Additional clarification is needed on whether certain bus sections supplying radial systems would be considered part of the BES. It is critical that the BES definition address this issue, since it will define what transmission Protection Systems fall in scope for PRC-004 & 005. One way to address this issue would be to add a qualifier to Exclusion E1 that states, "if a radial system is supplied from a bus section in a substation, then this bus section is considered part of the radial system and is not considered part of the BES if the tripping of this bus section does not result in an interruption to any BES facilities when the station is operating in its normal configuration." 2) Since the SDT deleted the inclusion of Black Start Cranking Paths in I3 then reference to I3 in criteria E1b and E1c should also be removed. Limits on connected generation should only be constrained by the 75MVA limit. In summary, delete the phrase "not identified in Inclusion I3" from both Exclusions E1b and E1c.
Yes
No
1) In the Drafting Teams Consideration of Comments on the previous version, it was stated, "….It is not the SDT's intent to specifically exclude any facilities in major metropolitan areas; it expects that the specific examples mentioned (NYC, Washington DC) would not qualify for exclusion under the revised Exclusion E3." The currently proposed E3 will result in specific exclusion of major local networks in major metropolitan areas. These major LNs qualify for exclusion under proposed E3, and its qualifiers, in that they distribute power to the local load rather than act as facilities to transfer bulk power across the interconnected system. However, the LNs that supply large amounts of load in very dense load areas should have some transmission reliability considerations. To capture the appropriate LNs in question, consideration should be given to limiting the amount of load supplied by a LN to some load level. For example if an LN has a peak load level of less than 1,000MVA it would qualify for LN exclusion and if it exceeds 1,000MVA it would not qualify for exclusion. There are certainly many LNs that supply relatively small amounts of load, just as radial facilities. They should be excluded. It is important to develop a load level that would provide the proper balance between the small LNs and the major LNs. 2) Since the SDT deleted the inclusion of Black Start Cranking Paths in I3 then reference to I3 in criteria E3a should also be removed. Limits on connected generation should only be

constrained by the 75MVA limit. Therefore E3a should then read "Limits on connected generation: The LN and its underlying Elements do not include generation resources with an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating);"

Yes

Yes

1) From the proposed BES definition and Exclusion E1 it is very clear that a 138-12kV distribution transformer serving radial load would not be considered part of the BES. However, suppose this transformer was connected to a position in a ring-bus or a breaker-and-a-half arrangement. Would the physical bus between the transformer high side terminals and the two breakers in the ring-bus, or breaker-and-a-half-bus, be considered part of the BES? They would be contiguous transmission elements (bus) operating at 138kV and supplying a radial distribution transformer. Also, tripping of this "radial" bus section would not interrupt any BES facilities, due to the station bus arrangement. As such, by definition and Exclusion E1 this 138kV bus section (element) would not be part of the BES, and no special exclusion filing would be required. Is this correct? However, take the same 138-12kV transformer but this time connected in a typical line-bus arrangement. The transformer by definition is not a BES element. As was the case above, the bus section between the transformer and the two breakers in the line-bus would be contiguous elements (bus) operating at 138kV and supplying a radial distribution transformer. Again, by definition and Exclusion E1 this bus section (element) would not be part of the BES. However, in this case tripping of the "radial" bus section would result in an interruption to the through path of the station, and could therefore interrupt the through flow on BES facilities. Does this make either the transformer, or its associated bus section, or both part of the BES? Based on the above examples, if the type of bus connection could influence whether an element is included in the BES or not, then additional language needs to be added to the definition (either as an Inclusion or Exclusion) to make this point clear. The BES definition needs to be specific enough to eliminate any confusion as to what is included, and what is not included, and thereby greatly minimize, if not eliminate, the need to request interpretations. A sample FAQ document, with examples, would be extremely helpful, but should not be a substitute for a BES description which leaves little room for interpretation. 2) As seen from the above attempt to describe issues that need clarification, without a diagram to show specific situations, it is difficult to fully explain the concerns on ensuring that the BES definition stands on its own. Since the commenting process does not accommodate diagrams, PHI is sending separately a white paper with diagrams in an attempt to clarify the definition and make it as unambiguous as possible, leaving little room for interpretation. This paper may be helpful in developing a FAQ document. 3) The definition should state that it applies to a system "normal" configuration. It does not include maintenance or N-1 or any abnormal configurations. 4) There was no place on the comment forms to comment on the proposed Implementation Plan for the BES definition. So comments are included here. The proposed plan states "compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition." This is fine for most applications; however, there is an effect with PRC-005 compliance. PRC-005 (Protection System Maintenance Standard) requires that evidence for the last two maintenance intervals, in order to demonstrate that you are following the prescribed intervals in your maintenance plan. If additional facilities are brought into scope by the new BES definition, and the protection systems associated with these facilities were not previously maintained on the same interval as other BES facilities, then it may not be possible within the allotted 24 months to demonstrate the facilities were maintained within the prescribed intervals for BES facilities. An implementation plan at least as long as one full maintenance cycle would be required to assure compliance. This issue needs to be addressed or coordinated with PRC-005.

Group

Cynthia S. Bogorad

Transmission Access Policy Study Group (please see www.tapsgroup.org for a list of TAPS' more than 40 members)

Yes

TAPS appreciates the SDT's work on this project. For the most part, TAPS supports what it believes to be the intent of the proposed language. The proposed specific exclusion of facilities used in the local distribution of electric energy is appropriate and consistent with Section 215 of the Federal Power Act. However, we have one suggestion to better carry out what we believe to be the SDT's intent. The SDT

proposes to change the core generation definition from the prior version's "…Real Power resources as described below, and Reactive Power resources connected at 100 kV or higher unless such designation is modified by the list shown below," to "Unless modified by the lists shown below, ... Real Power and Reactive Power resources connected at 100 kV or higher...." Because of this change from "as described below… unless… modified by the list shown below" to simply "unless modified by the lists shown below," the proposed core definition now has the effect of including all generation, regardless of size, that is connected at over 100kV. We do not think this is the SDT's intent. For the same reason, the core definition now has the effect of including all Reactive Power resources connected at over 100kV, including generators; Inclusion I5, which includes "[s]tatic or dynamic devices dedicated to supplying or absorbing Reactive Power," does not alter the core definition's inclusion of all Reactive Power resources connected at over 100kV (whether "dedicated" or not). The most straightforward solution to this problem is to simply delete Real and Reactive Power resources from the core definition, so that such resources are instead handled entirely in the Inclusions. The core definition would thus read: "Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher. This does not include facilities used in the local distribution of electric energy."
Yes
TAPS supports the intent of proposed Inclusion I2. For the sake of clarity, we suggest revising "per the ERO Statement of Compliance Registry Criteria" to "as described in the ERO Statement of Compliance Registry Criteria."
Yes
We recommend clarifying that the dispersed power resources covered by this inclusion do not include generators on the retail side of the retail meter. Specifically, we recommend that the Inclusion read: "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100kV or above, but not including generation on the retail side of the retail meter."
Yes
Yes
TAPS supports the exclusion of radial systems from the BES Definition. Such systems are generally not "necessary for operating an interconnected electric transmission network," the standard in Orders 743 and 743-A. We have several suggestions to clarify the proposed language for this Exclusion. Proposed Exclusion E1 refers to "[a] group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher." We appreciate the SDT's clarification of the point of connection requirement, but the term "a single point of connection" should be further defined (more clearly than just by voltage), and should be generic enough to encompass the various bus configurations. It is not the case, for example, that each individual breaker position in a ring bus is a separate point of connection for this purpose; in that situation, a bus at one voltage level at one substation should be considered "a single point of connection." Some examples of configurations that should be considered a single point of connection for this purpose are at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf, Examples 1-6. Although the core definition (appropriately) refers to "Transmission Elements" (with a capital "T"), proposed Exclusion E1 refers to "transmission Elements" (with a lowercase "t"). To avoid confusion, either "Transmission" should be capitalized in both locations, or the word "transmission" should simply be deleted from Exclusion E1, leaving a "group of contiguous Elements." We understand that the lack of capitalization may have been a deliberate choice by the SDT in an attempt to avoid confusion that SDT members believe exists in the Glossary definition. If the Glossary definition of Transmission is unclear—which TAPS does not necessarily believe is the case—the answer is not to simply abandon the Glossary definition in favor of an entirely undefined term; it is to submit a SAR to improve the Glossary definition. Exclusion E1(c) refers to "an aggregate capacity of non-retail generation less than or equal to 75 MVA." "Non-retail generation" is potentially ambiguous, because it could be read as distinguishing between generation that will be sold at wholesale and generation that is used by the retail provider to meet retail load. On the understanding that the intent is in fact to

describe generation behind the end-user meter, sometimes referred to as "behind-the-second-meter generation," we suggest the following revision: "an aggregate generation capacity less than or equal to 75 MVA, not including generation on the retail customer's side of the retail meter." Exclusion E1 concludes with a "Note": "A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion." The Note should not specify the types of evidence required to prove a normally open switch, and the phrase "as depicted on prints or one-line diagrams" should be deleted. This phrase is equivalent to a "Measure" in a standard and should not be embedded in the equivalent of a "Requirement." Since the phrase only gives an "example," it does not in fact add anything to the Note, but may lead to confusion over what sort of evidence is required. If the phrase remains in the Note, it should at minimum be better explained: "A normally open switching device between radial systems, as depicted on prints or one-line diagrams used in the normal course of business for example, does not affect this exclusion." In addition, while we believe the SDT's intent is that two otherwise radial lines connected to each other by a normally open breaker are both excluded, the statement that a normally open switching device "does not affect this exclusion" is unclear. We suggest that the note be modified to state that a normally open switching device "does not prevent this exclusion from applying," or words to that effect.
Yes
Yes
TAPS supports the exclusion of Local Networks from the BES. Such systems are generally not "necessary for operating an interconnected electric transmission network," the standard in Orders 743 and 743-A. We have several suggestions to clarify the proposed language for this Exclusion. TAPS' comments in response to Question 7 above regarding "points of connection at 100kV or higher" and "non-retail generation" are applicable to Exclusion E3 as well. The term "bulk power," which occurs twice in Exclusion E3, is vague and could be read incorrectly as a reference to the statutorily-defined "bulk-power system," which is not, we think, the SDT's intent. The word "bulk" should be deleted, so that the Exclusion simply refers to transferring "power" across the interconnected system. TAPS raised this concern in response to the last posting of the BES Definition. In response, the SDT removed some instances of "bulk power" but left the remaining two, stating that "the SDT believes it provides conceptual value to the exclusion principle." The SDT does not state what conceptual value the term is intended to provide; on the assumption that it relates to a distinction between transferring power from local generation to serve local load, and transferring power over longer distances, TAPS suggests, as an alternative to simply deleting the word "bulk," that the Exclusion be revised to refer to "transfers of power from non-LN generation to non-LN load." Exclusion E3(c) states: "Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN." This statement is unclear because the two parts mean different things. TAPS proposes rewriting this sentence to state: "Power flows only into the LN, that is, at each individual connection at 100 kV or higher, the pre-contingency flow of power is from outside the LN into the LN for all hours of the previous 2 years" to help clarify the intent. Two years is suggested because it is the time period set out in the draft exception application form for which an applicant should state whether power flows through an Element to the BES.
Yes
Individual
Joe Tarantino
Sacramento Municipal Utility District
Yes
In an effort to avoid potential confusion and provide clarity we believe the following sentence "This does not include facilities used in the local distribution of electric energy" more appropriately fits under the "exclusions," rather than "inclusions," section.
Yes
We believe additional clarification of transformers that are to be included may be achieved with respect to auto transformers, phase angle regulators and generator step-up transformers by adding the following recommended sentence: "All transformers (including autotransformers, voltage

regulators, and phase angle regulators) with primary and secondary terminals operated at or above 100kV, unless excluded by E1 or E3.”
No
We recommend removing the reference of the ERO Statement of Compliance Registry Criteria (Registry Criteria). The BES Definition should be the governing document and independent of ERO registration requirements. The definition should drive what appears in the Registry Criteria. Additionally, we support using the BES Phase 2 technical analysis to identify and provide technical support for determining the appropriate minimum MVA rating that a single unit, or the aggregation of multiple units, must meet to be considered part of the BES.
Yes
We recommend rewording Inclusion I3 as follows: “Only Primary Blackstart resources designated as part of the Transmission Operator’s restoration plan.” We have concerns that making all Blackstart generation either primary or secondary BES elements will create an incentive to remove those secondary Blackstart capable units in order to avoid BES inclusion. Making the primary Blackstart unit the only BES element will remove this incentive. In so doing, this will allow the secondary Blackstart units to remain in the Transmission Operator’s plan and training program as an alternate tool for the Transmission Operator to restore the system.
Yes
We support using the BES Phase 2 technical analysis to identify and provide technical support for determining the appropriate minimum MVA rating that the aggregation of multiple units must meet to be considered part of the BES. We also support using the Phase 2 studies to identify an appropriate minimum MVA level that a single unit of the aggregation of multiple units must be considered BES.
Yes
However, appropriate MVAr level should be established. Reactive resources should be treated similar to generation criteria and included in the technical studies associated with the Phase 2 technical analysis in order to establish the appropriate MVAr level included as BES.
Yes
For the E1 reference “Note,” we would benefit from additional clarification identifying the treatment of a normally open switch and offer the following: “Radial systems shall be assessed with all normally open switching devices in their open positions.” The wording in Exclusion 1-c should more clearly reflect what is intended by using the term “non-retail generation.” Also, as with the technical justification for Inclusions I2 and I4, it is recommended that the generation threshold, i.e. gross nameplate values, be deferred to Phase 2.
Yes
It is preferred to hold reference to gross nameplate rating/threshold values until generation technical justification is completed as part of Phase 2; these studies should apply to any real or reactive power threshold reference. For Exclusion E3-b using the phrase “[p]ower flows only into the LN” is too restrictive. An allowable MW threshold of LN power producing resources should be deferred to the Phase 2 BES technical analysis. Where no generation is present in the LN, it is recommended that an allowance for residual flow through the LN.
Yes
Group
John P. Hughes
Electricity Consumers Resource Council (ELCON)
Yes
However, one of the FERC directives in Order 743 charged NERC with delineating the difference between transmission and distribution. The Inclusions and Exclusions are a step in that direction, but this subject will need more consideration in Phase II.
Yes

No
Since an aggregate of 75 MVA is allowed at a single site, there is no basis for maintaining the 20 MVA for a single generator. The proposed MOD-026 assigns thresholds by region that are much higher than 20 MVA for modeling purposes. Since modeling generally would require more granularity than what is necessary for the reliable operation of the interconnected transmission system (BES), the SDT might want to review the threshold basis for NERC Project 2007-09 (Generator Verification). It is understood that the threshold will be reconsidered in Phase II of the BES Definition Project; however, a modest change from 20 to 75 MVA seems appropriate on an interim basis justified by the current 75 MVA aggregate per site. The following phrase should be added at the end "unless excluded under Exclusion E2."
Yes
Yes
The term "dispersed power" and "dispersed generation" are often synonymous with distributed generation, which includes behind-the-meter generation (CHP). The Inclusion should be clarified by specifically referencing wind and solar, or adopt the FERC term "Variable Energy Resources." Also, to distinguish this Inclusion from Inclusion I2, the SDT might want to clarify that the collection system (usually at voltage below 100 KV anyway) is not part of the BES—just the resources and any transformers included by I1, if this is indeed the intent of this Inclusion. The following phrase should be added at the end "unless excluded under Exclusion E2."
Yes
Yes
ELCON supports the changes made from the first posting for both E1 and E3 (which complements E1), as this will help maintain the status quo referred to in the introductory text. We seek one clarification: Some large industrial customers that operate in remote, rural locations provide distribution services to third parties (usually on a pro bono basis) where the local utility (LSE) is unable or unwilling to serve. These transactions, which are akin to "border-line sales" in utility parlance, are typically de minimis relative to the Load of the entity that delivers the power. While the distribution is at low voltages (less than 100 kV), the power may have been received by the entity at a higher voltage. We seek affirmation by the SDT that such situations are not precluded by Exclusion E1.
Yes
ELCON supports the proposed revisions to Exclusion E2.
Yes
This Exclusion and Exclusion E1 aid in the delineation of local distribution versus transmission. We suggest three clarifying revisions. First, the phase "but less than 300 kV" should be deleted. Many large industrial facilities have on-site distribution systems that operate above 300 kV due solely to the capacity of the lines to supply power over the distance required at the manufacturing sites. Second, for the same reasons discussed above (in response to question #7), the phrase "do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating)" in "a)" should be changed to "the net capacity provided to the transmission grid does not exceed 75 MVA." Third, the introductory phrase in "b)" -- "Power flows only into the LN" -- is inconsistent with the recognition in "a)" that power may flow out of an LN and into the transmission grid if there is generation connected to the LN and the 75 MVA limit is observed. We recommend either deleting the introductory clause or correcting it to read "Power is not transferred through the LN."
Yes
This is a needed exception to Inclusion I5 as these reactive power resources are used by retail customers for power factor correction at their own facilities in order avoid imposed power factor penalties.
No
Individual
Don Schmit
Nebraska Public Power District

Yes
The drafting team has done a great job of adding clarity and to improving the BES definition. Although more work is needed as noted in comments below, overall the drafting team is on the right track with the BES defintion.
Yes
No
Inclusion 2 does not take into consideration a later exclusion (Exclusion 3). At the end of Inclusion 2 after the words "..100 kV or above." Add the words ", unless excluded under Exclusion 3".
Yes
Yes
However the exclusion needs to be noted in I2, so as to non conflict with I2. (See comment on #2 above.)
No
In E3 (a): please define "non-retail generation" as usued in E3(a). Also, what is the criterion that makes this genertion BES generation? The MVA rating only, or is there other criteria? A generator may have a 75 MVA gross nameplate rating, but may be limited physically or electrically to below the 75 MVA. Is this a basis for exclusion for this generator?
Yes
Regarding the Local Network: Can there be some additional technical documents or examples provided for the most common configurations? The LN document is a good document to provide guidance, however the supply of common configuration examples would be very helpful in determining LN applicability. Examples where technical document with examples would be helpful: 1. If a breaker and a half source substation provides two parallel 115 kV lines feeding a load only substation from separate breaker and a half legs at the source substation, would the two parallel lines feeding the load be a LN distribution network feed since theyare from the same source substation? 2. if there is a radial feed from a ring bus or a breaker and a half configuration to a radial load on a single line can the portion of the ring bus or breaker and a half bus between the line breakers and the breakers themselves at the source substation be excluded from the BES? 3. Can some legs of a 115kV breaker and a half substation be disgnated BES and the other legs be non BES depending on how the BES lines and loads tie in to the breaker and half legs? 4. In determining if elements are BES is there any consideration to fault locations and if these faults would interrupt BES flow on ring bus or breaker and a half configurations to help determine what is BES? If so, how many contingencies would be considered to interrupt BES flow?
Individual
David M. Conroy
Central Maine Power Company
No
The second sentence, "This does not include facilities used in the local distribution of electric energy," is vague and not sufficiently clear for northeast industry expert colleagues to be certain of what is "not included." This sentence seems to apply only to distribution facilities that have already been classified based on the FERC "Seven Factor Test" in Order 888. If so, this sentence should be restated as follows for clarity: "This does not include facilities classified as distribution facilities." For US entities, this classification is clearly delineated in our annual FERC Form 1 filing.
Yes
We generally agree, but suggest modification to the language of Inclusion I1 to clarify its application for transformers with more than two windings: "Transformers with two or more terminals operated at 100 kV or higher, unless excluded under Exclusion E1 or E3." Based on this wording, transformer

tertiary windings would also be BES – is that the intent?
No
Inclusion I2 should remove the reference to the Statement of Compliance Registry Criteria. The definition should stand on its own. I2 should be revised to read: "Generators with a gross nameplate rating of 20 MVA or greater, or a generating plant/facility connected at a common bus, with a gross aggregate nameplate rating of 75 MVA or greater; and is directly connected at a voltage of 100 kV or above. BES includes the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above." This is consistent with the proposed I2 and the current Compliance Registry Criteria.
No
Inclusion I3 should be changed to include the phrase, "material to," currently in the Statement of Compliance Registry Criteria (Section 3C3). Based on the definition wording, the Generator Step-Up transformer (GSU) would not be BES if the generator would not otherwise already be included as BES under another definition provision.
No
The term "common point" needs clarification and/or definition. (e.g., is it intended to apply to the risk of single mode failure, where all the resources could be lost for a single event?) Some northeast industry expert colleagues interpret I2 to mean the collector system itself needs to be 100 kV or above in order to be BES. I2 seems to not include the collector system itself in BES. I4 should be restated as follows: "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system connected at a common point. BES includes the interconnecting substation with the step-up transformer(s) connected at a voltage of 100 kV or above." [alternatively, replace "interconnecting substation with" with, "generator terminals through the high-side of" if the entire collector system is intended to be BES] Also note that some wind collector systems require supplemental dynamic reactive resources or special control system to met reliability standards. As written, these reactive resources or controls may not be considered to be BES.
Yes
There is no such thing as "supplying or absorbing Reactive Power" but the intended meaning is sufficiently clear since it is industry 'shorthand'. We suggest an alternative wording of: "Static or dynamic Reactive Power resources that are connected at 100 kV or higher, or…"
No
E1 needs to be revised to make it less confusing. "Radial systems" leaves the impression that E1 is not simply a "radial line exclusion", because of the plural and the word "systems." Northeast industry expert colleagues are not clear what this sentence specifies: "A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher." • Does E1 apply only to a single radial transmission line (and its associated "group of Elements")? • Alternatively, does E1 apply to multiple radial lines "emanating from" the same substation regardless of the bus configuration – would a ring bus or a two-bus system that is connected with a tie breaker be considered as "a single point of connection"? • If the radial line is simply tapped off a BES line without any automatic interruption device, should not the radial line be included as part of the BES since a permanent fault on this radial line will take out the BES line it is tapping off of? If the radial line is defined as part of the BES, it could be subject to certain requirements such as vegetation management for overhead lines. • Should not the exclusion include some description of the operational requirements to help resolve the ambiguity? As it is, the exclusion is scenarios-based. When a specific scenario is overlooked, the oversight becomes a source of ambiguity. This definition is not clear. Clarity is imperative. E1(c) should define or replace the term "non-retail". Industry needs clarity on exactly what generation this clause applies to, in order to properly apply this definition. The Note referring to the "Normally Open switch" needs further clarification. As written, it seems to conflict with FERC order 743, paragraph 55: "While commenters would like to expand the scope of the term "radial" to exclude certain transmission facilities such as tap lines and secondary feeds via a normally open line, we are not persuaded that such categorical exemption is warranted." E1 should be restated as follows: "Radial systems: A single transmission line or transformer not otherwise identified in the Inclusions above, with a single point of connection of 100 kV or higher and: a) Only serves Load. Or, b) Only includes generation resources, not identified in the Inclusions above. Or, c) Both serves Load and only includes generation resources not identified in the Inclusions above."

No
E2 should be consistent with the Statement of Compliance Registry Criteria. References to Balancing Authority, Generator Owner, and Generator Operator should not be included in the BES definition. "Net capacity" is unclear – must flow never exceed 75 MVA on an instantaneous or integrated hourly energy basis per either design or operating experience? There is a potential for hundreds of MW to be interconnected at a customer facility, with the "net capacity" (= flow into the transmission system? Instantaneous? Annual average? On an integrated hourly basis at any hour?) being less than 75 MVA – are hundreds of MW of generation "not material" to BES reliability? The conditions under which direction of flow (i.e., "net capacity") is assessed are critical, but E2(i) is silent on this. In E2(ii), the "and", "or", and "or" are not clear – what are the necessary terms of the referenced "binding obligation" and what is an "applicable regulatory authority"? Are "standby" and "back-up" and "maintenance" power services independently defined and provided by a GOP, GO, or BA? Northeast industry expert colleagues do not understand the relevance of E2(ii) to BES reliability. E2 should be restated as follows: "A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the meter if the flow to or from the BES can never exceeds 75 MVA."
No
"Local Network" is capitalized (network not capitalized at the beginning of E3) throughout E3, yet it is not defined in the NERC Glossary. This exclusion is vague. This exclusion applies to a network with "multiple points of connection" with the purpose "to improve the level of service to retail customer load" – this phrase is intent-based and not reliability-based – most/all transmission "improves service" compared to it not being there. In essence, this exclusion can be obtained if a portion of the network: 1. Doesn't have significant generation (again, "non-retail" phrase is unclear) 2. Power only flows "into" this portion of the network, and not (ever? Even under any TPL design contingencies?) "out." Is this considering only pre-contingency steady state conditions? During contingency conditions and for the period following a contingency the LN could supply power to other parts of the network depending on the nature of the contingency. The conditions under which direction of flow is assessed are critical, but E3(b) is silent on this. 3. This portion of the network is not part of a monitored transmission interface This "Local Network Exclusion" is supported by a technical analysis which relied on transmission distribution factors (see http://www.nerc.com/docs/standards/sar/bes_definition_technical_justification_local_network_20110819.pdf on the NERC BES Definition standard page http://www.nerc.com/filez/standards/Project2010-17_BES.html). This transfer distribution factor (TDF) method was rejected by FERC in Order 743. Paragraph 85 of the Order states: "Given the questionable and inconsistent exclusions of facilities from the bulk electric system by the material impact assessment and the variable results of the Transmission Distribution Factor test proposed in NPCC's compliance filing in Docket No. RC09-3, there are no grounds on which to reasonably assume that the results of the material impact assessment are accurate, consistent, and comprehensive.93 Additionally, we have noted how the results of multiple material impact tests can vary depending on how the test is implemented." The phrase "contiguous transmission elements" is also not clear, especially when qualified as not being part of a monitored transmission interface. Should the "contiguous transmission elements" comprise a complete and exhaustive set of contiguous elements? Or can they be a subset of a larger contiguous set in which the other elements of the larger set are actually part of a monitored interface? Unless E3 is made more specific and clear, it should be stricken.
No
Consider using other wording to replace "retail"
Yes
If the definition and inclusions and exclusions are not sufficiently specific and clear, stakeholders will flood NERC and RROs with interpretation requests and/or apply the definition and its inclusions or exclusions incorrectly. Explanatory figures with one-line diagrams should be developed and shared to illustrate the system configurations included and excluded in a BES Definition. This would be very helpful for definition clarity. This should be done as part of an "Application Guide" for the BES Definition – there is precedence for an "Application Guide" with graphical support in CIP-002 version 5. A sample set of one-line diagrams with interpretations based upon the inclusions and exclusions developed by Northeast Power Coordinating Council members for discussion purposes is available as an example, but note that there is not a uniform agreement on these diagrams based on the BES Definition as written, due to lack of clarity.

Individual
Kirit Shah
Ameren
Yes
a)The general concept is sound, but the Inclusion and Exclusion sections create so many circular references it is virtually impossible to take a definitive stance on whether an asset is included or excluded to the BES definition. Please revise the inclusion and exclusion criteria to give pinpointed statements that are final and do not reference other criteria, that then again reference other criteria.b)We believe that 200kV and above is the appropriate bright line for the Bulk Electric System. c)In I5, only those Reactive Power devices applied for the purpose of BES support or BES voltage control should be included. A Reactive Power device connected at >100kV but used for the purpose of voltage support to local load should not be included. d)The core definition uses "Transmission Elements" while E1 uses "transmission Elements". What is the difference? If one or both terms are applicable, their definition should be included.
Yes
Agree in general, but have the following comments:a)We agree in general with the revisions to the specific inclusions for transformers in I1; however, we believe the transformer voltage level should be 200kV or above. b)The inclusion is unclear since it includes a certain voltage transformers, but excludes those that have E1 or E3 Exclusion criteria. Each exclusion criteria has multiple stipulations to its applicability, and then has a final inclusive reference to I3. Please make the wording exact and not dependent on clausal statements.
No
a)This definition becomes dependent on a document that can be changed without direct correlation to the BES definition. Remove the reference to the ERO Statement of Compliance Registry Criteria, and simply state the criteria as currently used. There is no need to look up another definition in another document to identify what is included in the BES definition. b)All MOD Standards' requirements for generators should also follow this definition.
Yes
a)The definition should include only those black start generators connected 100 kV and above and included in the restoration plan. b)We agree with the changes but believe clarity would be added by changing the word “identified” to “designated”.
Yes
a)For a consistent application, we suggest that the definition of the terms "Dispersed power producing resources" is included. Consider including some examples also.
No
a)Only those Reactive Power devices applied for the purpose of BES support or BES voltage control should be included. A Reactive Power device connected at >100kV but used for the purpose of voltage support to local load and/or needed to support local networks should be excluded. b)We believe that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common point. c)See the response to question 2: The inclusion is unclear since it includes a certain voltage transformers, but excludes those that have E1 or E3 Exclusion criteria. Each exclusion criteria has multiple stipulations to its applicability, and then has a final inclusive reference to I3. Please make the wording exact and not dependent on clausal statements.
Yes
a)We suggest the wording “non-retail generation’ should be clarified with an explanation of why it is used in this exclusion. b)This exclusion criterion has multiple stipulations to its applicability, and also has a final inclusive reference to I3. Please make the wording exact and not dependent on clausal statements.
No
a)If retail generation fails to meet (i) or (ii) it appears that the retail generation would be included. The wording of (ii) is complex. Who will police this with retail behind-the-meter generators? b)Clarification needs to be provided for what is meant by E2 (ii), regarding generation on the customer’s side of the retail meter; otherwise we have trouble developing a position on this question.

No
a) The exclusion should also be extended to reactive resources needed to support the local area network (see response to Q10). It is also suggested that "local network" be renamed to "local area network" to better describe or distinguish itself from a wide-area network such as the BES. b)We would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN "under normal operating conditions".
No
a)Reactive Power devices connected 100 kV and above applied for the purpose of voltage support to local load and/or local area network should also be excluded.
Yes
a)We believe this revised definition is an improvement over the previous posting, a step in the right direction. b)The definition of the BES is referenced in several existing standards and the Statement of Compliance Registry Criteria. Our concern is how this revised definition will impact entity registration, i.e., how will the revised definition be integrated into the Compliance Registry Criteria. The implementation plan should include how the integration is going to occur. The Rules of Procedure exception process should be further defined or referenced in this definition. c)See Question 1 response: The general concept is sound, but the Inclusion and Exclusion sections create so many circular references it is virtually impossible to take a definitive stance on whether an asset is included or excluded to the BES definition. Please revise the inclusion and exclusion criteria to give pinpointed statements that are final and do not reference other criteria, that then again reference other criteria
Group
William D Shultz
Southern Company Generation
No
We have two concerns with the changes that are proposed. First, the use of "effective dates" and "compliance obilgations ... shall begin" in the implementation plan of the definition change is confusing. Effective date is usually used to indicate the mandatory and enforceable date of a new item. Second, a radial circuit from 100kV to a generating facility with two (2) 20 MVA generators seems to meet both the inclusion criteria (I2) and the exculsion criteria (E1). Which criteria is dominant, inclusion or exclusion?
Yes
Yes
Yes, provided that the minimum gross individual nameplate rating threshold is the same as the gross aggregate nameplate rating (currently > 75MVA). The MVA ratings are specified in many places in the BES definition, where a reference is made in I2 to using the Statement of Compliance Registry Criteria. We believe that the BES definition should point to the Statement of Compliance Registry Criteria and not include MVA values. We also believe individual units < 75MVA should be excluded unless they have been shown to be critical to BES reliability through a technical justification study performed by the transmission planning authority.
Yes
Yes
Yes
We believe that the size of the reactive power resource should be considered as a key factor to be part of BES. When considering generating resources, the size, e.g., greater than 75 MVA, was a key part of criteria to be included or excluded as BES. A similar approach should be applied when considering reactive power resources. Moreover, the language at the end of I5, "or through a transformer that is designated in Inclusion I1," appears to be redundant since the reactive power resources are connected to 100 kV or higher already without this additional language. The following language is suggested: I5 - Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side

voltage of 100 kV or higher, and with an aggregate continuous nameplate rating greater than 30 MVA.
No
Subpart (b) uses the term "generation resources" while subpart (c) uses the term "non-retail generation", why are these different terms used? Further, why is it important that the term "non-retail generation" is used in subpart (c)? In addition, the SDT needs to clarify what the term "non-retail generation" means. Is this what is commonly referred to as "customer owned" or "behind-the-meter" generation? The change in version 2 that removed the requirement that an excluded radial system have an automatic interruption device at the single point of connection to the rest of the BES creates a problem. Three-terminal circuits are common below 230 kV. The "tapped portion" should not be left out of the BES since a fault on that portion takes out the whole line. We propose this revised language in the first sentence on E1: "E1 - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher, where the connection has an automatic interruption device,…" Exclusion E1, subpart (c) uses the phrase "an aggregate capacity of … less than or equal to 75 MVA …". Exclusion E3. subpart (a) provides that the local networks "do not have an aggregate capacity of … greater than 75 MVA …". Why are these phrases stated differently even though they appear to address the same resources?
Yes
Some editing is needed. The second part, (ii), of the and logic provided for the exclusion criteria E2 is confusing. The initial criteria, (i), seems to be adequate regarding impact to the BES. The criteria listed after "(ii)" does not seem to be relevant to the impact on the BES. What does it mean to provide standby, back-up, and maintenance power services to a generating unit or multiple generating units? It is unclear who is providing the power service. If this is needed, the statement needs to be simplified so it can be understood. What is the difference between the terms "retail Load" and "retail customer Load" as used in Exclusions E2 and E3?
Yes
What does the term "non-retail generation" mean? Can the term "non-retail generation" in E3a be changed to simply "generation."
Yes
Yes
1) On page 1, the year of the anticipated date for the BOT adoption is correctly 2012. 2) We believe that the last two sentences of the first paragraph of the Background Information section of the 2nd draft of the definition document is incorrect. The statements read: " It should be noted that the revised definition does not address functional entity registration or standards requirements applicability. Those are separate issues." The definition of the BES that is approved will govern the scope of the equipment that is relevant to many of the reliability standards. This issue cannot be separated from the applicability of the requirements of the reliability standards. What is the purpose of creating a continent wide definition of the BES if is is not to provide instruction the enetties subject to the requirements of the standards? Refer to these sample standard requirements to see that this definition already plays a major part in the applicability of the requirements: EOP-005-2 R1, R4; EOP-006-2 R1; EOP-008-1 R1; FAC-008-1 R1.2; and PRC-005-1a for example - there are many others.
Individual
Guy Andrews
Georgia System Operations Corporation
Yes
Yes
Yes
Yes

Yes
Yes
Yes
Yes
No
Item (b) is unclear: Although the first sentence says "Power flows only into the LN," which suggests there will be no exports, the second sentence says "The LN does not transfer energy originating outside the LN for delivery through the LN," which suggests it could deliver power originating within the LN. This would seem to be reasonable by comparison to E-2, so long as no more than 75 MVA is exported (which is indeed the limitation on the quantity of "non-retail generation" in the LN). On a related point, if the limit on connected generation is not intended to be a limit on possible exports, and therefore any power from interconnected non-retail generation must be sold within the LN, why does the limit need to be so low; why should the aggregate quantity of such internally-consumed generation be an issue? Also, is the "non-retail" designation intended to exclude customer-owned generation from the 75 MVA calculation?
Yes
No
Group
Brandy A. Dunn
Western Area Power Administration (Corporate Services Office)
Yes
Yes
Yes
Yes
No
Need to clarify the systems associated with this inclusion. The phrase "dispersed power producing resources" in inclusion (I4) is confusing and does not clearly communicate the focus of this inclusion. Without reviewing the reference information provided in the 1st draft comment form, it's not clear that dispersed power producing resources refer to wind and solar resources. Recommendation: Include examples after phrase "dispersed power producing resources" for clarification to this inclusion. Change I4 to read - Dispersed power producing resources (i.e. wind and solar resources) with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above.
No
This inclusion should be worded to only include static or dynamic reactive devices which are necessary to meet the NERC Planning Criteria in terms of normal and post-disturbance voltage profiles. We shouldn't have to include smaller shunt cap banks and reactors which are used primarily for voltage support (not voltage collapse). Recommendation: Change I5 to read - Static or dynamic devices dedicated to supplying or absorbing Reactive Power which are necessary to meet the NERC Planning Criteria in terms of normal and post-disturbance voltage profiles that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a

transformer that is designated in Inclusion I1
Yes
Yes
Yes
Yes
Yes
Yes, the definition should also provide clarification on mobile equipment installed to support maintenance or equipment failures. Adding mobile equipment is a common practice for our industry and should be addressed in the definition to bring a general awareness and common understanding of the practice regarding the NERC standards. Recommendation: Add the following Exclusion to BES definition for mobile equipment. Exclude all mobile equipment on stand-by that has not been placed into service as well as all components of mobile equipment that does not meet the inclusion criteria for the primary function of the device being installed (e.g. ,battery bank on mobile transformer installed on radial feed would also be excluded)
Individual
Scott Miller
MEAG Power
Yes
MEAG agrees to the clarifying changes to the core definition in general, however, we maintain that 200kV and above is the correct bright line for the BES.
Yes
We agree in general with the revisions to the specific inclusions for transformers in I1; however, we believe the transformer voltage level should be 200kV or above.
Yes
We agree in general with the revisions to I2 for generation; however, we maintain that 200kV and above is the correct bright line for the Bulk Electric System.
No
We agree with the changes but believe clarity would be added by changing the word “identified” to “designated”.
Yes
No
We feel that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common point.
Yes
We suggest the wording “non-retail generation’ should be clarified with an explanation of why it is used in this exclusion.
No
Clarification needs to be provided for what is meant by E2 (ii), regarding generation on the customer’s side of the retail meter; otherwise we have trouble developing a position on this question.
No
We would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN “under normal operating conditions”.
Yes
Yes

The definition of the BES is referenced in several existing standards and the Statement of Compliance Registry Criteria. We are concerned how this revised definition will impact entity registration, i.e., how will the revised definition be integrated into the Compliance Registry Criteria. The implementation plan should include how the integration is going to occur.
Group
David Dockery or John Bussman
AECI
Yes
In general, we agree with this revision. We however believe the correct voltage thresholds to be, transformer primary voltage of 200 kV or higher and secondary voltage of 100 kV or higher.
No
"100 kV or above" should be modified to "200 kV or above with a registered rating of 150 MVA or greater."
Yes
The word "identified" should be replaced with "designated".
Yes
In general, we agree with this revision. However, the aggregate MVA threshold should be 150 MVA or greater, and threshold voltage level should be 200kV or higher.
Yes
This inclusion should be limited to reactive devices 150 MVAR or greater (gross aggregate nameplate rating) connected through a common point at the 200 kV level or higher level.
Yes
This inclusion should be limited to reactive devices 150 MVAR or greater (gross aggregate nameplate rating) connected through a common point at the 200 kV level or higher level.
Yes
Remove "non-retail" because it is irrelevant to reliability. In general, we agree with the remaining concepts. However transformer voltage threshold should be 200 kV or higher, the power thresholds should be 150 MVA or greater.
Yes
E2 "retail meter" should read "retail meter(s)". (i) Should be reworded as "the maximum net impact to the BES does not exceed 150 MVA, connected at 200 kV or higher." (ii) if we understand this clause correctly, we believe our proposed (i) wording will handle the issue. Also, all load's inclusion, within a BA, is dictated within the BAL standards and so remove entirely or additional clarification is needed.
Yes
We would agree in principle with the LN exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN "under normal operating conditions". Also, the correct BES threshold level should be 200 kV rather than 100 kV. Finally, the nomenclature of Flowgate (FG) components appears to be confused. AECI believes E3 c) should be changed to read "contingent Facility" rather than "monitored Facility". Although unspecified within the NERC Glossary, we believe FG monitored Facilities are typically the impacted facilities in danger of overload, while the contingent facilities are those which, if lost, would cause the monitored Facility to become overloaded. As currently written, a formerly qualified LN could later become disqualified due to an external entity's ill-designing a parallel EHV line, thereby causing one or more potential (N-1) overloaded Facility within that LN. Further, operational FG loading conditions are often relieved by opening-up LN elements near the monitored Facility, with little impact upon BES reliability, yet with lesser reliability to the underlying LN loads. This implies that the monitored elements of Flowgates are typically non-essential to the BES reliability. AECI can support "contingent" FG Facilities disqualifying a LN claim, but it cannot support "monitored" Facilities as disqualifying factors for rejecting a LN claim.
Yes
Ownership is irrelevant, so "owned and operated by the retail customer solely for its own use", should

be replaced by "owned and operated solely in conjunction with specific industrial customer loads."
Yes
: AECI supports the bright-line concept, but believes the SDT should adopt a core voltage threshold of "200 kV or higher", and MVA capacity of "150 MVA or greater". A proper threshold is critical, because an inappropriately low threshold will divert significant industry attention and resource away from what truly benefits the BES reliability. (The number of facilities tend to rise more geometrically than linearly as the voltage threshold drops.) We believe that an evaluation of the transmission-line Surge Impedance Loading (SIL), at various kV levels, could provide technical insight as to why many industry planning engineers believe sub-230kV Facilities, in general do not belong within the BES. AECI suggests that the SDT consider a more consistent bright-line facility threshold of 150 MVA capability for all equipment. This would include transmission lines as well, where an Surge Impedance Loading analysis demonstrates that lines below 230 kV, can support 150 MVA flow up to 280 miles (applying 1.1 p.u. line-loadability of SIL, IEEE Transactions on Power Apparatus and Systems, Vol.PAS-98, No.2 March/April 1979, p 609, Figure 7),without additional reactive compensation. In comparison, single-conductor 138 kV lines, in same table, can support 150 MVA transfers no more than 50 miles, while 345 kV lines are capable of supporting 150 MVA transfers well over 600 miles.
Individual
Paul Titus
Northern Wasco County PUD
Yes
We agree with the changes. We must point out that the overall flow, or how one proceeds through the inclusions and exclusions is not clear. Can an item that meets an inclusion be subsequently excluded? If so, this needs to be explicitly stated. So far, we only have the flow chart produced by the ROP team that indicates otherwise (http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf). This was made evident by the question at the 9/28 webinar regarding an I5 capacitor on an E3 local network. The questioner thought the capacitor was BES per I5, but the answer was that it was excluded per E3. We can find no support for the answer given. The listing of specific exclusions within I1 (exception proves the rule) argues for questioner's stance that the capacitor is BES as written. Also, if included items could subsequently be excluded, they would be no different from any other item that met the voltage threshold of 100kV. There would be no need for any of the inclusions if all possible outputs from the inclusion tests go to the same exclusion test inputs. We strongly support the addition of the language regarding local distribution facilities, as it matches congressional intent to leave the regulation of these facilities to state and local authorities.
Yes
Northern Wasco County PUD strongly agrees with this inclusion as written. It is consistent with the recent PRC-004 and PRC-005 interpretation and the NERC definition of Transmission. We believe the recent changes to this inclusion add clarity.
No
Referencing the Criteria which in turn references the BES definition creates a circular definition. Northern Wasco County PUD encourages the adoption of specific thresholds that are technically justified. We also note that the Criteria and its revisions do not go through the standards development process, so that thresholds may change with little warning and without triggering an implementation plan for facilities that may be swept into the BES as a result.
Yes
We agree with the removal of the voltage language, since the inclusions and exclusions apply only to equipment over 100 kV.
Yes
Northern Wasco County PUD agrees both with the inclusion and with the revised language. The revised language removes the need to provide a separate definition for "Collector System".
No
While we agree that reactive devices of sizable capacity connected at 100 kV or higher are needed for BES reliability, Northern Wasco County PUD fails to see why this inclusion is needed as they are already captured by the 100 kV threshold. We would propose instead to eliminate this inclusion and substitute an exclusion for smaller capacity devices. If the SDT really believes an inclusion for reactive

devices is needed, we suggest the SDT provide a technically justified capacity limit within the inclusion. In addition we suggest also including the phrase "…unless excluded under Exclusion E1, E2 or E4" similar to that in I1. Please see the answer to Q1 above Q10 below.
No
Northern Wasco County PUD notes that a new term has been introduced, "non-retail generation," with no definition provided. The answer to the question on this during the 9/28 webinar indicated that non-retail generation was behind the retail customer's meter. We can see no reason why the net-metered PV systems should count toward the aggregate limit (exceeding the limit means no exclusion) while a non-blackstart thermal plant doesn't (the radial system is excluded if any amount of load is present). We have also heard the SDT meant just the opposite of what was stated in the webinar. We ask that a reasonable definition for non-retail be provided within the BES definition document. We strongly agree that radial systems should be excluded and that the presence of normally open switching devices between radial systems should not cause them to be considered non-radial. Such a result would cause the removal of these devices to the detriment of the local level of service. We note that the singular "A normally open switching device" is used and suggest that an allowance be made for the possibility of multiple devices. "Normally open switching devices…"
Yes
No
We strongly agree that local networks should be excluded, since they act much like the radial systems excluded in E1 while providing a higher level of service to customers. These networks should not be discouraged in the name of reliability. We again object to the introduction of the new confusing term "non-retail generation" with no definition provided.
No
Please see Northern Wasco County PUD's answers to Q1 and Q6. Any device that might be excluded under E4 has already been included per I5. Unless I5 is removed, or rewritten as suggested above; this exclusion will exclude nothing.
Yes
In order to help meet the fast approaching target date, Northern Wasco County PUD will be voting affirmative in this ballot, with the hope these comments will be addressed in Phase II. If the ballot should fail, please address these comments in this phase. Thanks to the team for their good work.
Group
Janelle Marriott Gill
Tri-State Generation and Transmission Assn., Inc., Energy Management
Yes
We believe that the new definiation is a good clarification.
Yes
No
1. The parenthetical phrase regarding the ERO SCRC is not clear. Is the intent that the inclusion applies to any generating resource that is required to register as a Generator or Generator Operator per the ERO SCRC? Or was a reference to the 75 MVA threshold inadvertently omitted? It also seems that it wouldn't need to be in parentheses, just make it a phrase in the sentence. 2. The wording of the sentence after the parenthetical phrase is also worded awkwardly. Suggest changing it to "including the generator terminals and all electrical equipment up to and including the high side of generator step up transformers, if they are connected at a voltage of 100 kV or higher.
Yes
Yes
No
There should be a limitation on what reactive components needs to be included. The limits could be based on capacity of the units or on the voltage step that occurs upon switching of the device

Yes
Yes
No
1. b) should be reworded to "Normally there is power flow only into the LN: The LN is not normally used to transfer power originating outside of the LN for delivery through the LN." There could be conditions inside the LN, such as large loads shut down for maintenance, which would allow the parallel transmission Elements to allow power to flow through the LN. Those conditions would have no negative or adverse effect on the BES. 2. Capitalize "Network" at the beginning of the Exclusion
Yes
No
Group
Will Smith
Midwest Reliability Organization
Yes
Yes
No
Unless excluded under E2.
Yes
Yes
I4 – Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above starting at the point of aggregation to 75 MVA or more through to the point of interconnection at 100 kV or above."
No
NSRF recommends the following proposed language for I5 to address the concern: "I5 -Static or dynamic devices which 1) are dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1 and 2) are pertinent to meeting the NERC Planning Criteria in terms of normal and post-disturbance voltage profiles."
Yes
Unless there is a specific reason to the contrary the NSRF suggests that E1b include the qualification of "aggregate capacity of non-retail generation less thatn or equal to 75 MVA" be added to be consistent with the wording in E1c.
Yes
No
THE NSRF suggestion considering a different approach for the power flow criteria in I3b. I3b: No form Power Transfers are scheduled out of, or thorough, the LN in the operating horizon [for BES designations applicable to the operating horizon] and not Firm Power Transfers are reserved to flow out of , or through, the LN in the planning horizon [for BES designations applicable to the planning horizon].
Yes
Yes

NSRF recommends that the following statement be added after I5. If an element is not included based upon the core definition or I1 – I5, the elements is not consider to be a part of the BES.
Individual
Linda Jacobson-Quinn
Farmington Electric Utility System
Yes
Yes
No
FEUS is concerned I2 is dependent on the Statement of Compliance Registry Criteria (SCRC). Modification of the SCRC is not required to go through the same process of modification of a Standard but section 1400 of the NERC Rules of Procedure. Section 1400 does allow for industry comment and requires multiple tiers of approval. However, it seems by changing the SCRC generating resources may be included or excluded from the BES – without requiring modification to the definition of the BES through the Standards Development Process. In addition, Page 4 Section I of the SCRC is dependent on the NERC definition of the BES. Logically, the SCRC should be dependent on the definition of the BES not the inverse.
Yes
No
FEUS feels additional clarity should be added to I4. It appears I4 is not intended to include each individual wind turbine generating unit in a wind farm as a BES element, but rather to include the point at which the aggregation becomes large enough to meet the aggregate capacity threshold of 75MVA.
No
I5 should be modified to identify a minimum Reactive Power threshold for static or dynamic devices. As drafted a 1 MVA device supplying or absorbing Reactive Power that is connected at 100 kV or higher would be included in the BES.
Yes
No
E2 should be modified to include a size and threshold for individual generating units, similar to that identified in I2. As currently worded E2 places the same threshold (75 MVA) on a single generating unit as is placed on multiple generating units.
Yes
Yes
No
Individual
Allen Rinard
South Houston Green Power, LLC
No
South Houston Green Power, LLC [SHGP], a registered generator owner in ERCOT, submits the following comments: Cogeneration facilities, some of which are well over 75 MW in size, are located at a number of industrial sites owned by SHGP and its affiliates. Some of these cogeneration facilities generate power that is distributed within the industrial site and used for manufacturing plant operations. In some instances, excess power not required for plant operations is delivered back into the electric transmission grid through the tie line(s) connecting the industrial site to the grid. While the tie lines and some of the internal lines at these industrial sites operate at 100kV or higher, they

do not perform anything that resembles a transmission function. Rather than transmit power long distances from generation to load centers, the tie lines and internal lines perform primarily an end user distribution function consisting of the distribution of power brought in from the grid or generated internally to different plants within each industrial site. In some cases, the facilities also perform an interconnection function to the extent they enable power from cogeneration facilities to be delivered into the grid. The voltage of the tie lines and internal lines at these industrial sites is dictated by the load and basic configuration of each site. Higher voltage lines are used when necessary to meet applicable load requirements or to reduce line losses. That does not mean that such lines perform a transmission function. SHGP would oppose any BES definition that would by default subject either the tie lines or the internal lines at such industrial sites to the mandatory reliability standards applicable to Transmission Owners and Transmission Operators when they more readily fit the Generation Owner / Generation Operator standards. Such an expanded BES definition would subject registered entities to substantial compliance costs and create potential exposure to penalties, but would not likely substantially enhance the reliability of the BES. Perhaps such costs and exposure could be justified in exceptional circumstances, if subjecting these facilities to compliance with reliability standards were to result in a material increase in reliability of the BES. There is reason to believe, however, that in many cases the additional reliability benefit would be minimal at best. The tie lines and internal lines at industrial sites owned by SHGP and its affiliates have been operated for years as end user distribution and interconnection facilities, and practices and procedures have developed over the years that have enabled such operations to achieve a high degree of reliability for such sites. Requiring these facilities to now operate in a different manner as transmission facilities may well result in a degradation of the reliability of the manufacturing plants located at such sites. For example, outages would have to be coordinated with the RTO, which may not be interested in coordinating such outages with scheduled manufacturing plant outages. In light of these considerations, SHGP agrees with the proposed revisions to the core definition, particularly the proposal to include a sentence expressly excluding facilities used in the local distribution of electric energy, provided it is understood that end user-owned delivery facilities located "behind-the-meter" are, regardless of voltage level, by default outside the scope of this definition.
Yes
No
SHGP agrees with the proposed revisions to Inclusion I2, but requests the following phrase added at the end "unless excluded under Exclusion E2".
Yes
No
Further clarification of "Dispersed power producing resources" is needed. Multiple small resources should not be included. The following phrase should be added at the end of Inclusion I4 "unless excluded under Exclusion E2".
No
The phrase should be added at the end "unless excluded under Exclusion E4".
No
SHGP generally supports with the proposed revisions to Exclusion E1, but suggests several additional clarifying revisions should be made. First, the phrase "a single point of connection" in the introductory sentence should be revised to read "a single point of connection (including multiple connections to the same ring bus or substation where the energy normally flows in the same direction)". This revision is intended to ensure that radial systems which involve multiple parallel lines and are designed to operate as a single radial system, but that nevertheless connect to the grid through more than line for reliability. Second, for this same reason, an additional (i.e., second) note should be added to the end of Exclusion E1 that reads as follows: "Note, a normally closed switching device that enables multiple lines emanating from the same grid ring bus or different grid buses to operate as a single radial system does not affect this exclusion." Third, the phrase "with an aggregate capacity of non-retail generation less than or equal to 75 MVA should be eliminated.
Yes
SHGP generally agrees with the proposed revisions to Exclusion E2, but believes that a clarifying

revision should be made. Substitute "transmission grid" for "BES" in the phrase "provided to the BES" to insure that the metering is to the grid.
SHGP would like to broaden the scope of Local Networks. If a Local Network does not allow transfer of Bulk Power across the Interconnected System, then the Local Network should be excluded regardless of the amount of generation behind the meter. Often, large industrial sites install large combined Heat & Power cogeneration units due to a hefty steam load. Subjecting industrial facilities to additional reporting and coordination efforts [other than those already required by the TO and RTO] may have little, if any, increase in grid reliability. The 75 MVA (gross nameplate rating) needs to be eliminated. To date, none of the Regional Entities has suggested that SHGP or its affiliates register as a Transmission Owner or Transmission Operator with respect to any SHGP or affiliated delivery facilities.
Yes
Group
William Bush
Holland Board of Public Works
Yes
Holland BPW believes that the proposed definition is an improvement to the status quo, but requires additional work. The thresholds for classifying generators as Bulk Electric System (BES) must be revised. There was little technical support for proposing the current thresholds. No greater evidence than that which was proffered for the initial thresholds should be required to modify those standards. Four years of compliance experience and industry feedback support increasing these thresholds. Holland BPW supports increasing the generation thresholds from 20 MVA (individual gross nameplate) and 75 MVA (aggregate gross nameplate) to not less than 100 MVA (individual gross nameplate) and 300 MVA (aggregate gross nameplate). Holland BPW recognizes that the SDT and NERC have committed to making these revisions as part of "Phase II", and are asking the industry to trust that such an initiative will not succumb to work on other initiatives. However, even if work on this initiative commences immediately, entities that should be removed from the Compliance Registry face costs of compliance or the risk of non-compliance penalties even though their facilities are not necessary for the reliable operation of the interconnected transmission system. That said, there are two significant improvements in the revised draft. First, it is essential to make clear that the "Inclusions" and "Exclusions" apply only to the first sentence of the core definition (i.e., "Transmission Elements"). The revised definition appears to address this. By placing "Unless modified by the lists shown below" at the beginning of the first sentence of the definition clarifies that the lists of Inclusions and Exclusions pertain only to "Transmission Elements" that would otherwise be included or excluded from the core definition. The revised definition and the lists of Inclusions and Exclusions do not and cannot be applied in a manner to pull in facilities used in the local distribution of electric energy as BES facilities because Congress, by statute, has already determined that such facilities are outside of NERC's reach, as recognized by the second sentence of the definition. Second, Holland BPW supports the addition of the second sentence of the core definition that states, "This does not include facilities used in the local distribution of electric energy." This language provides necessary recognition to the jurisdictional limitation provided for in Section 215 of the Federal Power Act, and as recognized by the FERC in Orders 743 and 743-A (see, e.g., ¶¶ 58-59 in 743-A). Finally, if the revised definition goes forward, it is imperative that the rules of procedure providing for an exception process be adopted at the same time.
No
It is essential that regional entities and NERC recognize that "facilities used in the local distribution of electric energy" are not included in the definition of BES, regardless of the gross individual or gross aggregate nameplate rating of generation resources. While the addition of the second sentence in the core definition makes this clarification, Holland BPW believes it is necessary that regional entities and NERC recognize that neither this Inclusion nor any of the Inclusions may be used as a basis to compel registration and compliance in such instances, regardless of the size of the generators. The statutory exemption of facilities used in the local distribution of electric energy is not limited by generator number or capability. NERC's definitions cannot impose limitations that are not set forth in the

statute. For purposes of the exclusion of facilities that might otherwise meet the definition of BES, the thresholds for determining what generating resources constitute BES facilities should be modified from the current levels (gross individual nameplate capacity of 20 MVA or gross aggregate nameplate rating of 75 MVA). Holland BPW supports modification of the thresholds to not less than 100 MVA (gross individual nameplate capacity) and 300 MVA (gross aggregate nameplate).

Yes

Holland BPW supports the exclusion of radial systems from the BES definition, but believes that further clarification is necessary. First, the deletion of "originating with an automatic interruption device" is a step in the right direction. However, "emanates from a single point of connection" could be too narrowly interpreted (i.e., multiple buses within a single substation could be viewed as multiple points of connection). Holland BPW proposes the following modification: "emanates from a single substation connected to the BES at 100 kV or higher…" Entities whose only connection emanates from a single substation and otherwise meet the BES definition should not be denied exclusion under E1 solely because they connect to multiple buses at that single substation. Additionally, adoption of "E3 – Local Networks" renders specious any argument that claims that connecting to multiple buses within a single substation makes a material difference for reliability purposes since local networks would have multiple connections anyway. Additionally, it is not clear why it is necessary to include the note at the end of the revised definition. ("A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.") This raises questions as to what "normally open" means, and whether the only evidence demonstrating what "normally open" means will be prints or one-line diagrams. Further, it is not entirely clear what is meant by the language "does not affect this exclusion". If the note remains, it should be modified to read something like, "a normally open switching device between radial systems does not prevent application of this exclusion." Finally, the generation threshold limit in E1(b) and E1(c) should be revised as discussed in response to Q1. Specifically, the proposed threshold of 75 MVA for this exclusion should be raised to not less than 300 MVA in both E1(b) and E1(c).

Yes

Holland BPW supports the exclusion of Local Networks (LN) from the definition of BES. Such systems are generally not necessary for the reliable operation of the interconnected transmission network. However, some revisions are necessary. Holland BPW believes that E3(a) and E3(b) can and should be eliminated, provided E3(c) remains. E3(c) provides that an LN is BES if it is classified as a Flow Gate or Transfer Path. The bases for removing E3(a) and E3(b) are as follows: (1) Provision E3(a) establishes a 75 MVA limit on connected generation. This is inconsistent with the concept of a LN and should be removed. If not removed, it should be increased to not less than 300 MVA, consistent with the discussion in response to Q1. If an LN does not accommodate bulk power transfer across the interconnected system, the amount of generation that exists and is distributed within that system is immaterial for purposes of the reliable operation of the interconnected transmission system. During the NERC Webinar, NERC representatives suggested that placing an upper limit on generation within a LN might be desirable based upon an assumption that if that entity's internal generation is lost, then replacement generation would have to come from the BES, and could therefore affect reliability. This assumption has not been substantiated. In most instances, generation resources are dispersed throughout the LN – it is unlikely an event would result in the loss in the amount of the aggregate generation. Additionally, LNs have local load shedding and system restoration plans for such contingencies. (2) E3(b) is unnecessary and should be removed. The proposed language in E3(b) appears to be concerned with flows originating from outside of the LN, coming into the LN, and then exiting the LN to loads outside of the LN. As noted above, E3(c) appears to address this concern. If E3(b) is maintained, then the introductory clause ("Power flows only into the LN:") should be deleted, because it is inconsistent with the second clause ("The LN does not transfer energy originating outside the LN for delivery through then LN.") If E3(b) is retained, Holland BPW supports the second clause ("The LN does not transfer energy originating outside the LN for delivery through then LN") because it appears to be the portion of the provision that addresses the concern about flows into, through, and then out of, the LN. (3) E3(b) should also be removed or modified because it fails to recognize typical

municipal system operations. An LN may have internal generation that is less than its peak load but in excess of off-peak or holiday load levels. The language "Load flows only into the LN" does not recognize this situation and prevents an LN from making the most economic use of surplus generation. There are no reliability reasons to discourage such sales since with or without such transactions, this generation is not necessary for the reliable operation of the interconnected transmission system.
Group
Katie Coleman
Andrews Kurth, LLP
Yes
Yes
Yes
The interplay between Inclusion I2, which references the Statement of Registry Compliance, and Exclusions E1-E3 is unclear. Under the Registry criteria, "a customer-owned or operated generator/generation that serves all or part of retail load with electric energy on the customer's side of the retail meter may be excluded as a candidate for registration … if (i) the net capacity provided to the bulk power system does not exceed the criteria above." It appears that the SDT intended to invoke this provision by referencing the Statement of Registry Compliance, which counts only the "net" capacity provided, by referencing the Statement of Compliance Registry Criteria. However, Exclusions E1 and E3 exclude generation on the basis of "gross nameplate ratings." For customer-owned facilities, this treatment is inconsistent with netting treatment provided in the Statement of Registry Compliance. Exclusions E1-E3 should be revised to reference the Statement of Compliance Registry Criteria as well so that customer-owned generation is included or excluded based on its net capacity to the grid rather than its gross nameplate capacity. TIEC also supports revisiting and potentially raising the thresholds that trigger registration as a Generation Owner or Operator. TIEC understands that the SDT has decided to maintain the status quo as reflected in NERC's Registry Criteria at this time. TIEC looks forward to addressing potential modifications to the thresholds in the appropriate context.
Yes
Yes
Yes
Yes
As noted in response to Question 3, above, Exclusion E1 would only allow exclude radial systems with "aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating)." The reference to "non-retail" generation in subsection (c) indicates that the SDT may have intended to preserve the "netting" approach set forth in the Statement of Registry Compliance, but this should be made clearer. The description in subsection (c) should be revised to exclude "Where the radial system serves Load and includes generation resources not identified in Inclusions I2 or I3," and the remainder of that sentence referencing a 75 MVA gross nameplate rating should be removed. This will provide a reference back to the Statement of Registry Compliance and clarify that only net capacity is considered for customer-owned facilities.
Yes
Please see the response to Question 3, above. Unlike exclusions E1 and E3, this exclusion refers specifically to the "net capacity" provided, which is consistent with existing treatment for generation that is netted against internal load under the Statement of Registry Compliance.
Yes

As noted in response to Question 3, above, subsection (a) of Exclusion E3 would only exclude Local Networks with "aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating)." The reference to "non-retail" generation in subsection (a) indicates that the SDT may have intended to preserve the "netting" approach set forth in the Statement of Registry Compliance, but this should be made clearer. The description in subsection (a) should be revised to exclude "Where the radial system serves Load and includes generation resources not identified in Inclusions I2 or I3," and the remainder of that sentence referencing a 75 MVA gross nameplate rating should be removed. This will provide a reference back to the Statement of Registry Compliance and clarify that only net capacity is considered for customer-owned facilities. TIEC also disagrees with the 300 kV upper limitation on transmission elements within a Local Network. Consistent with TIEC's comments to FERC, if these facilities are serving a distribution function, their voltage level is irrelevant. The transmission versus distribution distinction should be based on function, not voltage level. The remainder of this exclusion clarifies what constitutes a distribution function, so the 300 kV limit is unnecessary and should be removed.
Yes
No
Individual
Angela P Gaines
Portland General Electric Company
Yes
Yes
Yes
Yes
Yes
PGE requests additional clarity in the wording of Inclusion 4. Inclusion 4 is not intended to include each individual wind turbine generating unit in a wind farm as a BES element, but rather to include the point at which the aggregation becomes large enough to meet the aggregate capacity threshold of 75 MVA. However, the response to comments from the last comment posting and the current wording of Inclusion 4 does not provide sufficient clarity to answer this question.
Yes
Yes
Yes
Yes
PGE agrees with Exclusion E3, but believes additional clarification is necessary to facilitate a complete understanding and application of the exclusion criteria. First, there is no specific definition of "non-retail" generation provided. Additionally, E3 b) states "Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN." PGE believes that a local network should still qualify for the LN exclusion if power may flow out of the LN at a discrete point or certain discrete points during abnormal operating conditions, but power still flows into the LN on an aggregate basis during all operating conditions, and power flows only into the LN at all discrete points during normal operating conditions.
Yes

No
Individual
Andrew Gallo
City of Austin dba Austin Energy
Yes
In an effort to avoid potential confusion and provide clarity we believe the sentence, "This does not include facilities used in the local distribution of electric energy," more appropriately fits under the "exclusions" (rather "inclusions") section.
Yes
We believe additional clarification of transformers to be included may be achieved with respect to auto transformers, phase angle regulators and generator step-up transformers by adding the following sentence: All transformers (including autotransformers, voltage regulators, and phase angle regulators) with primary and secondary terminals operated at or above 100kV, unless excluded by E1 or E3.
No
We recommend removing the reference of the ERO Statement of Compliance Registry Criteria (Registry Criteria). The BES Definition should be the governing document and independent of ERO registration requirements. The definition should drive what appears in the Registry Criteria. Additionally, we support using the BES Phase 2 technical analysis to identify and provide technical support for determining the appropriate minimum MVA rating that a single unit, or the aggregation of multiple units, must meet to be part of the BES.
Yes
We recommend rewording Inclusion I3 as follows: "Only Primary Blackstart resources designated as part of the Transmission Operator's restoration plan." We have concerns that making all Blackstart generation either primary or secondary BES elements creates an incentive to remove those secondary Blackstart capable units in an effort to avoid BES inclusion. We believe that making the primary Blackstart unit the only BES element will remove this incentive. In so doing, this will allow the secondary Blackstart units to remain in the Transmission Operator's plan and training program as an alternate tool for the Transmission Operator to restore the system.
Yes
Yes
Appropriate MVAr level should be established. Reactive resources should be treated similar to generation criteria and included in the technical studies associated with the Phase 2 technical analysis in order to establish the appropriate MVAr level included as BES.
Yes
For the E1 reference "Note," we would benefit from additional clarification identifying the treatment of a normally open switch and offer the following: "Radial systems shall be assessed with all normally open switching devices in their open positions." The wording in Exclusion 1-c should more clearly reflect what is intended by using the term "non-retail generation." Also, as with the technical justification for Inclusions I2 and I4, we recommend that the generation threshold, i.e. gross nameplate values, be deferred to Phase 2.
Yes
Yes
We prefer to hold reference to gross nameplate rating/threshold values until generation technical justification is completed as part of Phase 2; these studies should apply to any real or reactive power threshold reference. For Exclusion E3-b using the phrase "[p]ower flows only into the Local Network" is too restrictive. An allowable MW threshold of Local Network power producing resources should be deferred to the Phase 2 BES technical analysis. Where no generation is present in the Local Network, it is recommended that an allowance for residual flow through the Local Network.
Yes

No
Individual
Martin Kaufman
ExxonMobil Research and Engineering
Yes
However, in Order 743, FERC directed NERC to further delineate the differences between transmission systems (used to transfer electric power between regions) and distribution systems (used to deliver electric power locally). The inclusions and exclusions defined in the draft BES definition are a step in the right direction, but further work is necessary during Phase II to meet the intention of the order. Additionally, the SDT should consider defining terms, such as non-retail generation, or providing references (footnotes) that elaborate on the referenced concept.
Yes
The Inclusion I1 contains the phrase "unless excluded under Exclusion E1 or E3". While recognizing that this is a welcomed clarification on how I1 interacts with the Exclusion section, it is inconsistent with Inclusions I2 through I5. The BES SDT team should consider how to standardize the language around the interactions between the Inclusions and Exclusions (perhaps add an "unless" qualifier for each Inclusion).
No
The Inclusion I1 contains the phrase "unless excluded under Exclusion E1 or E3". While recognizing that this is a welcomed clarification on how I1 interacts with the Exclusion section, it is inconsistent with Inclusions I2 through I5. The BES SDT team should consider how to standardize the language around the interactions between the Inclusions and Exclusions (perhaps add an "unless" qualifier for each Inclusion).
Yes
Yes
The BES SDT should clarify the difference between "dispersed power producing resources" and "generation resources" in such a manner that it is clear that an industrial plant containing providing the BES with power from ten 7.5MVA machines connected at a common point at a voltage of 100 kV or higher meets the qualifications for generation resources and does not meet the qualifications for a "dispersed power producing resource".
No
The BES SDT should work on clarifying the differences between Inclusion I5 and Exclusion E4. The phrase "solely for its own use" in Exclusion E4 is vague and open to interpretation. It is unclear whether equipment, such as power factor correction facilities, surge capacitors located in motor terminal boxes and excitation capacitors installed for use by a motor located on the low side of a 138 kV primary transformer would be excluded from the BES. Is the intent of this requirement to capture "reactive resources" that provide VARs to the BES in regions that exhibit voltage stability issues?
Yes
The removal of the requirement for an automatic fault interrupting device from this requirement is a welcomed change from the first posting. This Exclusion helps preserve the current NERC Registry and explicitly excludes many facilities used in the distribution of electric power.
Yes
Yes
Exclusion E1 and E3 aid in the delineation of distribution and transmission facilities. However, we request that the BES SDT review paragraphs 108 and 109 of FERC Order 743. In order to meet reliability target requirements to safely and economically operate manufacturing and production facilities, many industrial facilities are fed by two or more utility transmission lines that originate at independently fed utility substations. Due to the magnitude of an industrial site's load, these transmission lines are typically designed to operate at levels in excess of 100 kV at the request of the

utility company. These transmission lines typically terminate into an interconnection facility, owned by the industrial facility, that spot networks the transmission lines via a ring buss or breaker and a half substation within the industrial facility's private use network in order to serve the load of the facility's private use network. These private use networks typically satisfy the requirements set forth in the definition of a Local Network (power flows in, not a flowgate, etc.); however, the term "non-retail generation" is not a term that is implicitly defined or consistent with this documents use of "net capacity provided…" phrasing in similar exclusions.
Yes
The BES SDT should work on clarifying the differences between Inclusion I5 and Exclusion E4. The phrase "solely for its own use" in Exclusion E4 is vague and open to interpretation. It is unclear whether equipment, such as power factor correction facilities, surge capacitors located in motor terminal boxes and excitation capacitors installed for use by a motor located on the low side of a 138 kV primary transformer would be excluded from the BES.
Yes
It would be worthwhile to explain the relationship (timeline) between the BES Definition implementation plan and the compliance implementation plan proposed in the BES RoP team's new Appendix 5C for the NERC Rules of Procedure.
Individual
David Kahly
Kootenai Electric Cooperative
Yes
Kootenai Electric Cooperative ("KEC") believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. KEC therefore strongly supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. KEC strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, KEC supports use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. § 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate – "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. § 824o(a)(4) – will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. § 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). For similar reasons, KEC believes use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of

Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. KEC recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, KEC agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, KEC is prepared to support the BES definition as proposed by the SDT. While KEC strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, KEC believes a 200-kV threshold would be more appropriate for WECC than a 100-kV threshold. In addition, a 200-kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view is therefore incorrect. That being said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, KEC will support the SDT's proposal and will not further pursue its claims regarding the 200-kV threshold. Finally, we suggest that the SDT address the circumstance when an Element is covered by both an Inclusion and an Exclusion. We note that some of the inclusions already contain language addressing this question. For example, Inclusion 1 indicates that transformers falling within the specified parameters are part of the BES ". . . unless excluded under Exclusions E1 or E3." Where it is not already included, similar language should be included in the other Inclusions and/or Exclusions to explain whether the SDT intends the Inclusions or the Exclusions to predominate in situations where facilities might be covered by both. We suggest clarifying language in our responses to Questions 2 and 5.

Yes

KEC supports the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As we understand it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100 kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. We believe the SDT's intent would be clarified by adding a sentence at the end of Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100 kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. Many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of

the transformer should not cause these entities to be classified as BES owners. As the Phase II process moves forward, we commend to the SDT the extensive work performed on the point of demarcation question by the WECC BESDTF. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2."

Yes

KEC supports the changes made in Inclusion 2 and believe that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support the SDT's proposal for a Phase II of the BES Definition process to examine the technical justification for these thresholds and to establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less due process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC ¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase II through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little due process. KEC also believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, § 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase II should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes to include generation in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase II but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100 kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria. The "materiality

threshold" is intended to refer to the generator threshold developed in Phase II. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase II without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase II process based upon the technical analysis planned for Phase II, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase II is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase II are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase II on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe it is highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Hence, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase II under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100 kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100 kV or above." Finally, as discussed further in our answer to Questions 5 and 6, KEC believes more clarity may be achieved by collapsing Inclusion 5, addressing Reactive Power resources, and Inclusion 4, which addresses dispersed renewable resources, into a single Inclusion that addresses "power producing resources" (the language used in current Inclusion 4).

Yes

KEC supports the changes made in Inclusion 3 and believe that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support the SDT's proposal for a Phase II of the BES Definition process to examine the technical justification for these thresholds and to establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less due process and industry input than the Standards Development Process. Compare NERC Rules of Procedure § 1400 (providing for changes to Rules of Procedure upon approval

of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC ¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase II through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little due process. KEC also believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, § 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase II should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes to include generation in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase II but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100 kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria. The "materiality threshold" is intended to refer to the generator threshold developed in Phase II. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase II without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase II process based upon the technical analysis planned for Phase II, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase II is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase II are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase II on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to

preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe it is highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Hence, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase II under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100 kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100 kV or above." Finally, as discussed further in our answer to Questions 5 and 6, KEC believes more clarity may be achieved by collapsing Inclusion 5, addressing Reactive Power resources, and Inclusion 4, which addresses dispersed renewable resources, into a single Inclusion that addresses "power producing resources" (the language used in current Inclusion 4).

Yes

KEC supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e, "resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," which is discussed in more detail in our response to Question 3. This language, or some equivalent, will preserve the SDT's ability to revise the 75 MVA threshold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a LN. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be established by the SDT in Phase II. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase ". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the

Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.

No

KEC has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Finally, KEC believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase II process.

Yes

KEC continues to support the radial system exclusion, which is necessary as a legal matter, because, for example, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term "transmission Elements" in the initial paragraph should be changed to "Elements." Radial systems are not transmission systems and including the word "transmission" in the Radial System exclusion is therefore unnecessary and confusing. (2) Subparagraph (b) of Exclusion 1 refers to "generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). We urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," discussed in more detail in our response to Question 3. This language, or some equivalent, will preserve the SDT's ability to revise the 75 MVA threshhold in Phase II, with the result of Phase II included in the BES Definition by operation rather than requiring further revision of the Definition. (3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshhold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC's Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted. (4) The "Note" as drafted by the SDT indicates that "a normally open switching device between radial systems" will not serve to disqualify the Radial from exclusion under Exclusion 1. As noted above, KEC strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d), rather than a note, because treatment as a "note" suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: (d) Normally-open switching devices between radial elements as depicted and identified on system one-line diagrams does not affect this exclusion. This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.

Yes

KEC supports the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, KEC urges the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term "Qualifying Aggregate Generation Resources" or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similarly, a Local Network could lose its status because behind-the-

meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN.

Yes

KEC strongly supports the categorical exclusion of Local Networks ("LNs") from the BES. We believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement, discussed in our response to Question 1, to exclude all facilities used in the local distribution of electric power. LNs are, of course, probably the most common form of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers will ultimately benefit from the path chosen by the SDT. KEC also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, KEC supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." KEC supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. KEC believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making a "group of contiguous transmission Elements operated at or above 100 kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100 kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. KEC also believes that subparagraphs (a) and (b) are redundant in the sense that whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LDN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system – power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept

proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to mean generation that is used by retail customers located within a LN rather than being exported and sold on wholesale markets outside the LN. We therefore suggest that the SDT replace the phrase "non-retail generation" with the phrase "generation sold in wholesale markets and transmitted outside the LN." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. Finally, KEC believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity – the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less

likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN."

Yes

KEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.

No

KEC extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. KEC strongly supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, KEC is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that KEC specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. KEC supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to come into compliance with newly-applicable Reliability Standards. KEC also supports the 24-month transition period for the reasons laid out by the SDT.

Individual

Andy Pusztai

ATC LLC

Yes

Yes

Yes

Yes

Yes

No

ATC agrees with the inclusion provided the last clause is removed, as noted below. The BES definition is intended to establish a bright line BES definition. The clause "dedicated transformer" is undefined and unclear. Inclusion I5 –Static or dynamic devices dedicated to supplying or absorbing Reactive

Power that are connected at 100 kV or higher (deletion of remainder of clause).
Yes
Unless there is a specific reason to the contrary, ATC suggests that Exclusion E1b include the qualification of "aggregate capacity of non-retail generation less than or equal to 75 MVA" to be consistent with the wording in E1c.
Yes
No
ATC agrees in general with the exclusions for E3 pending the following changes: Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN under normal operating conditions (n-0 contingency); and ATC suggests considering a different approach for the power flow criteria in Exclusion E3b: Inclusion E3b - No Firm Power Transfers are scheduled to flow out of, or through, the LN in the operating horizon [for BES designations applicable to the operating horizon] and no Firm Power Transfers are reserved to flow out of, or through, the LN in the planning horizon [for BES designations applicable to the planning horizon).
Yes
No
Group
Sandra Shaffer
PacifiCorp
Yes
PacifiCorp believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. PacifiCorp strongly supports the new definition, conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT.
Yes
PacifiCorp suggests a clarification to I1 to provide as follows: "Transformers with either primary or secondary terminals, or both, that operate at or below 100 kV are not part of the BES."
No
Requiring owners of single generators (20 MVA – 75 MVA) to meet reliability standards that owners of distributed power producing resources (See I4) do not have to meet is discriminatory. The limit for a single unit should be set to 75 MVA until such time as a technical review can determine the appropriate levels for all generation resources. However, even with this concern, PacifiCorp supports the entire BES definition in its current form based on the timeframe under which the SDT is operating and with an emphasis based on a phase II SAR to address PacifiCorp's objections regarding generation levels.
Yes
PacifiCorp supports the removal of reference to Cranking Paths in I3. There is no reason to classify as BES the facilities interconnecting a BES generator to the interconnected transmission system.
No
Setting a dispersed power producing resource limit to 75 MVA at a common point discriminates against single generator owners who own generators between 20 MVA and 75 MVA (inclusion I1), typically connected at a common point and requires such owners to be subject to additional standards that dispersed power producing owners are not required. However, even with this concern, PacifiCorp supports the entire BES definition in its current form based on the timeframe under which the SDT is operating and with an emphasis based on a phase II SAR to address PacifiCorp's objections regarding generation levels. Under the attached scenario, please identify which elements would be considered BES: This response included a drawing. This format will not allow the submission of the drawing. The drawing will be sent separately in an email. Reference "Proj 2010-17 PAC Drawing".

No
PacifiCorp recommends the addition of the phrase "…unless excluded under E1 or E3." Otherwise, PacifiCorp believes that I5 is currently acceptable. However, phase II should identify limits and technically justify the appropriate limit(s).
Yes
: The note in E1 as written is ambiguous and requires clarification. PacifiCorp assumes the note means that two radial systems separated by a normally open switching device allows for the exclusion of both radial systems. PacifiCorp recommends that the SDT revise the note to serve as a paragraph clarifying E1 that, "Radial systems separated by normally open switching device(s) as depicted on prints or one-line diagrams for example, and operated in the normally open position, except during abnormal operating conditions, qualifies both radial systems under this exclusion."
Yes
Yes
PacifiCorp strongly supports the categorical exclusion of Local Networks ("LNs") from the BES. PacifiCorp believes the exclusion is necessary to ensure that the BES definition complies with FERC's statutory jurisdictional requirements. PacifiCorp recommends the following modifications: • Change "contiguous transmission Elements" to "contiguous Elements". • Modify item b to state, "Power flows only into the LN during normal operating conditions: The LN does not transfer energy originating outside the LN for delivery to loads located outside the LN…" • Add an item (may be included in item b) to provide as follows: "The LN is not critical (or is not relied upon) to maintain the reliability of the interconnected system during abnormal operating conditions."
Yes
No
It is absolutely imperative that phase II continue as proposed by the STD. If phase II was not proposed PacifiCorp would vote no on this proposal.
Group
Heather Hunt
NESCOE
No
The New England States Committee on Electricity ("NESCOE") appreciates the opportunity to provide comments on the revised BES definition. NESCOE is New England's Regional State Committee and represents the collective views of the six New England states. Please consider this submission to reflect the views of the States of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont. Some of these states may submit separate comments in addition to this joint filing. NESCOE does not believe that the proposed changes address our fundamental concerns. As NESCOE pointed out in its comments on the previous draft, the definition's reliance on a 100 kV "bright line" threshold may impose substantial costs on New England ratepayers without achieving meaningful reliability benefits. NERC and the drafting team have not provided any technical justification for imposing the 100 kV test, despite its potential for over-inclusiveness and significant costs. NESCOE believes that the Federal Energy Regulatory Commission ("FERC" or "the Commission") recognizes the need to avoid this result. As the Commission pointed out in Order 743A, Order 743 does not mandate the application of a 100 kV threshold, and NERC is free to propose alternatives. Unless and until NERC provides a technical justification for its approach, the Standard should use the 100 kV threshold concept in a way that is consistent with the Commission's guidance. Specifically, the Standard should make clear that the 100 kV threshold is an "initial line of demarcation," and not the end of the analysis. According to Order 743A, the two criteria that bound the BES definition are (1) the statutory exclusion of facilities used in local distribution, and (2) the requirement that the facilities included be "necessary for reliable operation" of the interconnected transmission system. A definition that recognizes these limits, coupled with an efficient and transparent exceptions process, would meet FERC's expectations. The proposed definition does not meet this standard. For these reasons, absent a technical justification for imposing a 100 kV threshold, NESCOE suggests the following revised core definition: "All Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher that are necessary for the reliable operation of the

interconnected transmission network, including but not limited to the facilities listed below as Inclusions, and excluding (1) facilities that are used in the local distribution of electric energy, and (2) the facilities and systems listed below as Exclusions. Other Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." Where FERC had concerns that the existing definitions for the bulk power system were under-inclusive, the proposed Standard risks erring in the opposite direction. Because the definition of the BES is critical to NERC's role as ERO and will have a significant impact on ratepayers, NESCOE believes the drafting team should track FERC's guidelines as closely as possible, or provide a specific technical justification for relying on the 100 kV bright line threshold.
No
NESCOE supports the revised Inclusion I1 language that treats Exclusions E1 and E3 as alternative exclusions, either of which may qualify as an exclusion. However, specificity is needed regarding what equipment is included in I1 (e.g., autotransformers, PARs, primary, secondary, tertiary windings).
No
Failing to establish a known MVA rating at this stage is problematic. The BES definition cannot be considered in a vacuum, and adjusting or establishing thresholds such as MVA ratings will create regulatory uncertainty and may result in additional costs and unnecessary system upgrades. Additionally, Inclusion I2 should remove the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document regarding generation that is included in the BES.
No
While NESCOE appreciates that cranking paths were excluded in response to industry comments, as we stated in comments to the prior posting of the BES definition, blackstart units should be excluded from the BES. Such units are appropriately covered under regional restoration procedures and applicable NERC standards (see for example, Emergency Operating Procedure EOP-005-2). However, should blackstart units be included in subsequent postings of the definition, we suggest that the language be revised to state that only those units "material to" the BES are included.
No
NESCOE continues to disagree with this proposed inclusion. NESCOE is concerned with the potential adverse impact this may have on the development of renewable generation resources. In addition, NESCOE suggests that the aggregate 75 MVA of connected generation is too low and is not adequately supported by technical analysis. The threshold value should be related to the largest contingency the applicable control area is designed to operate to. A level of 300 MVA would be appropriate. Finally, the inclusion needs to be clarified in order that entities have clear guidance on what is meant by "common point of interconnection."
No
NESCOE believes that inclusion of all devices that supply reactive power to the BES is unnecessary and will result in transferring unjustified costs to the ratepayer. Static devices (fixed capacitors) should remain excluded from the BES as they are dispatched by operations personnel, and if one fixed capacitor bank fails, the operator can replace its impact by switching in another fixed bank. This represents routine operation of the system. On the other hand, dynamic devices may be important to maintaining voltage stability of the system. These installations typically are rated to supply or absorb 75 MVA or more to or from the BES. Therefore, NESCOE suggests that dynamic reactive power devices rated at 75 MVA or more be included in the BES. Further, revised inclusion I5 is a new inclusion that lacks definition (and appears to be redundant with the general BES definition). NERC should provide additional technical justification for the additional language under Inclusion I5.
Yes
NESCOE suggests that the aggregate 75 MVA of connected generation is too low and would benefit from additional technical justification. The threshold value should be related to the largest contingency to which the applicable control area is designed to operate. A level of 300 MVA would be appropriate. This 300 MVA limit represents 25% of the 1200 MVA loss of source that is typically assumed for operation of the Northeast portion of the Eastern Interconnection. Depending on system conditions, this number may be as high as 1500 MVA. Therefore, the suggested value of 300 MVA has a technical basis and falls well within typical loss of source expectations for the Northeast.
Yes

While NESCOE generally supports Exclusion E2, no information has been provided by NERC demonstrating that the 75 MVA rating is based on any sound technical analysis.
Yes
NESCOE generally supports this exclusion but believes it is too narrow. As noted in the response to question 7, Exclusion E3 should allow a higher level of aggregate generation MVA on a Local Network (at least 300 MVA). In addition, NESCOE believes that local networks should not necessarily be ineligible for Exclusion E3 simply because an amount of power may transfer out of the network at times. NERC's draft technical network exclusions document should be amended such that local networks would be permitted to qualify for network exclusions under E3 if power flowing out of the network is minimal and would not likely adversely impact the BES. For example, transfers of less than or equal to 100 MVA should not have any adverse impact on the BES. The draft technical network exclusions document should be amended to state that transfers of 100 MVA MVA into the BES from the local distribution network are acceptable. The 100 MVA limit suggested here represents 25% of the rated value of a typical 345/115 substation (typically on the order of 400 MVA). Rarely does more than a fraction of the rated MVA flow from the low voltage side to the high voltage side. An allowance of 100 MVA represents a flow level will have no significant impact to the interconnected bulk power network.
Yes
While we are generally supportive of this exclusion, the term "retail" needs to be clarified (i.e., are retail customers of all sizes intended to be excluded?).
Yes
NESCOE offers the following additional comments: 1) Phased Approach. While well-intentioned, separating the BES definition project into two separate phases is problematic from both a procedural and substantive perspective. While we recognize that the filing due date is rapidly approaching, the BES definition cannot be considered in a vacuum, divorced from the concerns raised by a number of parties in response to past postings of the BES definition. The issues NERC has identified for consideration during the proposed "Phase 2" are inseparable from the development of the BES definition and should be squarely addressed before a definition is adopted. In particular, the development of criteria for determining what facilities are "necessary for the reliable operation" of the interconnected system cannot be put off for a second phase. Contrary to FERC's direction, NERC's proposal will force ratepayers to incur costs related to compliance with mandates that may or may not be revised through the second phase of the project. The importance of considering and resolving such concerns before adopting a definition is heightened by the proposed two-year implementation requirement. This short implementation period almost guarantees that entities will commit resources shortly after adoption of the definition to ensure compliance within the mandated period. In other words, ratepayers will bear costs related to compliance irrespective of any change resulting from the Phase 2 process or the exception process. Expediency, while understandable given the filing deadline, must be balanced against the risk that a multi-phased approach could lead to significant consumer costs without attendant meaningful reliability benefits. 2) Cost-Benefit Analysis. A cost impact analysis should be performed as part of developing any reliability standard. However, the development of the BES definition has failed to consider the cost impacts of the definition (and its inclusions and exclusions) and weigh these impacts against identified benefits that the definition would achieve. NESCOE stated in its May 21, 2011 comments on the last posting of the BES definition that "any new costs a revised definition imposes – which fall ultimately on consumers – should provide meaningful reliability benefits." A cost-benefit analysis should be integral to the development of a BES definition and, indeed, any reliability standard. This analysis should include a probabilistic risk assessment examining the likelihood of an event and the costs and risks resulting from such event, which should be weighed against the costs of complying with the proposed reliability measures. 3) Technical Justification. In addition to performing a cost-benefit analysis, a technical basis must be provided to justify a proposed reliability standard. However, as we state above, the proposed BES definition does not provide a technical justification for the 100 kV threshold. Nor does it provide a technical justification for the threshold for generation resources or other elements of the definition. As stated above, while well-intentioned and understandable, deferring this technical justification to a later and separate phase of the project is a flawed and potentially costly approach. Providing a technical justification for a reliability standard is a core function of standards development and should be addressed at the forefront of the process rather than relegated to a separate phase largely undertaken after a standard is filed.

Individual
Bo Jones
Westar Energy
No
The last sentence of the core part of the definition states that no distribution facilities will be included, but we feel that some of these facilities could be included due to also being blackstart resources. We agree with the idea of removing distribution facilities, but would like to see some clarification or a qualifier with regards to blackstart resources.
Yes
Yes
Yes
No
We believe that the removal of the wording "single site" in I2 would eliminate the need to include dispersed power producing resources in I4. We feel that I4 should be removed to reduce redundancy in the definition, unless there is some other reason to include it. Also, we understand that 75 MVA is retained in I4 because there is no direct link to the ERO Statement of Compliance Registry Criteria, but we have concerns that this number could change in phase two of the project, creating unnecessary work in the future.
No
We understand that I5 is being used to capture those devices other than generation resources, but the language used leads us to believe that it could include all generators that supply or absorb reactive power. We also believe the language should be changed to be consistent with I1. We suggest that I5 be changed to read: "Static or dynamic devices specifically used for supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side terminal operated at 100 kV or higher, or through a transformer that is designated in Inclusion I1."
Yes
No
As expressed in our comment to question 5, we have concerns that the 75 MVA number could change in phase two of the project, creating unnecessary work in the future.
Yes
No
This particular Exclusion doesn't address the qualifier as to the impact to the BES. We believe the qualification language in E2, in regards to behind the meter generation, should also be included in Exclusion E4 for clarification purposes.
Yes
We believe a reference should be made to the ROP changes which also provide a mechanism whereby Elements may be excluded or included in the BES. Without that reference, the proposed definition is not all inclusive of all means for exclusions or inclusions. We would suggest the definition be expanded to say "Unless modified by the lists shown below or as provided by Appendix 5C of the NERC Rules of Procedure, all Transmission…" This comment was submitted in response to the original posting and the response received was that it was inadvertently left out and that it would be placed back in, but we don't see the reference in this draft of the definition.
Individual
Mary Downey
Redding Electric Utility
Yes

Yes
Yes
Redding believes that the definition should drive what appears in the Registry Criteria, therefore we only support this on a temporary basis based on the premise that the BES Phase 2 technical analysis will identify and provide technical support for determining the appropriate minimum MVA rating for a single unit or the aggregation of multiple units.
Yes
Redding recommends the following rewording: "The Primary Blackstart resources designated in the Transmission Operator's restoration plan." We believe it reduces reliability if all Blackstart generation either primary or secondary are required to be BES. Requiring all Blackstart capable units to be BES creates an incentive to leave certain blacstart units out of restoration plans in order to avoid BES inclusion. By making only the primary Blackstart unit a BES element then Transmission Operators will be more willing to include ALL Blackstart units in their plan thus creating a complete procedure for the Transmission Operator to restore the system.
Yes
Yes
Redding believes that an appropriate MVAr level should be established during Phase 2.
Yes
Yes
Yes
Yes
Yes
Individual
Paul Cummings
City of Redding
Yes
Redding is concerned that NERC has a predetermined definition of Distribution Facilities and will not evaluate networked distribution facilities fairly. NERC stated their predetermined position in their "MOTION TO INTERVENE AND COMMENTS OF THE NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION" filed in the case of the City of Holland, Michigan (Docket No. RC11-5-000). On page 10 and 11 of this motion, under the section labeled "A. Holland's 138 kV lines are transmission rather that local distribution facilities" NERC states "Distribution facilities generally are characterized as elements that are designed and can carry electric energy (Watts/MW) in one direction only at any given time from a single source point (distribution substation) to final load centers." NERC is clearly states that only radial facilities are considered distribution facilities and are unwilling to consider that network facilities over 100Kv could be classified as Distribution Facilities. Holland's claim of NERC over reaching their authority appears to have credibility. In conclusion, Redding supports the addition of Distribution Facilities as an exclusion but believes that the BES Definition phase 2 needs to clearly define the difference between Distribution and Transmission Facilities by identifying the equipment "necessary for the Reliable Operation of the interconnected bulk power transmission system".
Yes
Yes
Redding believes that the definition should drive what appears in the Registry Criteria, therefore we

only support this on a temporary basis based on the premise that the BES Phase 2 technical analysis will identify and provide technical support for determining the appropriate minimum MVA rating for a single unit or the aggregation of multiple units.
Yes
Redding recommends the following rewording: "The Primary Blackstart resources designated in the Transmission Operator's restoration plan." We believe it reduces reliability if all Blackstart generation either primary or secondary are required to be BES. Requiring all Blackstart capable units to be BES creates an incentive to leave certain blacstart units out of restoration plans in order to avoid BES inclusion. By making only the primary Blackstart unit a BES element then Transmission Operators will be more willing to include ALL Blackstart units in their plan thus creating a complete procedure for the Transmission Operator to restore the system.
Yes
Yes
Redding believes that an appropriate MVAr level should be established in during Phase 2.
Yes
Yes
Yes
Yes
Yes
Redding is concerned that phase 2 will not produce significant rules or criteria that further define the BES; the desire to dedicate adaquate resourses is currently high since FERC has a looming deadline upon NERC, however without deadlines Redding believes that NERC will find it difficult to find the expertise or desire to finish the Project.
Individual
Keith Morisette
Tacoma Power
Yes
Tacoma Power supports the core definition as currently written.
Yes
Tacoma Power supports Inclusion I1 as currently written.
Yes
Tacoma Power generally supports Inclusion I2 and deferring the appropriate quantitative thresholds to those that will be determined in Phase 2. However, the term "gross individual" and "gross aggregate" nameplate rating, although industry used terms, are not industry defined or uniformly understood and applied. Nameplate ratings are determined from discussions and negotiations between the designer, supplier and the owner and it is the owner that makes the final determination of the generating station equipment nameplate ratings. Nameplate ratings for thermal or hydro plants may be based on such things as: fuel mix (best, worst and average), fuel delivery capacity, reservoir level, best efficiency point, normal operating point, ancillary equipment capacities, emissions and discharge restrictions, continuous versus peak output and designed versus installed and tested capacities. It would be more uniform to establish new or use existing criteria to define "gross individual" and "gross aggregate" nameplate ratings, such as that used in the Code of Federal Regulations CFR 18, Part 11.1, "Authorized Installed Capacity" for hydraulic units and CFR 18, Part 287.101, "Determination of Powerplant Design Capacity" for steam electric, combustion turbine and combined cycle units.
Yes
Tacoma Power generally support Inclusion I3 as written. We continue to believe the BES should only

include the Blackstart Resources that support a regional recovery. We propose changing Inclusion I3 to read, "Blackstart Resources identified in the Transmission Operator's restoration plan and included in a regional restoration plan."
Yes
Tacoma Power generally supports the Inclusion I4 as currently written. However, we support further refinement of the aggregate nameplate rating definition and support deferring the appropriate quantitative thresholds to those that will be determined in Phase 2.
No
Tacoma Power generally supports the intent of Inclusion I5 as currently written. However, we believe the definition of the MVAr threshold level must be included in the Phase 2 evaluation and should be determined in a similar manner to the generator threshold that will be determined for I2.
Yes
Tacoma Power generally supports the Exclusion E1 as currently written. However, the "note" at the end of E1 is confusing and can be interpreted inconsistently. We recommend moving the language from the "note" to part of the exclusion as its own section, as follows: (d) Normally-open switching devices between radial elements as depicted and properly identified on system one-line diagrams should not be used to deny this exclusion. Additionally, we believe it is not appropriate for E1 to state an MVA threshold in Section b) when determining such thresholds is the purpose for Phase 2. We urge the SDT to defer the determination of a MVA threshold in E1 to Phase 2.
Yes
Tacoma Power supports the Exclusion E2 as currently written.
No
Tacoma Power does not support the Exclusion E3 as currently written. We strongly believe that Section c) of E3 must replace the term "transfer path" with "Major Transfer Path" to distinguish these paths from any common ATC path. This revision is consistent with the existing language used in the form, Detailed Information to Support an Exception Request. Additionally, we believe it is not appropriate for E3 to state an MVA threshold in Section a) when determining such thresholds is the purpose for Phase 2. We urge the SDT to defer the determination of a MVA threshold in E3 to Phase 2. Finally, the term "non-retail generation" is not a universally understood term in the industry. We suggest that the SDT replace the phrase "non-retail generation" with "generation located on the retail customer's side of the meter."
Yes
Tacoma Power supports the Exclusion E4 as currently written.
No
Tacoma Power does not have any other concerns at this time. Thank you for consideration of our comments.
Individual
Rex Roehl
Indeck Energy Services
No
As acknowledged in the response to Question 12 comments on the previous BES definition, the BES definition is expansive compared to the definition of the BPS in the FPA Section 215. The inclusion of the limited Exclusions is an attempt to remedy the situation. However, the Exclusions need to include a fifth one that if, based on studies or other assessments, it can be shown that any tranmission or generator element otherwise identified as part of the BES is not important to the reliability of the BPS, then that element should be excluded from the mandatory standards program. There has never been a study to show that elements, such as a 20 MW wind farm, 60 MW merchant generator (which operates infrequently in the depressed market) in a large BA (eg NYISO) or a radial transmission line connecting a small generator are important to the reliability of the BPS. They are covered by the mandatory standards program through the registration criteria. The BES Definition is the opportunity to permit an entity to demonstrate that an element is unimportant to reliability of the BPS. The SDT has identified a small subset of elements that it is willing to exclude. By their very nature, these exclusions dim the bright line that is the stated goal of this project. However, the SDT's foresight seems limited in its selections. Analytical studies are used to evaluate contingencies that could lead to

the Big Three (cascading outages, instability or voltage collapse). Such a study showing that a transmission or generation element is bounded by the N-1 or N-2 contingency would exclude it from the BES definition. For example, in a BA with a NERC definition Reportable Disturbance of approximately 400 MW (eg NYISO), a 20 MW wind farm, 60 MW merchant generator or numerous other smaller facilities would be bounded by larger contingencies. It would take more than six 60 MW merchant generators with close location and common mode failure to even be a Reportable Disturbance, much less become the N-1 contingency for the Big Three. Exclusion E5 should be "E5 - Any facility that can be demonstrated to the Regional Entity by analytical study or other assessment to be unimportant to the reliability of the BPS (with periodic reports by the Regional Entity to NERC of any such assessments)."
Yes
As acknowledged in the response to Question 12 comments on the previous BES definition, the BES definition is expansive compared to the definition of the BPS in the FPA Section 215. The inclusion of the limited Exclusions is an attempt to remedy the situation. However, the Exclusions need to include a fifth one that if, based on studies or other assessments, it can be shown that any tranmission or generator element otherwise identified as part of the BES is not important to the reliability of the BPS, then that element should be excluded from the mandatory standards program. There has never been a study to show that elements, such as a 20 MW wind farm, 60 MW merchant generator (which operates infrequently in the depressed market) in a large BA (eg NYISO) or a radial transmission line connecting a small generator are important to the reliability of the BPS. They are covered by the mandatory standards program through the registration criteria. The BES Definition is the opportunity to permit an entity to demonstrate that an element is unimportant to reliability of the BPS. The SDT has identified a small subset of elements that it is willing to exclude. By their very nature, these exclusions dim the bright line that is the stated goal of this project. However, the SDT's foresight seems limited in its selections. Analytical studies are used to evaluate contingencies that could lead to the Big Three (cascading outages, instability or voltage collapse). Such a study showing that a transmission or generation element is bounded by the N-1 or N-2 contingency would exclude it from the BES definition. For example, in a BA with a NERC definition Reportable Disturbance of approximately 400 MW (eg NYISO), a 20 MW wind farm, 60 MW merchant generator or numerous other smaller facilities would be bounded by larger contingencies. It would take more than six 60 MW merchant generators with close location and common mode failure to even be a Reportable Disturbance, much less become the N-1 contingency for the Big Three. Exclusion E5 should be "E5 - Any facility that can be demonstrated to the Regional Entity by analytical study or other assessment to be unimportant to the reliability of the BPS (with periodic reports by the Regional Entity to NERC of any such assessments)."
Group
Antonio Grayson
Transmission
Yes
Yes
Yes
No

We agree with the changes but believe clarity would be added by changing the word "identified" to "designated".
Yes
No
We believe that the size of the reactive power resource should be considered as a key factor to be part of BES. When considering generating resources, the size, e.g., greater than 75 MVA, was a key part of criteria to be included or excluded as BES. A similar approach should be applied when considering reactive power resources. We also suggest the removal of static reactive resources from this inclusion.
No
Subpart (b) uses the term "generation resources" while subpart (c) uses the term "non-retail generation", why are these different terms used? Further, why is it important that the term "non-retail generation" is used in subpart (c)? In addition, the SDT needs to clarify what the term "non-retail generation" means. Is this what is commonly referred to as "customer owned" or "behind-the-meter" generation? The change in version 2 that removed the requirement that an excluded radial system have an automatic interruption device at the single point of connection to the rest of the BES creates a problem. Three-terminal circuits are common below 230 kV. The "tapped portion" should not be left out of the BES since a fault on that portion takes out the whole line. We propose this revised language in the first sentence on E1: "E1 - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher, where the connection has an automatic interruption device,…" Exclusion E1, subpart (c) uses the phrase "an aggregate capacity of … less than or equal to 75 MVA …". Exclusion E3. subpart (a) provides that the local networks "do not have an aggregate capacity of … greater than 75 MVA …". Why are these phrases stated differently even though they appear to address the same resources?
No
We suggest that clarification is needed for what is meant by E2 (ii), regarding generation on the customer's side of the retail meter. Also, we would like for a clarification of the difference between the terms "retail load" and "retail customer load" as used in exclusions E2 and E3.
No
We would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): "Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN "under normal operating conditions". What does the term "non-retail generation" mean? Can the term "non-retail generation in E3a be changed to simply "generation"?
Yes
Yes
The definition of the BES is referenced in several existing standards and the Statement of Compliance Registry Criteria. Southern Companies are concerned how this revised definition will impact entity registration, i.e., how will the revised definition be integrated into the Compliance Registry Criteria. The implementation plan should include how the integration is going to occur. The Rules of Procedure exception process should be further defined or referenced in this definition.
Group
Al DiCaprio
PJM
No
While we agree with the changes to the definition, we do not understand the purpose of the final sentence "This does not include facilities used in the local distribution of electric energy." Since the issue of local (distribution) networks is addressed under Exclusion E3, we do not see the added benefit of the referenced text.
Yes

Yes
No
We support the SDT's decision to exclude the cranking paths from the BES definition since testing and verification of the use of facilities in the cranking path is already covered by the appropriate EOP standards. This inclusion is extraneous given there is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. We therefore suggest removing Inclusion I3.
Yes
The revised Inclusion I4 does clarify that there is no requirement for a contiguous BES path from the dispersed generation resources to the point of interconnection to the BES.
Yes
No
While we support the provisions of E1 in principle, we are seeking clarification to the following issues. Does the connection voltage of generation referred to in E1.b affect whether a radial system could be excluded under E1? Please clarify the meaning of "non-retail" generation used in E1.c.
Yes
Yes
Yes
Yes
(1) We support a phased approach proposed in the draft supplemental SAR. Development of the revised BES definition is an important and complex undertaking. The product of this work is fundamental to establishing the applicability of NERC Reliability Standards. The issues identified for attention in Phase 2 of this project warrant careful investigation and as such allowing additional time to properly research and provide for stakeholders to vett them is justified. Specific to the assessment of raising the generator rating threshold from 20 MVA to 75 MVA per unit, we would point out that this needs to be looked at from a different perspective. Industry debates so far have been on the apparent lack of reliability contribution and economic benefits for keeping the threshold at 20 MVA. The former point implies that any negative reliability impact that could be contributed by a generator higher than 20 MVA but lower than 75 MVA could be negligible. Some examples of the standards that the 20-75 MVA units may need to comply with to ensure reliability are: • Voltage and frequency ride through capability • Voltage control (AVR, etc.) • Underfrequency trip setting • Protection relay setting coordination • Data submission for modeling; verification of capability and model A Venn diagram developed by an industry group shows that generators at 20 to 74.99 MVA account for about 13.8% of the total installed capacity in the US. Out of this, 3.0% are currently deemed non-BES whereas the other 10.8% are BES. We do not know how the BES reliability may be affected if these 10.8% generators are no longer deemed BES facilities (after an increase of threshold to 75 MVA) and subject to compliance with NERC standards, including those mentioned above. An assessment from both a positive contribution and a negative impact viewpoints are thus required to aid the determination of the merit of raising the rating threshold. (2) The draft Implementation Plan for the BES definition states "Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition." We are concerned that the stated implementation period may be insufficient time to complete transition plans for newly identified BES Elements and Facilities, where those plans require procurement, installation and commissioning of additional equipment. We believe a period of 24 months may be more appropriate.
Individual
Frank Cumpton

BGE
Yes
No comment.
Yes
No comment.
Yes
No comment.
Yes
No comment.
Yes
No comment.
Yes
No comment.
No
During the previous comment period, BGE asked for clarification regarding the exclusion of "radial facilities". The particular example configuration in question involved two 115 kV lines emanating from two different points of connection and "tied" on the "low side" at 34.5 kV. The SDT responded that this was not a radial facility but would be excluded under the E3-Local Network exclusion. BGE believes that this particular configuration should be excluded under the E1-Radial Systems exclusion. BGE does not beleive that two otherwise radial lines are made "non-radial" because they are tied at a voltage lower than 100 kV.
Yes
No comment.
Yes
No comment.
Yes
No comment.
No
No comment.
Group
Irion A. Sanger
Davison Van Cleve PC
Yes
The Industrial Customers of Northwest Utilities ("ICNU") submits the following comments regarding the North American Electric Reliability Corporation's ("NERC") proposal for defining the Bulk Electric System ("BES"). ICNU is an incorporated, non-profit association of large end-use electric customers in the Pacific Northwest, with offices in Portland, Oregon. ICNU previously submitted comments in the Western Electricity Coordinating Council's ("WECC") process for defining the BES. ICNU's members are not electric utilities, but some ICNU members own substations that are interconnected to utility transmission systems and utility distribution systems. In addition, in some cases, ICNU members operate local distribution facilities behind their substations to serve their end-use loads. In some cases, the ICNU member's interconnection to the utility-owned transmission system or distribution system is via a utility-owned radial line; and, in others, the ICNU member's distribution system is looped into the utility's transmission system for reliability purposes. Finally, some ICNU members have local distribution systems that include the ICNU member's backup generating facilities. ICNU is submitting comments, because these facilities arguably could fall within NERC's proposed definition of BES. ICNU appreciates the work that NERC has done to date, and encourages NERC to develop a rule that recognizes the unique aspects of the Pacific Northwest transmission system and the particular needs of end-use customers. Given the arbitrary requirements and limitations imposed by the Federal Energy Regulatory Commission, ICNU supports NERC's overall approach to defining the BES. NERC has proposed a bright line rule in which all transmission elements operated 100 kV or higher will be included in the definition, subject to certain inclusions and exclusions. ICNU supports NERC's goal of

excluding facilities in the local distribution of electric energy. NERC proposes three general classes of exclusions, which includes certain radial systems, generating units that serve all or part of retail customer's load, and local networks. Specifically, NERC proposes that: 1) radial systems 100 kV and higher shall be excluded if they only serve load, or only include certain generation resources less than 75 MVA; 2) generating units that serve customer load on the customer meter are excluded if the net capacity provided to the BES does not exceed 75 MVA and standby, back up and maintenance power services are provided; 3) local networks operated less than 300 kV that distribute power to load rather than transfer bulk power across the interconnected system; and 4) reactive power owned and operated by a retail customer solely for its own benefit. ICNU supports these exclusions; however, ICNU is concerned that certain end-use retail customer facilities that do not impact the BES may still be inappropriately included. NERC appears to recognize this possibility and includes an exception process to include or exclude facilities on a case-by-case basis. ICNU urges NERC to develop this exception process, and to review the work by WECC regarding how to structure an appropriate exception. At a minimum, the exception process should not require end-use customers to perform costly and complex studies, but should instead require utilities or regional organizations that have the relevant expertise to conduct the necessary studies to determine if a specific facility should be removed or included in the BES. ICNU is also concerned about the term "non-retail generation," which does not appear to have a corresponding definition. ICNU understands that non-retail generation is intended to apply to generation behind the retail customer's meter. ICNU recommends that net metered systems should not count towards the generation limits for radial and local network systems.

Additional Comments Submitted:

Salt River Project:

Definition of Bulk Electric System (BES):
The Blackstart "Cranking Path" has been deleted from Inclusion 3 of the BES definition. However, NERC Standards EOP-005 and CIP-002, R1.2.4, require documenting the Cranking Path. In addition, CIP-002-4 identifies the Cranking Path as a Critical Asset in Attachment 1. Compliance to the NERC Standards needs to be an exact science whenever possible. SRP does not argue the inclusion or exclusion of Cranking Path. However, if it is excluded, guidance must be provided on whether or not a Cranking Path is subject to the previously mentioned Standards.

Additional Comments Submitted:

PacifiCorp

5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

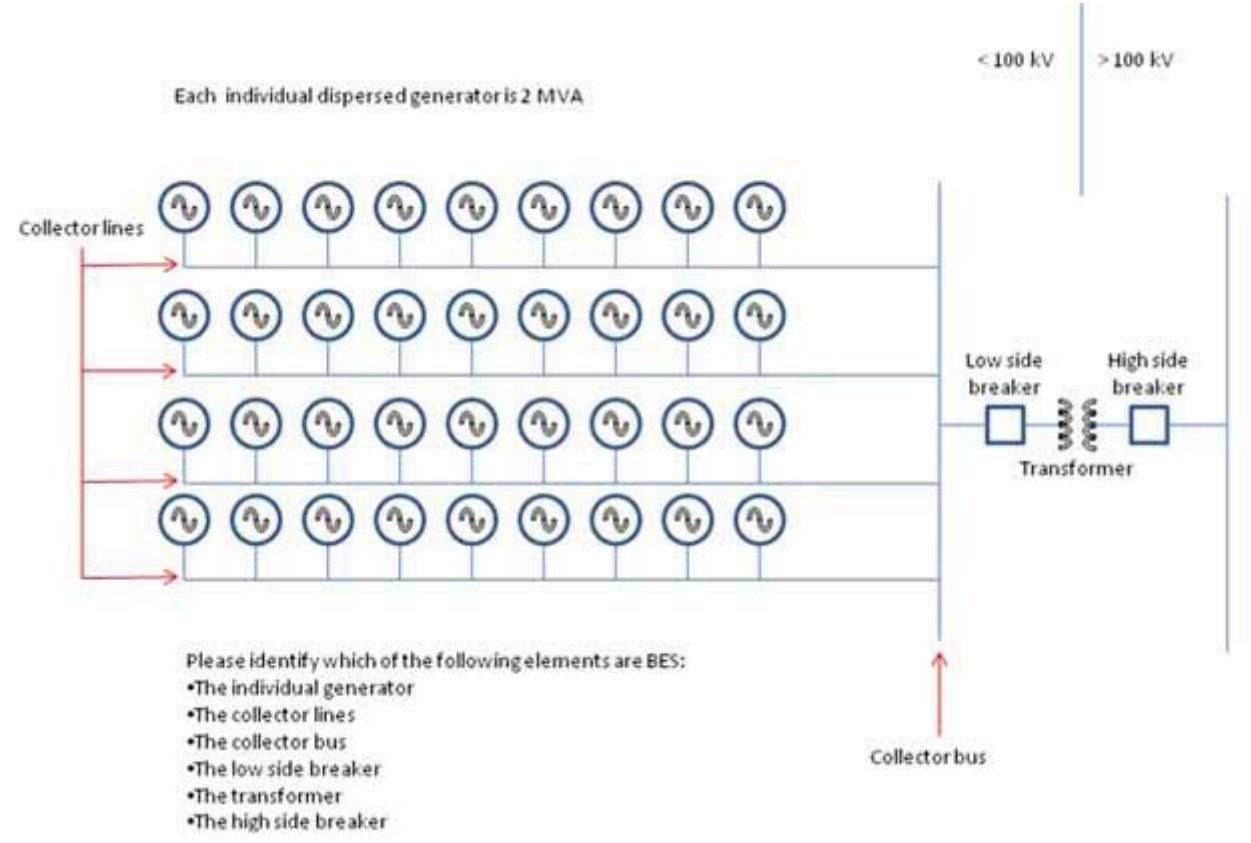
Yes:

No: X

Comments: Setting a dispersed power producing resource limit to 75 MVA at a common point discriminates against single generator owners who own generators between 20 MVA and 75 MVA (inclusion I1), typically connected at a common point and requires such owners to be subject to additional standards that dispersed power producing owners are not required.

However, even with this concern, PacifiCorp supports the entire BES definition in its current form based on the timeframe under which the SDT is operating and with an emphasis based on a phase II SAR to address PacifiCorp's objections regarding generation levels.

Under the attached scenario, please identify which elements would be considered BES:



Additional Comments Submitted

RFC Staff:

Bulk Electric System (BES): Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. ~~This does not include facilities used in the local distribution of electric energy.~~ The BES includes:

~~**Inclusions:**~~

- I1 - Transformers with primary and secondary terminals operated at 100 kV or higher. ~~unless excluded under Exclusion E1 or E3~~for local distribution or retail customers~~.~~
- I2 - Generating resources as described in the ERO Statement of Compliance Registry Criteria including the generator terminals through the high-side of the step-up transformer(s), connected at a voltage of 100 kV or above.
- I3 - Blackstart Resources and associated designated ~~blackstart~~ Cranking Paths operated at 100 kV or higher, identified in the Transmission Operator's restoration plan. ~~regardless of voltage level.~~
- ~~I4 - Dispersed power producing resources as described in the ERO Statement of Compliance Registry Criteria utilizing a system designed primarily for aggregating capacity, connected at common point at a voltage of 100 kV or above.~~
- **I4~~5~~** –Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in ~~Inclusion~~ I1.

This definition does not include facilities used in the local distribution of electric energy or retail customers, which are: ~~**Exclusions:**~~

- E1 - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher from a single Transmission source originating with a single~~n~~ automatic interruption device and:
    a) Only serves Load. Or,
    b) Only includes generation resources not identified in ~~Inclusion~~ I3, with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,
    c) Where the radial system serves Load and includes generation resources, not identified in ~~Inclusion~~ I3, ~~-~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

    Note - A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.
- E2 - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if:
    - (i) the net capacity provided to the BES does not exceed 75 MVA, and
    - (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.
- E3 - Local Network (LN): A group of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the interconnected system. LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The LN is characterized by all of the following:

a) Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in ~~Inclusion~~ I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating);

b) Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN; and;

c) Not part of a Flowgate or transfer path: The LN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).

- **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

Consideration of Comments on Initial Ballot — Definition of BES (Project 2010-17)
Date of Initial Ballot: September 30, 2011 - October 10, 2011

Summary Consideration: Many commenters followed instructions and cast their ballot while simply pointing to their detailed comments in the posted comment report. The SDT thanks those commenters as this greatly reduces the administrative workload on the SDT. Those who decided to place comments in the ballot report for the most part echoed comments that had already been seen by the SDT in the posted comment report which was administered first by the SDT. As a result, there were no changes to the definition due to comments received in the ballot report. However, for ease of reference, the changes to the definition made as a result of those comments are repeated here.

The SDT made the following changes to the definition due to industry comments received:

- Clarified the wording in Inclusion I1 to indicate that at least one secondary terminal must be at 100 kV or higher to accommodate multiple terminal transformers.
- Removed the reference to the ERO Statement of Compliance Registry Criteria in Inclusion I2 so that there is no chance of the registry values being changed and affecting the definition prior to resolution of threshold values in Phase II of this project.
- Clarified that generators were not part of Inclusion I5 to avoid improperly pulling in small generators.
- Clarified the language of Exclusion E2 by re-ordering the text as suggested.
- Clarified the language of Exclusion E3.b as suggested.

The SDT feels that it is important to remind the industry that Phase II of this project will begin immediately after the conclusion of Phase I as SDT resources clear up. The same SDT will follow through with Phase II.

The SDT is recommending that this project be moved forward to the recirculation ballot stage.

There were two comments that were repeated multiple times throughout the various documents. The first topic was about how to sort through the definition inclusions and exclusions, i.e., which takes precedence. The SDT offers this guidance on that issue:

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.

Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.

In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.

The second item is about providing specific guidance on how the information on the exception request form will be used in making decisions on inclusions/exclusions in the exception process. While not technically part of this document which is about the definition, since the question did come up in these comments, the SDT provides the following information:

The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication.

Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of

Procedure that states “No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved.”

The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

If you feel that the drafting team overlooked your comments, please let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 404-446-2560 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

Voter	Entity	Segment	Vote	Comment
Kirit Shah	Ameren Services	1	Negative	Please refer to Ameren comments submitted using the Comment Form.
Andrew Z Pusztai	American Transmission Company, LLC	1	Negative	Comments submitted.
John Bussman	Associated Electric Cooperative, Inc.	1	Negative	comments posted on comment form
Michael S Crowley	Dominion Virginia Power	1	Negative	Please see Dominion’s submitted comments

[1] The appeals process is in the Standards Processes Manual: http://www.nerc.com/docs/standards/sc/Standard_Processes_Manual_Approved_May_2010.pdf.

Voter	Entity	Segment	Vote	Comment
Bernard Pelletier	Hydro-Quebec TransEnergie	1	Negative	Please see our comments on the BES Definition
Terry Harbour	MidAmerican Energy Co.	1	Negative	See the MidAmerican submitted comments. The BES definition needs additional specific inclusion or exclusion provisions that clearly exclude variable resource generation collector circuits rated below 100 kV and generators less than 20 MVA connected to those collector circuits in accordance with the registration criteria.
Tracy Sliman	Tri-State G & T Association, Inc.	1	Negative	Comments submitted by electronic form.
Kathleen Goodman	ISO New England, Inc.	2	Negative	please refer to detailed comments submitted for this project.
Charles Yeung	Southwest Power Pool, Inc.	2	Negative	SPP's comments on this concurrent ballot/comment period have been submitted and provide support for our Negative vote. In addition, SPP is a member of the IRC SRC and is in support of those comments on this standard. Please refer to these sets of comments for our recommendations.
Chris W Bolick	Associated Electric Cooperative, Inc.	3	Negative	Please see comments of AECI.
Linda Jacobson	City of Farmington	3	Negative	FEUS appreciates the SDT work in defining the BES. While the proposed definition is an improvement over the current definition, FEUS feels there is some additional clarification necessary before approval. Seperate comments have been submitted.
Richard Blumenstock	Consumers Energy	3	Negative	See Consumers Energy's comments on the official submittal form.
Michael F. Gildea	Dominion Resources Services	3	Negative	See Dominion's submitted comments.
David Kiguel	Hydro One Networks, Inc.	3	Negative	After careful analysis of the proposed documents, Hydro One Networks Inc. is casting a negative vote. We commend the SDT for the effort in facing the challenge. However, we believe that the proposed definition and the exception request criteria still need further work. Some issues need to be resolved before a

Voter	Entity	Segment	Vote	Comment
				final approval is granted. Please see our detailed comments as provided in the on-line system.
Tony Eddleman	Nebraska Public Power District	3	Negative	Comments were submitted through the Nebraska Public Power District comment form.
Janelle Marriott	Tri-State G & T Association, Inc.	3	Negative	Tri-State G&T Load Serving Entity comments were submitted via electronic comment process.
David Frank Ronk	Consumers Energy	4	Negative	See Comments provided by Consumers Energy Company
Brock Ondayko	AEP Service Corp.	5	Negative	AEP believes the drafting team is on the correct path, and the concepts expressed appear to be appropriate. However, AEP has a number of questions and recommended refinements that if addressed by the drafting team, will make the definition more clear to industry. These comments are being submitted via electronic form by Thad Ness on behalf of American Electric Power.
Francis J. Halpin	Bonneville Power Administration	5	Negative	Please refer to formal BPA Comments submitted on 10/7/2011.
David C Greyerbiehl	Consumers Energy Company	5	Negative	See Consumers Energy's comments on the official comment submittal forms.
Mike Garton	Dominion Resources, Inc.	5	Negative	See comments filed on this project.
Dan Roethemeyer	Dynegy Inc.	5	Negative	Comments will be included with those to be submitted with the SERC OC Standards Review Group.
Christopher Schneider	MidAmerican Energy Co.	5	Negative	See the MidAmerican submitted comments. The BES definition needs additional specific inclusion or exclusion provisions that clearly exclude variable resource generation collector circuits rated below 100 kV and generators less than 20 MVA connected to those collector circuits in accordance with the registration criteria.

Voter	Entity	Segment	Vote	Comment
Don Schmit	Nebraska Public Power District	5	Negative	Please see comments submitted by Nebraska Public Power District on 10/10/2011.
Mahmood Z. Safi	Omaha Public Power District	5	Negative	see Doug Peterchuck's comments
Bo Jones	Westar Energy	5	Negative	Please see comments submitted electronically.
Edward P. Cox	AEP Marketing	6	Negative	AEP believes the drafting team is on the correct path, and the concepts expressed appear to be appropriate. However, AEP has a number of questions and recommended refinements that if addressed by the drafting team, will make the definition more clear to industry. These comments are being submitted via electronic form by Thad Ness on behalf of American Electric Power.
Louis S. Slade	Dominion Resources, Inc.	6	Negative	See comments submitted by Dominion.
David Ried	Omaha Public Power District	6	Negative	See Doug Peterchucks comments from OPPD.
Donald G Jones	Texas Reliability Entity, Inc.	10	Negative	See comment form submitted separately.
John C. Allen	Rochester Gas and Electric Corp.	1	Negative	Comments to be submitted separately.
Paul B. Johnson	American Electric Power	1	Negative	AEP believes the drafting team is on the correct path, and the concepts expressed appear to be appropriate. However, AEP has a number of questions and recommended refinements that if addressed by the drafting team, will make the definition more clear to industry. These comments are being submitted via electronic form by Thad Ness on behalf of American Electric Power.
Ajay Garg	Hydro One Networks, Inc.	1	Negative	After careful analysis of the proposed documents, Hydro One Networks Inc. is casting a negative vote. We commend the SDT for the effort in facing the challenge. However, we believe that the proposed definition and the exception

Voter	Entity	Segment	Vote	Comment
				request criteria still need further work. Some issues need to be resolved before a final approval is granted. Please see our detailed comments as provided in the on-line system.
Steven L. Rueckert	Western Electricity Coordinating Council	10	Affirmative	Comments Submitted
Robert Smith	Arizona Public Service Co.	1	Affirmative	Comments submitted
Christopher L de Graffenried	Consolidated Edison Co. of New York	1	Affirmative	See Con Edison's comments on the BES Definition submitted separately by electronic survey form.
Stuart Sloan	Consumers Power Inc.	1	Affirmative	Please see CPI's separate comment form.
William J Smith	FirstEnergy Corp.	1	Affirmative	FirstEnergy supports the proposed BES definition and offers comments and suggestions through the formal comment period.
Gordon Pietsch	Great River Energy	1	Affirmative	Please see MRO NSRF comments.
Joe D Petaski	Manitoba Hydro	1	Affirmative	Please see comments provided by Manitoba Hydro in formal commenting period
David Thorne	Potomac Electric Power Co.	1	Affirmative	Comments submitted
Denise M Lietz	Puget Sound Energy, Inc.	1	Affirmative	See comments of Denise Lietz.
Rich Salgo	Sierra Pacific Power Co.	1	Affirmative	Comments submitted.

Voter	Entity	Segment	Vote	Comment
Richard Burt	Minnkota Power Coop. Inc.	1	Affirmative	While MPC is voting affirmative, we ask that you see the comments submitted by the MRO NERC Standards Review Forum (NSRF).
Tim Reed	Muscatine Power & Water	1	Affirmative	MPW agrees with the comments submitted by the MRO NERC Standards Review Forum (NSRF).
David Boguslawski	Northeast Utilities	1	Affirmative	NU contributed to and joins with NPCC comments.
Larry Akens	Tennessee Valley Authority	1	Affirmative	TVA has submitted comments through the Comment Form for 2nd Draft of Definitions of BES (Project 2010-17)
Charles B Manning	Electric Reliability Council of Texas, Inc.	2	Affirmative	ERCOT ISO has joined the IRC SRC comments submitted.
Bud Tracy	Blachly-Lane Electric Co-op	3	Affirmative	Please see BLEC's separate comment form.
Dave Markham	Central Electric Cooperative, Inc. (Redmond, Oregon)	3	Affirmative	Please see Central's separate comment form.
Steve Alexanderson	Central Lincoln PUD	3	Affirmative	Comments previously submitted.
Dave Hagen	Clearwater Power Co.	3	Affirmative	Please see Clearwater Power's separate comment form.
Peter T Yost	Consolidated Edison Co. of New York	3	Affirmative	Con Edison comments have been submitted separately.

Voter	Entity	Segment	Vote	Comment
Roman Gillen	Consumers Power Inc.	3	Affirmative	Please see CPI's separate comment form.
Roger Meader	Coos-Curry Electric Cooperative, Inc	3	Affirmative	Please see CCEC's separate comment form.
Russell A Noble	Cowlitz County PUD	3	Affirmative	Comments submitted.
Dave Sabala	Douglas Electric Cooperative	3	Affirmative	Please see DEC's separate comment form.
Bryan Case	Fall River Rural Electric Cooperative	3	Affirmative	Please see FREC's separate comment form.
Stephan Kern	FirstEnergy Energy Delivery	3	Affirmative	FirstEnergy supports the proposed BES definition and offers comments and suggestions through the formal comment period.
Joe McKinney	Florida Municipal Power Agency	3	Affirmative	Please see comments submitted through the formal comments
William N. Phinney	Georgia Systems Operations Corporation	3	Affirmative	See electronic comment form from Georgia System Operations Corporation
William Bush	Holland Board of Public Works	3	Affirmative	Please see comment form.
Dave Kahly	Kootenai Electric Cooperative	3	Affirmative	Reference the comments of KEC in response to the SDT comment form.

Voter	Entity	Segment	Vote	Comment
Rick Crinklaw	Lane Electric Cooperative, Inc.	3	Affirmative	Please see LEC's separate comment form.
Michael Henry	Lincoln Electric Cooperative, Inc.	3	Affirmative	Please see Lincoln's separate comment form.
Greg C. Parent	Manitoba Hydro	3	Affirmative	Please see comments provided by Manitoba Hydro in formal commenting period
Jeff Franklin	Mississippi Power	3	Affirmative	"Comments Submitted"
John S Bos	Muscatine Power & Water	3	Affirmative	MPW agrees with the comments submitted by the MRO NERC Standards Review Forum (NSRF)
Jon Shelby	Northern Lights Inc.	3	Affirmative	Please see NLI's separate comment form.
Ray Ellis	Okanogan County Electric Cooperative, Inc.	3	Affirmative	Please see Okanogan's separate comment form.
Heber Carpenter	Raft River Rural Electric Cooperative	3	Affirmative	Please see RREC's separate comment form.
Jeff Nelson	Springfield Utility Board	3	Affirmative	Please refer to SUB's comments on the BES Definition.
Ian S Grant	Tennessee Valley Authority	3	Affirmative	My company has submitted comments via the comment form.
Steve Eldrige	Umatilla Electric Cooperative	3	Affirmative	Please see UEC's separate comment form.

Voter	Entity	Segment	Vote	Comment
Marc Farmer	West Oregon Electric Cooperative, Inc.	3	Affirmative	Please see WOEC's separate comment form.
James R Keller	Wisconsin Electric Power Marketing	3	Affirmative	Comments submitted.
Shamus J Gamache	Central Lincoln PUD	4	Affirmative	See Central Lincoln PUD comments (CLPUD) Posted by Steve Alexanderson.
John Allen	City Utilities of Springfield, Missouri	4	Affirmative	City Utilities of Springfield, Missouri supports the comments from SPP.
Frank Gaffney	Florida Municipal Power Agency	4	Affirmative	Please see comments through the formal comments
Guy Andrews	Georgia System Operations Corporation	4	Affirmative	See electronic comment form submitted by Georgia System Operations Corp
Joseph DePoorter	Madison Gas and Electric Co.	4	Affirmative	Please see the MRO NSRF comments concerning this project.
Douglas Hohlbaugh	Ohio Edison Company	4	Affirmative	FirstEnergy supports the proposed BES definition and offers comments and suggestions through the formal comment period.
Aleka K Scott	Pacific Northwest Generating Cooperative	4	Affirmative	Please see PNGC's separate comment form.
Wilket (Jack) Ng	Consolidated Edison Co. of New York	5	Affirmative	See Con Edison's comments on the BES Definition submitted separately by electronic survey form.

Voter	Entity	Segment	Vote	Comment
David Schumann	Florida Municipal Power Agency	5	Affirmative	Please see comments submitted through the formal comments
Preston L Walsh	Great River Energy	5	Affirmative	Please see the comments submitted by the MRO / NSRF
James M Howard	Lakeland Electric	5	Affirmative	Refer to comments from FMPA.
Gary Carlson	Michigan Public Power Agency	5	Affirmative	Comments submitted separately
William D Shultz	Southern Company Generation	5	Affirmative	Comments from Southern Company Generation are being submitted via the electronic comment form available on the project web page.
Linda Horn	Wisconsin Electric Power Co.	5	Affirmative	Comments submitted.
Nickesha P Carrol	Consolidated Edison Co. of New York	6	Affirmative	Con Edison comments have been submitted separately.
Kevin Querry	FirstEnergy Solutions	6	Affirmative	FirstEnergy supports the proposed BES definition and offers comments and suggestions through the formal comment period.
Richard L. Montgomery	Florida Municipal Power Agency	6	Affirmative	Please see comments submitted through the formal comments
Thomas Washburn	Florida Municipal Power Pool	6	Affirmative	See FMPA's comments
Daniel Prowse	Manitoba Hydro	6	Affirmative	Please see comments provided by Manitoba Hydro in formal commenting period

Voter	Entity	Segment	Vote	Comment
Margaret Ryan	Pacific Northwest Generating Cooperative	8	Affirmative	Please see PNGC's separate comment form.
Bruce Lovelin	Central Lincoln PUD	9	Affirmative	I support the comments sent in by Steve Alexanderson of Central Lincoln PUD
Alan Adamson	New York State Reliability Council	10	Affirmative	The New York State Reliability Council will be separately submitting a commemt form.
Guy V. Zito	Northeast Power Coordinating Council, Inc.	10	Affirmative	NPCC will be submitting comments regarding concerns expressed by our members through the formal comment process along with suggestions to address those comments.
Anthony E Jablonski	ReliabilityFirst Corporation	10	Affirmative	Comments submitted
Response: The SDT thanks you for following the instructions on submitting comments. This greatly decreases the amount of administrative work for the SDT and will help accelerate the process.				
Mike Ramirez	Sacramento Municipal Utility District	4	Negative	SMUD believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although SMUD in balloting "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. SMUD recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SMUD agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. That said, SMUD is prepared to support the BES definition as proposed by the SDT going forward. SMUD has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are

Voter	Entity	Segment	Vote	Comment
				encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. Detailed Comments submitted separately.
James Leigh-Kendall	Sacramento Municipal Utility District	3	Negative	SMUD believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although SMUD in balloting "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. SMUD recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SMUD agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. That said, SMUD is prepared to support the BES definition as proposed by the SDT going forward. SMUD has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. Detailed Comments submitted separately.
Terry L Baker	Platte River Power Authority	3	Negative	Platte River believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although Platte River ballots "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. Platte River recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, Platte River agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification. That said, Platte River is prepared to support the BES definition as proposed by the SDT going forward. Platte River has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded

Voter	Entity	Segment	Vote	Comment
				another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far.
Jeanie Doty	City of Austin dba Austin Energy	5	Negative	AE believes the SDT has made substantial progress towards a clear and workable definition of the BES. Although AE voted "Negative," we strongly support the approach to defining the Bulk Electric System as proposed here. AE recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, AE agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as detailed in our comments. That said, AE is prepared to support the BES definition as proposed by the SDT going forward. AE has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far.
Lisa L Martin	City of Austin dba Austin Energy	6	Negative	AE believes the SDT has made substantial progress towards a clear and workable definition of the BES. Although AE voted "Negative," we strongly support the approach to defining the Bulk Electric System as proposed here. AE recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, AE agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as detailed in our comments. That said, AE is prepared to support the BES definition as proposed by the SDT going forward. AE has taken the opportunity to provide this industry feedback, as it is our understanding that we

Voter	Entity	Segment	Vote	Comment
				will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far.
Andrew Gallo	City of Austin dba Austin Energy	3	Negative	Austin Energy (AE) believes the SDT has made substantial progress toward a clear and workable definition of the BES. Although AE votes "Negative," we strongly support the approach to defining the BES as proposed here. AE recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, AE agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, we believe the second draft would benefit from further clarification or modification in a number of respects, as detailed in our comments (filed separately). That said, AE is prepared to support the BES definition as proposed by the SDT going forward. AE has taken the opportunity to provide this industry feedback, as it is our understanding that we will have another ballot opportunity (on a recirculation ballot). If this were to be our sole opportunity to vote, we would vote "Affirmative" at this time. We are encouraged by the work completed to date and commend the SDT for their commitment and extensive work thus far.
Kevin Smith	Balancing Authority of Northern California NCR11118	1	Negative	BANC believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although BANC in balloting "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. BANC recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, BANC agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. That said, BANC is prepared to support the BES definition as proposed by the SDT going forward. BANC has taken the opportunity to provide this industry feedback, as it is our understanding

Voter	Entity	Segment	Vote	Comment
				that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. Detailed Comments submitted separately.
Carol Ballantine	Platte River Power Authority	6	Negative	Platte River believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although Platte River ballots "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. Platte River recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, Platte River agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification. That said, Platte River is prepared to support the BES definition as proposed by the SDT going forward. Platte River has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far.
John C. Collins	Platte River Power Authority	1	Negative	Platte River believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although Platte River ballots "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. Platte River recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, Platte River agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification. That said, Platte River is prepared to support the BES definition as proposed by the SDT going forward. Platte River has taken the opportunity to

Voter	Entity	Segment	Vote	Comment
				provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far.
Bethany Hunter	Sacramento Municipal Utility District	5	Negative	SMUD believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although SMUD in balloting "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. SMUD recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SMUD agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. That said, SMUD is prepared to support the BES definition as proposed by the SDT going forward. SMUD has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. Detailed Comments submitted separately.
Claire Warshaw	Sacramento Municipal Utility District	6	Negative	SMUD believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although SMUD in balloting "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. SMUD recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SMUD agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. That said, SMUD is

Voter	Entity	Segment	Vote	Comment
				prepared to support the BES definition as proposed by the SDT going forward. SMUD has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. Detailed Comments submitted separately.
Tim Kelley	Sacramento Municipal Utility District	1	Negative	SMUD believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although SMUD in balloting "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. SMUD recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SMUD agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. That said, SMUD is prepared to support the BES definition as proposed by the SDT going forward. SMUD has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. Detailed Comments submitted separately.
Response: Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up. The first step in Phase II will be the posting of the Phase II draft SAR for comment. At that time, you will have the opportunity to submit comments for the inclusion of items and issues to be considered by the SDT in Phase II.				
Philip Riley	Public Service Commission of South Carolina	9	Negative	The Public Service Commission of South Carolina does not believe adequate technical evaluations have been done for basing the BES definition on the 100 kV and 20 MVA thresholds as proposed. In addition, the Public Service Commission of South Carolina does not believe adequate cost benefit studies have been done to justify the proposal for the 100

Voter	Entity	Segment	Vote	Comment
				kV and 20 MVA thresholds. Lack of cost benefit analyses has been a recurring comment of the Public Service Commission of South Carolina on proposed NERC standards.
Response: Both the 20 MVA and 100 kV thresholds are items for consideration in Phase II. At that time, technical evaluations and studies will be performed to provide the details the SDT needs to have to adequately address the issues. The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 & 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 & 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.				
Dale Bodden	CenterPoint Energy Houston Electric	1	Negative	Inclusion I5 provides for the inclusion of static devices dedicated to supplying or absorbing Reactive Power based upon their connection to the transmission system. The wording concerning their connection to the transmission system appears reasonable; however, CenterPoint Energy believes the size of a static reactive device should be taken into consideration. Static reactive devices are more widely distributed across a transmission system than generation resources. We recommend that only static reactive devices that are greater than 150 MVAR be included. CenterPoint Energy could support Draft 2 if a reasonable size threshold is established for static reactive devices.

Voter	Entity	Segment	Vote	Comment
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.				
Robert Ganley	Long Island Power Authority	1	Negative	LIPA has voted NO to the proposed definition of Bulk Electric System as posted and offers the following comments with our vote: 1. The SDT needs to provide clarifying language for the following terms so that facilities can be adequately addressed in determining whether they are BES elements or not: a. "local distribution" as used in the BES core definition b. "common point" as used in Inclusion I4 c. "single point of interconnection" as used in Exclusion E1 d. "underlying Elements" as used in Exclusion E3a 2. The core definition and exclusion E3b and E3c adequately define a Local Network. It seems like the intent to exclude non bulk distribution systems would still be included because of E3a. (limits on connected generation) We believe E3a should be eliminated in defining a Local Network.
Response: a) The SDT believes that the wording in the core definition plus Exclusions E1 and E3 provide the basis for defining local distribution. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. b) While the SDT has determined no additional clarification of the term "common point" is needed in the BES definition, the following guidance is provided. The SDT believes the common point of connection, which is the point from where generation is				

Voter	Entity	Segment	Vote	Comment
aggregated to determine if the 75 MVA threshold is met, to be the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system. c) The "single point of connection of 100 kV or higher" is where the radial system will begin if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. d) The SDT believes that the existing phrase in ExclusionE3.a "and its underlying Elements" has sufficient clarity and meets the intent of the exclusion with brevity. No change made. e) The SDT continues to believe that it is necessary to establish a limit on the allowable quantity of generation that may be significant to the reliable operation of the surrounding interconnected transmission system. Please note that the issues surrounding the appropriate generation threshold, among other topics, will be taken up in Phase 2 of this BES definition effort. No change made.				
Martyn Turner	Lower Colorado River Authority	1	Negative	1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: LCRA TSC supports the inclusion of transformers (with both the primary and secondary windings operated at 100-kV or higher) in the BES definition; however, additional clarification is suggested. The term transformers needs to be further defined with respect to function (auto transformers, phase angle regulators, generator step-up transformers, etc.). Similarly, a separate definition for "Transformer" could be developed and included

Voter	Entity	Segment	Vote	Comment
				in the NERC Glossary of Terms. 3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: 4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: 5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: LCRA TSC suggests consistency between this inclusion criteria and the criteria used in I2 for "generation". 6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: This inclusion conflicts with exclusion E4. Which one takes priority? 7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The current wording is unclear with respect to the treatment of normally open switching devices. LCRA TSC suggests the following language to replace the existing language on the note to E1: "Two radial systems connected by a normally open, manually operated switching

Voter	Entity	Segment	Vote	Comment
				device, as depicted on prints or one-line diagrams for example, may be considered as radial systems under this exclusion." The current wording is unclear with respect to "non-retail generation". The sudden loss of large, radial-supplied load may result in reliability deficiencies. LCRA TSC suggests stating a load level or a load capacity in the exclusion. 8. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2 (behind-the-meter generation)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: 9. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3 (local network)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: 10. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E4 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: This exclusion conflicts with inclusion item I5. Which one takes priority? 11. Are there any other concerns with this definition that haven't been covered in previous questions and comments remembering that the exception criteria are posted separately for comment? Yes: X No: Comments: LCRA TSC supports the direction the standards drafting team taking with this project on the BES Definition and encourages further clarification as noted in these comments for proper application.
Response: The SDT refers LCRA to the individual comment responses in the definition comment form as the comments expressed here are exactly identical to the comments submitted by LCRA on that form.				
Danny Dees	MEAG Power	1	Negative	MEAG believes that a Yes vote for the draft BES Definition will result in minimal or no changes. We have identified a few changes that if made will secure a Yes vote on the next ballot.

Voter	Entity	Segment	Vote	Comment
				The most important change is needed in I5 reactive resources noted below. I5 reactive resources - We feel that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common point. E1 - Non-retail generation needs to be defined to clarify why it is used in this exclusion. E2 (ii) The reference to generation on the customer's side of the retail meter needs to be clarified to provide a better understanding as to what is intended with this phrase. E3 b - We would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN "under normal operating conditions".
Response: The SDT refers MEAG to the individual comment responses in the definition comment form as the comments expressed here are exactly identical to the comments submitted by MEAG on that form.				
Ernest Hahn	Metropolitan Water District of Southern California	1	Affirmative	MWDSC generally supports the core definition of the Bulk Electric System as proposed. However, some of the proposed Inclusions and Exclusions need to be clarified as identified below. Inclusion 5 should be changed to be consistent with the core definition and to clarify Reactive Power devices. Under I5, the additional phrase "or through a dedicated transformer with a high-side voltage of 100 kV or higher," appears to conflict with the core definition's phrase "and Real Power and Reactive Power resources connected at 100 kV or higher". For example, if you have a device connected to a 69Kv system which is used solely for an end-user's load, but the 69kv system is transformed up to a 115kV system, such device could be included as BES or you would have to define what is meant by "dedicated. If Reactive Power is meant to agree with the definition under NERC's Glossary of Terms, there should be consistency and less verbiage. MWDSC also agrees with WECC's comment that there should be some minimum threshold for Reactive Power devices similar to that identified for generating resources in Inclusion 2. MWDSC recommends that Inclusion 5 be changed as follows: I5 - "Reactive

Voter	Entity	Segment	Vote	Comment
				Power devices dedicated to support the BES that are connected at 100kV or higher, or through a transformer that is designated in Inclusion I1." Exclusion 4 appears to limit the devices just to retail customers. However, any end-user load, including wholesale or retail, should be included. NERC's Glossary of Terms uses the phrase "end-use customer", not retail customers to describe loads. MWDSC recommends that Exclusion 4 be changed as follows: E4 - Reactive Power devices owned and operated by an end-use customer solely for its own use.
Response: The SDT refers MWDSC to the individual comment responses in the definition comment form as the comments expressed here are exactly identical to the comments submitted by MWDSC on that form.				
William Palazzo	New York Power Authority	6	Negative	1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: In general NYPA agrees with the definition. However, NYPA believes that clarifying revisions need to be made as described in the responses to Questions 2 -11 below. 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The wording of Inclusion I1 is not clear. The term transformers needs to be further defined with respect to auto transformers, phase angle regulators and generator step-up transformers. Recommend the following wording: "All transformers (including auto-transformers, voltage regulators, and phase angle regulators) with primary and secondary terminals operated at or above 100kV, and generator step-up transformers (GSU) with one terminal operated at or above 100KV, unless excluded by E1 or E3." 3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language

Voter	Entity	Segment	Vote	Comment
				would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Recommend removing the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document and provide the details of what generating resources should be included. The current language induces circular arguments without a true governing document. The definition should drive what appears in the Registry Criteria. Inclusion I2 should be revised to read: "Generating resources with a gross nameplate rating of 20MVA or greater, or generating plant/facility connected at a common bus, with an aggregate nameplate rating of 75MVA or greater and is directly connected to a BES Element." This is consistent with proposed Inclusion I2 and the current Compliance Registry Criteria. 4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Recommend that the concept and the words "material to and designated as part of" be included in Inclusion I3. Recommend rewording Inclusion I3 as follows "Blackstart resources material to and designated as part of the Transmission Operator's restoration plan." 5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The term "common point" needs clarification with respect to connection to the BES. Recommend the following wording: "connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 KV or above." 6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Technical studies need to be conducted to

Voter	Entity	Segment	Vote	Comment
				confirm reactive resource impacts on the reliability of the BES. The inclusion of reactive resources is a significant expansion of the current BES definition and therefore requires technical justification for inclusion. Inclusion I5 as written is generally confusing with multiple references to other inclusions and exclusions in the definition. Recommend removing references to reactive resources from Phase 1 until technical justification can be demonstrated (as part of Phase 2). 7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The wording in E1c should more clearly reflect what is intended by using the term "non-retail". The E1 reference Note should be re-worded to state "Radial systems shall be assessed with all normally open switching devices in their open positions." The current wording is unclear with respect to the treatment of normally open switching devices. Recommend that load bus tie-breakers be excluded from the BES as these devices apply to the users of the BES. Recommend that the potential inclusion in the BES of protective relay systems which protect radial lines emanating from a ring bus or breaker and a half bus design be confirmed in Phase 2 pursuant to technical studies. 8. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2 (behind-the-meter generation)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The wording of Exclusion E2 should be consistent with the Statement of Compliance Registry Criteria in Section III.c.4. 9. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3 (local network)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: It is our understanding that a sub-team of the SDT performed a technical study to support the limits outlined in Exclusion E3.

Voter	Entity	Segment	Vote	Comment
				This study should be made available. Recommend removing the sentence in the definition that states: "This does not include facilities used in the local distribution of electric energy." This sentence leads to confusion as it overlaps with language in Exclusion E3. 10. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E4 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The statement "owned or operated by the retail customer" is confusing and arguably inaccurate and should be revised. Refer to comments related to reactive resources for Question 6 regarding Inclusion I5. 11. Are there any other concerns with this definition that haven't been covered in previous questions and comments remembering that the exception criteria are posted separately for comment? Yes: X No: Comments: Recommend integrating the Inclusions into the base definition wording to eliminate confusion. Format of the definition is confusing by referencing both Inclusions and Exclusions. NYPA supports many of the comments
Marilyn Brown	New York Power Authority	3	Negative	1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: In general NYPA agrees with the definition. However, NYPA believes that clarifying revisions need to be made as described in the responses to Questions 2 -11 below. 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The wording of Inclusion I1 is not clear. The term transformers needs to be further defined with respect to auto transformers, phase angle regulators and generator step-up transformers. Recommend the

Voter	Entity	Segment	Vote	Comment
				following wording: "All transformers (including autotransformers, voltage regulators, and phase angle regulators) with primary and secondary terminals operated at or above 100kV, and generator step-up transformers (GSU) with one terminal operated at or above 100KV, unless excluded by E1 or E3." 3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Recommend removing the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document and provide the details of what generating resources should be included. The current language induces circular arguments without a true governing document. The definition should drive what New York Power Authority's Comments Final: October 05, 2011 Comment Form for 2nd Draft of Definition of BES (Project 2010-17) Page 4 of 6 appears in the Registry Criteria. Inclusion I2 should be revised to read: "Generating resources with a gross nameplate rating of 20MVA or greater, or generating plant/facility connected at a common bus, with an aggregate nameplate rating of 75MVA or greater and is directly connected to a BES Element." This is consistent with proposed Inclusion I2 and the current Compliance Registry Criteria. 4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Recommend that the concept and the words "material to and designated as part of" be included in Inclusion I3. Recommend rewording Inclusion I3 as follows "Blackstart resources material to and designated as part of the Transmission Operator's restoration plan." 5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language

Voter	Entity	Segment	Vote	Comment
				would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The term "common point" needs clarification with respect to connection to the BES. Recommend the following wording: "connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 KV or above." 6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Technical studies need to be conducted to confirm reactive resource impacts on the reliability of the BES. The inclusion of reactive resources is a significant expansion of the current BES definition and therefore requires technical justification for inclusion. Inclusion I5 as written is generally confusing with multiple references to other inclusions and exclusions in the definition. Recommend removing references to reactive resources from Phase 1 until technical justification can be demonstrated (as part of Phase 2). New York Power Authority's Comments Final: October 05, 2011 Comment Form for 2nd Draft of Definition of BES (Project 2010-17) Page 5 of 6 7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The wording in E1c should more clearly reflect what is intended by using the term "non-retail". The E1 reference Note should be re-worded to state "Radial systems shall be assessed with all normally open switching devices in their open positions." The current wording is unclear with respect to the treatment of normally open switching devices. Recommend that load bus tie-breakers be excluded from the BES as these devices apply to the users of the BES. Recommend that the potential inclusion in the BES of protective relay systems which protect radial lines emanating from a ring bus or breaker and a half bus design be confirmed in Phase 2 pursuant to technical studies. 8. The SDT has revised the specific exclusions to the core definition in response

Voter	Entity	Segment	Vote	Comment
				to industry comments. Do you agree with Exclusion E2 (behind-the-meter generation)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The wording of Exclusion E2 should be consistent with the Statement of Compliance Registry Criteria in Section III.c.4. 9. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3 (local network)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: It is our understanding that a sub-team of the SDT performed a technical study to support the limits outlined in Exclusion E3. This study should be made available. Recommend removing the sentence in the definition that states: "This does not include facilities used in the local distribution of electric energy." This sentence leads to confusion as it overlaps with language in Exclusion E3. New York Power Authority's Comments Final: October 05, 2011 Comment Form for 2nd Draft of Definition of BES (Project 2010-17) Page 6 of 6 10. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E4 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The statement "owned or operated by the retail customer" is confusing and arguably inaccurate and should be revised. Refer to comments related to reactive resources for Question 6 regarding Inclusion I5. 11.Are there any other concerns with this definition that haven't been covered in previous questions and comments remembering
Arnold J. Schuff	New York Power Authority	1	Negative	You do not have to answer all questions. Enter All Comments in Simple Text Format. Insert a "check" mark in the appropriate boxes by double-clicking the gray areas. The SDT has asked one specific question for each specific aspect of the definition. 1. The SDT has made clarifying changes to the core definition in response to

Voter	Entity	Segment	Vote	Comment
				industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: In general NYPA agrees with the definition. However, NYPA believes that clarifying revisions need to be made as described in the responses to Questions 2 -11 below. 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The wording of Inclusion I1 is not clear. The term transformers needs to be further defined with respect to auto transformers, phase angle regulators and generator step-up transformers. Recommend the following wording: "All transformers (including auto-transformers, voltage regulators, and phase angle regulators) with primary and secondary terminals operated at or above 100kV, and generator step-up transformers (GSU) with one terminal operated at or above 100KV, unless excluded by E1 or E3." 3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Recommend removing the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document and provide the details of what generating resources should be included. The current language induces circular arguments without a true governing document. The definition should drive what appears in the Registry Criteria. Inclusion I2 should be revised to read: "Generating resources with a gross nameplate rating of 20MVA or greater, or generating plant/facility connected at a common bus, with an aggregate nameplate rating of 75MVA or greater and is directly connected to a BES Element." This is consistent with proposed Inclusion I2 and the current Compliance Registry Criteria.

Voter	Entity	Segment	Vote	Comment
				4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Recommend that the concept and the words "material to and designated as part of" be included in Inclusion I3. Recommend rewording Inclusion I3 as follows "Blackstart resources material to and designated as part of the Transmission Operator's restoration plan." 5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The term "common point" needs clarification with respect to connection to the BES. Recommend the following wording: "connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 KV or above." 6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Technical studies need to be conducted to confirm reactive resource impacts on the reliability of the BES. The inclusion of reactive resources is a significant expansion of the current BES definition and therefore requires technical justification for inclusion. Inclusion I5 as written is generally confusing with multiple references to other inclusions and exclusions in the definition. Recommend removing references to reactive resources from Phase 1 until technical justification can be demonstrated (as part of Phase 2). 7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The wording in E1c should more clearly reflect

Voter	Entity	Segment	Vote	Comment
				what is intended by using the term "non-retail". The E1 reference Note should be re-worded to state "Radial systems shall be assessed with all normally open switching devices in their open positions." The current wording is unclear with respect to the treatment of normally open switching devices. Recommend that load bus tie-breakers be excluded from the BES as these devices apply to the users of the BES. Recommend that the potential inclusion in the BES of protective relay systems which protect radial lines emanating from a ring bus or breaker and a half bus design be confirmed in Phase 2 pursuant to technical studies. 8. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2 (behind-the-meter generation)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The wording of Exclusion E2 should be consistent with the Statement of Compliance Registry Criteria in Section III.c.4. 9. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3 (local network)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: It is our understanding that a sub-team of the SDT performed a technical study to support the limits outlined in Exclusion E3. This study should be made available. Recommend removing the sentence in the definition that states: "This does not include facilities used in the local distribution of electric energy." This sentence leads to confusion as it overlaps with language in Exclusion E3. 10. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E4 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: The statement "owned or operated by the retail customer" is confusing and arguably inaccurate and should be revised. Refer to comments related to reactive resources for Question 6 regarding

Voter	Entity	Segment	Vote	Comment
				Inclusion I5. 11. Are there any other concerns with this definition that haven't been covered in previous questions and comments remembering that the exception criteria are posted separately for

Response: 1. The SDT refers NYPA to the responses below for Q2 – Q10.
2. The SDT believes the existing language is clear and the proposed additional language would be redundant. No change made.
3. The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.
4. The SDT believes that adding language such as "material to" does not provide clarity and remains immeasurable. No change made.
5. The "single point of connection of 100 kV or higher" is where the radial system will begin if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation.
6. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects of the definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will provide compelling justification. No change made.
7. "Non-retail generation" means that generation which is on the system (supply) side of the retail meter. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator

Voter	Entity	Segment	Vote	Comment
from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment. The "single point of connection of 100 kV or higher" is where the radial system will begin if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Treatment of protection systems is but one of many items to be studied and clarified in Phase II. 8. The threshold levels of generators and the relationship between the ERO Statement of Compliance Registry Criteria and the BES definition will be considered in the Phase 2 review. However, the SDT believes that a value was needed for Phase I and decided to proceed with the single 75 MVA threshold. No change made. 9. No study was run by the SDT concerning the limits in E3. The SDT does not see any conflict between the cited statement and the language in E3. 10. The SDT believes the wording is clear and absent any concrete suggestions has not made a change in this regard.				
Doug Peterchuck	Omaha Public Power District	1	Negative	We believe that this version of the definition and associated Inclusion and Exclusion criteria will again create regional inconsistency in identifying BES facilities. We believe the best way to address this is to condense the definition by applying a bright-line threshold within the definition itself that uses the defined inclusions to describe transmission and generation facilities operating or connecting at 100 kV or above as BES facilities. Further, the definition should include existing registration criteria for generation facilities (including real and reactive resources), which includes both single units at or above 20 MVA and aggregate units at 75 MVA or above that are directly connected to facilities at 100kV or higher. The proposed Exception Process should only allow Registered Entities to remove facilities from BES designation based on technical justification (i.e. perform system impact studies to show facility not impacting reliable operation of BES). If the BES definition is properly created and defined, there should not be a need

Voter	Entity	Segment	Vote	Comment
				to have an exception process for a registered entity to add a facility to the BES. With coordination led by NERC, the RE should have the final approval of any registered entity requesting a facility exemption. Exemptions should be granted based on result of the system impact study performed. Saying this, the proposed exclusion list should actually be listed as "Typical Exceptions to be considered by Regional Entities and NERC".
Response: The SDT strived to create a bright-line as requested in the comment. The inclusions and exclusions are seen as necessary clarifications to the core definition and every attempt was made to make them bright-line as well. The SDT has reverted to specific numeric thresholds consistent with the ERO Statement of Compliance Registry Criteria for Phase I. The exception process has been designed with maximum flexibility in mind to allow for all possible conditions. Therefore, it is set up to allow for both deletion and inclusion requests. Order 743 directs that the ERO be the final arbiter of exception requests.				
Robert Kondziolka	Salt River Project	1	Negative	Definition of Bulk Electric System (BES) The Blackstart "Cranking Path" has been deleted from Inclusion 3 of the BES definition. However, NERC standards EOP-005 and CIP-002, R1.2.4 require documenting the Cranking Path. In addition, CIP-002-4 identifies the Cranking Path as a Critical Asset in Attachment 1. Compliance to the NERC Standards needs to be an exact science whenever possible. SRP does not argue the inclusion or exclusion of Cranking Path. However, if it is excluded, guidance must be provided on whether or not a Cranking Path is subject to the previously mentioned Standards. Detailed Information to Support BES Exceptions Request SRP agrees with the WECC Staff recommendation on the "Detailed Information to Support BES Exceptions Request." "WECC Staff believes that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to

Voter	Entity	Segment	Vote	Comment
				each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO."
John T. Underhill	Salt River Project	3	Negative	Definition of Bulk Electric System (BES) The Blackstart "Cranking Path" has been deleted from Inclusion 3 of the BES definition. However, NERC standards EOP-005 and CIP-002, R1.2.4 require documenting the Cranking Path. In addition, CIP-002-4 identifies the Cranking Path as a Critical Asset in Attachment 1. Compliance to the NERC Standards needs to be an exact science whenever possible. SRP does not argue the inclusion or exclusion of Cranking Path. However, if it is excluded, guidance must be provided on whether or not a Cranking Path is subject to the previously mentioned Standards. Detailed Information to Support BES Exceptions Request SRP agrees with the WECC Staff recommendation on the "Detailed Information to Support BES Exceptions Request." "WECC Staff believes that the proposed Technical Principles for Demonstrating BES Exceptions Request does not provide the necessary clarity as to what applying entities must provide to support their request, nor does it provide any criteria for consistency among regions in their assessment of requests. We believe that the checklist items for transmission and generation facilities are appropriate questions that must be answered in considering all requests. However, without objective criteria defining what must be submitted and how to assess the materials submitted, the current methodology leaves it to each region to develop their own methodology and criteria for evaluating the submittals. We believe the lack of clarity regarding what studies must be

Voter	Entity	Segment	Vote	Comment
				submitted and what must be demonstrated by the studies submitted will be overly burdensome on the submitting entity and the Region, as multiple studies may be required for the two to agree that there is sufficient justification for an exemption request. We believe that additional work is necessary to develop clear, objective methods and criteria for identifying which facilities may be excluded from or should be included in the Bulk Electric System. Clear, objective methods and criteria will enable the submitter of requests to understand what is necessary for submitting an exception request and will provide for consistency among the regions in their initial assessment and recommendations to the ERO."

Response: Cranking Paths are subject to any standard in which they are specifically spelled out.
The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the

Voter	Entity	Segment	Vote	Comment
proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result ofa sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.				

Voter	Entity	Segment	Vote	Comment
Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.				
Barbara Constantinescu	Independent Electricity System Operator	2	Negative	This is our response to Question 4 in the comment form: We thank the SDT for excluding the cranking paths from the BES definition, a point we had raised in our comments to the previous posting. However, we had also disagreed with the inclusion of Blackstart Resources and reiterate our view that their inclusion is superfluous given there is already a designation specific for system restoration covered by an existing standard, to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. We therefore suggest removing Inclusion I3 entirely.

Voter	Entity	Segment	Vote	Comment
				We support the provisions of E1 in principle but require clarification of some issues and suggest alternative wording in some cases. It is unclear if the connection voltage of generation referred to in E1.b affects whether a radial system could be excluded under E1 although from the context it appears that it would. For clarity we suggest appending "connected at 100 kV or higher." Please provide in the BES definition document an explanation of "non-retail" and "retail" generation used in E1.c. Additionally, despite the fact the revisions to Inclusion I3 (Blackstart Resources) removed any reference to Cranking Paths, Exclusion 1 (b) and (c) both indicate that the exclusion of a radial system would not be allowed if generation identified in I3 were connected to it. This implies that the Cranking Path for this Blackstart Resource would have to be BES. This appears to be an inconsistency. We suggest removing the phrase "not identified in Inclusion I3" in both instances. We disagree with notion that the capacity of generation connected to a radial system ought to determine whether that radial system should be classified as BES. Firstly, it is a given that the generation connected to the subject radial that meets the registry criteria would already be captured within the core BES definition and Inclusion I2. This is our response to Question 7 in the comment form: The function served by a radial that is of importance in the current context is that of delivering surplus power to the rest of the bulk power system and so, the impact on the BES of loss of the radial system or its connected generation needs to be considered. In our view, the "BES-status" of the radial itself is immaterial and so too is the aggregate capacity of generation resources connected to it. Detailed arguments regarding impact on the BES can be made in support of an application for an exclusion under the Exception Process, but it would be beneficial to avoid unnecessarily including a radial merely because it has more than 75 MVA of qualifying generation connected to it, without equal consideration of the connected load. To put a "bright line" on the consideration of impact referred to above, we suggest: In E1 (b): Replace "an aggregate capacity less than or equal to 75 MVA (gross

Voter	Entity	Segment	Vote	Comment
				nameplate rating)" with "a net capacity provided to the BES of less than or equal to 75 MVA." In E1 (c): Replace "an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating)" with "a net capacity of non-retail generation provided to the BES of 75 MVA." This wording would be consistent with E2 (i). Finally the word "affect" stated in the note accompanying E1 lends itself to mis-interpretation. We therefore suggest the following revision to achieve greater clarity: "This exclusion applies to radial systems connected by a normally open switch." This is our response to Question 9 of the comment form: Consistent with our comments in response to Q7, we propose removing E3 (a) since, as explicitly described in E3 (b), one of the characteristic of the LN is that power flows only into the LN. The level of generation contained within the LN is therefore immaterial, particularly where the most onerous contingency or system operating condition occurring within the LN, results in acceptable BES performance as defined by the applicable criteria of the NERC transmission planning standards. The generation connected within the LN that meets the registry criteria would already be captured within the definition of the BES as provided for in Inclusion I2.
Response: The SDT refers IESO to the individual comment responses in the definition comment form as the comments expressed here are exactly identical to the comments submitted by IESO on that form.				
Marie Knox	Midwest ISO, Inc.	2	Negative	While we agree with the changes to the definition of the Bulk Electric System (BES), there are a few key refinements left to be addressed. The BES drafting team needs to clarify that facilities below 100 kV are defined "local distribution facilities", are beyond NERC jurisdiction, and are excluded from the NERC BES. Facilities below 100 kV are used for the local distribution of electric energy. We fear that equipment that is connected to the BES, would be considered a part of the BES as well, and we disagree.

Voter	Entity	Segment	Vote	Comment
Response: The SDT points the commenter to the core definition which clearly states that the BES is 100 kV and above unless modified by the inclusions/exclusions and also clearly states that local distribution facilities are not included. The inclusions/exclusions were carefully developed to try to avoid bringing in any equipment that is truly local distribution. The SDT would also point out that the way the definition has been framed that it would not bring in local distribution facilities simply because they were connected to the BES at some location.				
Alden Briggs	New Brunswick System Operator	2	Negative	Please see comments submitted by the Reliability Standards Committee. The draft definition will significantly increase the number of BES elements. Many elements and connected facilities will be added to the BES and subject to NERC standards under the draft definition. Most of these requirements for elements will unnecessary introduce administrative burden and operating expenses. As a NPCC study identifies, this would impose significant costs to the ratepayer, with little or no increase in reliability benefits to the Bulk Power System (BPS) as currently defined by NPCC.
Response: The SDT refers NBSO to the individual comment responses in the definition comment form as the comments expressed here are identical to the comments submitted by NBSO on that form.				
Jack W Savage	Modesto Irrigation District	3	Negative	MID is voting No with the following comments. Inclusions and exclusions are based upon the ERO Statement of Compliance Registry Criteria - currently 75MVA. What is the SDT's technical justification for using this generation level? If 75MVA is the criteria for including facilities as part of the BES, why is that same criteria not applied at voltages below 100kv? Is 75MVA of generation within an area whose load far exceeds that 75MVA cause to classify that entire area as part of the BES and not exclude it as a Local Network? Why are customer owned generators treated differently than other generators? Where is "non-retail generation" defined? As worded, I5 will make any and all reactive devices connected at 100kv or higher part of the BES. Is is intended that capacitors attached to the tertiary of a 115/69kv transformer for local voltage support be included as part of the BES? By implication, if they are, then the 115/69kv transformer should also be included. Is that the intent? Did the SDT consider and attempt to include and reconcile the WECC BES Task

Voter	Entity	Segment	Vote	Comment
				Force's definition of the BES and their technical basis for defining exclusions? Please explain.

Response: As has been previously stated in the first posting consideration of comments, the SDT is using the existing thresholds for generation due to the scope limitations of the FERC Order. Phase II of this project will include a thorough investigation of, and a technical justification for, any threshold values used in the definition.

The SDT is using the same criteria that exists in today's definition for generation threshold values and will be exploring all issues associated with these threshold values in Phase II of this project when more time will be available for technical analysis of the issues.

The SDT recognizes that some candidate local networks will have far in excess of 75 MVA of load demand, yet it believes that the 75 MVA threshold value given in Exclusion E3.a is an appropriate level regardless of the amount of load. This value is consistent with the existing threshold of aggregate generation in the ERO Statement of Compliance Registry Criteria. The generation values used in the BES definition will receive more attention and refinement as part of phase 2 of this Project 2010-17.

Customer owned generation has traditionally been treated differently and the SDT is retaining this important distinction.

Non-retail generation is a widely used and understood term and is not defined here.

The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.

The SDT considered all of the previous work done by several of the regional entities in the revision of the definition. WECC is well represented on the SDT.

Voter	Entity	Segment	Vote	Comment
Steven M. Jackson	Municipal Electric Authority of Georgia	3	Negative	MEAG believes that a Yes vote for the draft BES Definition will result in minimal or no changes. We have identified a few changes that if made will secure a Yes vote on the next ballot. The most important change is needed in I5 reactive resources noted below. I5 reactive resources - We feel that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common point. E1 - Non-retail generation needs to be defined to clarify why it is used in this exclusion. E2 (ii) The reference to generation on the customer's side of the retail meter needs to be clarified to provide a better understanding as to what is intended with this phrase. E3 b - We would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN *"under normal operating conditions"*.
Steven Grego	MEAG Power	5	Negative	MEAG believes that a Yes vote for the draft BES Definition will result in minimal or no changes. We have identified a few changes that if made will secure a Yes vote on the next ballot. The most important change is needed in I5 reactive resources noted below. I5 reactive resources - We feel that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common point. E1 - Non-retail generation needs to be defined to clarify why it is used in this exclusion. E2 (ii) The reference to generation on the customer's side of the retail meter needs to be clarified to provide a better understanding as to what is intended with this phrase. E3 b - We would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN *"under normal operating conditions"*.
Response: The SDT refers MEAG to the individual comment responses in the definition comment form as the comments expressed here are identical to the comments submitted by MEAG on that form.				

Voter	Entity	Segment	Vote	Comment
Spencer Tacke	Modesto Irrigation District	4	Negative	The choice of 75 MVA as the determining generating capacity seems to have been an arbitrary choice with no technical basis. We strongly support the E3 (Local Networks) exception, if it were not for the 75 MVA generation requirement. So I believe a technical basis for selecting 75 MVA as the generator size needs to be developed before the definition would be acceptable. Thank you.
Response: Comments were received that either posed a challenge to the generator thresholds in Exclusion E3.a or suggested that the Exclusion for local networks should be silent on generator thresholds until such time as the additional consideration of appropriate generation thresholds is addressed in Phase 2 of Project 2010-17. The SDT agrees that the threshold(s) for generation throughout the BES definition are appropriately addressed in Phase 2 of this effort; however, in the meantime and for the purpose of satisfying the Commission's Order in 743 and 743a in a timely fashion, the SDT believes it is necessary to use a generation threshold that is consistent with the in-force ERO Statement of Compliance Registry Criteria.				
Chifong Thomas	BrightSource Energy, Inc.	5	Negative	BrightSource Energy supports the core definition of the Bulk Electric System as proposed. However, we believe the following clarification will be needed. For Inclusion 3 we agree that Blackstart units should be considered vital to the overall operation of the BES, and therefore included in the definition of the BES. However, we do not agree with the deletion of the cranking path from Inclusion 3. The cranking path should be included in the definition since NERC standards EOP-005 and CIP-002, R1.2.4 require documenting the cranking path and the revised CIP-002-4 identifies the cranking path as a critical asset. To be able to count on a Blackstart unit to perform as designed in the Blackstart Restoration Plan, it must be ensured that the cranking path is available. We believe that additional clarity is needed in the wording of Inclusion 4. It is our understanding, for example, that Inclusion 4 is not intended to include each individual wind turbine generating unit in a wind farm, or each PV panel as a BES element, but rather to include the point at which the aggregated capacity reaches the threshold of 75 MVA. However, the current wording of Inclusion 4 does not provide sufficient clarity. We believe that the wording of Inclusion 4 could be modified to add clarity on this topic. We believe that Inclusion 5 should be modified to identify some minimum Reactive Power threshold for static or dynamic devices similar to that identified for generating sources in Inclusion 2. As worded a 1 MVA device supplying or

Voter	Entity	Segment	Vote	Comment
				absorbing Reactive Power that is connected at 100 kV or higher would be included in the BES. We believe that Exclusion 2 should be modified to include a size threshold for individual generating units, similar to that identified in Inclusion 2. As currently worded Exclusion 2 places the same threshold (75 MVA) on a single generating unit as is placed on multiple generating units.
Response: Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system Elements. The Transmission Operator's restoration plans identify a number of possible system restoration scenarios to address the uncertainty of the actual requirements needed to address a particular restoration event including Cranking Paths. Therefore, the SDT maintains that Cranking Paths are not required to be included in the BES definition as they are essentially a moving target and could include distribution Elements. The Cranking Paths issue will be discussed anew in Phase II of this project. No change made. Inclusion I4 denotes an aggregate threshold. This is clear from the requirement inclusion threshold of "aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)." The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. The threshold levels of generators and the relationship between the ERO Statement of Compliance Registry Criteria and the BES definition will be considered in the Phase 2 review. However, the SDT believes that a value was needed for Phase I and decided to proceed with the single 75 MVA threshold. No change made.				
Rex A Roehl	Indeck Energy Services, Inc.	5	Negative	As acknowledged in the response to Question 12 comments on the previous BES definition, the BES definition is expansive compared to the definition of the BPS in

Voter	Entity	Segment	Vote	Comment
				the FPA Section 215. The inclusion of the limited Exclusions is an attempt to remedy the situation. However, the Exclusions need to include a fifth one that if, based on studies or other assessments, it can be shown that any tranmission or generator element otherwise identified as part of the BES is not important to the reliability of the BPS, then that element should be excluded from the mandatory standards program. There has never been a study to show that elements, such as a 20 MW wind farm, 60 MW merchant generator (which operates infrequently in the depressed market) in a large BA (eg NYISO) or a radial transmission line connecting a small generator are important to the reliability of the BPS. They are covered by the mandatory standards program through the registration criteria. The BES Definition is the opportunity to permit an entity to demonstrate that an element is unimportant to reliability of the BPS. The SDT has identified a small subset of elements that it is willing to exclude. By their very nature, these exclusions dim the bright line that is the stated goal of this project. However, the SDT's foresight seems limited in its selections. Analytical studies are used to evaluate contingencies that could lead to the Big Three (cascading outages, instability or voltage collapse). Such a study showing that a transmission or generation element is bounded by the N-1 or N-2 contingency would exclude it from the BES definition. For example, in a BA with a NERC definition Reportable Disturbance of approximately 400 MW (eg NYISO), a 20 MW wind farm, 60 MW merchant generator or numerous other smaller facilities would be bounded by larger contingencies. It would take more than six 60 MW merchant generators with close location and common mode failure to even be a Reportable Disturbance, much less become the N-1 contingency for the Big Three. Exclusion E5 should be "E5 - Any facility that can be demonstrated to the Regional Entity by analytical study or other assessment to be unimportant to the reliability of the BPS (with periodic reports by the Regional Entity to NERC of any such assessments)."
Response: The SDT refers Indeck to the individual comment responses in the definition comment form as the comments expressed here are identical to the comments submitted by Indeck on that form.				

Voter	Entity	Segment	Vote	Comment
Gerald Mannarino	New York Power Authority	5	Negative	Comments: For Question 2 on page 2, recommend that the specific types of studies to be provided are defined to add consistency and transparency to the Exception request process. Recommend that the concept and the words "material to" be included as part of the question as follows "Is the facility material to permanent Flowgates in the Eastern Interconnection....." For Question 4 on page 2, recommend that single contingency analysis be performed and submitted to demonstrate impacts to the BES. For Question 6 on page 3, recommend that "Cranking Path" be removed to be consistent with the draft BES Definition. Recommend that the concept and the words "material to and designated as part of" be included as part of the question. Recommend rewording Question 6 as follows "Is the facility a Blackstart resource material to and designated as part of the Transmission Operator's restoration plan?" For Question 7 on page 3, facilities less than two years old or under construction would not be able to provide SCADA data for the most recent consecutive two calendar year period. Facility rating changes and the magnitude of such changes which trigger application or reapplication of the exception process are not addressed. Recommend that Question 7 be revised to address these issues. Comments: For Question 2 on page 4, recommend that the specific generator ancillary service products be defined to add consistency and transparency to the Exception Request process. For Question 3 on page 4, recommend that confirmation of must-run generation be provided by the Reliability Coordinator, Reliability Planner, or the Balancing Authority as a clarification to the "appropriate reference".
Response: These questions have been provided to those members of the SDT who are working on responses to the criteria posting questions. They will be responded to in detail in those documents.				
Colin Anderson	Ontario Power Generation Inc.	5	Negative	OPG continues to question the need for the changes required (and costs imposed) as a result of this new definition. This is particularly true in the NPCC region where an impact based methodology is being used to determine the set of BES elements. A very clear 100kV bright line, as proposed in this draft, will dramatically increase the list of generation elements that must meet reliability standards, without a corresponding increase in wide-area reliability.

Voter	Entity	Segment	Vote	Comment
				OPG recommends that the work planned for phase II, technical justification of the generation and voltage thresholds, should be completed before implementing the new definition of BES. OPG does not agree that the question of the 20 MVA (single) versus 75 MVA (aggregate) threshold should be deferred until a subsequent phase of the standard development process ("Phase II"). This question should be resolved now. In general, key elements of the development process should not be parsed out into multiple phases, in hopes that "Standard Development Fatigue" will eliminate critics of the approach. Further, selecting the generator terminals as the boundary for BES within the generating station means that the Isolated Phase Bus (IPB), which connects the generator terminals to the Low Voltage (LV) terminals of the generator step-up (GSU) transformer, is now included as a BES element. The IPB is operated at low voltage, no more than 22kV, so including it as a BES element is going beyond the FERC order 743 and 743a. OPG strongly recommends that the BES boundary be moved to the LV terminals of the GSU transformer. To assure availability of the generation blackstart resources identified in the Transmission Operator's Power System Restoration Plan the generators are tested according to the requirements of reliability standard EOP-009. Blackstart resources are only required post LOBES (Loss of Bulk Electric System) and in many cases do not contribute to the reliability of the BES under normal operating conditions. OPG recommends that this inclusion be removed from the new definition of BES. OPG disagrees in general with proceeding to implement a 100 kV brightline definition in the absence of a properly quantified cost/benefit analysis. Entities are being asked to incur a high cost for no demonstrated benefit in wide-area reliability.
Response: The SDT refers OPG to the individual comment responses in the definition comment form as the comments expressed here are identical to the comments submitted by OPG on that form.				
Roland Thiel	Platte River Power Authority	5	Negative	Definition of BES Platte River believes that the SDT has made substantial progress towards a clear and workable definition of the BES. Although Platte River ballots "Negative" we strongly support the approach to defining the Bulk Electric System as proposed here. Platte River recognizes that, given the deadlines imposed by

Voter	Entity	Segment	Vote	Comment
				FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, Platte River agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification. That said, Platte River is prepared to support the BES definition as proposed by the SDT going forward. Platte River has taken the opportunity to provide this industry feedback, as it is our understanding that we will be afforded another ballot opportunity. If this were to be our sole occasion to ballot, we would vote "Affirmative" at this time. We are encouraged by the work that has been completed and we commend the SDT for their commitment and extensive work thus far. Detailed Information to Support BES Exceptions Requests Platte River believes that a Yes vote for the Technical Principles for Demonstrating BES Exceptions Request will result in minimal changes to today's process under the current definition which includes the language "as defined by the Regional Reliability Organization." While the proposed Technical Principles for Demonstrating BES Exceptions Request includes a checklist that must be submitted with exception requests, a yes vote will still require each region to develop their own methods and criteria for assessing materials submitted with exemption requests. We believe that a No vote with guidance to the drafting team that objective methods and criteria must be developed and applied continent-wide will result in the desired uniformity and consistency among regions in their assessment of exception requests.
Response: Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up. The first step in Phase II will be the posting of the Phase II draft SAR for comment. At that time, you will have the opportunity to submit comments for the inclusion of items and issues to be considered by the SDT in Phase II. The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT				

Voter	Entity	Segment	Vote	Comment
would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables				

Voter	Entity	Segment	Vote	Comment
to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result ofa sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.				

Voter	Entity	Segment	Vote	Comment
Steven Grega	Public Utility District No. 1 of Lewis County	5	Negative	The bright line definition makes the BES too inclusive. Many smaller facilities are cought in the definition that are NOT BES facilities. Would suggest only the major transmission cranking paths, in our area, as defined by WECC, should be included. Why subject so many to these regulation when there is no or little return on reliability to the system. We worry about compliance not reliability. In our case, our small public utility has a run-of-river 70MW hydro (29MWave), non-dispatchable, similar to wind. We made the mistake of connection to BPA's 230kV system rather than our 69kV system. Our portion of the 230kV is uncontrolled by a SCADA system. In our utility, we rely on phone calls for all outage reporting. Since the 230kV line our feeds our utility substation and we have an alternitive 69kV connection, many time it is not a concern if the 230kV line is out. The definition of the BES should be limited to truly only the major transmission paths and major generation plants. I beleive it is good utility practce to make sure right of ways are clear and relays are tested, but a number of Standards go way too far with little or no benefit to the system, especially for smaller utilities. I think it is time that we step back and evaluate what is truly important in making the BES more reliable. Limiting the BES definition would be a good start.
Response: The bright-line definition is a continent-wide definition. In these instances, there will always be one off situations where the bright-line might not apply. With the changes to the ERO Rules of Procedure for exception requests, an entity will have the right to request exception from the definition even if the application of the bright-line would have brought them into the fold.				
Dennis Kimm	MidAmerican Energy Co.	6	Negative	The BES definition needs additional specific inclusion or exclusion provisions that clearly exclude variable resource generation collector circuits rated below 100 kV and generators less than 20 MVA connected to those collector circuits in accordance with the registration criteria.
Response: Inclusion I4 denotes an aggregate threshold. This is clear from the requirement inclusion threshold of "aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)."				
Steven J Hulet	Salt River Project	6	Negative	The Blackstart "Cranking Path" has been deleted from Inclusion 3 of the BES definition. However, NERC standards EOP-005 and CIP-002, R1.2.4 require documenting the Cranking Path. In addition, CIP-002-4 identifies the Cranking Path as a Critical Asset in Attachment 1. Compliance to the NERC Standards needs to be an exact science whenever possible. SRP does not argue the

Voter	Entity	Segment	Vote	Comment
				inclusion or exclusion of Cranking Path. However, if it is excluded, guidance must be provided on whether or not a Cranking Path is subject to the previously mentioned Standards.
Response: Cranking Paths are subject to any standard in which they are specifically spelled out.				
Donald Nelson	Commonwealth of Massachusetts Department of Public Utilities	9	Negative	Please refer to our detailed comments filed today. As described further in our comments, the MA DPU is primarily concerned with the substance of the definition and the process for developing this standard as follows: 1) Phased Approach. While well-intentioned, separating the BES definition project into two separate phases is problematic from both a procedural and substantive perspective. While we recognize that the filing due date is rapidly approaching, the BES definition cannot be considered in a vacuum, divorced from the concerns raised by a number of parties in response to past postings of the BES definition. The issues NERC has identified for consideration during the proposed "Phase 2" are inseparable from the development of the BES definition (e.g., generation thresholds, technical justification for the 100 kV threshold) and should be squarely addressed before a definition is adopted and ratepayers incur costs related to compliance with mandates that may or may not be revised through the second phase of the project. The importance of considering concerns before adopting a definition is heightened by the proposed two-year implementation requirement. This short implementation period almost guarantees that entities will commit resources shortly after adoption of the definition to ensure compliance within the mandated period. In other words, ratepayers will bear costs related to compliance irrespective of any change resulting from the Phase 2 process or the exception process. Expediency, while understandable given the filing deadline, must be balanced against the risk that a multi-phased approach could lead to significant consumer costs without attendant meaningful reliability benefits. 2) Cost-Benefit Analysis. A cost impact analysis should be performed as part of developing any reliability standard. However, the development of the BES definition has failed to consider the cost impacts of the definition (and its inclusions and exclusions) and has not weighed these impacts against identified

Voter	Entity	Segment	Vote	Comment
				benefits that the definition would achieve. The MA DPU supported the May 21, 2011 comments from the New England States Committee on Electricity ("NESCOE") on the last posting of the BES definition. In these comments, NESCOE stated that "any new costs a revised definition imposes - which fall ultimately on consumers - should provide meaningful reliability benefits." A cost-benefit analysis should be integral to the development of a BES definition and, indeed, any reliability standard. This analysis should include a probabilistic risk assessment examining the likelihood of an event and the costs and risks resulting from such event, which should be weighed against the costs of complying with the proposed reliability measures. 3) Technical Justification. In addition to performing a cost-benefit analysis, a technical basis must be provided to justify a proposed reliability standard. However, the proposed BES definition does not provide a technical justification for the 100 kV threshold, the threshold for generation resources, or other elements of the definition. As stated above, while well-intentioned and understandable, deferring this technical justification to a later and separate phase of the project is a flawed and potentially costly approach. Providing a technical justification for a reliability standard is a core function of standards development and should be addressed at the forefront of the process rather than relegated to a separate phase largely undertaken after a standard is filed.
Response: 1. Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up. The first step in Phase II will be the posting of the Phase II draft SAR for comment. At that time, you will have the opportunity to submit comments for the inclusion of items and issues to be considered by the SDT in Phase II. Since the revised definition relies heavily on the status quo of the current definition, the SDT does not anticipate that many entities will be burdened with additional costs. 2. The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 & 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the				

Voter	Entity	Segment	Vote	Comment
current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 & 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes the best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission. 3. Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up. The first step in Phase II will be the posting of the Phase II draft SAR for comment. At that time, you will have the opportunity to submit comments for the inclusion of items and issues to be considered by the SDT in Phase II. Technical justifications for all variables involved in the definition will be done in Phase II.				
Diane J Barney	National Association of Regulatory Utility Commissioners	9	Negative	There is a lack of clarity as to how the information is to be used and by what weight in the exception process.
Response: The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at				

Voter	Entity	Segment	Vote	Comment
as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result ofa sudden disturbance, including a cyber				

Voter	Entity	Segment	Vote	Comment
security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.				
Thomas Dvorsky	New York State Department of Public Service	9	Negative	The currently proposed definition of the BES is based neither on a technical analysis nor on a cost impact study.
Response: Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up. The first step in Phase II will be the posting of the Phase II draft SAR for comment. At that time, you will have the opportunity to submit comments for the inclusion of items and issues to be considered by the SDT in Phase II. Technical justifications for all variables involved in the definition will be done in Phase II.				

Voter	Entity	Segment	Vote	Comment
The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 & 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 & 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.				
Larry Nordell	Montana Consumer Counsel	8	Abstain	The BES definition must be cognizant of costs and benefits. At the very least it needs to have an exclusion for elements whose failure would have no consequential impacts on the bulk system, and an exclusion for elements for which the costs inclusion are clearly in excess of the benefits of inclusion.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 & 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 & 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition				

Voter	Entity	Segment	Vote	Comment
coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.				
John D Varnell	Tenaska Power Services Co.	6	Abstain	Which part of this definition has the highest priority inclusions or exclusions.
Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.				

Voter	Entity	Segment	Vote	Comment
				Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.
William M Chamberlain	California Energy Commission	9	Affirmative	While we are voting in favor of this definition as an improvement over the current status quo, we agree with WECC that additional improvements are necessary as set forth below. For Inclusion 3 we agree that Blackstart units should be considered vital to the overall operation of the BES, and therefore included in the definition of the BES. However, we do not agree with the deletion of the cranking path from Inclusion 3. The cranking path should be included in the definition since NERC standards EOP-005 and CIP-002, R1.2.4 require documenting the cranking path and the revised CIP-002-4 identifies the cranking path as a critical asset in Attachment 1. To be able to count on a Blackstart unit to perform as designed in the Blackstart Restoration Plan, it must be ensured that the cranking path is available. We believe that additional clarity is needed in the wording of Inclusion 4. It is our understanding, for example, that Inclusion 4 is not intended to include each individual wind turbine generating unit in a wind farm as a BES element, but

Voter	Entity	Segment	Vote	Comment
				rather to include the point at which the aggregation becomes large enough to meet the aggregate capacity threshold of 75 MVA. However, the response to comments from the last comment posting and the current wording of Inclusion 4 do not provide sufficient clarity to answer this question. We believe that the wording of Inclusion 4 could be modified to add clarity on this topic. We believe that Inclusion 5 should be modified to identify some minimum Reactive Power threshold for static or dynamic devices similar to that identified for generating sources in Inclusion 2. As worded a 1 MVA device supplying or absorbing Reactive Power that is connected at 100 kV or higher would be included in the BES. We believe that Exclusion 2 should be modified to include a size threshold for individual generating units, similar to that identified in Inclusion 2. As currently worded Exclusion 2 places the same threshold (75 MVA) on a single generating unit as is placed on multiple generating units.

Response: Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system Elements. The Transmission Operator's restoration plans identify a number of possible system restoration scenarios to address the uncertainty of the actual requirements needed to address a particular restoration event including Cranking Paths. Therefore, the SDT maintains that Cranking Paths are not required to be included in the BES definition as they are essentially a moving target and could include distribution Elements. The Cranking Paths issue will be discussed anew in Phase II of this project. No change made.
Inclusion I4 denotes an aggregate threshold. This is clear from the requirement inclusion threshold of "aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)."
The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction

Voter	Entity	Segment	Vote	Comment
with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. The threshold levels of generators and the relationship between the ERO Statement of Compliance Registry Criteria and the BES definition will be considered in the Phase 2 review. However, the SDT believes that a value was needed for Phase I and decided to proceed with the single 75 MVA threshold. No change made.				
Claston Augustus Sunanon	Orlando Utilities Commission	6	Affirmative	Orlando Utilities Commission supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date.
Response: The exceptions process and the definition are being worked on in parallel and will b efiled as one document. Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up. The first step in Phase II will be the posting of the Phase II draft SAR for comment. At that time, you will have the opportunity to submit comments for the inclusion of items and issues to be considered by the SDT in Phase II.				
Brenda Powell	Constellation Energy Commodities Group	6	Affirmative	While we support the proposed definition to satisfy the FERC Order, we also support continued work on the threshold questions slated for "Phase II", in particular the refinement of the generation thresholds.
Response: Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up. Thresholds will be analyzed at that time.				
Michelle R DAntuono	Occidental Chemical	5	Affirmative	1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X Comments: However, one of the FERC directives in Order 743 charged NERC with delineating the difference between transmission and distribution. The Inclusions and Exclusions are a step in that direction, but this subject will need more consideration in Phase II.

Voter	Entity	Segment	Vote	Comment
				2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X Comments: 3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. No: X Comments: Since an aggregate of 75 MVA is allowed at a single site, there is no basis for maintaining the 20 MVA for a single generator. The proposed MOD-026 assigns thresholds by region that are much higher than 20 MVA for modeling purposes. Since modeling generally would require more granularity than what is necessary for the reliable operation of the interconnected transmission system (BES), the SDT might want to review the threshold basis for NERC Project 2007-09 (Generator Verification). It is understood that the threshold will be reconsidered in Phase II of the BES Definition Project; however, a modest change from 20 to 75 MVA seems appropriate in the interim period justified by the current 75f MVA aggregate per site. For clarity purposes the following should be added at the end "unless excluded under Exclusion E2". 4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X Comments: 5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X Comments: To distinguish this Inclusion from Inclusion I2, the SDT might want to clarify that the collection system (usually at voltage below 100

Voter	Entity	Segment	Vote	Comment
				KV anyway) is not part of the BES-just the resources and any transformers included by I1, if this is indeed the intent of this Inclusion. 6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X Comments: 7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X Comments: A much needed change from the first posting, as this will maintain the status quo referred to in the introduction text. 8. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2 (behind-the-meter generation)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X Comments: 9. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3 (local network)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X Comments: This Exclusion and Exclusion E1 aid in the delineation of distribution versus transmission. 10. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E4 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X Comments: This is a needed exception to Inclusion I5 as these reactive power resources are used by retail customers for power factor correction at their own facilities in order avoid imposed power factor penalties. 11. Are there any other concerns with this definition that haven't been covered in

Voter	Entity	Segment	Vote	Comment
				previous questions and comments remembering that the exception criteria are posted separately for comment? Yes: X Comments: It might be worthwhile to explain the relationship (timeline) between the BES Definition implementation plan and the compliance implementation plan proposed in the BES RoP team's new Appendix 5C for the NERC Rules of Procedure.

Response: 1. Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up. The first step in Phase II will be the posting of the Phase II draft SAR for comment. At that time, you will have the opportunity to submit comments for the inclusion of items and issues to be considered by the SDT in Phase II.
2. Thank you for your support.
3. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. Correlation to MOD standards would be included in Phase II.
4. Thank you for your support.
5. The essential distinction between Inclusions I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2.
6. – 10. Thank you for your support.
11. For a newly identified Element(s) under the revised BES definition, the time period to be in full compliance with all applicable Reliability Standards is 24 months from the effective date of the definition. If the entity wishes to file for an exception of a newly

Voter	Entity	Segment	Vote	Comment
identified Element(s) under the revised BES definition through the Rules of Procedure Exception Process, the entity will have 12 months from the effective date of the revised BES definition in which to file such a request. If the exception request is rejected or disapproved and the classification of the Element(s) remains as a BES Element, the Regional Entity and the owner of such a BES Element(s) shall agree to an Implementation Plan for full compliance obligations, which will establish an implementation date no earlier than the date established by the definition Implementation Plan (24 months from the effective date of the definition).				
Gary Ofner	North Carolina Electric Membership Corp.	1	Affirmative	In general, we support the proposed definition of the BES. However, we have identified a few concerns that warrant the SDT's consideration. We'd prefer to see the language from the ERO Statement of Compliance Registry Criteria repeated within the BES Definition itself instead of referencing an outside document. As it stands right now, the Compliance Registry Criteria needs to stay intact for Phase I of this project. That makes the Compliance Registry Criteria reliant on the BES Definition and vice versa. We understand that the Statement of Compliance Registry Criteria may be reviewed/revised at the same time Phase 2 of this project is being developed, therefore we agree with Inclusion I2 of this draft. Blackstart Resources can actually be on the distribution system. There is still the question of whether the distribution system would then be subjected to the enforceable standards. If so, there would most likely be a significant cost increase associated with tracking compliance for these distribution systems without a commensurate increase in reliability since Blackstart Resources are rarely used. This could very well cause entities to un-designate Blackstart Resources on distribution systems to avoid these distribution systems from becoming part of the BES. The same rationale that was used for eliminating cranking paths could also be applied to Blackstart Resources. A flowgate should not be used to limit applicability of E3. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a

Voter	Entity	Segment	Vote	Comment
				problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the "permanent" adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First, flowgates are created to manage congestion. The IDC is more of a congestion management tool than a reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve IROLs that have been violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The characteristics of the flowgate make it a good proxy for estimating how much contractual use has been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROLs, many simply are not. The term "non-retail generation" used in Exclusion E1 (item c) and again in E3 (item a) should be clarified (see comments for question 8 below). The Note after item c should also be clarified to indicate that closing a normally open switch doesn't affect this exclusion.
Jeffrey S Brame	North Carolina Electric Membership Corp.	5	Affirmative	In general, we support the proposed definition of the BES. However, we have identified a few concerns that warrant the SDT's consideration. We'd prefer to see the language from the ERO Statement of Compliance Registry Criteria repeated within the BES Definition itself instead of referencing an outside document. As it stands right now, the Compliance Registry Criteria needs to stay intact for Phase I of this project. That makes the Compliance Registry Criteria reliant on the BES Definition and vice versa.

Voter	Entity	Segment	Vote	Comment
				We understand that the Statement of Compliance Registry Criteria may be reviewed/revised at the same time Phase 2 of this project is being developed, therefore we agree with Inclusion I2 of this draft. Blackstart Resources can actually be on the distribution system. There is still the question of whether the distribution system would then be subjected to the enforceable standards. If so, there would most likely be a significant cost increase associated with tracking compliance for these distribution systems without a commensurate increase in reliability since Blackstart Resources are rarely used. This could very well cause entities to un-designate Blackstart Resources on distribution systems to avoid these distribution systems from becoming part of the BES. The same rationale that was used for eliminating cranking paths could also be applied to Blackstart Resources. A flowgate should not be used to limit applicability of E3. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the "permanent" adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First, flowgates are created to manage congestion. The IDC is more of a congestion management tool than a

Voter	Entity	Segment	Vote	Comment
				reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve IROLs that have been violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The characteristics of the flowgate make it a good proxy for estimating how much contractual use has been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROLs, many simply are not. The term "non-retail generation" used in Exclusion E1 (item c) and again in E3 (item a) should be clarified (see comments for question 8 below). The Note after item c should also be clarified to indicate that closing a normally open switch doesn't affect this exclusion.

Response: The SDT has reverted to specific numeric thresholds consistent with the ERO Statement of Compliance Registry Criteria for Phase I.

Thank you for your support.

The SDT disagrees that Blackstart Resources should not be included in the BES Definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES elements. No change made.

The SDT believes that the language in Exclusion E3.c prohibiting "Flowgates" from qualifying for definitional exclusion is appropriate and necessary. As a definitional exclusion characteristic, Exclusion E3.c must follow the principle of being a bright-line and easily identifiable, and as such, the SDT feels that the definition cannot allow some types of Flowgates and disallow others. Flowgates must continue to be a prohibiting characteristic under Exclusion E3, since these facilities are more likely to be used in the transfer

Voter	Entity	Segment	Vote	Comment
of bulk power than not. An entity who wishes to make a case for exclusion of a unique type of Flowgate facility can do so through the exception process. The SDT believes that the continued qualifier of "permanent" associated with the term "Flowgate" addresses the majority of the concern in this comment. No change made. "Non-retail generation" means that generation which is on the system (supply) side of the retail meter. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment.				
Paul Cummings	City of Redding	5	Affirmative	An affirmative vote is conditional on NERC's dedication to phase 2 of the Project.
Response: Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up.				
Pawel Krupa	Seattle City Light	1	Affirmative	Comments: 1. Core Definition: Yes Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. We strongly support the approach to defining the Bulk Electric System as proposed here. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. 2. I1 - Transformer inclusions: No Comments: The wording of Inclusion I1 is not clear. The term transformers needs to be further defined with respect to multiphase transformers and generator step-up transformers. Recommend the following wording: "All transformers with at least two primary and secondary terminals operated at or above 100kV, and generator step-up transformers (GSU) with one terminal operated at or above 100kV, unless excluded by E1 or E3." 3. I2 - Generation Thresholds: Yes Comments: Recommend removing the

Voter	Entity	Segment	Vote	Comment
				reference to the Statement of Compliance Registry Criteria. The definition should be the governing document and provide the details of what generating resources should be included. The current language induces circular arguments without a true governing document. The definition should drive what appears in the Registry Criteria. Inclusion I2 should be revised to read: "Generating resources with a gross nameplate rating of 20MVA or greater, or generating plant/facility connected at a common bus, with an aggregate nameplate rating of 75MVA or greater and is directly connected to a BES Element." This is consistent with proposed Inclusion. 4. I3 - Blackstart Units: Yes Comments: None 5. I4 - Dispersed Power: No Comments: The term "common point" needs clarification with respect to connection to the BES. Recommend the following wording: "connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 KV or above." 6. I5 - Reactive Power devices: No Comments: Technical studies need to be conducted to confirm reactive resource impacts on the reliability of the BES. The inclusion of reactive resources is a significant expansion of the current BES definition and therefore requires technical justification for inclusion. Inclusion I5 as written is generally confusing with multiple references to other inclusions and exclusions in the definition. Recommend removing references to reactive resources from Phase 1 until technical justification can be demonstrated (as part of Phase 2). 7. E1 - Radial System: Yes Comments: (1) The E1 Reference Note should be re-worded to state "Radial systems shall be assessed with all normally open switching devices in their open positions." The current wording is unclear with respect to the treatment of normally open switching devices. (2) Recommend that load bus tie-breakers be excluded from the BES as these devices apply to the users of the BES. (3) Recommend that the potential inclusion in the BES of protective relay systems which reach beyond a load network or ring bus should be confirmed in Phase 2 pursuant to technical studies. 8. E2 - Behind-the-Meter-Generation: Yes Comments: The wording of Exclusion E2 should be consistent with the Statement of Compliance Registry Criteria in

Voter	Entity	Segment	Vote	Comment
				Section III.c.4. 9. E3 - Local Network: Yes Comments: Defining characteristic b) "Power flows only into the LN" is confusing. For example, is this condition meant as an absolute, that power never under any circumstances flows out? Are exceptions allowed, such as during a switching operation or a catastrophic outage? Does power flow through a local net load sink, as might be determined by superposition of supply sources over time, negate that sink from exclusion as a LN? Recommend additional clarity for this characteristic. 10. E4 - Customer Reactive Power devices: No Comments: Refer to comments related to reactive resources for Question 6 regarding Inclusion I5. 11. Other concerns: No Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. We strongly support the approach to defining the Bulk Electric System as proposed here. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments.
Dana Wheelock	Seattle City Light	3	Affirmative	Comments: 1. Core Definition: Yes Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. We strongly support the approach to defining the Bulk Electric System as proposed here. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. 2. I1 - Transformer inclusions: No Comments: The wording of Inclusion I1 is not

Voter	Entity	Segment	Vote	Comment
				clear. The term transformers needs to be further defined with respect to multiphase transformers and generator step-up transformers. Recommend the following wording: "All transformers with at least two primary and secondary terminals operated at or above 100kV, and generator step-up transformers (GSU) with one terminal operated at or above 100kV, unless excluded by E1 or E3." 3. I2 - Generation Thresholds: Yes Comments: Recommend removing the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document and provide the details of what generating resources should be included. The current language induces circular arguments without a true governing document. The definition should drive what appears in the Registry Criteria. Inclusion I2 should be revised to read: "Generating resources with a gross nameplate rating of 20MVA or greater, or generating plant/facility connected at a common bus, with an aggregate nameplate rating of 75MVA or greater and is directly connected to a BES Element." This is consistent with proposed Inclusion. 4. I3 - Blackstart Units: Yes Comments: None 5. I4 - Dispersed Power: No Comments: The term "common point" needs clarification with respect to connection to the BES. Recommend the following wording: "connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 KV or above." 6. I5 - Reactive Power devices: No Comments: Technical studies need to be conducted to confirm reactive resource impacts on the reliability of the BES. The inclusion of reactive resources is a significant expansion of the current BES definition and therefore requires technical justification for inclusion. Inclusion I5 as written is generally confusing with multiple references to other inclusions and exclusions in the definition. Recommend removing references to reactive resources from Phase 1 until technical justification can be demonstrated (as part of Phase 2). 7. E1 - Radial System: Yes Comments: (1) The E1 Reference Note should be re-worded to state "Radial systems shall be assessed with all normally open switching devices in their open positions." The current wording is unclear with respect to the treatment of normally open switching devices. (2) Recommend that

Voter	Entity	Segment	Vote	Comment
				load bus tie-breakers be excluded from the BES as these devices apply to the users of the BES. (3) Recommend that the potential inclusion in the BES of protective relay systems which reach beyond a load network or ring bus should be confirmed in Phase 2 pursuant to technical studies. 8. E2 - Behind-the-Meter-Generation: Yes Comments: The wording of Exclusion E2 should be consistent with the Statement of Compliance Registry Criteria in Section III.c.4. 9. E3 - Local Network: Yes Comments: Defining characteristic b) "Power flows only into the LN" is confusing. For example, is this condition meant as an absolute, that power never under any circumstances flows out? Are exceptions allowed, such as during a switching operation or a catastrophic outage? Does power flow through a local net load sink, as might be determined by superposition of supply sources over time, negate that sink from exclusion as a LN? Recommend additional clarity for this characteristic. 10. E4 - Customer Reactive Power devices: No Comments: Refer to comments related to reactive resources for Question 6 regarding Inclusion I5. 11. Other concerns: No Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. We strongly support the approach to defining the Bulk Electric System as proposed here. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments.
Dennis Sismaet	Seattle City Light	6	Affirmative	Comments: 1. Core Definition: Yes Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. We strongly support the approach to defining the Bulk Electric System as proposed here. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the

Voter	Entity	Segment	Vote	Comment
				approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. 2. I1 - Transformer inclusions: No Comments: The wording of Inclusion I1 is not clear. The term transformers needs to be further defined with respect to multiphase transformers and generator step-up transformers. Recommend the following wording: "All transformers with at least two primary and secondary terminals operated at or above 100kV, and generator step-up transformers (GSU) with one terminal operated at or above 100kV, unless excluded by E1 or E3." 3. I2 - Generation Thresholds: Yes Comments: Recommend removing the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document and provide the details of what generating resources should be included. The current language induces circular arguments without a true governing document. The definition should drive what appears in the Registry Criteria. Inclusion I2 should be revised to read: "Generating resources with a gross nameplate rating of 20MVA or greater, or generating plant/facility connected at a common bus, with an aggregate nameplate rating of 75MVA or greater and is directly connected to a BES Element." This is consistent with proposed Inclusion. 4. I3 - Blackstart Units: Yes Comments: None 5. I4 - Dispersed Power: No Comments: The term "common point" needs clarification with respect to connection to the BES. Recommend the following wording: "connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 KV or above." 6. I5 - Reactive Power devices: No Comments: Technical studies need to be conducted to confirm reactive resource impacts on the reliability of the BES. The inclusion of reactive resources is a significant expansion of the current BES definition and therefore requires technical justification for inclusion. Inclusion I5 as written is generally confusing with multiple references to other inclusions and exclusions in the definition. Recommend removing references to reactive

Voter	Entity	Segment	Vote	Comment
				resources from Phase 1 until technical justification can be demonstrated (as part of Phase 2). 7. E1 - Radial System: Yes Comments: (1) The E1 Reference Note should be re-worded to state "Radial systems shall be assessed with all normally open switching devices in their open positions." The current wording is unclear with respect to the treatment of normally open switching devices. (2) Recommend that load bus tie-breakers be excluded from the BES as these devices apply to the users of the BES. (3) Recommend that the potential inclusion in the BES of protective relay systems which reach beyond a load network or ring bus should be confirmed in Phase 2 pursuant to technical studies. 8. E2 - Behind-the-Meter-Generation: Yes Comments: The wording of Exclusion E2 should be consistent with the Statement of Compliance Registry Criteria in Section III.c.4. 9. E3 - Local Network: Yes Comments: Defining characteristic b) "Power flows only into the LN" is confusing. For example, is this condition meant as an absolute, that power never under any circumstances flows out? Are exceptions allowed, such as during a switching operation or a catastrophic outage? Does power flow through a local net load sink, as might be determined by superposition of supply sources over time, negate that sink from exclusion as a LN? Recommend additional clarity for this characteristic. 10. E4 - Customer Reactive Power devices: No Comments: Refer to comments related to reactive resources for Question 6 regarding Inclusion I5. 11. Other concerns: No Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. We strongly support the approach to defining the Bulk Electric System as proposed here. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments.

Voter	Entity	Segment	Vote	Comment
Michael J. Haynes	Seattle City Light	5	Affirmative	1. Core Definition: Yes Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. We strongly support the approach to defining the Bulk Electric System as proposed here. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. 2. I1 - Transformer inclusions: No Comments: The wording of Inclusion I1 is not clear. The term transformers needs to be further defined with respect to multiphase transformers and generator step-up transformers. Recommend the following wording: "All transformers with at least two primary and secondary terminals operated at or above 100kV, and generator step-up transformers (GSU) with one terminal operated at or above 100kV, unless excluded by E1 or E3." 3. I2 - Generation Thresholds: Yes Comments: Recommend removing the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document and provide the details of what generating resources should be included. The current language induces circular arguments without a true governing document. The definition should drive what appears in the Registry Criteria. Inclusion I2 should be revised to read: "Generating resources with a gross nameplate rating of 20MVA or greater, or generating plant/facility connected at a common bus, with an aggregate nameplate rating of 75MVA or greater and is directly connected to a BES Element." This is consistent with proposed Inclusion. 4. I3 - Blackstart Units: Yes Comments: None 5. I4 - Dispersed Power: No Comments: The term "common point" needs clarification with respect to connection to the BES. Recommend the following wording: "connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 KV or above." 6. I5 - Reactive Power devices: No Comments: Technical studies need to be

Voter	Entity	Segment	Vote	Comment
				conducted to confirm reactive resource impacts on the reliability of the BES. The inclusion of reactive resources is a significant expansion of the current BES definition and therefore requires technical justification for inclusion. Inclusion I5 as written is generally confusing with multiple references to other inclusions and exclusions in the definition. Recommend removing references to reactive resources from Phase 1 until technical justification can be demonstrated (as part of Phase 2). 7. E1 - Radial System: Yes Comments: (1) The E1 Reference Note should be re-worded to state "Radial systems shall be assessed with all normally open switching devices in their open positions." The current wording is unclear with respect to the treatment of normally open switching devices. (2) Recommend that load bus tie-breakers be excluded from the BES as these devices apply to the users of the BES. (3) Recommend that the potential inclusion in the BES of protective relay systems which reach beyond a load network or ring bus should be confirmed in Phase 2 pursuant to technical studies. 8. E2 - Behind-the-Meter-Generation: Yes Comments: The wording of Exclusion E2 should be consistent with the Statement of Compliance Registry Criteria in Section III.c.4. 9. E3 - Local Network: Yes Comments: Defining characteristic b) "Power flows only into the LN" is confusing. For example, is this condition meant as an absolute, that power never under any circumstances flows out? Are exceptions allowed, such as during a switching operation or a catastrophic outage? Does power flow through a local net load sink, as might be determined by superposition of supply sources over time, negate that sink from exclusion as a LN? Recommend additional clarity for this characteristic. 10. E4 - Customer Reactive Power devices: No Comments: Refer to comments related to reactive resources for Question 6 regarding Inclusion I5. 11. Other concerns: No Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. We strongly support the approach to defining the Bulk Electric System as proposed here. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis

Voter	Entity	Segment	Vote	Comment
				within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments.
Hao Li	Seattle City Light	4	Affirmative	Comments: 1. Core Definition: Yes Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. We strongly support the approach to defining the Bulk Electric System as proposed here. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments. 2. I1 - Transformer inclusions: No Comments: The wording of Inclusion I1 is not clear. The term transformers needs to be further defined with respect to multiphase transformers and generator step-up transformers. Recommend the following wording: "All transformers with at least two primary and secondary terminals operated at or above 100kV, and generator step-up transformers (GSU) with one terminal operated at or above 100kV, unless excluded by E1 or E3." 3. I2 - Generation Thresholds: Yes Comments: Recommend removing the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document and provide the details of what generating resources should be included. The current language induces circular arguments without a true governing document. The definition should drive what appears in the Registry Criteria. Inclusion I2 should be revised to read: "Generating resources with a gross nameplate rating of 20MVA or greater, or generating plant/facility connected at a common bus, with an aggregate nameplate rating of 75MVA or greater and is directly connected to a BES Element." This is consistent with proposed Inclusion.

Voter	Entity	Segment	Vote	Comment
				4. I3 - Blackstart Units: Yes Comments: None 5. I4 - Dispersed Power: No Comments: The term "common point" needs clarification with respect to connection to the BES. Recommend the following wording: "connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 KV or above." 6. I5 - Reactive Power devices: No Comments: Technical studies need to be conducted to confirm reactive resource impacts on the reliability of the BES. The inclusion of reactive resources is a significant expansion of the current BES definition and therefore requires technical justification for inclusion. Inclusion I5 as written is generally confusing with multiple references to other inclusions and exclusions in the definition. Recommend removing references to reactive resources from Phase 1 until technical justification can be demonstrated (as part of Phase 2). 7. E1 - Radial System: Yes Comments: (1) The E1 Reference Note should be re-worded to state "Radial systems shall be assessed with all normally open switching devices in their open positions." The current wording is unclear with respect to the treatment of normally open switching devices. (2) Recommend that load bus tie-breakers be excluded from the BES as these devices apply to the users of the BES. (3) Recommend that the potential inclusion in the BES of protective relay systems which reach beyond a load network or ring bus should be confirmed in Phase 2 pursuant to technical studies. 8. E2 - Behind-the-Meter-Generation: Yes Comments: The wording of Exclusion E2 should be consistent with the Statement of Compliance Registry Criteria in Section III.c.4. 9. E3 - Local Network: Yes Comments: Defining characteristic b) "Power flows only into the LN" is confusing. For example, is this condition meant as an absolute, that power never under any circumstances flows out? Are exceptions allowed, such as during a switching operation or a catastrophic outage? Does power flow through a local net load sink, as might be determined by superposition of supply sources over time, negate that sink from exclusion as a LN? Recommend additional clarity for this characteristic. 10. E4 - Customer Reactive Power devices: No Comments: Refer to comments

Voter	Entity	Segment	Vote	Comment
				related to reactive resources for Question 6 regarding Inclusion I5. 11. Other concerns: No Comments: Seattle City Light (SCL) believes that the SDT has made substantial progress towards a clear and workable definition of the BES. We strongly support the approach to defining the Bulk Electric System as proposed here. SCL recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct a technical analysis within the time available. Accordingly, SCL agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold level and other issues. However, it is our opinion that the second draft would benefit from further clarification or modification in a number of respects, as are detailed in our comments.

Response: 1. Thank you for your support.
2. The SDT believes the existing language is clear and the proposed additional language would be redundant. No change made.
3. The SDT has reverted to specific numeric thresholds consistent with the ERO Statement of Compliance Registry Criteria for Phase I.
4. Thank you for your support.
5. The "single point of connection of 100 kV or higher" is where the radial system will begin if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation.
6. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the

Voter	Entity	Segment	Vote	Comment
definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. 7. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment. The treatment of protection systems is but one of many items to be analyzed in Phase II. 8. The wording of Exclusion E2 is essentially the same as the wording on this topic in the ERO Statement of Registry Criteria which has been in existence for several years and is well understood in the industry. The roles of the Balancing Authority, Generator Owner, and Generator Operator are implied in the ERO Statement of Compliance Registry Criteria and the terms were added to Exclusion E2 as the result of industry requests for clarification. 9. Several commenters suggested that the requirement under Exclusion E3.b should apply only during normal operating conditions, in other words, commenters felt that some power flow should be allowed to flow from the candidate local network back into the BES as long as it only occurred under abnormal conditions. To this suggestion, the SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that in order to maintain the intent of a bright-line characteristic in the BES definition such a qualifier could not be accommodated. However, the SDT pointed out that for those circumstances where a candidate for local network is unable to utilize the local network exclusion due to an abnormal situation that caused power to flow out of the network, the network could be a suitable candidate that could apply for exclusion under the Exception Process. 10. See response in #6 above. 11. Thank you for your support.				
Long T Duong	Snohomish County PUD No. 1	1	Affirmative	The Public Utility District No. 1 of Snohomish County ("SNPD") believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. SNPD therefore strongly supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and,

Voter	Entity	Segment	Vote	Comment
				(2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. Below are SNPD's responses to the NERC comment form for the 2nd Draft of Definition of BES (Project 2010-17). SNPD believes the refinements below will clarify the current draft of the BES definition, without changing the current intent. 1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Comments: SNPD strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, SNPD supports use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. Â§ 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will

Voter	Entity	Segment	Vote	Comment
				help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate - "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. Â§ 824o(a)(4) - will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. Â§ 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). For similar reasons, Snohomish believes use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. Snohomish recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, Snohomish agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, Snohomish is prepared to support the BES definition as proposed by the SDT. While Snohomish strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in

Voter	Entity	Segment	Vote	Comment
				our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, Snohomish believes a 200-kV threshold would be more appropriate for WECC than a 100-kV threshold. In addition, a 200-kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view is therefore incorrect. That being said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, Snohomish will support the SDT's proposal and will not further pursue its claims regarding the 200-kV threshold. Finally, we suggest that the SDT language address the circumstance when a facility is covered by both an Inclusion and an Exclusion. We note that some of the inclusions already contain language addressing this question. For example, Inclusion 1 indicates that transformers falling within the specified parameters are part of the BES ". . . unless excluded under Exclusions E1 or E3." Where it is not already included, similar language should be included in the other Inclusions and/or Exclusions to explain whether the SDT intends the Inclusions or the Exclusions to predominate in situations where facilities might be covered by both. We suggest clarifying language in our comments to I1 and I4 below. 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Comments: We support the SDT's changes to the first Inclusion because it is

Voter	Entity	Segment	Vote	Comment
				more clear and simple than the initial approach. That being said, we suggest that an additional sentence o
William T Moojen	Snohomish County PUD No. 1	6	Affirmative	The Public Utility District No. 1 of Snohomish County ("SNPD") believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. SNPD therefore strongly supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. Below are SNPD's responses to the NERC comment form for the 2nd Draft of Definition of BES (Project 2010-17). SNPD believes the refinements below will clarify the current draft of the BES definition, without changing the current intent. 1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Comments: SNPD strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, SNPD supports use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution

Voter	Entity	Segment	Vote	Comment
				of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. Â§ 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate - "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. Â§ 824o(a)(4) - will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. Â§ 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). For similar reasons, Snohomish believes use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. Snohomish recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, Snohomish agrees with the approach taken

Voter	Entity	Segment	Vote	Comment
				by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, Snohomish is prepared to support the BES definition as proposed by the SDT. While Snohomish strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, Snohomish believes a 200-kV threshold would be more appropriate for WECC than a 100-kV threshold. In addition, a 200-kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view is therefore incorrect. That being said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, Snohomish will support the SDT's proposal and will not further pursue its claims regarding the 200-kV threshold. Finally, we suggest that the SDT language address the circumstance when a facility is covered by both an Inclusion and an Exclusion. We note that some of the inclusions already contain language addressing this question. For example, Inclusion 1 indicates that transformers falling within the specified parameters are part of the BES ". . . unless excluded under Exclusions E1 or E3." Where it is not already included, similar language should be included in the other Inclusions and/or Exclusions to explain whether the SDT intends the Inclusions or the

Voter	Entity	Segment	Vote	Comment
				Exclusions to predominate in situations where facilities might be covered by both. We suggest clarifying language in our comments to I1 and I4 below. 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Comments: We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence o
Sam Nietfeld	Snohomish County PUD No. 1	5	Affirmative	The Public Utility District No. 1 of Snohomish County ("SNPD") believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. SNPD therefore strongly supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. Below are SNPD's responses to the NERC comment form for the 2nd Draft of Definition of BES (Project 2010-17). SNPD believes the refinements below will clarify the current draft of the BES definition, without changing the current intent. 1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Comments: SNPD strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded

Voter	Entity	Segment	Vote	Comment
				from the core definition (i.e., "all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, SNPD supports use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. Â§ 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate - "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. Â§ 824o(a)(4) - will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. Â§ 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). For similar reasons, Snohomish believes use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site),

Voter	Entity	Segment	Vote	Comment
				which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. Snohomish recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, Snohomish agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, Snohomish is prepared to support the BES definition as proposed by the SDT. While Snohomish strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, Snohomish believes a 200-kV threshold would be more appropriate for WECC than a 100-kV threshold. In addition, a 200-kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view is therefore incorrect. That being said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, Snohomish will support the SDT's proposal and will not further pursue its claims regarding the 200-kV threshold.

Voter	Entity	Segment	Vote	Comment
				Finally, we suggest that the SDT language address the circumstance when a facility is covered by both an Inclusion and an Exclusion. We note that some of the inclusions already contain language addressing this question. For example, Inclusion 1 indicates that transformers falling within the specified parameters are part of the BES ". . . unless excluded under Exclusions E1 or E3." Where it is not already included, similar language should be included in the other Inclusions and/or Exclusions to explain whether the SDT intends the Inclusions or the Exclusions to predominate in situations where facilities might be covered by both. We suggest clarifying language in our comments to I1 and I4 below. 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Comments: We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence o
John D Martinsen	Public Utility District No. 1 of Snohomish County	4	Affirmative	The Public Utility District No. 1 of Snohomish County ("SNPD") believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. SNPD therefore strongly supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. Below are SNPD's responses to the NERC comment form for the 2nd Draft of Definition of BES (Project 2010-17). SNPD believes the refinements below will clarify the current draft of the BES definition, without changing the current intent. 1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would

Voter	Entity	Segment	Vote	Comment
				be more appropriate, please provide specific suggestions in your comments. Comments: SNPD strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, SNPD supports use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. Â§ 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate - "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. Â§ 824o(a)(4) - will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. Â§ 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). For similar reasons, Snohomish believes use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the

Voter	Entity	Segment	Vote	Comment
				NERC Glossary of Terms Used, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. Snohomish recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, Snohomish agrees with the approach taken by the SDT, which is to propose a Phase II of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase II proceeds expeditiously, Snohomish is prepared to support the BES definition as proposed by the SDT. While Snohomish strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, Snohomish believes a 200-kV threshold would be more appropriate for WECC than a 100-kV threshold. In addition, a 200-kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view is therefore incorrect. That being said, we raise the issue here to emphasize the importance of the Exclusions for Local

Voter	Entity	Segment	Vote	Comment
				Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, Snohomish will support the SDT's proposal and will not further pursue its claims regarding the 200-kV threshold. Finally, we suggest that the SDT language address the circumstance when a facility is covered by both an Inclusion and an Exclusion. We note that some of the inclusions already contain language addressing this question. For example, Inclusion 1 indicates that transformers falling within the specified parameters are part of the BES ". . . unless excluded under Exclusions E1 or E3." Where it is not already included, similar language should be included in the other Inclusions and/or Exclusions to explain whether the SDT intends the Inclusions or the Exclusions to predominate in situations where facilities might be covered by both. We suggest clarifying language in our comments to I1 and I4 below. 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Comments: We support the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence o
Response: The SDT refers Snohomish to the individual comment responses in the definition comment form as the comments expressed here are identical to the comments submitted by Snohomish on that form.				
Thomas Richards	Fort Pierce Utilities Authority	4	Affirmative	FPUA supports the exclusion of Local Networks from the BES. Such systems are generally not "necessary for operating an interconnected electric transmission network," the standard in Orders 743 and 743-A. However, we have some suggestions to clarify the proposed language for this Exclusion. We have a major concern with the wording in E3 defining a Local Network. The requirement that "Power flows only into the LN" fails to recognize that loop flows are inevitable in a networked system, particularly during a contingency. It just doesn't make sense

Voter	Entity	Segment	Vote	Comment
				that E3 allows flows out of the LN when exporting power that was generated within the LN, yet de minimis loop flows are not. I am suggesting that the "Power flows only into the LN" requirement be replaced with different criteria to allow "minor" inadvertent transfers across the LN. Such a modification would bring E3 in line with the technical justification paper developed for this project. FPUA supports FMPA's suggested change: "Power flows only into the LN, that is, at each individual connection at 100 kV or higher, the pre-contingency flow of power is from outside the LN into the LN for all hours of the previous 2 years" to help clarify the intent. Two years is suggested because it is the time period set out in the draft exception application form for which an applicant should state whether power flows through an Element to the BES.
Response: Several commenters suggested that the requirement under Exclusion E3.b should apply only during normal operating conditions, in other words, commenters felt that some power flow should be allowed to flow from the candidate local network back into the BES as long as it only occurred under abnormal conditions. To this suggestion, the SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that in order to maintain the intent of a bright-line characteristic in the BES definition such a qualifier could not be accommodated. However, the SDT pointed out that for those circumstances where a candidate for local network is unable to utilize the local network exclusion due to an abnormal situation that caused power to flow out of the network, the network could be a suitable candidate that could apply for exclusion under the Exception Process.				
Allen Mosher	American Public Power Association	4	Affirmative	APPA would like to thank the Standard Drafting Team (SDT) for their work on this standard and will continue to support approval of the current draft of the Bulk Electric System (BES) definition to meet the FERC imposed deadline. APPA also fully supports immediate consideration in Phase 2 of this project of the technical issues raised by the drafting team and commenters in response to the current draft definition. The SDT should be applauded for addressing the issue of local distribution facilities by placing the exclusion in the BES definition itself: "This does not include facilities used in the local distribution of electric energy." It is clearly spelled out in Section 215 that local distribution facilities are not subject to compliance with NERC standards. Including this statement in the definition ensures consistency between NERC's technical standards and the legal foundation

Voter	Entity	Segment	Vote	Comment
				upon which these standards are based. The current BES definition allows for various interpretations which could allow for excessive compliance documentation on facilities that are not part of the BES. The drafting team has provided sufficient granularity through the specific inclusions and exclusions to provide clear direction to NERC, regional entities and registered entities on the specific subset of electric facilities that are included within (or excluded from) the BES. APPA applauds the SDT for understanding that many utilities have unique system configurations and there is a need to differentiate between networked and radial systems. Allowing the exclusion for radial systems serving only load to have a normally open switch between the BES and such a radial system provides an important distinction. This clarifies the issue that a single radial fed system is the same as a system with multiple feeds with normally open switches between them. The SDT should be commended for identifying and addressing the issue of local networks (LN). Even though these systems are built in a networked configuration, the electric energy delivered is intended only to serve local distribution load. APPA believes that level-of-service/quality-of-service issues arising in local distribution systems must be left to the authority of state and local regulatory agencies and governing bodies. Therefore local networks should be excluded from the BES. APPA is concerned that the 20MVA & 75MVA generation threshold was not addressed in Phase 1 of this project, but fully recognizes the difficulty in timely completing development of the necessary technical studies and consensus development required to include this improvement in Phase 1. For these reasons, APPA supports the current draft BES definition and requests that the SDT move quickly to the phase 2 process to study what generation is necessary for reliable operation of the BES. APPA also requests more specificity on the detailed information required to support BES exceptions processed through the NERC Rules of Procedure drafting process. Additional technical specificity will help ensure consistency between regions and transparency for registered entities on the technical studies and data

Voter	Entity	Segment	Vote	Comment
				required to support exception requests.

Response: Thank you for your support.
Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up.
The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.
There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that

Voter	Entity	Segment	Vote	Comment
the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result ofa sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.				

Voter	Entity	Segment	Vote	Comment
Finally, the SDT would point to the draft SAR for Phase II of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.				
Greg Lange	Public Utility District No. 2 of Grant County	3	Affirmative	The Public Utility District No. 1 of Grant County ("GCPD") believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. GCPD therefore strongly supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. GCPD strongly supports the addition of the language regarding local distribution facilities, as it matches congressional intent to leave the regulation of these facilities to state and local authorities. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase II SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. Many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately

Voter	Entity	Segment	Vote	Comment
				stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. As the Phase II process moves forward, we recommend that SDT consider the extensive work performed on the point of demarcation question by the WECC BESDTF. GCPD does not support The inclusion of Reactive Power devices because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Also, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Reactive Power devices should be subject to the same technical analysis for inclusion or exclusion that will cover generators in the Phase II process. GCPD strongly supports the revised Local Networks ("LNs") exclusion from the BES. GCPD also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, GCPD supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." GCPD supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is very small, the outward flow is only for a few hours a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b)

Voter	Entity	Segment	Vote	Comment
				be revised to read: "Except in unusual circumstances, power flows only into the LN."

Response: The exception process is being worked on in parallel with the definition.
Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up.
Thank you for your support.
The development of demarcation points will be included in Phase 2 of this project. Work done at WECC and other regions will be utilized as appropriate.
The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.
Several commenters suggested that the requirement under Exclusion E3.b should apply only during normal operating conditions, in other words, commenters felt that some power flow should be allowed to flow from the candidate local network back into the BES as long as it only occurred under abnormal conditions. To this suggestion, the SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that in order to maintain the intent of a bright-line characteristic in the BES definition such a qualifier could not be accommodated. However, the SDT pointed out that for those circumstances where a candidate for local network is unable to utilize the local network exclusion due to an abnormal situation that caused power to flow out of the network, the network could be a suitable candidate that could apply for exclusion under the Exception Process.

Voter	Entity	Segment	Vote	Comment
John H Hagen	Pacific Gas and Electric Company	3	Affirmative	We support the overall approach with the following concerns: 1) Clarify what is included as a Blackstart Resource and do not rely on what is defined in local or regional restoration plans, as this will create regional variances; 2) Inclusion of generating units >20mva seems to low and
Response: 1. Blackstart Resource is a defined term that can be found in the NERC Glossary. 2. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.				
Brad Chase	Orlando Utilities Commission	1	Affirmative	Orlando Utilities Commission supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. in addition, phase II should include a clear distinction between the BES and BPS.
Ballard K Mutters	Orlando Utilities Commission	3	Affirmative	Orlando Utilities Commission supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase II of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date.

Voter	Entity	Segment	Vote	Comment
Response: The exception process is being worked on in parallel with the definition. Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up.				
CJ Ingersoll	Constellation Energy	3	Affirmative	While we support the proposed definition to satisfy the FERC Order, we also support continued work on the threshold questions slated for "Phase II", in particular the refinement of the generation thresholds.
Response: Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up.				
Howard M. Mott Jr.	Clay Electric Cooperative	3	Affirmative	The Note under Exclusions: E1 - Radial Systems: should not include "...as depicted on prints or one-line diagrams..." and should be changed. "Note - A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion." I recommend the note be changed to read: Note - A normally open switching device between radial systems operated in a 'make-before-break' fashion does not affect this exclusion.
Response: Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment.				
Brian Fawcett	Clatskanie People's Utility District	3	Affirmative	1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: Yes No: Comments: We agree with the changes. We must point out that the overall flow, or how one proceeds through the inclusions and exclusions is not clear. Can an item that meets an inclusion be subsequently excluded? If so, this needs to be explicitly stated. So far, we only have the flow chart produced by the ROP team that indicates otherwise (http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf). This was made evident by the question at the 9/28 webinar regarding an I5 capacitor on an E3 local network. The questioner thought the capacitor was BES per I5, but the answer was that it was excluded per E3. We can find no support for the

Voter	Entity	Segment	Vote	Comment
				answer given. The listing of specific exclusions within I1 (exception proves the rule) argues for questioner's stance that the capacitor is BES as written. Also, if included items could subsequently be excluded, they would be no different from any other item that met the voltage threshold of 100kV. There would be no need for any of the inclusions if all possible outputs from the inclusion tests go to the same exclusion test inputs. We strongly support the addition of the language regarding local distribution facilities, as it matches congressional intent to leave the regulation of these facilities to state and local authorities. 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: Clatskanie PUD strongly agrees with this inclusion as written. It is consistent with the recent PRC-004 and PRC-005 interpretation and the NERC definition of Transmission. We believe the recent changes to this inclusion add clarity. 3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Referencing the Criteria which in turn references the BES definition creates a circular definition. Clatskanie PUD encourages the adoption of specific thresholds that are technically justified. We also note that the Criteria and its revisions do not go through the standards development process, so that thresholds may change with little warning and without triggering an implementation plan for facilities that may be swept into the BES as a result. 4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language

Voter	Entity	Segment	Vote	Comment
				would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: We agree with the removal of the voltage language, since the inclusions and exclusions apply only to equipment over 100 kV. 5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: Clatskanie PUD agrees both with the inclusion and with the revised language. The revised language removes the need to provide a separate definition for "Collector System". 6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: While we agree that reactive devices of sizable capacity connected at 100 kV or higher are needed for BES reliability, Clatskanie PUD fails to see why this inclusion is needed as they are already captured by the 100 kV threshold. We would propose instead to eliminate this inclusion and substitute an exclusion for smaller capacity devices. If the SDT really believes an inclusion for reactive devices is needed, we suggest the SDT provide a technically justified capacity limit within the inclusion. In addition we suggest also including the phrase "...unless excluded under Exclusion E1, E2 or E4" similar to that in I1. Please see the answer to Q1 above Q10 below. 7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: Clatskanie PUD notes that a new term has been introduced, "non-retail generation," with no definition provided. The answer to the question on this during the 9/28 webinar indicated that non-retail generation was behind the retail customer's meter. We can see no reason why

Voter	Entity	Segment	Vote	Comment
				the net-metered PV systems should count toward the aggregate limit (exceeding the limit means no exclusion) while a non-blackstart thermal plant doesn't (the radial system is excluded if any amount of load is present). We have also heard the SDT meant just the opposite of what was stated in the webinar. We ask that a reasonable definition for non-retail be provided within the BES definition document. We strongly agree that radial systems should be excluded and that the presence of normally open switching devices between radial systems should not cause them to be considered non-radial. Such a result would cause the removal of these devices to the detriment of the local level of service. We note that the singular "A normally open switching device" is used and suggest that an allowance be made for the possibility of multiple devices. "Normally open switching devices..." 8. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2 (behind-the-meter generation)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: X No: Comments: 9. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3 (local network)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: X Comments: We strongly agree that local networks should be excluded, since they act much like the radial systems excluded in E1 while providing a higher level of service to customers. These networks should not be discouraged in the name of reliability. We again object to the introduction of the new confusing term "non-retail generation" with no definition provided.
Response: 1. The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100				

Voter	Entity	Segment	Vote	Comment
kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element as defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind-the-retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the				

Voter	Entity	Segment	Vote	Comment
interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. 2. Thank you for your support. 3. The SDT has reverted to specific numeric thresholds consistent with the ERO Statement of Compliance Registry Criteria for Phase I. 4. Thank you for your support. 5. Thank you for your support. 6. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. 7. “Non-retail generation” means that generation which is on the system (supply) side of the retail meter. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator’s responsibility to indicate how a switch is used in the normal operating environment. 8. Thank you for your support. 9. Thank you for your support. “Non-retail generation” means that generation which is on the system (supply) side of the retail meter.				

Voter	Entity	Segment	Vote	Comment
Gregg R Griffin	City of Green Cove Springs	3	Affirmative	GCS appreciates the SDT's work on this project. For the most part, GCS supports what it believes to be the intent of the proposed language. The proposed specific exclusion of facilities used in the local distribution of electric energy is appropriate and consistent with Section 215 of the Federal Power Act. However, we have suggestions to better carry out what we believe to be the SDT's intent. The first sentence can be read as: "... all ... Real Power and Reactive Power resources connected at 100 kV or higher", which is surely not what the SDT intends. The basic problem is that Inclusions I2 and I4 do not modify the first sentence, e.g., from a set theory perspective, the set described by the first sentence includes the sets described in inclusions I2 and I4; hence, I2 and I4 do not modify the first sentence. From a literal reading, this would cause any size generator connected at 100 kV to be included, which is surely not the intent of the SDT. For similar reasons, the core definition and Inclusion I5 now has the effect of including all generators connected at 100 kV since a generator is a "dynamic device ... supplying or absorbing Reactive Power". The word "dedicated" in I5 is not sufficient in GCS's mind to unambiguously exclude generators from this statement. GCS suggests the following wording to address these issues: "Transmission Elements (not including elements used in the local distribution of electric energy) and Real Power and Reactive Power resources as described in the list below, unless excluded by Exclusion or Exception: a. Transmission Elements other than transformers and reactive resources operated at 100 kV or higher. b. Transformers with primary and secondary terminals operated at 100 kV or higher. c. Generating resource(s) (with gross individual or gross aggregate nameplate rating per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above. d. Blackstart Resources identified in the Transmission Operator's restoration plan. e. Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above, but not including generation on the retail side of the retail meter. f. Non-generator static or dynamic devices dedicated to supplying or absorbing more than 6 MVAr of

Voter	Entity	Segment	Vote	Comment
				Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in bullet 2 above." 2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: Yes No: Comments: Please see comments to Question 1 3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: yes No: Comments: Please see comments to Question 1 4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: Yes No: Comments: Please see comments to Question 1. 5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: Yes No: Comments: We recommend clarifying that the dispersed power resources covered by this inclusion do not include generators on the retail side of the retail meter. Specifically, we recommend that the Inclusion read: "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100kV or above, but not including generation on the retail side of the retail meter." 6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you

Voter	Entity	Segment	Vote	Comment
				do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: No: Comments: To help clarify and to avoid inclusion of de minimis reactive resources, we propose a size threshold of 6 MVAr consistent with the smallest size generator included in the BES at a 0.95 power factor, which is a common leading power factor used in Facility Connection Requirements for generators. In other words, 6 MVAr is consistent with typically the least amount of MVAr required to be absorbed by the smallest generator meeting the registry criteria. 7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. Yes: Yes No: Comments: GCS supports the exclusion of radial systems from the BES Definition. Such systems are generally not "necessary for operating an interconnected electric transmission network," the standard in Orders 743 and 743-A. We have several suggestions to clarify the proposed language for this Exclusion. Proposed Exclusion E1 refers to "[a] group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher." We appreciate the SDT's clarification of the point of connection requirement, but the term "a single point of connection" should be further defined (more clearly than just by voltage), and should be generic enough to encompass the various bus configurations. It is not the case, for example, that each individual breaker position in a ring bus is a separate point of connection for this purpose; in that situation, a bus at one voltage level at one substation should be considered "a single point of connection." Some examples of configurations that should be considered a single point of connection for this purpose are at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf, Examples 1-6. Although the core definition (appropriately) refers to "Transmission Elements" (with a capital "T"), proposed Exclusion E1 refers to "transmission Elements" (with a lowercase "t"). To avoid confusion, either "Transmission" should be

Voter	Entity	Segment	Vote	Comment
				capitalized in both locations, or the word "transmission" should simply be deleted from Exclusion E1, leaving a "group of contiguous Elements." We understand that the lack of capitalization may have been a deliberate choice by the SDT in an attempt to avoid confusion that SDT members believe exists in the Glossary definition.

Response: 1. – 4. The SDT refers the commenter to the first phrase of the core definition starting with "Unless modified…" which the SDT believes handles the concern brought out here. The SDT considered your wording changes in its deliberations and refers the commenter to the revised redline of the definition posted in response to the consideration of comments.

5. The SDT further clarifies that generating units on the customer's side of the retail meter are not included under Inclusion I4 since customer-side retail generation typically does not "utilize[e] a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above."

6. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 & 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.

7. The "single point of connection of 100 kV or higher" is where the radial system will begin if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. The SDT considered the disposition of the word "transmission" in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be

Voter	Entity	Segment	Vote	Comment
included in the term "Element".				
Thomas C Duffy	Central Hudson Gas & Electric Corp.	3	Affirmative	Due to the movement to a phased BES definition development process and assuming the definition is approved as proposed, there is an urgent need for NERC to provide clear guidance to Registered Entities regarding how to proceed with facilities and address changes to the NERC Compliance Registry registration obligations brought in/on by the application of the new definition. The problem stems from a likely scenario whereby the affected Registered Entities may be faced with an Implementation Plan and an Exception Request Procedure which must be completed prior to the completion of the Phase II definition development process. If that is the case, many Registered Entities will be confronted with either (1) spending large amounts of human and financial resources, not yet acquired, to address facilities/procedures necessary to address possible new compliance obligations only to find their efforts rendered unnecessary by the results produced in Phase II or, (2) waiting until the results of Phase II are provided and risking being found non-compliant and subject to substantial penalties in the future. Neither option can be viewed as a desirable, or for that matter, an acceptable position to be placed in.
Response: Part of the implementation plan for this project is for NERC to work with regional entities on transition plans. Those regional entities would then work with registered entities to try to avoid the situation described by the commenter.				
Richard K Vine	California ISO	2	Affirmative	We support the SDT's decision to exclude the cranking paths from the BES definition since testing and verification of the use of facilities in the cranking path is already covered by the appropriate EOP standards. However, we suggest removing the entirety of Inclusion I3. This inclusion is extraneous given there is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability.

Voter	Entity	Segment	Vote	Comment
Response: The SDT disagrees that Blackstart Resources should not be included in the BES Definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES elements. No change made.				
James Jones	Southwest Transmission Cooperative, Inc.	1	Affirmative	In general, we support the proposed definition of the BES. However, we have identified a few concerns that warrant the SDT's consideration. We'd prefer to see the language from the ERO Statement of Compliance Registry Criteria repeated within the BES Definition itself instead of referencing an outside document. As it stands right now, the Compliance Registry Criteria needs to stay intact for Phase I of this project. That makes the Compliance Registry Criteria reliant on the BES Definition and vice versa. We understand that the Statement of Compliance Registry Criteria may be reviewed/revised at the same time Phase 2 of this project is being developed, therefore we agree with Inclusion I2 of this draft. Blackstart Resources can actually be on the distribution system. There is still the question of whether the distribution system would then be subjected to the enforceable standards. If so, there would most likely be a significant cost increase associated with tracking compliance for these distribution systems without a commensurate increase in reliability since Blackstart Resources are rarely used. This could very well cause entities to un-designate Blackstart Resources on distribution systems to avoid these distribution systems from becoming part of the BES. The same rationale that was used for eliminating cranking paths could also be applied to Blackstart Resources. A flowgate should not be used to limit applicability of E3. First, there is no

Voter	Entity	Segment	Vote	Comment
				definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the "permanent" adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First, flowgates are created to manage congestion. The IDC is more of a congestion management tool than a reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve IROLs that have been violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The characteristics of the flowgate make it a good proxy for estimating how much contractual use has been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROLs, many simply are not. The term "non-retail generation" used in Exclusion E1 (item c) and again in E3 (item a) should be clarified (see comments for question 8 below). The Note after item c should also be clarified to indicate that closing a normally open switch doesn't affect this exclusion.

Voter	Entity	Segment	Vote	Comment
Noman Lee Williams	Sunflower Electric Power Corporation	1	Affirmative	In general, we support the proposed definition of the BES. However, we have identified a few concerns that warrant the SDT's consideration. We'd prefer to see the language from the ERO Statement of Compliance Registry Criteria repeated within the BES Definition itself instead of referencing an outside document. As it stands right now, the Compliance Registry Criteria needs to stay intact for Phase I of this project. That makes the Compliance Registry Criteria reliant on the BES Definition and vice versa. We understand that the Statement of Compliance Registry Criteria may be reviewed/revised at the same time Phase 2 of this project is being developed, therefore we agree with Inclusion I2 of this draft. Blackstart Resources can actually be on the distribution system. There is still the question of whether the distribution system would then be subjected to the enforceable standards. If so, there would most likely be a significant cost increase associated with tracking compliance for these distribution systems without a commensurate increase in reliability since Blackstart Resources are rarely used. This could very well cause entities to un-designate Blackstart Resources on distribution systems to avoid these distribution systems from becoming part of the BES. The same rationale that was used for eliminating cranking paths could also be applied to Blackstart Resources. A flowgate should not be used to limit applicability of E3. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of

Voter	Entity	Segment	Vote	Comment
				IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the "permanent" adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First, flowgates are created to manage congestion. The IDC is more of a congestion management tool than a reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve IROLs that have been violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The characteristics of the flowgate make it a good proxy for estimating how much contractual use has been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROLs, many simply are not. The term "non-retail generation" used in Exclusion E1 (item c) and again in E3 (item a) should be clarified (see comments for question 8 below). The Note after item c should also be clarified to indicate that closing a normally open switch doesn't affect this exclusion.

Response: The SDT has reverted to specific numeric thresholds consistent with the ERO Statement of Compliance Registry Criteria for Phase I.

The SDT disagrees that Blackstart Resources should not be included in the BES Definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES

Voter	Entity	Segment	Vote	Comment
elements. No change made. The SDT believes that the language in Exclusion E3.c prohibiting "Flowgates" from qualifying for definitional exclusion is appropriate and necessary. As a definitional exclusion characteristic, Exclusion E3.c must follow the principle of being a bright-line and easily identifiable, and as such, the SDT feels that the definition cannot allow some types of Flowgates and disallow others. Flowgates must continue to be a prohibiting characteristic under Exclusion E3, since these facilities are more likely to be used in the transfer of bulk power than not. An entity who wishes to make a case for exclusion of a unique type of Flowgate facility can do so through the exception process. The SDT believes that the continued qualifier of "permanent" associated with the term "Flowgate" addresses the majority of the concern in this comment. No change made. "Non-retail generation" means that generation which is on the system (supply) side of the retail meter. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment.				
Jerome Murray	Oregon Public Utility Commission	9	Affirmative	With the condition that reference is not made to the NERC Statement of Compliance Registry Criteria (SCRC) within the BES definition. This circularity must be eliminated. Recommended language should be: "I2 - Generating resource(s) with a gross individual nameplate rating greater than 20 MVA or with a gross aggregate nameplate rating greater than 75 MVA including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above."
Response: The SDT has reverted to specific numeric thresholds consistent with the ERO Statement of Compliance Registry Criteria for Phase I.				
Gregory S Miller	Baltimore Gas & Electric Company	1	Affirmative	While BGE supports the proposed definition to satisfy the FERC Order, we also support continued work on the threshold questions slated for "Phase II".
Response: Phase II will be starting up immediately following the filing of Phase I as the SDT resources get freed up.				

Voter	Entity	Segment	Vote	Comment
Luther E. Fair	Gainesville Regional Utilities	1	Affirmative	GVL feels that the effort to improve this standard is heading in the right direction. We look forward to the phase 2 segment of the process where additional clairity can be offered. Thanks for all your hard work.
Mark B Thompson	Alberta Electric System Operator	2	Affirmative	The AESO agrees with the NERC BES definition. It should be noted however that when the AESO adopts a NERC definition in Alberta the AESO must consider the applicability of the NERC definition in Alberta which may result in revisions to such definition to align it with our current electric energy market framework.
Benjamin Friederichs	Big Bend Electric Cooperative, Inc.	3	Affirmative	I believe this definition would include those elements necessary to the reliable operation of the BES while excluding those elements that would not have a material impact. NERC's willingness to exclude radial 115kv transmission lines is especially beneficial to smaller utilities like us. Their inclusion would not improve the reliability of the BES, but would vastly increase our costs and regulatory/reporting burdens.
James L Layton	Blue Ridge Electric	3	Affirmative	The SDT has done a good job of clearly defining the BES and developing a clear inclusion and exculsion list.
Joe Noland	City of Cheney	3	Affirmative	The City of Cheney agrees with changes made to the BES definition
Jason Fortik	Lincoln Electric System	3	Affirmative	No comments.
Anthony Schacher	Salem Electric	3	Affirmative	Salem Electric is encouraged to see that the standard drafting team understands the reality that in many circumstances many small radially fed utilities have no effect on the bulk electric system. By permitting reasonable and prudent exceptions it will allow many of the small utilities to be able to spend our limited time and resources on the reliability of our systems for our end users, instead of undertaking unnecessary steps to protect a system upon which we have no effect. The exception process is thorough but still manageable for small utilities with limited resources. Salem Electric would like to thank the Standards Drafting Team for their hard work and dedication in defining the Bulk Electric System.
Bob C. Thomas	Illinois Municipal Electric Agency	4	Affirmative	Illinois Municipal Electric Agency (IMEA) appreciates the SDT's diligence in developing bright-line BES Definition language; particularly, language clarifying the exclusion of local distribution facilities, achieving more realistic/reasonable

Voter	Entity	Segment	Vote	Comment
				identification of radial systems, and recognizing the distinction of local networks. With its Affirmative vote, IMEA supports and recommends comments submitted by the Transmission Access Policy Study Group.
Frank R. McElvain	Siemens Energy, Inc.	7	Affirmative	I am not completely satisfied with the arbitrary nature of the 100 kV demarcation. I know of 60 kV systems that parallel 500 kV circuits. However, this draft captures my concept of the Bulk Electric System pretty well.
Response: Thank you for your support.				

Consideration of Comments

Definition of the Bulk Electric System (Project 2010-17)

The Bulk Electric System Drafting Team thanks all commenters who submitted comments on the 2nd draft of the Definition of the Bulk Electric System (Project 2010-17). These standards were posted for a 45-day public comment period from August 26, 2011 through October 10, 2011. Stakeholders were asked to provide feedback on the standards and associated documents through a special electronic comment form. There were 113 sets of comments, including comments from approximately 255 different people from approximately 156 companies representing all 10 Industry Segments as shown in the table on the following pages.

All comments submitted may be reviewed in their original format on the standard's project page:

http://www.nerc.com/filez/standards/Project2010-17_BES.html

The SDT made the following changes to the definition due to industry comments received:

- Clarified the wording in Inclusion I1 to indicate that at least one secondary terminal must be at 100 kV or higher to accommodate multiple terminal transformers.
- Removed the reference to the ERO Statement of Compliance Registry Criteria in Inclusion I2 so that there is no chance of the registry values being changed and affecting the definition prior to resolution of threshold values in Phase 2 of this project.
- Clarified that generators were not part of Inclusion I5 to avoid improperly pulling in small generators.
- Clarified the language of Exclusion E2 by re-ordering the text as suggested.
- Clarified the language of Exclusion E3.b as suggested.
- Clarified the compliance obligation date of the revised definition in the Implementation Plan.

The SDT feels that it is important to remind the industry that Phase 2 of this project will begin immediately after the conclusion of Phase 1. For consistency, the same SDT will follow through with Phase 2.

Minority opinions expressed in this document are as follows:

- Some commenters feel that threshold values should be resolved in Phase 1. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist

through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

- Several commenters suggested that the requirement under Exclusion E3.b should apply only during normal operating conditions, in other words, commenters felt that some power flow should be allowed to flow from the candidate local network back into the BES as long as it only occurred under abnormal conditions. The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that in order to maintain the intent of a bright-line characteristic in the BES definition such a qualifier could not be accommodated. However, the SDT pointed out that for those circumstances where a candidate for local network is unable to utilize the local network exclusion due to an abnormal situation that caused power to flow out of the network, the network could be a suitable candidate that could apply for exclusion under the Exception Process.
- Some commenters expressed the opinion that Blackstart Resources are not required for the normal operation of the interconnected transmission system. The directive by FERC to revise the definition of the BES has been interpreted by the SDT to include all Facilities necessary for reliably operating the interconnected transmission system under both normal and emergency conditions. This interpretation by the SDT includes situations related to Blackstart Resources and system restoration. Blackstart Resources have the ability to be started without the support of the interconnected transmission system in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The SDT maintains that Blackstart Resources must be included in the definition.

The SDT is recommending that this project be moved forward to the recirculation ballot stage.

There were two comments that were repeated multiple times throughout the various documents. The first topic was about how to sort through the definition inclusions and exclusions, i.e., which takes precedence. The SDT offers this guidance on that issue:

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the

Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

> "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.

Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.

In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.

The second item is about providing specific guidance on how the information on the exception request form will be used in making decisions on inclusions/exclusions in the exception process. While not

technically part of this document which is about the definition, since the question did come up in these comments, the SDT provides the following information:

The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication.

Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result ofa sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved."

The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Finally, the SDT would point to the draft SAR for Phase 2 of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase 1 of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission,

you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 404-446-2560 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

[1] The appeals process is in the Reliability Standards Development Procedures: http://www.nerc.com/standards/newstandardsprocess.html.

Index to Questions, Comments, and Responses

1. **The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.** 20
2. **The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.** 77
3. **The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.** 97
4. **The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.** 139
5. **The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.** 158
6. **The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.** 190
7. **The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.** 223
8. **The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2 (behind-the-meter generation)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.** 269
9. **The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3 (local network)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.** 289
10. **The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E4 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.** 338

11. Are there any other concerns with this definition that haven't been covered in previous questions and comments remembering that the exception criteria are posted separately for comment?.....358

RFC Suggested changes to definition: 411

Pacificorp additional comments: 413

Rochester Diagrams:. 415

The Industry Segments are:

1 — Transmission Owners
2 — RTOs, ISOs
3 — Load-serving Entities
4 — Transmission-dependent Utilities
5 — Electric Generators
6 — Electricity Brokers, Aggregators, and Marketers
7 — Large Electricity End Users
8 — Small Electricity End Users
9 — Federal, State, Provincial Regulatory or other Government Entities
10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Gerald Beckerle	SERC OC Standards Review Group	X		X							

	Additional Member	Additional Organization	Region	Segment Selection
1.	Jeff Harrison	AECI		1, 3, 5, 6
2.	Eugend Warnecke	Ameren		1, 3
3.	Dan Roethemeyer	Dynegy		5
4.	Danny Dees	MEAG	SERC	1, 3, 5
5.	Brad Young	LGE/KU	SERC	3
6.	Marc Butts	Southern	SERC	1, 5
7.	Scott Brame	NCEMC	SERC	1, 3, 4, 5
8.	Tim Hattaway	PowerSouth	SERC	1, 5
9.	Steve McElhaney	SMEPA	SERC	1, 3, 4, 5
10.	Joel Wise	TVA	SERC	1, 3, 5, 6

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10

11.	Dwayne Roberts	OMU	SERC	3, 5
12.	Jake Miller	Dynegy	SERC	5
13.	Andy Burch	EEI	SERC	5
14.	Tom Burns	PJM	SERC	2
15.	M. R. Castello	Alabama Power	SERC	3
16.	Bob Dalrymple	TVA	SERC	1, 3, 5, 6
17.	Robert Thomasson	BREC	SERC	1
18.	Randy Hubbert	Southern	SERC	1, 5
19.	Phil Whitmer	Southern	SERC	1, 5
20.	Alvis Lanton	SIPC	SERC	1
21.	Jim Case	Entergy	SERC	1, 3, 6
22.	Mike Hirst	Cogentrix	SERC	5
23.	Gene Delk	SCEandG	SERC	1, 3, 5, 6
24.	Mike Bryson	PJM	SERC	2
25.	John Troha	SERC	SERC	10

2.	Group	David Taylor	NERC Staff Technical Review										
No additional members listed.													
3.	Group	Guy Zito	Northeast Power Coordinating Council										X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Alan Adamson	New York State Reliability Council, LLC	NPCC	10
2.	Gregory Campoli	New York Independent System Operator	NPCC	2
3.	Kurtis Chong	Independent Electricity System Operator	NPCC	2
4.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1
5.	Chris de Graffenried	Consolidated Edison Co. of New York Inc.	NPCC	1
6.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10
7.	Peter Yost	Consoldiated Edison Co. of New York, Inc.	NPCC	3
8.	Mike Garton	Dominion Resources Services, Inc.	NPCC	5
9.	Kathleen Goodman	ISO - New England	NPCC	2
10.	Chantel Haswell	FPL Group, Inc.	NPCC	5
11.	David Kiguel	Hydro One Networks Inc.	NPCC	1
12.	Michael Lombardi	Northeast Utilities	NPCC	1

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
13.	Randy MacDonald	New Brunswick Power Transmission	NPCC 9										
14.	Bruce Metruck	New York Power Authority	NPCC 6										
15.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC 10										
16.	Robert Pellegrini	The United Illumianting Company	NPCC 1										
17.	Si Truc Phan	Hydro-Quebec TransEnergie	NPCC 1										
18.	David Ramkalawan	Ontario Power Generation, Inc.	NPCC 5										
19.	Saurabh Saksena	National Grid	NPCC 1										
20.	Michael Schiavone	National Grid	NPCC 1										
21.	Wayne Sipperly	New York Power Authority	NPCC 5										
22.	Donald Weaver	New Brunswick System Operator	NPCC 2										
23.	Ben Wu	Orange and Rockland Utilities	NPCC 1										
4.	Group	Charles Long	SERC Planning Standards Subcommittee	X									X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Pat Huntley	SERC	SERC	10
2.	John Sullivan	Ameren Services Co.	SERC	1
3.	James Manning	NC Electric Membership Corp.	SERC	1
4.	Philip Kleckley	SC Electric and Gas Co.	SERC	1
5.	Bob Jones	Southern Company Services	SERC	1
6.	Jim Kelley	PowerSouth Energy Cooperative	SERC	1

5.	Group	Jonathan Hayes	Southwest Power Pool Standards Review Team		X								

	Additional Member	Additional Organization	Region	Segment Selection
1.	Gregory McAuley	Oklahoma Gas and Electric	SPP	1, 3, 5
2.	Harold Wyble	Kansas City Power and Light	SPP	1, 3, 5, 6
3.	Jamie Strickland	Oklahoma Gas and Electric	SPP	1, 3, 5
4.	Mark Wurm	Board of Public Utilities City of McPherson	SPP	1, 3, 5
5.	John Allen	City Utilities of Springfield	SPP	1, 4
6.	Louis Guidry	CLECO	SPP	1, 3, 5
7.	Robert Cox	Lea County Electric	SPP	
8.	Sean Simpson	Board of Public Utilities City of McPherson	SPP	1, 3, 5
9.	Stephen McGie	Coffeyville	SPP	

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
10.	Valerie Pinamonti	American Electric Power	SPP	1, 3, 5									
11.	Michael Bensky		SPP										
12.	Robert Rhodes	Southwest Power Pool	SPP	2									
13.	Jonathan Hayes	Southwest Power Pool	SPP	2									
6.	Group	Frank Gaffney	Florida Municipal Power Agency	X		X	X	X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Tim Beyrle	City of New Smyrna Beach	FRCC	4
2.	Greg Woessner	Kissimmee Utility Authority	FRCC	3
3.	Jim Howard	Lakeland Electric	FRCC	3
4.	Lynne Mila	City of Clewiston	FRCC	3
5.	Joe Stonecipher	Beaches Energy Services	FRCC	1
6.	Cairo Vanegas	FPUA	FRCC	4
7.	Randy Hahn	Ocala Utility Services	FRCC	3

7.	Group	Steve Rueckert	WECC Staff										X

No additional members listed.

8.	Group	Chris Higgins	Bonneville Power Administration	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Lorissa Jones	Transmission Internal Ops	WECC	1
2.	Steve Larson	General Counsel	WECC	1, 3, 5, 6
3.	Rebecca Berdahl	Long Term Sales and Purchases	WECC	3
4.	John Anasis	Technical Operations	WECC	1
5.	Erika Doot	Generation Support	WECC	3, 5, 6
6.	Don Watkins	System Operations	WECC	1
7.	Fran Halpin	Duty Scheduling	WECC	5
8.	Joe Rogers	Transfer Services	WECC	3

9.	Group	Bruce Wertz	Texas RE NERC Standards Subcommittee										X

	Additional Member	Additional Organization	Region	Segment Selection
1.	David Baker	Bandera Electric Cooperative	ERCOT	NA
2.	Gary L. Rayborn	Wharton County Electric Cooperative	ERCOT	NA
3.	Phillip Amaya	Magic Valley EC	ERCOT	NA
4.	Gary Nietsche	Fayette EC	ERCOT	NA

Group/Individual		Commenter	Organization		Registered Ballot Body Segment									
					1	2	3	4	5	6	7	8	9	10
5.	Tim Soles	Occidental Power Services	ERCOT	NA										
6.	Lee Stubblefield	City of Fredericksburg	ERCOT	NA										
7.	Lowell Ogle	City of Brenham	ERCOT	NA										
8.	John Ohlhausen	Medina EC	ERCOT	NA										
9.	Jimmy Sikes	City of Georgetown	ERCOT	NA										
10.	Ron Hughes	San Patricio EC	ERCOT	NA										
11.	Lou White	City of San Marcos	ERCOT	NA										
12.	David Peterson	Central Texas EC	ERCOT	NA										
13.	Gerry Nunan	Karnes EC	ERCOT	NA										
14.	Joe Farley	City of Weatherford	ERCOT	NA										
15.	Flint Geagley	City of Lampasas	ERCOT	NA										
16.	William Bissette	City of Seguin	ERCOT	NA										
17.	Brian Green	Farmers EC		NA										
18.	Jose Escamilla	CPS Energy	ERCOT	NA										
19.	Pam Zdenek	Infigen	NA - Not Applicable	NA										
10.	Group	Joe Tarantino	Balancing Authority Northern California		X									

	Additional Member	Additional Organization	Region	Segment Selection
1.	SMUD		WECC	1, 3, 4, 5, 6
2.	MID		WECC	4, 5
3.	City of Redding		WECC	3, 4, 5, 6
4.	City of Roseville		WECC	NA

11.	Group	Jean Nitz	ACES Power Marketing Standards Collaborators						X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Mohan Sachdeva	Buckeye Power, Inc.	RFC	3, 4
2.	Susan Sosbe	Wabash Valley Power Association	SERC	3

12.	Group	Louis Slade	Dominion		X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Connie Lowe		RFC	5, 6
2.	Mike Garton		MRO	5, 6
3.	Michael Gildea		NPCC	5, 6

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
4. Michael Crowley			SERC	1, 3									
5. Sean Iseminger			SERC	5, 6									
13.	Group	David Thorne	Pepco Holdings Inc and Affiliates	X		X							
Additional Member	**Additional Organization**	**Region**	**Segment Selection**										
1. Carl Kinsley	Delmarva Power and Light Co	RFC	1, 3										
14.	Group	Cynthia S. Bogorad	Transmission Access Policy Study Group	X		X	X	X	X				
Please see www.tapsgroup.org for TAPS' more than 40 members.													
15.	Group	John P. Hughes	Electricity Consumers Resource Council (ELCON)	X		X		X	X	X			
No additional members listed.													
16.	Group	William D Shultz	Southern Company Generation					X					
Additional Member	**Additional Organization**	**Region**	**Segment Selection**										
1. Tom Higgins	Southern Company Generation	SERC	5										
2. Terry Crawley	Southern Company Generation	SERC	5										
3. Therron Wingard	Southern Company Genreation	SERC	5										
4. Ed Goodwin	Southern Company Generation	SERC	5										
17.	Group	David Dockery or John Bussman	AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative	X		X		X	X				
No additional members listed.													
18.	Group	Janelle Marriott Gill	Tri-State Generation and Transmission Assn., Inc. Energy Management			X		X					
No additional members listed.													
19.	Group	Will Smith	MRO NERC Standards Review Forum (NSRF)										X
Additional Member	**Additional Organization**	**Region**	**Segment Selection**										
1. Mahmood Safi	Omaha Public Utility District	MRO	1, 3, 5, 6										
2. Chuck Lawrence	American Transmission Company	MRO	1										

Group/Individual		Commenter	Organization		Registered Ballot Body Segment									
					1	2	3	4	5	6	7	8	9	10
3.	Tom Webb	Wisconsin Public Service Corporation	MRO	3, 4, 5, 6										
4.	Jodi Jenson	Western Aera Power Administration	MRO	1, 6										
5.	Ken Goldsmith	Alliant Energy	MRO	4										
6.	Alice Ireland	Xcel Energy	MRO	1, 3, 4, 6										
7.	Dave Rudolph	Basin Electric Power Cooperative	MRO	1, 3, 5, 6										
8.	Eric Ruskamp	Lincoln Electric System	MRO	1, 3, 5, 6										
9.	Joe DePoorter	Madison Gas and Electric	MRO	3, 4, 5, 6										
10.	Scott Nickels	Rochester Public Utilities	MRO	4										
11.	Terry Harbour	MidAmerican Energy Company	MRO	1, 3, 5, 6										
12.	Marie Knox	Midwest ISO Inc.	MRO	2										
13.	Lee Kittleson	Otter Tail Power Company	MRO	1, 3, 4, 5										
14.	Scott Bos	Muscantine Power and Water	MRO	1, 3, 5, 6										
15.	Tony Eddleman	Nebraska Public Power District	MRO	1, 3, 5										
16.	Mike Brytowski	Great River Energy	MRO	1, 3, 5, 6										
17.	Richard Burt	Minnkota Power Cooperative	MRO	1, 3, 5, 6										
18.	Will Smith	Midwest Reliability Orgnization	MRO	10										
20.	Group	Al DiCaprio	IRC Standards Review Committee			X								

	Additional Member	Additional Organization	Region	Segment Selection
1.	Steve Myers	ERCOT	ERCOT	2
2.	Terry Bilke	MISO	MRO	2
3.	Don Weaver	NBSO	NPCC	2
4.	Mark Thompson	AESO	WECC	2
5.	Greg Campoli	NYISO	NPCC	2
6.	Charles Yeung	SPP	SPP	2
7.	Ben Li	IESO	NPCC	2

21.	Individual	Ian Grant	Tennessee Valley Authority	X		X		X				X		
22.	Individual	Janet Smith	Arizona Public Service Company	X		X		X	X					
23.	Individual	David Kiguel	Hydro One Networks Inc.	X		X								
24.	Individual	Mark Conner	Tri-State GandT	X										
25.	Individual	Brandy A. Dunn	Western Area Power Administration	X										

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
26.	Individual	William Bush	Holland Board of Public Works			X							
27.	Individual	Katie Coleman	Texas Industrial Energy Consumers							X			
28.	Individual	Sandra Shaffer	PacifiCorp	X		X		X	X				
29.	Individual	Heather Hunt	NESCOE									X	
30.	Individual	Antonio Grayson	Southern Company	X		X							
31.	Individual	Irion A. Sanger	Industrial Customers of Northwest Utilities							X			
32.	Individual	Doug Hohlbaugh	FirstEnergy Corp.	X		X	X	X	X				
33.	Individual	John Bee	Exelon	X		X		X					
34.	Individual	Gary Carlson	Michigan Public Power Agency					X					
35.	Individual	Richard Malloy	Idaho Falls Power			X		X					
36.	Individual	Anthony Jablonski	ReliabilityFirst										X
37.	Individual	Colin Anderson	Ontario Power Generation Inc.					X					
38.	Individual	Thomas C. Duffy	Central Hudson Gas and Electric Corporation			X							
39.	Individual	Manny Robledo	City of Anaheim			X	X						
40.	Individual	Deborah J Chance	Chevron U.S.A. Inc.					X		X	X		
41.	Individual	Alice Ireland	Xcel Energy	X		X		X	X				
42.	Individual	Edwin Tso	Metropolitan Water District of Southern California	X									
43.	Individual	Greg Rowland	Duke Energy	X		X		X	X				
44.	Individual	David Proebstel	Clallam County PUD No.1			X							
45.	Individual	Richard Salgo	NV Energy	X									
46.	Individual	Jerome Murray	Oregon Public Utility Commission Staff									X	
47.	Individual	Mary Jo Cooper	Z Global Engineering and Energy Solutions			X							
48.	Individual	Eric Salsbury	Consumers Energy			X	X	X					
49.	Individual	Tracy Richardson	Springfield Utility Board			X							

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
50.	Individual	Kerry Wiedrich	Mission Valley Power			X						X	
51.	Individual	Denise M. Lietz	Puget Sound Energy	X		X		X					
52.	Individual	Chris de Graffenried	Consolidated Edison Co. of NY, Inc.	X		X		X	X				
53.	Individual	Gail Shaw	Tillamook PUD			X						X	
54.	Individual	Thad Ness	American Electric Power	X		X		X	X				
55.	Individual	Joe Petaski	Manitoba Hydro	X		X		X	X				
56.	Individual	Robert Ganley	Long Island Power Authority	X									
57.	Individual	John A. Gray	The Dow Chemical Company					X		X	X		
58.	Individual	Rick Hansen	City of St. George			X		X				X	
59.	Individual	Donald E. Nelson	Massachusetts Department of Public Utilities									X	
60.	Individual	David Burke	Orange and Rockland Utilities, Inc.	X		X							
61.	Individual	Bud Tracy	Blachly-Lane Electric Cooperative (BLEC)			X							
62.	Individual	Roger Meader	Coos-Curry Electric Cooperative (CCEC)			X							
63.	Individual	Kathleen Goodman	ISO New England Inc		X								
64.	Individual	Dave Markham	Central Electric Cooperatve (CEC)			X							
65.	Individual	Dave Hagen	Clearwater Power Company (CPC)			X							
66.	Individual	Eric Lee Christensen	Snohomish County PUD	X		X	X	X					
67.	Individual	Roman Gillen	Consumer's Power Inc.	X		X							
68.	Individual	Dave Sabala	Douglas Electric Cooperative (DEC)			X							
69.	Individual	Bryan Case	Fall River Rural Electric Cooperative (FALL)			X							
70.	Individual	Rick Crinklaw	Lane Electric Cooperative (LEC)			X							
71.	Individual	Michael Henry	Lincoln Electric Cooperative (LEC)								X		
72.	Individual	Jon Shelby	Northern Lights Inc. (NLI)			X							
73.	Individual	Randy MacDonald	NBPT	X									
74.	Individual	Ray Ellis	Okanogan County Electric Cooperative								X		

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
			(OCEC)										
75.	Individual	Donald Jones	Texas Reliability Entity										X
76.	Individual	Diane Barney	New York State Dept of Public Service									X	
77.	Individual	Rick Paschall	Pacific Northwest Generating Cooperative (PNGC)	X		X	X				X		
78.	Individual	Heber Carpenter	Raft River Rural Electric Cooperative (RAFT)			X							
79.	Individual	Marc Farmer	West Oregon Electric Cooperative								X		
80.	Individual	John Seelke	PSEG Services Corp	X		X		X	X				
81.	Individual	Sylvain Clermont	Hydro-Quebec TransEnergie	X								X	
82.	Individual	Michael Falvo	Independent Electricity System Operator		X								
83.	Individual	John Allen	Rochester Gas and Electric and New York State Electric and Gas	X									
84.	Individual	Steve Eldrige	Umatilla Electric Cooperative (UEC)	X		X							
85.	Individual	Steve Alexanderson	Central Lincoln			X	X					X	
86.	Individual	Allan Long	Memphis Light, Gas and Water Division	X									
87.	Individual	Shane Sweet	Harney Electric Cooperative, Inc.			X							
88.	Individual	Russell Noble	Cowlitz County PUD			X	X	X					
89.	Individual	Brian Evans-Mongeon	Utility Services, Inc.								X		
90.	Individual	Martyn Turner	LCRA Transmission Services Corporation	X									
91.	Individual	Saurabh Saksena	National Grid	X		X							
92.	Individual	Jennifer Flandermeyer	Kansas City Power and Light Company	X		X		X	X				
93.	Individual	Darryl Curtis	Oncor Electric Delivery Company LLC	X									
94.	Individual	Joe Tarantino	Sacramento Municipal Utility District	X		X	X	X	X				
95.	Individual	Don Schmit	Nebraska Public Power District	X		X		X					
96.	Individual	David M. Conroy	Central Maine Power Company	X									
97.	Individual	Kirit Shah	Ameren	X		X		X	X				
98.	Individual	Guy Andrews	Georgia System Operations Corporation			X	X						

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
99.	Individual	Scott Miller	MEAG Power	X		X		X					
100.	Individual	Paul Titus	Northern Wasco County PUD			X							
101.	Individual	Linda Jacobson-Quinn	Farmington Electric Utility System			X							
102.	Individual	Allen Rinard	South Houston Green Power, LLC					X		X			
103.	Individual	Angela P Gaines	Portland General Electric Company	X		X		X	X				
104.	Individual	Andrew Gallo	City of Austin dba Austin Energy	X		X	X	X	X				
105.	Individual	Martin Kaufman	ExxonMobil Research and Engineering	X				X					
106.	Individual	David Kahly	Kootenai Electric Cooperative			X							
107.	Individual	Andy Pusztai	ATC LLC	X									
108.	Individual	Bo Jones	Westar Energy	X		X		X	X				
109.	Individual	Mary Downey	Redding Electric Utility			X	X	X	X				
110.	Individual	Paul Cummings	City of Redding					X					
111.	Individual	Keith Morisette	Tacoma Power	X		X	X	X	X				
112.	Individual	Rex Roehl	Indeck Energy Services					X					
113.	Individual	Frank Cumpton	BGE	X									

1. **The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.**

Summary Consideration: After consideration of the comments below, the SDT has decided against making any changes to the draft core definition as the changes suggested do not provide additional clarity. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

No changes were made to the core definition.

Organization	Yes or No	Question 1 Comment
NERC Staff Technical Review	No	The sentence, “This does not include facilities used in the local distribution of electricity,” is a commentary or statement of objective rather than a definition of what facilities comprise the BES. Including such information that does not define the facilities to be included or excluded will be a source of confusion in applying the definition. The BES definition as proposed by the SDT may in fact include such facilities and as stated in paragraph 37 of Order 743: “Determining where the line between “transmission” and “local distribution” lies, which includes an inquiry into which lower voltage “transmission” facilities are necessary to operate the interconnected transmission system, should be part of the exemption process the ERO develops.”If the drafting team believes that Exclusions E1 through E4 in the

Organization	Yes or No	Question 1 Comment
		definition are sufficient to not include any facilities used in the local distribution of electricity then those exclusions, and not the aforementioned sentence in the "core definition," define the facilities that are not included (i.e., the sentence is unnecessary).
Response: The SDT discussed your comment and decided against deletion of the sentence in the core definition that refers to facilities used in the local distribution of electricity. There were many commenters who were in favor of the inclusion of the sentence in the core definition. Additionally, the SDT does not agree with the premise that the exclusions are fully sufficient to not include any facilities used in the local distribution of electricity in the definition. No change made.		
Southwest Power Pool Standards Review Team	No	The last sentence of the core states that no distribution facilities will be included, but some of these facilities could be included due to blackstart resources. We don't disagree with the idea of removing distribution facilities, but would like to see some clarification or qualifier.
Westar Energy	No	The last sentence of the core part of the definition states that no distribution facilities will be included, but we feel that some of these facilities could be included due to also being blackstart resources. We agree with the idea of removing distribution facilities, but would like to see some clarification or a qualifier with regards to blackstart resources.
Response: The inclusion of Blackstart Resources in Inclusion I3 is meant to include the blackstart generators but is not meant to include any local distribution facilities at voltage levels < 100 kV that may connect the Blackstart Resources to the BES. No change made.		
Southern Company Generation	No	We have two concerns with the changes that are proposed. First, the use of "effective dates" and "compliance obilgations ... shall begin" in the implementation plan of the definition change is confusing. Effective date is usually used to indicate the mandatory and enforceable date of a new item. Second, a radial circuit from 100kV to a generating facility with two (2) 20 MVA generators seems to meet both the inclusion criteria (I2) and the

Organization	Yes or No	Question 1 Comment
		exculsion criteria (E1). Which criteria is dominant, inclusion or exclusion?

Response: See the responses addressing the Effective Dates and the C compliance Obligations in Question 11.

As to the second part of your question, the two generators would be included in the BES by virtue of their gross individual nameplate ratings. However, the radial circuit itself would be excluded since the gross generation was not equal to or greater than 75 MVA.

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.

Organization	Yes or No	Question 1 Comment
Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
National Grid	No	While we agree that the BES should not include facilities used in the local distribution of energy, we feel that this is already captured in Exclusion E3. Stating it in the core definition is confusing, and should be eliminated. We suggest removing "This does not include facilities used in the distribution of electric energy" from the core definition.
IRC Standards Review Committee	No	While we agree with the changes to the definition, we do not understand the purpose of the final sentence "This does not include facilities used in the local distribution of electric energy." Since the issue of local (distribution) networks is addressed under Exclusion E3, we do not see the added benefit of the referenced text.
Response: The SDT discussed your comment and decided against deletion of the sentence in the core definition that refers to facilities used in the local distribution of electricity. There were many commenters who were in favor of the inclusion of the sentence in the core definition. Furthermore, Exclusion E3 does not by itself define the entire population of facilities used in the local distribution of electricity.		
Hydro One Networks Inc.	No	Although we agree with the concept and commend the SDT for developing explicit inclusions and exclusions as part of the definition, we believe there are several outstanding issues and concerns listed as our response to Q11 that need to be addressed by the SDT and by NERC as the ERO.
Response: Please see the detailed response to Q11.		

Organization	Yes or No	Question 1 Comment
Massachusetts Department of Public Utilities	No	The Massachusetts Department of Public Utilities ("MA DPU") appreciates the opportunity to provide comments on the second draft definition of the Bulk Electric System ("BES"). Massachusetts is the largest state by population and load in New England. It comprises 46% of both the region's population and electricity consumption. Generating plants located in Massachusetts represent 42% of New England's capacity and our capitol city, Boston, is the largest load center in the region. Some of the revisions since the last posting of the draft BES definition have improved the proposed language. However, the MA DPU has a number of concerns regarding both the substance of the definition and the process for developing this standard: 1) Phased Approach. While well-intentioned, separating the BES definition project into two separate phases is problematic from both a procedural and substantive perspective. While we recognize that the filing due date is rapidly approaching, the BES definition cannot be considered in a vacuum, divorced from the concerns raised by a number of parties in response to past postings of the BES definition. The issues NERC has identified for consideration during the proposed "Phase 2" are inseparable from the development of the BES definition (e.g., generation thresholds, technical justification for the 100 kV threshold) and should be squarely addressed before a definition is adopted and ratepayers incur costs related to compliance with mandates that may or may not be revised through the second phase of the project. The importance of considering concerns before adopting a definition is heightened by the proposed two-year implementation requirement. This short implementation period almost guarantees that entities will commit resources shortly after adoption of the definition to ensure compliance within the mandated period. In other words, ratepayers will bear costs related to compliance irrespective of any change resulting from the Phase 2 process or the exception process. Expediency, while understandable given the filing deadline, must be balanced against the risk that a multi-phased approach could lead to

Organization	Yes or No	Question 1 Comment
		significant consumer costs without attendant meaningful reliability benefits. 2) Cost-Benefit Analysis. A cost impact analysis should be performed as part of developing any reliability standard. However, the development of the BES definition has failed to consider the cost impacts of the definition (and its inclusions and exclusions) and has not weighed these impacts against identified benefits that the definition would achieve. The MA DPU supported the May 21, 2011 comments from the New England States Committee on Electricity ("NESCOE") on the last posting of the BES definition. In these comments, NESCOE stated that "any new costs a revised definition imposes - which fall ultimately on consumers - should provide meaningful reliability benefits." A cost-benefit analysis should be integral to the development of a BES definition and, indeed, any reliability standard. This analysis should include a probabilistic risk assessment examining the likelihood of an event and the costs and risks resulting from such event, which should be weighed against the costs of complying with the proposed reliability measures. 3) Technical Justification. In addition to performing a cost-benefit analysis, a technical basis must be provided to justify a proposed reliability standard. However, the proposed BES definition does not provide a technical justification for the 100 kV threshold, the threshold for generation resources, or other elements of the definition. As stated above, while well-intentioned and understandable, deferring this technical justification to a later and separate phase of the project is a flawed and potentially costly approach. Providing a technical justification for a reliability standard is a core function of standards development and should be addressed at the forefront of the process rather than relegated to a separate phase largely undertaken after a standard is filed. In Order 743, the Federal Energy Regulatory Commission ("FERC" or "the Commission") directed NERC to revise the BES definition. Revision to Electric Reliability Organization Definition of Bulk Electric System, Order No. 743A, 134 FERC Â¶ 61,210

Organization	Yes or No	Question 1 Comment
		(Mar. 17, 2011) at P 8, citing to Revision to Electric Reliability Organization Definition of Bulk Electric System, Order No. 743, 133 FERC Â¶ 61,150 (2010). The Commission stated that one way NERC could address the technical and policy concerns FERC had identified would be to institute a "bright-line threshold that includes all facilities operated at or above 100 kV except defined radial facilities, and establish an exemption process and criteria for excluding facilities [NERC] determines are not necessary for operating the interconnected transmission network." Id. at P 8. However, the Commission made clear in Order 743 that NERC may propose an alternative proposal and that the 100 kV threshold is an "initial line of demarcation" to be refined through exclusions and exemptions. Id. at PP 8, 40. Accordingly, unless and until NERC provides a technical justification for its approach, the Standard should use the 100 kV threshold concept in a way that is consistent with the Commission's guidance. Specifically, the two criteria that bound the BES definition are (1) the statutory exclusion of facilities used in local distribution, and (2) the requirement that the facilities included be "necessary for reliable operation" of the interconnected transmission system. A definition that recognizes these limits, coupled with an efficient and transparent exception process, would appear to meet the Commission's expectations. For these reasons, absent a technical justification for imposing a 100 kV threshold, the MA DPU supports the revised core definition offered by NESCOE in comments filed on this 2nd Draft: "All Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher that are necessary for the reliable operation of the interconnected transmission network, including but not limited to the facilities listed below as Inclusions, and excluding (1) facilities that are used in the local distribution of electric energy, and (2) the facilities and systems listed below as Exclusions. Other Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." The definition of the BES is

Organization	Yes or No	Question 1 Comment
		critical to NERC's role as ERO and will have a significant impact on system reliability and cost to consumers. While FERC had concerns that the existing definitions for the bulk power system were under-inclusive, the proposed Standard, as drafted, risks erring in the opposite direction and appears inconsistent with the Commission's guidance in this area.
NESCOE	No	The New England States Committee on Electricity ("NESCOE") appreciates the opportunity to provide comments on the revised BES definition. NESCOE is New England's Regional State Committee and represents the collective views of the six New England states. Please consider this submission to reflect the views of the States of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont. Some of these states may submit separate comments in addition to this joint filing. NESCOE does not believe that the proposed changes address our fundamental concerns. As NESCOE pointed out in its comments on the previous draft, the definition's reliance on a 100 kV "bright line" threshold may impose substantial costs on New England ratepayers without achieving meaningful reliability benefits. NERC and the drafting team have not provided any technical justification for imposing the 100 kV test, despite its potential for over-inclusiveness and significant costs. NESCOE believes that the Federal Energy Regulatory Commission ("FERC" or "the Commission") recognizes the need to avoid this result. As the Commission pointed out in Order 743A, Order 743 does not mandate the application of a 100 kV threshold, and NERC is free to propose alternatives. Unless and until NERC provides a technical justification for its approach, the Standard should use the 100 kV threshold concept in a way that is consistent with the Commission's guidance. Specifically, the Standard should make clear that the 100 kV threshold is an "initial line of demarcation," and not the end of the analysis. According to Order 743A, the two criteria that bound the BES definition are (1) the statutory exclusion of facilities used in local

Organization	Yes or No	Question 1 Comment
		distribution, and (2) the requirement that the facilities included be "necessary for reliable operation" of the interconnected transmission system. A definition that recognizes these limits, coupled with an efficient and transparent exceptions process, would meet FERC's expectations. The proposed definition does not meet this standard. For these reasons, absent a technical justification for imposing a 100 kV threshold, NESCOE suggests the following revised core definition: "All Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher that are necessary for the reliable operation of the interconnected transmission network, including but not limited to the facilities listed below as Inclusions, and excluding (1) facilities that are used in the local distribution of electric energy, and (2) the facilities and systems listed below as Exclusions. Other Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process." Where FERC had concerns that the existing definitions for the bulk power system were under-inclusive, the proposed Standard risks erring in the opposite direction. Because the definition of the BES is critical to NERC's role as ERO and will have a significant impact on ratepayers, NESCOE believes the drafting team should track FERC's guidelines as closely as possible, or provide a specific technical justification for relying on the 100 kV bright line threshold.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition		

Organization	Yes or No	Question 1 Comment
coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that the best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
ReliabilityFirst	No	This seems very confusing, but should be clear and easy enough for anyone to pickup, read, understand, apply and arrive at the same conclusion. The term local distribution needs to be either defined or have some guidance provided on what it is intended to cover. A suggestion for defining distribution would be that radials and local networks makeup distribution facilities. Radials usually terminate at distribution or customer substations and local networks are primarily used for distribution also. The Commission granted NERC the ability to define distribution in Order 743-A, paragraphs 67-71. It is not clear if the BES is meant to be a contiguous system or not from the language in the revised definition. ReliabilityFirst Staff believes that the BES should be contiguous, and therefore, any facilities needed to connect real and reactive resources to the BES need to be included. To maintain reliability, the BES cannot have pockets of generation that are not connected

Organization	Yes or No	Question 1 Comment
		to the BES via BES facilities. ReliabilityFirst Staff believes that without including the paths from BES generators in the BES, the reliable operation of the system could be jeopardized if the paths are unavailable due to non-compliance to Reliability Standards. For example, wind farm collector systems at voltages operated at less than 100 kV should be included in the BES for the above reason.
Response: The SDT discussed your comment and decided against deletion of the sentence in the core definition that refers to facilities used in the local distribution of electricity. There were many commenters who were in favor of the inclusion of the sentence in the core definition. Additionally, the SDT does not agree that Exclusions E1 and E3 are fully sufficient to not include any facilities used in the local distribution of electricity in the definition. No change made. The SDT has previously stated the existing BES definition does not mandate contiguity of the BES and the proposed definition is carrying that principle forward. Simply making a blanket statement the BES must be contiguous could have unintended consequences. However, the BES understands the importance of the concept and has agreed to discuss contiguity issues in Phase 2 of this project.		
Ontario Power Generation Inc.	No	OPG continues to question the need for the changes required (and costs imposed) as a result of this new definition. This is particularly true in the NPCC region where an impact based methodology is being used to determine the set of BES elements. A very clear 100kV bright line, as proposed in this draft, will dramatically increase the list of generation elements that must meet reliability standards, without a corresponding increase in wide-area reliability. OPG recommends that the work planned for phase II, technical justification of the generation and voltage thresholds, should be completed before implementing the new definition of BES.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or		

Organization	Yes or No	Question 1 Comment
contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.		
Kansas City Power and Light Company	No	There is no established basis for the generation thresholds referenced through the ERO Statement of Compliance Registry Criteria in Appendix 5B and the specificity of 75 MVA in the proposed BES definition. The objectives identified in the Phase 2 SAR for the definition of the Bulk Electric System include establishing an engineering basis for the generation thresholds. Phase 2 will be critical in refining and improving the Bulk Electric System definition and bringing additional clarity to the definition.
New York State Dept of Public Service	No	The core definition is still deficient due to a lack of technical support for basing the BES definition on 100 kV and for lack of any cost/benefit analysis.
City of Anaheim	No	The City of Anaheim recommends either changing the E1 (b) language back to that of the previous BES definition draft, i.e. 75 MVA or above connected at 100 kV or above, or limit the amount of generation allowed within a Radial Element or Local Network to 300 MVA or less, which is the amount of uncontrolled load loss that constitutes a reportable "disturbance" pursuant to EOP-004 and DOE Form OE-417. If DOE and NERC do not consider a 300 MW uncontrolled loss of load a reportable event, then why would the potential loss of a 75 MVA of non-critical generator connected at 69 kV make a Radial Element or Local Network critical to the reliability of the BES? The current ERO Statement of Compliance Criteria does not require GO/GOP

Organization	Yes or No	Question 1 Comment
		registration for generation connected below 100 kV as long as it's not critical to the reliability of the BES, i.e. black start, etc., even if the amount of generation is greater than 75 MVA. There is good reason for this because the mere loss of 75 MVA generator would not affect the reliability of a system as big as the Western Interconnection, at all, and a fault at say 69 kV would have sufficient impedance not to affect the BES from an electrical perspective.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
Consolidated Edison Co. of NY, Inc.	No	o Please clarify the phrase “facilities used in local distribution” as used in the ‘core’ BES Definition. What is the purpose of this phrase in the BES Definition? How does the SDT propose that an entity demonstrate that a facility is used in local distribution? o Does this phrase “facilities used in local distribution” establish a jurisdictional boundary which takes precedence over all other parts of the BES Definition and Designations? o If this phrase does not take precedence over the remainder of the BES Definition and Designations, i.e., perhaps only over some parts BES Definition and Designations, or over none of the BES Definition and Designations, then what was the drafting teams understanding of and intent

Organization	Yes or No	Question 1 Comment
		with regard to “facilities used in local distribution?” o What are Entities supposed to do with respect to “facilities used in local distribution” identified by State and Provincial regulators? o How has NERC assured that the posted BES Definition and Designations meet the intent of the Commission to establish an exemption process that avoids identifying “facilities used in local distribution” as part of the BES (Â¶37 and Â¶39 below)? Recommendations: If “facilities used in local distribution” are to be excluded on jurisdictional grounds, then o The last sentence in the Core definition should be revised as follows: “This does not include facilities used in the local distribution of electric energy, as identified by a jurisdictional governmental authority.” o We strongly recommend that the BES SDT adopt the FERC Seven Factor test as a proven basis for establishing the boundary between jurisdictional Transmission and non-jurisdictional “facilities used in local distribution.” Supporting Discussion: In FERC Order 743-A the Commission stated69. We agree ... that the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes” By adopting this FERC Seven Factor test, the BES SDT will have fulfilled its obligation to respond to these FERC mandates relating to “local distribution” as stated in FERC Order 743: “Determining where the line between ‘transmission’ and ‘local distribution’ lies,” (Â¶37),”To the extent that any individual line would be considered to be local distribution, that line would not be considered part of the bulk electric system” (Â¶39), to establish “[A] means to track and review facilities that are classified as local distribution to ensure accuracy and consistent application of the definition” (Â¶119).Supporting References: FERC Order 743 observed some believe that “the Commission’s [and by extension NERC’s] proposal exceeds its jurisdiction by encompassing local distribution facilities that are not necessary for operating the interconnected transmission network.” [FERC

Organization	Yes or No	Question 1 Comment
		Order 743, Â¶27.]In this regard FERC Order 743 states: At Â¶37, Congress specifically exempted “facilities used in the local distribution of electric energy” from the definition. ... Determining where the line between “transmission” and “local distribution” lies, which includes an inquiry into which lower voltage “transmission” facilities are necessary to operate the interconnected transmission system, should be part of the exemption process the ERO develops. And at Â¶39, To the extent that any individual line would be considered to be local distribution, that line would not be considered part of the bulk electric system. And at Â¶119, ... [W]e believe that it would be beneficial for the ERO in maintaining a list of exempted facilities, to consider including a means to track and review facilities that are classified as local distribution to ensure accuracy and consistent application of the definition. Similarly, the ERO could track exemptions for radial facilities. [Emphasis added]Note that in Â¶119 the Commission clearly distinguishes between “radial facilities” and “local distribution” just as it differentiates between jurisdictional radials and non-jurisdictional local distribution facilities in footnote 82:82 As discussed further below, the Commission uses the term “exclusion” herein when discussing facilities expressly excluded by the statute (i.e., local distribution) and the term “exemption” when referring to the exemption process NERC will develop for use with facilities other than local distribution that may be exempted from compliance with the mandatory Reliability Standards for other reasons. FERC Order 743-A suggests:69. We agree with Consumers Energy, Portland General and others that the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes ...”
Response: The SDT discussed your comments and decided not to make changes to the core definition. The SDT included the last sentence in the draft BES core definition as a reference to Section 215 of the Energy Power Act that excludes these facilities from the bulk power system. In addition, FERC specifically excluded these facilities in Orders No. 743 and 743-A. By asking if this sentence defines a jurisdictional boundary, you are asking the SDT for a legal conclusion that is beyond the scope of the project.		

Organization	Yes or No	Question 1 Comment
The SDT expects that most of the facilities used in the local distribution of energy will be covered by the 100 kV voltage level as well as Exclusions E1 through E4. In the event the BES definition does not provide a definitive determination on whether an Element is classified as BES or non-BES, the Rules of Procedure Exception Process may be utilized on a case-by-case basis to either include or exclude an Element. While the SDT does not agree with the premise that Exclusions E1 through E4 are fully sufficient to not include any facilities used in the local distribution of electricity in the definition, the SDT declined to use the FERC Seven Factor Test to define the dividing line between transmission and distribution as this is not an applicable test in all areas of North America which includes the Canadian Provinces. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
Hydro-Quebec TransEnergie	No	The proposed revision to the definition maintaining this bright line of 100 kV would expand significantly what is considered to be BES in HQT's case (the amount of added facilities could be ten times more). Since the main structure of Quebec system is included in the BES where the best norms and standards apply, the inclusion in the BES of sub-systems at lower voltage and including generation will not bring significant impact on the reliable operation of the interconnected system, because of the nature of the Quebec Interconnection. Furthermore for HQT's system, the proposed BES definition combined with the exception procedure are presently incompatible or at least inconsistent

Organization	Yes or No	Question 1 Comment
		with the regulatory framework applicable in Quebec. The proposed changes have not address this concern, neither the SDT's responses to our previous comments last May (Q.1 and 12).We reiterate that the definition and the exception procedure shall be determined by Quebec's regulator, the RÃ©gie de l'Ã‰nergie du QuÃ©bec, (Quebec Energy Board) which has the responsibility to ensure that electric power transmission in Quebec is carried out according to the reliability standards it adopts. Per se, it would be necessary that E1 and E3 grant exclusions with much higher level of generation. It would also be necessary to allow for several levels of application for the Reliability Standards, in accordance with the RÃ©gie de l'Ã©nergie du QuÃ©bec approach: the Bulk Power System (BPS) as determined using an impact-based methodology, the Main Transmission System (MTS), and other parts of Regional System. Standards related to the protection system (PRC-004-1 and PRC-005-1) and those related to the design of the transmission system (TPL 001-0 to TPL-004-0) shall be applicable to the first level, but all other reliability standards shall be applied to the second level, the MTS. The MTS definition is somewhat different than the Bulk Electric System definition, and it includes elements that impact the reliability of the grid, supply-demand balance and interchanges. We argue that it would be necessary for NERC to address the regulatory issues outside ot the present context of the SDT and ROP team.
Response: While the SDT appreciates the differences within the North American continent, it attempted to craft a BES definition that can be applied within the ERO footprint. It is neither within the scope of the SDT nor is it appropriate for the SDT to provide any regulatory resolution within the definition. As previously stated in our responses, the SDT believes that Acts and Regulations supersede the requirements of any Standard setting body. As such, we agree that NERC along with relevant Regions will have to address these types of non-jurisdictional situations directly or explicitly through the Exception Process.		
Rochester Gas and Electric and New York State Electric and Gas	No	The second sentence, "This does not include facilities used in the local distribution of electric energy," is vague and not sufficiently clear for northeast industry expert colleagues to be certain of what is "not included."

Organization	Yes or No	Question 1 Comment
		This sentence seems to apply only to distribution facilities that have already been classified based on the FERC "Seven Factor Test" in Order 888. If so, this sentence be re-written as follows for clarity: "This does not include facilities classified as distribution facilities." For US entities, this classification is clearly delineated in our annual FERC Form 1 filing.
Central Maine Power Company	No	The second sentence, "This does not include facilities used in the local distribution of electric energy," is vague and not sufficiently clear for northeast industry expert colleagues to be certain of what is "not included." This sentence seems to apply only to distribution facilities that have already been classified based on the FERC "Seven Factor Test" in Order 888. If so, this sentence should be restated as follows for clarity: "This does not include facilities classified as distribution facilities." For US entities, this classification is clearly delineated in our annual FERC Form 1 filing.
Response: The SDT discussed your comment and decided against revision of the sentence in the core definition that refers to facilities used in the local distribution of electricity. There were many commenters who were in favor of the inclusion of the sentence as written in the core definition.		
South Houston Green Power, LLC	No	South Houston Green Power, LLC [SHGP], a registered generator owner in ERCOT, submits the following comments: Cogeneration facilities, some of which are well over 75 MW in size, are located at a number of industrial sites owned by SHGP and its affiliates. Some of these cogeneration facilities generate power that is distributed within the industrial site and used for manufacturing plant operations. In some instances, excess power not required for plant operations is delivered back into the electric transmission grid through the tie line(s) connecting the industrial site to the grid. While the tie lines and some of the internal lines at these industrial sites operate at 100kV or higher, they do not perform anything that resembles a transmission function. Rather than transmit power long distances from generation to load centers, the tie lines and internal lines perform primarily

Organization	Yes or No	Question 1 Comment
		an end user distribution function consisting of the distribution of power brought in from the grid or generated internally to different plants within each industrial site. In some cases, the facilities also perform an interconnection function to the extent they enable power from cogeneration facilities to be delivered into the grid. The voltage of the tie lines and internal lines at these industrial sites is dictated by the load and basic configuration of each site. Higher voltage lines are used when necessary to meet applicable load requirements or to reduce line losses. That does not mean that such lines perform a transmission function. SHGP would oppose any BES definition that would by default subject either the tie lines or the internal lines at such industrial sites to the mandatory reliability standards applicable to Transmission Owners and Transmission Operators when they more readily fit the Generation Owner / Generation Operator standards. Such an expanded BES definition would subject registered entities to substantial compliance costs and create potential exposure to penalties, but would not likely substantially enhance the reliability of the BES. Perhaps such costs and exposure could be justified in exceptional circumstances, if subjecting these facilities to compliance with reliability standards were to result in a material increase in reliability of the BES. There is reason to believe, however, that in many cases the additional reliability benefit would be minimal at best. The tie lines and internal lines at industrial sites owned by SHGP and its affiliates have been operated for years as end user distribution and interconnection facilities, and practices and procedures have developed over the years that have enabled such operations to achieve a high degree of reliability for such sites. Requiring these facilities to now operate in a different manner as transmission facilities may well result in a degradation of the reliability of the manufacturing plants located at such sites. For example, outages would have to be coordinated with the RTO, which may not be interested in coordinating such outages with scheduled manufacturing plant outages. In

Organization	Yes or No	Question 1 Comment
		light of these considerations, SHGP agrees with the proposed revisions to the core definition, particularly the proposal to include a sentence expressly excluding facilities used in the local distribution of electric energy, provided it is understood that end user-owned delivery facilities located "behind-the-meter" are, regardless of voltage level, by default outside the scope of this definition.
Response: See the detailed comments on this issue in the responses to the comments on the Exception Process as well as the Detailed Information to Support an Exception Request Form.		
Indeck Energy Services	No	As acknowledged in the response to Question 12 comments on the previous BES definition, the BES definition is expansive compared to the definition of the BPS in the FPA Section 215. The inclusion of the limited Exclusions is an attempt to remedy the situation. However, the Exclusions need to include a fifth one that if, based on studies or other assessments, it can be shown that any tranmission or generator element otherwise identified as part of the BES is not important to the reliability of the BPS, then that element should be excluded from the mandatory standards program. There has never been a study to show that elements, such as a 20 MW wind farm, 60 MW merchant generator (which operates infrequently in the depressed market) in a large BA (eg NYISO) or a radial transmission line connecting a small generator are important to the reliability of the BPS. They are covered by the mandatory standards program through the registration criteria. The BES Definition is the opportunity to permit an entity to demonstrate that an element is unimportant to reliability of the BPS. The SDT has identified a small subset of elements that it is willing to exclude. By their very nature, these exclusions dim the bright line that is the stated goal of this project. However, the SDT's foresight seems limited in its selections. Analytical studies are used to evaluate contingencies that could lead to the Big Three (cascading outages, instability or voltage collapse). Such a study showing that a transmission or generation element is bounded by the N-1 or N-2

Organization	Yes or No	Question 1 Comment
		contingency would exclude it from the BES definition. For example, in a BA with a NERC definition Reportable Disturbance of approximately 400 MW (eg NYISO), a 20 MW wind farm, 60 MW merchant generator or numerous other smaller facilities would be bounded by larger contingencies. It would take more than six 60 MW merchant generators with close location and common mode failure to even be a Reportable Disturbance, much less become the N-1 contingency for the Big Three. Exclusion E5 should be "E5 - Any facility that can be demonstrated to the Regional Entity by analytical study or other assessment to be unimportant to the reliability of the BPS (with periodic reports by the Regional Entity to NERC of any such assessments)."
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. In the event that the BES definition does not provide a definitive determination on whether an Element is classified as BES or non-BES, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
Snohomish County PUD Kootenai Electric Cooperative	Yes	The Public Utility District No. 1 of Snohomish County ("SNPD") believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. SNPD therefore strongly supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with

Organization	Yes or No	Question 1 Comment
		the BES definition; and, (2) the SDT moving forward expeditiously on Phase 2 of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. SNPD strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below" to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, SNPD supports use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. Â§ 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate - "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. Â§

Organization	Yes or No	Question 1 Comment
		824o(a)(4) - will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. Â§ 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). For similar reasons, Snohomish believes use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. Snohomish recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, Snohomish agrees with the approach taken by the SDT, which is to propose a Phase 2 of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase 2 proceeds expeditiously, Snohomish is prepared to support the BES definition as proposed by the SDT. While Snohomish strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the

Organization	Yes or No	Question 1 Comment
		second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, Snohomish believes a 200-kV threshold would be more appropriate for WECC than a 100-kV threshold. In addition, a 200-kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view is therefore incorrect. That being said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, Snohomish will support the SDT's proposal and will not further pursue its claims regarding the 200-kV threshold. Finally, we suggest that the SDT address the circumstance when an Element is covered by both an Inclusion and an Exclusion. We note that some of the inclusions already contain language addressing this question. For example, Inclusion 1 indicates that transformers falling within the specified parameters are part of the BES ". . . unless excluded under Exclusions E1 or E3." Where it is not already included, similar language should be included in the other Inclusions and/or Exclusions to explain whether the SDT intends the Inclusions or the Exclusions to predominate in situations where facilities might be covered by both.

Organization	Yes or No	Question 1 Comment
		We suggest clarifying language in our responses to Questions 2 and 5.
Response: The exception process will be filed concurrently with the definition. Phase 2 of this project will begin immediately following the conclusion of Phase 1 as SDT resources free up. The goal of the SDT and the Rules of Procedure Team is to have the Exception Process begin concurrently with the implementation of the revised BES Definition. Please see responses to Q2 and Q5.		
Metropolitan Water District of Southern California	Yes	Metropolitan Water District of Southern California ("MWDSC") generally supports the core definition of the Bulk Electric System as proposed. However, some of the proposed Inclusions and Exclusions need to be clarified as identified in questionnaires #6 and #10 below.
Response: Please see the detailed responses in Q6 and Q11 below.		
Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperatve (CEC) Clearwater Power Company (CPC) Consumer's Power Inc. Douglas Electric Cooperative (DEC) Fall River Rural Electric Cooperative (FALL)	Yes	The Public Utility District No. 1 of Clallam County ("CLPD") believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. CLPD therefore strongly supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase 2 of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. CLPD strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase "Unless modified by the lists shown below"

Organization	Yes or No	Question 1 Comment
Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC)		to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., "all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher") and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft. (2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, CLPD supports use of the phrase "all Transmission Elements" and the qualifying sentence: "This does not include facilities used in the local distribution of electric energy." This language helps ensure that FERC, NERC, and the Regional Entities ("REs") will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act ("FPA"). In Section 215(a)(1), Congress unequivocally excluded "facilities used in the local distribution of electric energy" from the keystone "bulk-power system" definition. 16 U.S.C. Â§ 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate - "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. Â§ 824o(a)(4) - will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. Â§ 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service).For similar reasons, Clallam believes use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the term

Organization	Yes or No	Question 1 Comment
		"Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. Clallam recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, Clallam agrees with the approach taken by the SDT, which is to propose a Phase 2 of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase 2 proceeds expeditiously, Clallam is prepared to support the BES definition as proposed by the SDT. While Clallam strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our II proceeds expeditiously, Clallam is prepared to support the BES definition as proposed by the SDT. While Clallam strongly supports the overall approach adopted

Organization	Yes or No	Question 1 Comment
		by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, Clallam believes a 200-kV threshold would be more appropriate for WECC than a 100-kV threshold. In addition, a 200-kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view is therefore incorrect. That being said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, Clallam will support the SDT's proposal and will not further pursue its claims regarding the 200-kV threshold.
Response: The exception process will be filed concurrently with the definition. Phase 2 of this project will begin immediately following the conclusion of Phase 1 as SDT resources free up. The goal of the SDT and the Rules of Procedure Team is to have the Exception Process begin concurrently with the implementation of the revised BES Definition.		
Michigan Public Power Agency	Yes	The Michigan Public Power Agency (MPPA) believes the SDT continues to make substantial progress towards a clear and workable definition of the

Organization	Yes or No	Question 1 Comment
		Bulk Electric System (“BES”) that markedly improves both the existing definition and the SDT’s previous proposal. MPPA therefore strongly supports the new definition, although our support is conditioned on: (1) A workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase 2 of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. MPPA strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase “Unless modified by the lists shown below” to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., “all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher”). (2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, MPPA supports use of the phrase “all Transmission Elements” and the qualifying sentence: “This does not include facilities used in the local distribution of electric energy.” This language helps ensure that FERC, NERC, and the Regional Entities (“REs”) will act within the jurisdictional constrains Congress placed in Section 215 of the Federal Power Act (“FPA”). In Section 215(a)(1), Congress unequivocally excluded “facilities used in the local distribution of electric energy” from the keystone “bulk-power system” definition. 16 U.S.C. Â§ 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission

Organization	Yes or No	Question 1 Comment
		system, where the reliability problems Congress intended to regulate - "instability, uncontrolled separation, [and] cascading failures," 16 U.S.C. Â§ 824o(a)(4) - will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. Â§ 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). MPPA also believes the use of the phrase "Transmission Elements" as the starting point for the base definition is desirable because both "Transmission" and "Elements" are already defined in the NERC Glossary of Terms Used, and the term "Transmission" makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. MPPA believes this was one of the many key elements addressed by FERC in Order No. 743 and reinforced by FERC Order No. 743A and has been missing from the previous definition as well as the original definition being used since Compliance efforts commenced in June, 2007 . Because of this lack of clarity MPPA has had numerous discussions with the region regarding all 17 of our member's connection to the TO/TOP in Michigan. Our discussions have resulted in defending 6 of our members specifically from the "Bright Line definition" path while having no tools in our tool box to substantiate our exclusion. When a small municipality with a peak load of 12.6 MW and no generation must be defended from a TO and/or TOP registration just because of its connection to it's TO/TOP the process requires needed adjustment for clarity. This was too small to even qualify as a DP under the Statement of Compliance Registry Criteria but must have to defend itself from a TO/TOP registration issue. (3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry

Organization	Yes or No	Question 1 Comment
		Criteria ("SCRC") (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. A member of MPPA has been involved in a registration issue and it has a 3rd party study conducted by a nation consulting firm showing for the MISO area, generation levels of 100 MVA and 300 MVA aggregate or above are below the standard calculation mathematical significant impact criteria for static and dynamic planning protocol. MPPA recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, MPPA agrees with the approach taken by the SDT, which is to propose a Phase 2 of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase 2 proceeds expeditiously, MPPA is prepared to support the BES definition as proposed by the SDT. While MPPA strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Eastern Interconnection. That being said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition

Organization	Yes or No	Question 1 Comment
		that works in the Eastern Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, MPPA will support the SDT's proposal. Finally, we suggest that the SDT address the circumstances when a facility is covered by both an Inclusion and an Exclusion. We note that some of the inclusions already contain language addressing this question. For example, Inclusion 1 indicates that transformers falling within the specified parameters are part of the BES ". . . unless excluded under Exclusions E1 or E3." Where it is not already included, similar language should be included in the other Inclusions and/or Exclusions to explain whether the SDT intends the Inclusions or the Exclusions to predominate in situations where facilities might be covered by both. We suggest clarifying language in our comments to I1 and I4 below.
Response: The exception process will be filed concurrently with the definition. Phase 2 of this project will begin immediately following the conclusion of Phase 1 as SDT resources free up. The goal of the SDT and the Rules of Procedure Team is to have the Exception Process begin concurrently with the implementation of the revised BES Definition. See the detailed response to your comments regarding Inclusion I1 and I4 in the specific questions and responses below.		
FirstEnergy Corp.	Yes	However, consider changing the last sentence to read "This does not include facilities operated at less than 100kV, unless modified below, which are are used in the local sub-transmission and distribution of electric energy."
Response: The SDT discussed your comments and decided not to change the core definition. The BES definition does not include facilities operated at less than 100 kV.		
Industrial Customers of Northwest	Yes	The Industrial Customers of Northwest Utilities ("ICNU") submits the

Organization	Yes or No	Question 1 Comment
Utilities		following comments regarding the North American Electric Reliability Corporation's ("NERC") proposal for defining the Bulk Electric System ("BES"). ICNU is an incorporated, non-profit association of large end-use electric customers in the Pacific Northwest, with offices in Portland, Oregon. ICNU previously submitted comments in the Western Electricity Coordinating Council's ("WECC") process for defining the BES. ICNU's members are not electric utilities, but some ICNU members own substations that are interconnected to utility transmission systems and utility distribution systems. In addition, in some cases, ICNU members operate local distribution facilities behind their substations to serve their end-use loads. In some cases, the ICNU member's interconnection to the utility-owned transmission system or distribution system is via a utility-owned radial line; and, in others, the ICNU member's distribution system is looped into the utility's transmission system for reliability purposes. Finally, some ICNU members have local distribution systems that include the ICNU member's backup generating facilities. ICNU is submitting comments, because these facilities arguably could fall within NERC's proposed definition of BES. ICNU appreciates the work that NERC has done to date, and encourages NERC to develop a rule that recognizes the unique aspects of the Pacific Northwest transmission system and the particular needs of end-use customers. Given the arbitrary requirements and limitations imposed by the Federal Energy Regulatory Commission, ICNU supports NERC's overall approach to defining the BES. NERC has proposed a bright line rule in which all transmission elements operated 100 kV or higher will be included in the definition, subject to certain inclusions and exclusions. ICNU supports NERC's goal of excluding facilities in the local distribution of electric energy. NERC proposes three general classes of exclusions, which includes certain radial systems, generating units that serve all or part of retail customer's load, and local networks. Specifically, NERC proposes that: 1) radial systems 100 kV and higher shall be excluded if they only serve load, or only include

Organization	Yes or No	Question 1 Comment
		certain generation resources less than 75 MVA; 2) generating units that serve customer load on the customer meter are excluded if the net capacity provided to the BES does not exceed 75 MVA and standby, back up and maintenance power services are provided; 3) local networks operated less than 300 kV that distribute power to load rather than transfer bulk power across the interconnected system; and 4) reactive power owned and operated by a retail customer solely for its own benefit. ICNU supports these exclusions; however, ICNU is concerned that certain end-use retail customer facilities that do not impact the BES may still be inappropriately included. NERC appears to recognize this possibility and includes an exception process to include or exclude facilities on a case-by-case basis. ICNU urges NERC to develop this exception process, and to review the work by WECC regarding how to structure an appropriate exception. At a minimum, the exception process should not require end-use customers to perform costly and complex studies, but should instead require utilities or regional organizations that have the relevant expertise to conduct the necessary studies to determine if a specific facility should be removed or included in the BES. ICNU is also concerned about the term "non-retail generation," which does not appear to have a corresponding definition. ICNU understands that non-retail generation is intended to apply to generation behind the retail customer's meter. ICNU recommends that net metered systems should not count towards the generation limits for radial and local network systems.
Response: See the detailed comments on this issue in the responses to the comments on the Rules of Procedure Exception Process as well as the Detailed Information to Support an Exception Request Form. To address your second comment, the SDT declined to change the term "non-retail generation". Non-retail generation is the generation on the system (supply) side of the retail meter.		

Organization	Yes or No	Question 1 Comment
PacifiCorp	Yes	PacifiCorp believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System ("BES") that markedly improves both the existing definition and the SDT's previous proposal. PacifiCorp strongly supports the new definition, conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase 2 of the standards development process in accordance with the SAR recently put forward by the SDT.
Response: The SDT appreciates your support for the clarifying changes made to the core definition. The goal of the SDT and the Rules of Procedure Team is to have the Exception Process begin concurrently with the implementation of the revised BES Definition. Phase 2 of this project will begin immediately following the conclusion of Phase 1 as SDT resources free up.		
Holland Board of Public Works	Yes	Holland BPW believes that the proposed definition is an improvement to the status quo, but requires additional work. The thresholds for classifying generators as Bulk Electric System (BES) must be revised. There was little technical support for proposing the current thresholds. No greater evidence than that which was proffered for the initial thresholds should be required to modify those standards. Four years of compliance experience and industry feedback support increasing these thresholds. Holland BPW supports increasing the generation thresholds from 20 MVA (individual gross nameplate) and 75 MVA (aggregate gross nameplate) to not less than 100 MVA (individual gross nameplate) and 300 MVA (aggregate gross nameplate). Holland BPW recognizes that the SDT and NERC have committed to making these revisions as part of "Phase 2", and are asking the industry to trust that such an initiative will not succumb to work on other initiatives. However, even if work on this initiative commences

Organization	Yes or No	Question 1 Comment
		immediately, entities that should be removed from the Compliance Registry face costs of compliance or the risk of non-compliance penalties even though their facilities are not necessary for the reliable operation of the interconnected transmission system. That said, there are two significant improvements in the revised draft. First, it is essential to make clear that the "Inclusions" and "Exclusions" apply only to the first sentence of the core definition (i.e., "Transmission Elements"). The revised definition appears to address this. By placing "Unless modified by the lists shown below" at the beginning of the first sentence of the definition clarifies that the lists of Inclusions and Exclusions pertain only to "Transmission Elements" that would otherwise be included or excluded from the core definition. The revised definition and the lists of Inclusions and Exclusions do not and cannot be applied in a manner to pull in facilities used in the local distribution of electric energy as BES facilities because Congress, by statute, has already determined that such facilities are outside of NERC's reach, as recognized by the second sentence of the definition. Second, Holland BPW supports the addition of the second sentence of the core definition that states, "This does not include facilities used in the local distribution of electric energy." This language provides necessary recognition to the jurisdictional limitation provided for in Section 215 of the Federal Power Act, and as recognized by the FERC in Orders 743 and 743-A (see, e.g., Â¶Â¶ 58-59 in 743-A). Finally, if the revised definition goes forward, it is imperative that the rules of procedure providing for an exception process be adopted at the same time.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing		

Organization	Yes or No	Question 1 Comment
deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. As for your second group of comments, the SDT appreciates your support for the clarifying changes made to the core definition. The goal of the SDT and the Rules of Procedure Team is to have the Exception Process begin concurrently with the implementation of the revised BES Definition.		
Dominion	Yes	Dominion agrees with the clarifying changes provided that the use of the capitalized terms “Transmission” and “Elements” mean that an Element that is radial is not part of the BES regardless of whether it is specifically included in the Exclusions (E1 through E4).
Response: To the extent that a radial facility that is >100 kV does not meet the exclusion criteria as specified in Exclusions E1 through E4, the Exception Process can be used to provide a final decision on whether the facility is or is not a BES Element.		
Sacramento Municipal Utility District	Yes	In an effort to avoid potential confusion and provide clarity we believe the following sentence “This does not include facilities used in the local distribution of electric energy” more appropriately fits under the “exclusions,” rather than “inclusions,” section.
ISO New England Inc	Yes	The second sentence is unclear with respect to its intent. If it’s intended to cover the exclusion described in E3, the sentence is not needed. If it’s intended to mean something else, it is unclear as to what is intended and likely should be deleted.
Manitoba Hydro	Yes	Manitoba Hydro agrees in general with the changes made to the core definition but the sentence ‘This does not include facilities used in the local

Organization	Yes or No	Question 1 Comment
		distribution of electric energy' should be removed as it is covered under Exclusion E3 and reduces the clarity of the core definition.
City of Austin dba Austin Energy	Yes	In an effort to avoid potential confusion and provide clarity we believe the sentence, "This does not include facilities used in the local distribution of electric energy," more appropriately fits under the "exclusions" (rather "inclusions") section.
Balancing Authority Northern California	Yes	In an effort to avoid potential confusion and provide clarity we believe the following sentence "This does not include facilities used in the local distribution of electric energy" more appropriately fits under the "exclusions," rather than "inclusions," section.
Response: The SDT discussed your comment and decided against moving the sentence in the core definition that refers to facilities used in the local distribution of electricity to the Exclusions section. There were many commenters who were in favor of the inclusion of the sentence in the core definition.		
ExxonMobil Research and Engineering	Yes	However, in Order 743, FERC directed NERC to further delineate the differences between transmission systems (used to transfer electric power between regions) and distribution systems (used to deliver electric power locally). The inclusions and exclusions defined in the draft BES definition are a step in the right direction, but further work is necessary during Phase 2 to meet the intention of the order. Additionally, the SDT should consider defining terms, such as non-retail generation, or providing references (footnotes) that elaborate on the referenced concept.
Response: Thank you for your support of Phase 2. Non-retail generation is the generation on the system (supply) side of the retail meter.		

Organization	Yes or No	Question 1 Comment
Transmission Access Policy Study Group	Yes	TAPS appreciates the SDT's work on this project. For the most part, TAPS supports what it believes to be the intent of the proposed language. The proposed specific exclusion of facilities used in the local distribution of electric energy is appropriate and consistent with Section 215 of the Federal Power Act. However, we have one suggestion to better carry out what we believe to be the SDT's intent. The SDT proposes to change the core generation definition from the prior version's "...Real Power resources as described below, and Reactive Power resources connected at 100 kV or higher unless such designation is modified by the list shown below," to "Unless modified by the lists shown below, ... Real Power and Reactive Power resources connected at 100 kV or higher...." Because of this change from "as described below... unless... modified by the list shown below" to simply "unless modified by the lists shown below," the proposed core definition now has the effect of including all generation, regardless of size, that is connected at over 100kV. We do not think this is the SDT's intent. For the same reason, the core definition now has the effect of including all Reactive Power resources connected at over 100kV, including generators; Inclusion I5, which includes "[s]tatic or dynamic devices dedicated to supplying or absorbing Reactive Power," does not alter the core definition's inclusion of all Reactive Power resources connected at over 100kV (whether "dedicated" or not). The most straightforward solution to this problem is to simply delete Real and Reactive Power resources from the core definition, so that such resources are instead handled entirely in the Inclusions. The core definition would thus read: "Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher. This does not include facilities used in the local distribution of electric energy."
Florida Municipal Power Agency	Yes	FMPA appreciates the SDT's work on this project. For the most part, FMPA supports what it believes to be the intent of the proposed language. The proposed specific exclusion of facilities used in the local distribution of

Organization	Yes or No	Question 1 Comment
		electric energy is appropriate and consistent with Section 215 of the Federal Power Act. However, we have suggestions to better carry out what we believe to be the SDT's intent. The first sentence can be read as: "... all ... Real Power and Reactive Power resources connected at 100 kV or higher", which is surely not what the SDT intends. The basic problem is that Inclusions I2 and I4 do not modify the first sentence, e.g., from a set theory perspective, the set described by the first sentence includes the sets described in inclusions I2 and I4; hence, I2 and I4 do not modify the first sentence. From a literal reading, this would cause any size generator connected at 100 kV to be included, which is surely not the intent of the SDT. For similar reasons, the core definition and Inclusion I5 now has the effect of including all generators connected at 100 kV since a generator is a "dynamic device ... supplying or absorbing Reactive Power". The word "dedicated" in I5 is not sufficient in FMPA's mind to unambiguously exclude generators from this statement. FMPA suggests the following wording to address these issues:"Transmission Elements (not including elements used in the local distribution of electric energy) and Real Power and Reactive Power resources as described in the list below, unless excluded by Exclusion or Exception: a. Transmission Elements other than transformers and reactive resources operated at 100 kV or higher. b. Transformers with primary and secondary terminals operated at 100 kV or higher. c. Generating resource(s) (with gross individual or gross aggregate nameplate rating per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above. d. Blackstart Resources identified in the Transmission Operator's restoration plan. e. Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a

Organization	Yes or No	Question 1 Comment
		voltage of 100 kV or above, but not including generation on the retail side of the retail meter. f. Non-generator static or dynamic devices dedicated to supplying or absorbing more than 6 MVAr of Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in bullet 2 above."
Response: The SDT discussed your comments and declined to make changes to the core definition. However, clarifying changes were made to Inclusion I2 to specify the generation thresholds to be included in the BES. In addition, the SDT added a clarifying phrase to Inclusion I5 to emphasize that the item is not meant to apply to generators.		
MEAG Power	Yes	MEAG agrees to the clarifying changes to the core definition in general, however, we maintain that 200kV and above is the correct bright line for the BES.
Electricity Consumers Resource Council (ELCON)	Yes	However, one of the FERC directives in Order 743 charged NERC with delineating the difference between transmission and distribution. The Inclusions and Exclusions are a step in that direction, but this subject will need more consideration in Phase 2.
Texas RE NERC Standards Subcommittee	Yes	However, one of the FERC directives in Order 743 charged NERC with delineating the difference between transmission and distribution. The Inclusions and Exclusions are a step in that direction, but this subject will need more consideration in Phase 2.
SERC OC Standards Review Group	Yes	The SERC OC Standards Review Group agrees to the clarifying changes to the core definition in general; however, we maintain that 200kV and above is the correct bright line for the Bulk Electric System.
AECI and member GandTs, Central Electric Power Cooperative, KAMO	Yes	In general, we agree with this revision. We however believe the correct voltage thresholds to be, transformer primary voltage of 200 kV or higher and

Organization	Yes or No	Question 1 Comment
Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative		secondary voltage of 100 kV or higher.
Tennessee Valley Authority	Yes	TVA agrees to the clarifying changes to the core definition in general; however, we maintain that 200kV and above is the correct bright line for the Bulk Electric System, and requests that the Phase 2 for the project use 200kV and above or develop a transmission voltage and/or an MVA threshold that is technically based.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
Puget Sound Energy	Yes	This draft of the defintion is very much improved. We appreciate the work of the Standard Development Team and its efforts to increase the clarity of this important definition. For additional clarity, the first paragraph should read "Unless specifically excluded under the list of exclusions below or included or excluded through the Procedure for Requesting and Receiving an Exception from the Application of the NERC Definition of Bulk Electric System, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher,

Organization	Yes or No	Question 1 Comment
		including those Transmission Elements described in the list of inclusions below." The sentence "This does not include facilities used in the local distribution of electric energy." should be removed from the first paragraph. Because this issue is specifically addressed in exclusions E1 and E3, the inclusion of this general sentence here is unnecessary and could even be ambiguous (raising the question of whether additional Transmission Elements might be excluded even if not described in E1 or E2).
Response: The SDT discussed your comment and decided against deletion of the sentence in the core definition that refers to facilities used in the local distribution of electricity. There were many commenters who were in favor of the inclusion of the sentence in the core definition. Additionally, the SDT does not agree with the premise that the exclusions are fully sufficient to not include any facilities used in the local distribution of electricity in the definition. No change made.		
Z Global Engineering and Energy Solutions	Yes	We support these changes however feel that further clarification needs to be made regarding the E1 Note. This note currently states "Note - A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion" This note is not clear. We recommend that the note is rewritten to be clear that a normally open switching device should not be viewed as normally closed as the regions are currently doing. Possible language: "Note: A normally open switching device between radial systems, as depicted on prints or oneline diagrams, for example, does not classify the two or more radial lines as a loop line. The exclusion will still apply.”}"
Response: The SDT discussed your comment and declined to make the suggested change. It is the intent of the SDT that a switch that is marked normally open as depicted on prints or one-lines be treated as normally open when deciding whether a facility is or is not a BES Element.		
Northern Wasco County PUD	Yes	We agree with the changes. We must point out that the overall flow, or how one proceeds through the inclusions and exclusions is not clear. Can an item

Organization	Yes or No	Question 1 Comment
		that meets an inclusion be subsequently excluded? If so, this needs to be explicitly stated. So far, we only have the flow chart produced by the ROP team that indicates otherwise (http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf). This was made evident by the question at the 9/28 webinar regarding an I5 capacitor on an E3 local network. The questioner thought the capacitor was BES per I5, but the answer was that it was excluded per E3. We can find no support for the answer given. The listing of specific exclusions within I1 (exception proves the rule) argues for questioner's stance that the capacitor is BES as written. Also, if included items could subsequently be excluded, they would be no different from any other item that met the voltage threshold of 100kV. There would be no need for any of the inclusions if all possible outputs from the inclusion tests go to the same exclusion test inputs. We strongly support the addition of the language regarding local distribution facilities, as it matches congressional intent to leave the regulation of these facilities to state and local authorities.
Harney Electric Cooperative, Inc.	Yes	HEC agrees with the changes by the SDT. Although HEC believes that there needs to be explicit language stating whether or not an item that meets inclusion can be overridden by an exclusion. An example of this was given during the Webinar on 9/28 regarding a Capacitor included under I5 yet excluded under E3 according to the NERC representative.
Central Lincoln	Yes	We agree with the changes. We must point out that the overall flow, or how one proceeds through the inclusions and exclusions is not clear. Can an item that meets an inclusion be subsequently excluded? If so, this needs to be explicitly stated. So far, we only have the flow chart produced by the ROP team that indicates otherwise (http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf). This was made evident by the question at the 9/28 webinar regarding an I5 capacitor on an E3 local network. The questioner thought the capacitor was

Organization	Yes or No	Question 1 Comment
		BES per I5, but the answer was that it was excluded per E3. We can find no support for the answer given. The listing of specific exclusions within I1 (exception proves the rule) argues for questioner's stance that the capacitor is BES as written. Also, if included items could subsequently be excluded, they would be no different from any other item that met the voltage threshold of 100kV. There would be no need for any of the inclusions if all possible outputs from the inclusion tests go to the same exclusion test inputs.We strongly support the addition of the language regarding local distribution facilities, as it matches congressional intent to leave the regulation of these facilities to state and local authorities.
Mission Valley Power	Yes	Mission Valley Power - We agree with the changes. We must point out that the overall flow, or how one proceeds through the inclusions and exclusions is not clear. Can an item that meets an inclusion be subsequently excluded? If so, this needs to be explicitly stated. So far, we only have the flow chart produced by the ROP team that indicates otherwise (http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf). This was made evident by the question at the 9/28 webinar regarding an I5 capacitor on an E3 local network. The questioner thought the capacitor was BES per I5, but the answer was that it was excluded per E3. We can find no support for the answer given. The listing of specific exclusions within I1 (exception proves the rule) argues for questioner's stance that the capacitor is BES as written. Also, if included items could subsequently be excluded, they would be no different from any other item that met the voltage threshold of 100kV. There would be no need for any of the inclusions if all possible outputs from the inclusion tests go to the same exclusion test inputs. We strongly support the addition of the language regarding local distribution facilities, as it matches congressional intent to leave the regulation of these facilities to state and local authorities.
Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will		

Organization	Yes or No	Question 1 Comment
identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		

Organization	Yes or No	Question 1 Comment
Long Island Power Authority	Yes	Need to define the term "local distribution"
Response: The SDT believes that with the last sentence in the core definition and Exclusions E1 and E3 that the term has been sufficiently distinguished with regard to the BES. No change made.		
Utility Services, Inc.	Yes	Upon reflection of the core definition and BES Inclusion Designations, Utility Services believes that there is an unintended redundancy between the two. Utility Services would like to suggest that the portion of the core definition that refers to the Real and Reactive Power resources be removed from the core and to leave the Inclusions as is.
Response: The SDT discussed your comment and decided against making a change to the core definition. However, a new parenthetical was added in Inclusion I5 to clarify that the item is meant to exclude generators.		
Cowlitz County PUD	Yes	Cowlitz County PUD No. 1 (Cowlitz) commends the SDT for the simplified concise core definition. However, Cowlitz believes that only Real and Reactive Power resources necessary for the support of the BES should be included. Therefore, Cowlitz suggests the core definition or the Inclusions section state this. This will allow basis for demonstrating resource Elements should be excluded from the BES through the Rules of Procedure exception process. This is not to say that owners of non-BES resource Elements should not be registered, as such entities may still have an obligation to contribute BES Reliability functions. Cowlitz votes affirmative and believes the above concern can be addressed in Phase 2.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of		

Organization	Yes or No	Question 1 Comment
industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
Ameren	Yes	a)The general concept is sound, but the Inclusion and Exclusion sections create so many circular references it is virtually impossible to take a definitive stance on whether an asset is included or excluded to the BES definition. Please revise the inclusion and exclusion criteria to give pinpointed statements that are final and do not reference other criteria, that then again reference other criteria. b)We believe that 200kV and above is the appropriate bright line for the Bulk Electric System. c)In I5, only those Reactive Power devices applied for the purpose of BES support or BES voltage control should be included. A Reactive Power device connected at >100kV but used for the purpose of voltage support to local load should not be included. d)The core definition uses "Transmission Elements" while E1 uses "transmission Elements". What is the difference? If one or both terms are applicable, their definition should be included.
Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit		

Organization	Yes or No	Question 1 Comment
breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the		

Organization	Yes or No	Question 1 Comment
definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. The SDT points the commenter to Exclusion E4 for the handling of such a situation. The SDT considered the disposition of the word "transmission" in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element".		
The Dow Chemical Company	Yes	The Dow Chemical Company ("Dow) is an international chemical and plastics manufacturing firm and a leader in science and technology, providing chemical, plastic, and agricultural products and services to many essential consumer markets throughout the world. Dow and certain of its worldwide affiliates and subsidiaries, including Union Carbide Corporation, own and operate electrical facilities at a number of industrial sites within the U.S., principally, in Texas and Louisiana. The electrical facilities at these various industrial sites are configured similarly and perform similar functions. In most cases, a tie line or lines connect the industrial site to the electric transmission grid. Power is delivered from the electric transmission grid to the industrial site through the tie line(s). Lines "behind-the-meter" within the industrial site then deliver power to individual manufacturing plants within the site. Additionally, cogeneration facilities, some of which are well over 75 MW in size, are located at a number of industrial sites owned by Dow and its subsidiaries. These cogeneration facilities generate power that is distributed within the industrial site and used for manufacturing plant operations. In some instances, excess power not required for plant operations is delivered back into the electric transmission grid through the tie line(s) connecting the industrial site to the grid. While the tie lines and some of the internal lines at these industrial sites operate at 100kV or higher, they do not perform anything that resembles a transmission

Organization	Yes or No	Question 1 Comment
		function. Rather than transmit power long distances from generation to load centers, the tie lines and internal lines perform primarily an end user distribution function consisting of the distribution of power brought in from the grid or generated internally to different plants within each industrial site. In some cases, the facilities also perform an interconnection function to the extent they enable power from cogeneration facilities to be delivered into the grid. The voltage of the tie lines and internal lines at these industrial sites is dictated by the load and basic configuration of each site. Higher voltage lines are used when necessary to meet applicable load requirements or to reduce line losses. That does not mean that such lines perform a transmission function. At some sites, Dow is registered as a Generation Owner and Generation Operator. At other sites, the applicable Regional Entity has found that such registration is not required because of the relatively small amount of power supplied to the grid from the applicable cogeneration resources, even though those cogeneration resources have an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating). Tie lines (to the grid) and internal lines at an industrial site that operate at 100kV or higher should be excluded from the BES definition if, due to the relatively small amount of power supplied to the grid from the generation resources at the site, the owner of those generation resources is not required to be registered as a Generation Owner and the operator of those generation resources is not required to be registered as a Generation Operator. At sites where the owner of the generation resources is registered as a Generation Owner and the operator of those generation resources is registered as a Generation Operator, the internal lines (between the generation resources and the manufacturing plants) that operate at 100kV or higher should be excluded from the BES definition, because they are distribution and not transmission facilities. The lines interconnecting the generation resources at such sites to the transmission grid should be included in the BES definition, but the owner and operator of such

Organization	Yes or No	Question 1 Comment
		interconnection lines should not be registered as a Transmission Owner or Transmission Operator. In no instance has a Regional Entity determined that Dow or any subsidiary should be registered as a Transmission Owner or Transmission Operator. Instead, such interconnection lines should be considered as part of the generation resource and Generation Owners and Generation Operators should be subject to reliability standards specifically developed for such interconnection lines. Dow is strongly opposed to any BES definition that would result in either the tie lines or the internal lines at industrial sites being subject to the mandatory reliability standards applicable to Transmission Owners and Transmission Operators. Complying with reliability standards would cause Dow and its subsidiaries to incur substantial compliance costs and create potential exposure to penalties in the future for noncompliance. Perhaps such costs and exposure could be justified if subjecting these facilities to compliance with reliability standards resulted in a material increase in reliability of the BES, but there is no reason to believe that will be the case. In fact, the opposite might be true. The tie lines and internal lines at industrial sites owned by Dow and its subsidiaries have been operated for decades as end user distribution and interconnection facilities, and practices and procedures have developed over the years that have enabled such operations to achieve a high degree of reliability for such sites. Requiring these facilities to now operate in a different manner as transmission facilities may well result in a degradation of the reliability of the manufacturing plants located at such sites. For example, outages would have to be coordinated with the RTO, which may not be interested in coordinating such outages with scheduled manufacturing plant outages. In light of these considerations, Dow agrees with the proposed revisions to the core definition, particularly the proposal to include a sentence expressly excluding facilities used in the local distribution of electric energy, provided it is understood that end user-owned delivery facilities located “behind-the-meter” are, regardless of

Organization	Yes or No	Question 1 Comment
		voltage level, presumptively outside the scope of this definition.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration.		
City of Redding	Yes	Redding is concerned that NERC has a predetermined definition of Distribution Facilities and will not evaluate networked distribution facilities fairly. NERC stated their predetermined position in their "MOTION TO INTERVENE AND COMMENTS OF THE NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION" filed in the case of the City of Holland, Michigan (Docket No. RC11-5-000). On page 10 and 11 of this motion, under the section labeled "A. Holland's 138 kV lines are transmission rather that local distribution facilities" NERC states "Distribution facilities generally are characterized as elements that are designed and can carry electric energy (Watts/MW) in one direction only at any given time from a single source point (distribution substation) to final load centers." NERC is clearly states that only radial facilities are considered distribution facilities and are unwilling to consider that network facilities over 100Kv could be classified as Distribution Facilities. Holland's claim of NERC over reaching their authority appears to have credibility. In conclusion, Redding supports the addition of Distribution Facilities as an exclusion but believes that the BES Definition phase 2 needs to clearly define the difference between Distribution and Transmission Facilities by identifying the equipment "necessary for the Reliable Operation of the interconnected bulk power transmission system".
Response: See the detailed comments on this issue in the Responses to the comments to the Question 2 of the Exception Process		

Organization	Yes or No	Question 1 Comment
as well as the Detailed Information to Support an Exception Request Form. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
Xcel Energy		In general, Xcel Energy supports the changes to the core definition of Bulk Electric System. Some additional clarification may be required as suggested below under the individual Inclusions or Exclusions.
Tacoma Power	Yes	Tacoma Power supports the core definition as currently written.
Redding Electric Utility	Yes	
ATC LLC	Yes	
Portland General Electric Company	Yes	
Farmington Electric Utility System	Yes	
Georgia System Operations Corporation	Yes	
Nebraska Public Power District	Yes	The drafting team has done a great job of adding clarity and to improving the BES definition. Although more work is needed as noted in comments

Organization	Yes or No	Question 1 Comment
		below, overall the drafting team is on the right track with the BES defintion.
Oncor Electric Delivery Company LLC	Yes	
LCRA Transmission Services Corporation	Yes	
Memphis Light, Gas and Water Division	Yes	
Independent Electricity System Operator	Yes	
PSEG Services Corp	Yes	
Orange and Rockland Utilities, Inc.	Yes	
City of St. George	Yes	The core definition is acceptable as long as the concerns for inclusion and exclusion are addressed as outlined in the other comments.
American Electric Power	Yes	
Tillamook PUD	Yes	We strongly support the addition of the language regarding local distribution facilities, as it matches congressional intent to leave the regulation of these facilities to state and local authorities.
Consumers Energy	Yes	
Springfield Utility Board	Yes	SUB particularly agrees with the addition of, “This does not include facilities used in the local distribution of electric energy.” to the BES draft definition.

Organization	Yes or No	Question 1 Comment
NV Energy	Yes	The core definition is simpler than the prior version. We support the addition of the last sentence regarding the exclusion of facilities used in the local distribution of electric energy.
Duke Energy	Yes	
Chevron U.S.A. Inc.	Yes	Yes. Very good progress was made in the process. The initial overly broad language was inadvertently including parties that are not necessary to meet the NERC and FERC goals. The current language has clarified some of the ambiguities.
Central Hudson Gas and Electric Corporation	Yes	
Idaho Falls Power	Yes	We generally support the changes made.
Exelon	Yes	
Southern Company	Yes	
Texas Industrial Energy Consumers	Yes	
Tri-State GandT	Yes	We believe that the new definition is a good clarification.
Western Area Power Administration	Yes	
Tri-State Generation and Transmission Assn., Inc. Energy Management	Yes	We believe that the new definiation is a good clarification.
MRO NERC Standards Review Forum	Yes	

Organization	Yes or No	Question 1 Comment
(NSRF)		
Pepco Holdings Inc and Affiliates	Yes	
ACES Power Marketing Standards Collaborators	Yes	
WECC Staff	Yes	
Bonneville Power Administration	Yes	
Northeast Power Coordinating Council	Yes	
SERC Planning Standards Subcommittee	Yes	
BGE	Yes	No comment.
Response: Thank you for your support.		

2. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: Several commenters asked for additional clarity in the description of the types of transformers covered by Inclusion I1 and in response the SDT has slightly revised the language in Inclusion I1 based upon comments received and to provide additional clarity as shown below.

Several commenters suggested that Inclusion I1 contain a statement to identify the subset of transformers that are not covered by Inclusion I1 and the SDT declined to make this revision. The SDT believes the use of language in the definition to state what is also excluded is redundant and not needed in the definition.

Some comments were received suggesting modifying to Inclusion I1 to add a 200 kV threshold. Using a 200 kV voltage threshold and/or an MVA threshold for inclusion of transformers in the BES and the addition of demarcation points will be considered in Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

Several commenters asked for additional clarity on the hierarchy of inclusions and exclusions. The SDT provides the following guidance on this topic.

The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.

Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.

In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.

I1 - Transformers with the primary terminal and at least one secondary terminal~~s~~ operated at 100 kV or higher unless excluded under Exclusion E1 or E3.

Organization	Yes or No	Question 2 Comment

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	More specific description is needed for the equipment intended to be included in I1. For example, is it intended to include autotransformers, PARs, primary, secondary, tertiary windings, etc.? There will be difficulty applying the definition to facilities without this detail. Suggest rewording to: All transformers (including auto-transformers, voltage regulators, and phase angle regulators and all windings) with primary and secondary terminals operated at or above 100kV, and generator step-up (GSU) transformers with one terminal operated at or above 100KV, unless excluded by E1 or E3.
NESCOE	No	NESCOE supports the revised Inclusion I1 language that treats Exclusions E1 and E3 as alternative exclusions, either of which may qualify as an exclusion. However, specificity is needed regarding what equipment is included in I1 (e.g., autotransformers, PARs, primary, secondary, tertiary windings).
Massachusetts Department of Public Utilities	No	The MA DPU supports the revised Inclusion I1 language that treats Exclusions E1 and E3 as alternative exclusions, either of which may qualify as an exclusion. However, specificity is needed regarding what equipment is included in I1 (e.g., autotransformers, PARs, primary, secondary, tertiary windings).

Response: Several commenters indicated that additional specificity is needed to describe the transformers in Inclusion I1 and the SDT added the word, "terminal" and the phrase, "at least one" to Inclusion I1 for additional clarity. The revised Inclusion I1 now reads:

> **I1** - Transformers with the primary terminal and at least one secondary terminal~~s~~ operated at 100 kV or higher unless excluded under Exclusion E1 or E3.

The SDT provides the following guidance with respect to inclusions and exclusions to provide clarity on how to use the definition and in response to your comment:

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between

Organization	Yes or No	Question 2 Comment
BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
AECI and member GandTs,	No	"100 kV or above" should be modified to "200 kV or above with a registered

Organization	Yes or No	Question 2 Comment
Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative		rating of 150 MVA or greater."
Response: The issue of transformer voltage level and possibly an MVA threshold level will be discussed in Phase 2 of this project. No change made.		
Duke Energy	No	For clarity regarding 3 and 4 winding transformers, it should say "primary and at least one secondary terminal operated at 100 kV or higher.
Response: The SDT has revised the language to provide the clarity suggested in the comment. **I1** - Transformers with the primary terminal and at least one secondary terminal~~s~~ operated at 100 kV or higher unless excluded under Exclusion E1 or E3.		
New York State Dept of Public Service	No	o I1 lacks specificity that can lead to confusion and required clarifications. Suggested wording change: All transformers (including auto-transformers, voltage regulators, and phase angle regulators and all windings) with primary and secondary terminals operated at or above 100 kV, and generator step-up (GSU) transformers with one terminal operated at or above 100 kV, unless excluded by E1 or E3.
ISO New England Inc	No	I1 needs to be clarified such that it is clear on whether this includes autotransformers, phase angle regulators, and devices which have a tertiary winding. Using the tertiary winding as an example, it is not clear whether the tertiary winding itself is considered BES, especially if it is serving a radial system

Organization	Yes or No	Question 2 Comment
		as described in E1.
Response: The SDT has slightly revised the language in Inclusion I1 based upon comments received and to provide clarity. Since a transformer is one Element, any additional tertiary windings would be included in the BES if a transformer meets this criterion for inclusion. **I1** - Transformers with the primary terminal and at least one secondary terminal~~s~~ operated at 100 kV or higher unless excluded under Exclusion E1 or E3.		
Rochester Gas and Electric and New York State Electric and Gas	No	We generally agree, but suggest modification to the language of Inclusion I1 to clarify its application for transformers with more than two windings: "Transformers with two or more terminals operated at 100 kV or higher, unless excluded under Exclusion E1 and E3." Based on this wording, transformer tertiary windings would also be BES - is that the intent?
Central Maine Power Company	Yes	We generally agree, but suggest modification to the language of Inclusion I1 to clarify its application for transformers with more than two windings: "Transformers with two or more terminals operated at 100 kV or higher, unless excluded under Exclusion E1 or E3." Based on this wording, transformer tertiary windings would also be BES - is that the intent?
Response: It is correct that associated tertiary windings are included in the BES if the transformer is based upon the language in Inclusion I1. Also, the SDT has slightly revised the language in Inclusion I1 based upon comments received and to provide clarity. Since a transformer is one Element, any additional tertiary windings would be included in the BES if a transformer meets this criterion for inclusion. **I1** - Transformers with the primary terminal and at least one secondary terminal~~s~~ operated at 100 kV or higher unless excluded under Exclusion E1 or E3.		
LCRA Transmission Services Corporation	No	LCRA TSC supports the inclusion of transformers (with both the primary and secondary windings operated at 100-kV or higher) in the BES definition; however, additional clarification is suggested. The term transformers needs to

Organization	Yes or No	Question 2 Comment
		be further defined with respect to function (auto transformers, phase angle regulators, generator step-up transformers, etc.). Similarly, a separate definition for "Transformer" could be developed and included in the NERC Glossary of Terms.
Response: The SDT believes the existing language is clear and the proposed additional language would be redundant. However, in response to comments from others, the SDT has made clarifying changes to Inclusion I1 that should address your concerns and obviate the need for a separate definition for transformers. **I1** - Transformers with the primary terminal and at least one secondary terminal~~s~~ operated at 100 kV or higher unless excluded under Exclusion E1 or E3.		
ExxonMobil Research and Engineering	Yes	The Inclusion I1 contains the phrase "unless excluded under Exclusion E1 or E3". While recognizing that this is a welcomed clarification on how I1 interacts with the Exclusion section, it is inconsistent with Inclusions I2 through I5. The BES SDT team should consider how to standardize the language around the interactions between the Inclusions and Exclusions (perhaps add an "unless" qualifier for each Inclusion).
Response: The SDT provides the following guidance with respect to inclusions and exclusions to provide clarity on how to use the definition and in response to your comment: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of		

Organization	Yes or No	Question 2 Comment
electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
Ameren	Yes	Agree in general, but have the following comments: a) We agree in general with the revisions to the specific inclusions for transformers in I1; however, we believe the transformer voltage level should be 200kV or above. b) The inclusion is unclear since it includes a certain voltage transformers, but excludes those that have E1 or E3 Exclusion criteria. Each exclusion criteria has multiple stipulations to its applicability, and then has a final inclusive reference to I3. Please make the wording exact and not dependent on clausal statements.

Organization	Yes or No	Question 2 Comment
Response: The issue of transformer voltage level and possibly an MVA threshold level will be discussed in Phase 2 of this project. The SDT provides the following guidance with respect to inclusions and exclusions to provide clarity on how to use the definition and in response to your comment: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.		

Organization	Yes or No	Question 2 Comment
Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
Memphis Light, Gas and Water Division	Yes	We believe further clarification is needed to limit BES transformers only to those serving the transmission system and not distribution loads, such as excluding transformers with one or both terminals operating below 100 kV.
Response: Transformers are excluded from the BES if the secondary terminal operates below 100 kV. No change made.		
Puget Sound Energy	Yes	Inclusion I1 references primary and secondary terminals of transformers, while Inclusions I2 and I5 reference the high-side of transformers. The SDT should consider using consistent terminology throughout the definition for this concept.
Response: The SDT has reviewed the entire document for consistency in phrasing but in this particular situation finds no problem in the terminology employed. No change made.		
Michigan Public Power Agency Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperatve (CEC)	Yes	MPPA supports the SDT's changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As MPPA understands it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100 kV or above, which is why the definition uses the word "and" ("the primary and secondary terminals"). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. MPPA believes the SDT's intent would be clarified by adding a sentence at the end of

Organization	Yes or No	Question 2 Comment
Clearwater Power Company (CPC) Snohomish County PUD Consumer's Power Inc. Douglas Electric Cooperative (DEC) Fall River Rural Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC) Kootenai Electric Cooperative		Inclusion 1 that reads: "Transformers with either primary or secondary terminals, or both, that operate at or below 100 kV are not part of the BES." This language will help ensure that there is no controversy over whether the SDT's use of the word "and" in the phrase "the primary and secondary terminals" was intentional. We also support the SDT's proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase 2 SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. There are many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. MPPA has some members who have been forced to sell of such assets in the hopes of remove the necessity for a TO/TOP registration path in this region. We also support the incorporation of language (". . . unless excluded under Exclusions E1 or E3") making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase ". . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network

Organization	Yes or No	Question 2 Comment
		meeting the requirements of Exclusion E2."

Response: The SDT has slightly revised Inclusion I1 to provide additional clarity. The SDT believes it is not necessary to state what transformers are not included in the BES, which would be redundant.

> **I1** - Transformers with the primary terminal and at least one secondary terminal~~s~~ operated at 100 kV or higher unless excluded under Exclusion E1 or E3.

The development of demarcation points will be included in Phase 2 of this project.

The SDT provides the following guidance with respect to inclusions and exclusions to provide clarity on how to use the definition and in response to your comment:

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3

Organization	Yes or No	Question 2 Comment
(local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
Cowlitz County PUD	Yes	Cowlitz supports the SDT's efforts to simplify this inclusion. However, Cowlitz suggests the following change to clarify the inclusive nature of the use of "and:" Transformers with primary and secondary terminals both operated at 100 kV or high**er…**
City of Austin dba Austin Energy	Yes	We believe additional clarification of transformers to be included may be achieved with respect to auto transformers, phase angle regulators and generator step-up transformers by adding the following sentence: All transformers (including autotransformers, voltage regulators, and phase angle regulators) with primary and secondary terminals operated at or above 100kV, unless excluded by E1 or E3.
Sacramento Municipal Utility District	Yes	We believe additional clarification of transformers that are to be included may be achieved with respect to auto transformers, phase angle regulators and generator step-up transformers by adding the following recommended sentence: "All transformers (including autotransformers, voltage regulators, and phase angle regulators) with primary and secondary terminals operated at or above 100kV, unless excluded by E1 or E3."

Organization	Yes or No	Question 2 Comment
Utility Services, Inc.	Yes	Utility Services supports the comments offered by other commenters who suggest that transformers and other related devices be mentioned in the inclusion.
PacifiCorp	Yes	PacifiCorp suggests a clarification to I1 to provide as follows: "Transformers with either primary or secondary terminals, or both, that operate at or below 100 kV are not part of the BES."
Balancing Authority Northern California	Yes	We believe additional clarification of transformers that are to be included may be achieved with respect to auto transformers, phase angle regulators and generator step-up transformers by adding the following recommended sentence: "All transformers (including autotransformers, voltage regulators, and phase angle regulators) with primary and secondary terminals operated at or above 100kV, unless excluded by E1 or E3."
Response: The SDT has slightly revised the language in Inclusion I1 based upon comments received and to provide clarity. **I1** - Transformers with the primary terminal and at least one secondary terminal~~s~~ operated at 100 kV or higher unless excluded under Exclusion E1 or E3.		
PacifiCorp	Yes	PacifiCorp suggests a clarification to I1 to provide as follows: "Transformers with either primary or secondary terminals, or both, that operate at or below 100 kV are not part of the BES."
Response: The SDT believes it is not necessary to state what transformers are not included in the BES, which would be redundant. No change made.		
Florida Municipal Power Agency	Yes	Please see comments to Question 1
Response: Please see response to Q1.		

Organization	Yes or No	Question 2 Comment
MEAG Power	Yes	We agree in general with the revisions to the specific inclusions for transformers in I1; however, we believe the transformer voltage level should be 200kV or above.
Tennessee Valley Authority	Yes	TVA agrees in general with the revisions to the specific inclusions for transformers in I1; however, we believe the low side transformer voltage level should be 200kV or above, and requests that the Phase 2 for the project use 200kV and above or develop a transmission voltage and/or an MVA threshold that is technically based.
SERC OC Standards Review Group	Yes	We agree in general with the revisions to the specific inclusions for transformers in I1; however, we believe the transformer voltage level should be 200kV or above.
Response: The issue of transformer voltage level and possibly an MVA threshold level will be discussed in Phase 2 of this project. No change made.		
National Grid	Yes	
Farmington Electric Utility System	Yes	
South Houston Green Power, LLC	Yes	
Portland General Electric Company	Yes	
Northern Wasco County PUD	Yes	Northern Wasco County PUD strongly agrees with this inclusion as written. It is consistent with the recent PRC-004 and PRC-005 interpretation and the NERC definition of Transmission. We believe the recent changes to this inclusion add

Organization	Yes or No	Question 2 Comment
		clarity.
Georgia System Operations Corporation	Yes	
Nebraska Public Power District	Yes	
Kansas City Power and Light Company	Yes	
Oncor Electric Delivery Company LLC	Yes	
Harney Electric Cooperative, Inc.	Yes	HEC agrees with the inclusions to I1 and believes that add clarity to the definition.
Central Lincoln	Yes	Central Lincoln strongly agrees with this inclusion as written. It is consistent with the recent PRC-004 and PRC-005 interpretation and the NERC definition of Transmission. We believe the recent changes to this inclusion add clarity.
PSEG Services Corp	Yes	
Hydro-Quebec TransEnergie	Yes	
Independent Electricity System Operator	Yes	
Orange and Rockland Utilities, Inc.	Yes	
Tillamook PUD	Yes	Tillamook PUD strongly agrees with this inclusion as written. It is consistent with the recent PRC-004 and PRC-005 interpretation and the NERC definition of

Organization	Yes or No	Question 2 Comment
		Transmission. We believe the recent changes to this inclusion add clarity.
American Electric Power	Yes	
Manitoba Hydro	Yes	
Long Island Power Authority	Yes	
The Dow Chemical Company	Yes	
City of St. George	Yes	
Mission Valley Power	Yes	Mission Valley Power - Comments: Mission Valley Power strongly agrees with this inclusion as written. It is consistent with the recent PRC-004 and PRC-005 interpretation and the NERC definition of Transmission. We believe the recent changes to this inclusion add clarity.
NV Energy	Yes	The changes made to I1 (Transformers) appropriately resolves several of the industry concerns about three-winding transformers as well as an inadvertent use of the word “and” rather than “or”.
Z Global Engineering and Energy Solutions	Yes	
Consumers Energy	Yes	
Springfield Utility Board	Yes	SUB supports and appreciates the change in language from, “unless excluded under Exclusions E1 and E3” to “Exclusion E1 or E3”. This makes it clear that Radial System or Local Network transformers should not be considered BES facilities, regardless of operating voltage.

Organization	Yes or No	Question 2 Comment
Chevron U.S.A. Inc.	Yes	
Metropolitan Water District of Southern California	Yes	
Idaho Falls Power	Yes	We support the language as drafted.
ReliabilityFirst	Yes	
Ontario Power Generation Inc.	Yes	
Central Hudson Gas and Electric Corporation	Yes	
City of Anaheim	Yes	
Southern Company	Yes	
FirstEnergy Corp.	Yes	
Exelon	Yes	
Hydro One Networks Inc.	Yes	
Tri-State GandT	Yes	
Western Area Power Administration	Yes	
Texas Industrial Energy Consumers	Yes	

Organization	Yes or No	Question 2 Comment
Tri-State Generation and Transmission Assn., Inc. Energy Management	Yes	
MRO NERC Standards Review Forum (NSRF)	Yes	
IRC Standards Review Committee	Yes	
ACES Power Marketing Standards Collaborators	Yes	
Dominion	Yes	The proposed changes are much clearer than proposed language in the 1st draft of this BES definition.
Pepco Holdings Inc and Affiliates	Yes	
Electricity Consumers Resource Council (ELCON)	Yes	
Southern Company Generation	Yes	
WECC Staff	Yes	
Bonneville Power Administration	Yes	
Texas RE NERC Standards	Yes	

Organization	Yes or No	Question 2 Comment
Subcommittee		
SERC Planning Standards Subcommittee	Yes	
Southwest Power Pool Standards Review Team	Yes	
NERC Staff Technical Review	Yes	
ATC LLC	Yes	
Westar Energy	Yes	
Redding Electric Utility	Yes	
City of Redding	Yes	
Tacoma Power	Yes	Tacoma Power supports Inclusion I1 as currently written.
BGE	Yes	No comment.

Response: Thank you for your support. Due to comments received from others the SDT has made clarifying changes as follows:

I1 - Transformers with the primary terminal and at least one secondary terminal~~s~~ operated at 100 kV or higher unless excluded under Exclusion E1 or E3.

3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: Comments received regarding the threshold level for generators, the relationship between the NERC Compliance Registry and the BES Definition and the need for contiguous BES elements will be considered in the Phase 2 review.

In response to comments regarding the reference to the ERO Statement of Compliance Registry Criteria (SCRC) the SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.

The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

Inclusion I2 was clarified as follows:

I2 - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.

Organization	Yes or No	Question 3 Comment

Organization	Yes or No	Question 3 Comment
Northeast Power Coordinating Council	No	In deference to direction given to the Drafting Team, Inclusion I2 should remove the reference to the Statement of Compliance Registry Criteria. The current language induces circular arguments without a true governing document. The definition should drive what appears in the registration criteria. I2 should be revised to read: "Generating resources with a gross nameplate rating of 20MVA or greater, or generating plant/facility connected at a common bus, with an aggregate nameplate rating of 75MVA or greater and is directly connected to a BES Element." This is consistent with the proposed I2 and the current Compliance Registry Criteria. Ultimately the definition should be the governing document and provide the details of what generation should be included. It is understood that Phase 2 of this project will address this.
Balancing Authority Northern California	No	We recommend removing the reference of the ERO Statement of Compliance Registry Criteria (Registry Criteria). The BES Definition should be the governing document and independent of ERO registration requirements. The definition should drive what appears in the Registry Criteria. Additionally, we support using the BES Phase 2 technical analysis to identify and provide technical support for determining the appropriate minimum MVA rating that a single unit, or the aggregation of multiple units, must meet to be considered part of the BES.
Oregon Public Utility Commission Staff	No	Reference to NERC Statement of Compliance Registry Criteria (SCRC) needs to be eliminated from the BES Definition. This circularity must be eliminated. Proposed revised language is:"I2 - Generating resource(s) with a gross individual nameplate rating greater than 20 MVA or with a gross aggregate nameplate rating greater than 75 MVA including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above."
American Electric Power	No	AEP is a proponent of cross-referencing related documents to avoid elements from becoming out of sync, however, rather than having the BES Definition document reference the ERO Statement of Compliance Registry Criteria, perhaps it should be

Organization	Yes or No	Question 3 Comment
		the other way around. This definition document undergoes a more thorough industry development and review process. The ERO Statement of Compliance Registry Criteria does not get specific in regards to device types. The BES Definition document is a more appropriate place to designate inclusion criteria.
New York State Dept of Public Service	No	In I2, there is a reference to the Statement of Compliance Registry Criteria. However, the Statement references the BES definition. This circular logic results in a fatally flawed definition. The statement reference should be replaced with the actual intended words.
Rochester Gas and Electric and New York State Electric and Gas	No	Inclusion I2 should remove the reference to the Statement of Compliance Registry Criteria. The definition should stand on its own. I2 should be revised to read: "Generators with a gross nameplate rating of 20 MVA or greater, or a generating plant/facility connected at a common bus, with a gross aggregate nameplate rating of 75 MVA or greater and is directly connected at a voltage of 100 kV or above. BES includes the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above." This is consistent with the proposed I2 and the current Compliance Registry Criteria.
Sacramento Municipal Utility District	No	We recommend removing the reference of the ERO Statement of Compliance Registry Criteria (Registry Criteria). The BES Definition should be the governing document and independent of ERO registration requirements. The definition should drive what appears in the Registry Criteria. Additionally, we support using the BES Phase 2 technical analysis to identify and provide technical support for determining the appropriate minimum MVA rating that a single unit, or the aggregation of multiple units, must meet to be considered part of the BES.
Central Maine Power Company	No	Inclusion I2 should remove the reference to the Statement of Compliance Registry Criteria. The definition should stand on its own. I2 should be revised to read: "Generators with a gross nameplate rating of 20 MVA or greater, or a generating plant/facility connected at a common bus, with a gross aggregate nameplate rating of

Organization	Yes or No	Question 3 Comment
		75 MVA or greater; and is directly connected at a voltage of 100 kV or above. BES includes the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above." This is consistent with the proposed I2 and the current Compliance Registry Criteria.
Farmington Electric Utility System	No	FEUS is concerned I2 is dependent on the Statement of Compliance Registry Criteria (SCRC). Modification of the SCRC is not required to go through the same process of modification of a Standard but section 1400 of the NERC Rules of Procedure. Section 1400 does allow for industry comment and requires multiple tiers of approval. However, it seems by changing the SCRC generating resources may be included or excluded from the BES - without requiring modification to the definition of the BES through the Standards Development Process. In addition, Page 4 Section I of the SCRC is dependent on the NERC definition of the BES. Logically, the SCRC should be dependent on the definition of the BES not the inverse.
Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project. **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.		
Electricity Consumers Resource Council (ELCON)	No	Since an aggregate of 75 MVA is allowed at a single site, there is no basis for maintaining the 20 MVA for a single generator. The proposed MOD-026 assigns thresholds by region that are much higher than 20 MVA for modeling purposes. Since modeling generally would require more granularity than what is necessary for the reliable operation of the interconnected transmission system (BES), the SDT might want to review the threshold basis for NERC Project 2007-09 (Generator Verification). It is understood that the threshold will be reconsidered in Phase 2 of the BES Definition Project; however, a modest change from 20 to 75 MVA seems

Organization	Yes or No	Question 3 Comment
		appropriate on an interim basis justified by the current 75 MVA aggregate per site. The following phrase should be added at the end "unless excluded under Exclusion E2."
Texas RE NERC Standards Subcommittee	No	Since an aggregate of 75 MVA is allowed at a single site, there is no basis for maintaining the 20 MVA for a single generator. The proposed MOD-026 assigns thresholds by region that are much higher than 20 MVA for modeling purposes. Since modeling generally would require more granularity than what is necessary for the reliable operation of the interconnected transmission system (BES), the SDT might want to review the threshold basis for NERC Project 2007-09 (Generator Verification).
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. Coordination between the BES Definition and the MOD Standards will be addressed in Phase 2.		
Tri-State GandT	No	1. The parenthetical phrase regarding the ERO SCRC is not clear. Is the intent that the inclusion applies to any generating resource that is required to register as a Generator or Generator Operator per the ERO SCRC? Or was a reference to the 75 MVA threshold inadvertently omitted? It also seems that it wouldn't need to be in parentheses, just make it a phrase in the sentence. 2. The wording of the sentence after the parenthetical phrase is also worded

Organization	Yes or No	Question 3 Comment
		awkwardly. Suggest changing it to "including the generator terminals and all electrical equipment up to and including the high side of generator step up transformers, if they are connected at a voltage of 100 kV or higher.
Tri-State Generation and Transmission Assn., Inc. Energy Management	No	1. The parenthetical phrase regarding the ERO SCRC is not clear. Is the intent that the inclusion applies to any generating resource that is required to register as a Generator or Generator Operator per the ERO SCRC? Or was a reference to the 75 MVA threshold inadvertently omitted? It also seems that it wouldn't need to be in parentheses, just make it a phrase in the sentence. 2. The wording of the sentence after the parenthetical phrase is also worded awkwardly. Suggest changing it to "including the generator terminals and all electrical equipment up to and including the high side of generator step up transformers, if they are connected at a voltage of 100 kV or higher.
Pepco Holdings Inc and Affiliates	No	The definition should not reference the ERO Statement of Compliance Registry Criteria; rather the actual generation threshold criteria should be listed in the definition itself. This way the definition can stand on it's own without having to refer to another document for applicability. Also, the wording should be changed to read "including the generator terminals through the high side of any dedicated generator step-up transformer(s), connected at a voltage of 100kV or above." Otherwise, the present wording could ensnare distribution facilities (similar to the cranking path argument in I3) if a 21 MVA generator was connected on a distribution line with no dedicated generator step-up transformer. In that case the distribution line and substation feeder transformer might be construed to be in scope.

Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.

I2 - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate

Organization	Yes or No	Question 3 Comment
nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above. The I2 inclusion refers only to generation " … through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above." No change made.		
ExxonMobil Research and Engineering	No	The Inclusion I1 contains the phrase "unless excluded under Exclusion E1 or E3". While recognizing that this is a welcomed clarification on how I1 interacts with the Exclusion section, it is inconsistent with Inclusions I2 through I5. The BES SDT team should consider how to standardize the language around the interactions between the Inclusions and Exclusions (perhaps add an "unless" qualifier for each Inclusion).
South Houston Green Power, LLC	No	SHGP agrees with the proposed revisions to Inclusion I2, but requests the following phrase added at the end "unless excluded under Exclusion E2".
Nebraska Public Power District	No	Inclusion 2 does not take into consideration a later exclusion (Exclusion 3). At the end of Inclusion 2 after the words "..100 kV or above." Add the words ", unless excluded under Exclusion 3".
MRO NERC Standards Review Forum (NSRF)	No	Unless excluded under E2.
Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. *Element is defined* in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "		

Organization	Yes or No	Question 3 Comment
Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
Harney Electric Cooperative, Inc.	No	HEC would like to see the inclusion of specific thresholds that are technically justified.
City of St. George	No	The basis for the Compliance Registry Criteria generation levels for inclusion seems to be arbitrary with little or no justification. As currently proposed, a small 20 MVA

Organization	Yes or No	Question 3 Comment
		generator must comply with same requirements as large units of several hundred MVA of generation capacity. Phase 2 of the BES project may help address the issue but in the meantime many facilities must comply with numerous standards with little or no benefit to the reliability of the actual BES. No timeline for Phase 2 is indicated. Finding a bright line number for the generation levels on a per unit or overall plant basis will be a difficult task, but the present MVA levels of the Registration Criteria are very low for automatic inclusion. The compliance requirements of an entity should match the impact to the system.
NV Energy	No	While we do not agree with making specific reference and linkage to the generator thresholds of the SCRC, it is understood that a timely justification of any alternative threshold was not possible. It is of paramount importance that the subject of generation thresholds be addressed in subsequent development of this Definition. We are of the opinion that generation ought to be considered as a "user" of the BES, not necessarily a part of the BES, similar in concept to the way Load uses the BES. Using this concept, the BES would be restricted to the "wires" type facilities. Standards would nevertheless be applicable to generators that use the BES, so no gap in reliability would exist.
Idaho Falls Power	No	Reliance upon the Registry Criteria falls back to the 20MVA threshold. We believe this threshold is very low and unnecessarily draws in small entities for which there is no impact to the BES. We understand the barriers and the volume of tenchnical evidence required for any change and we therefore have no alternative language to suggest.
PacifiCorp	No	Requiring owners of single generators (20 MVA - 75 MVA) to meet reliability standards that owners of distributed power producing resources (See I4) do not have to meet is discriminatory. The limit for a single unit should be set to 75 MVA until such time as a technical review can determine the appropriate levels for all generation resources. However, even with this concern, PacifiCorp supports the entire BES definition in its current form based on the timeframe under which the SDT

Organization	Yes or No	Question 3 Comment
		is operating and with an emphasis based on a phase II SAR to address PacifiCorp's objections regarding generation levels.
Holland Board of Public Works	No	It is essential that regional entities and NERC recognize that "facilities used in the local distribution of electric energy" are not included in the definition of BES, regardless of the gross individual or gross aggregate nameplate rating of generation resources. While the addition of the second sentence in the core definition makes this clarification, Holland BPW believes it is necessary that regional entities and NERC recognize that neither this Inclusion nor any of the Inclusions may be used as a basis to compel registration and compliance in such instances, regardless of the size of the generators. The statutory exemption of facilities used in the local distribution of electric energy is not limited by generator number or capability. NERC's definitions cannot impose limitations that are not set forth in the statute. For purposes of the exclusion of facilities that might otherwise meet the definition of BES, the thresholds for determining what generating resources constitute BES facilities should be modified from the current levels (gross individual nameplate capacity of 20 MVA or gross aggregate nameplate rating of 75 MVA). Holland BPW supports modification of the thresholds to not less than 100 MVA (gross individual nameplate capacity) and 300 MVA (gross aggregate nameplate).
Hydro One Networks Inc.	No	We do not agree with the thresholds of 20 MVA for a single unit and 75 MVA aggregate at a plant, carried forward from the compliance registry. We understand the suggested phased approach and expect that the issue will be dealt with at that future time. With the exception of units that are must runs for reliability reasons, we suggest that the SDT should consider units smaller than 75 MVA or x MVA is designated as BES support element and not BES element. These units should only be required to comply with a handful of relevant NERC Standards. For example, o Voltage and frequency ride through capability o Voltage control (AVR, etc.) o Underfrequency trip setting o Protection relay setting coordination o Data submission for modeling; verification of capability and model These smaller and geographically dispersed generating resources should neither be designated as BES

Organization	Yes or No	Question 3 Comment
		element nor be required to have its connection path be designated as BES. We suggest removing the parentheses enclosing the text “with gross individual...” since their inclusion may lead to an erroneous reading of provision to include generators that do not meet ERO Statement of Compliance Registry Criteria.
Response: The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
Ontario Power Generation Inc.	No	OPG does not agree that the question of the 20 MVA (single) versus 75 MVA (aggregate) threshold should be deferred until a subsequent phase of the standard development process ("Phase 2"). This question should be resolved now. In general, key elements of the development process should not be parsed out into multiple phases, in hopes that "Standard Development Fatigue" will eliminate critics of the approach. Further, selecting the generator terminals as the boundary for BES within the generating station means that the Isolated Phase Bus (IPB), which connects the generator terminals to the Low Voltage (LV) terminals of the generator step-up (GSU) transformer, is now included as a BES element. The IPB is operated at low voltage, no more than 22kV, so including it as a BES element is going beyond the FERC order 743 and 743a. OPG strongly recommends that the BES boundary be moved to the LV terminals of the GSU transformer.

Organization	Yes or No	Question 3 Comment
Response: The SDT acknowledges and appreciates your perspective and frustration. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. The I2 inclusion refers to generation"… including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above. Comments received regarding the threshold level for generators, the relationship between the NERC Compliance Registry and the BES Definition and the need for contiguous BES elements will be considered in the Phase 2 review.		
Chevron U.S.A. Inc.	No	It is not logical to allow an aggregate of 75 MVA at a single site for multiple generators while maintaining 20 MVA for a single generator. Further, if a party exceeds export of 75 MVA to meet an emergency condition on the grid, it should not be a triggering event for BES definition. Parties should be concerned with keeping the grid operational rather than the adverse effect of exceeding 75 MVA.
Response: The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric		

Organization	Yes or No	Question 3 Comment
System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. Please see the detailed responses to Q9.		
Massachusetts Department of Public Utilities	No	Failing to establish a known MVA rating at this stage is problematic. The BES definition cannot be considered in a vacuum, and adjusting or establishing thresholds such as MVA ratings will create regulatory uncertainty and may result in additional costs and unnecessary system upgrades. Additionally, Inclusion I2 should remove the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document regarding generation that is included in the BES.
NESCOE	No	Failing to establish a known MVA rating at this stage is problematic. The BES definition cannot be considered in a vacuum, and adjusting or establishing thresholds such as MVA ratings will create regulatory uncertainty and may result in additional costs and unnecessary system upgrades. Additionally, Inclusion I2 should remove the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document regarding generation that is included in the BES.
Northern Wasco County PUD	No	Referencing the Criteria which in turn references the BES definition creates a circular definition. Northern Wasco County PUD encourages the adoption of specific thresholds that are technically justified. We also note that the Criteria and its revisions do not go through the standards development process, so that thresholds may change with little warning and without triggering an implementation plan for facilities that may be swept into the BES as a result.
Central Lincoln	No	Referencing the Criteria which in turn references the BES definition creates a circular definition. Central Lincoln encourages the adoption of specific thresholds that are

Organization	Yes or No	Question 3 Comment
		technically justified. We also note that the Criteria and its revisions do not go through the standards development process, so that thresholds may change with little warning and without triggering an implementation plan for facilities that may be swept into the BES as a result.
Tillamook PUD	No	Referencing the Criteria which in turn references the BES definition creates a circular definition. Tillamook PUD encourages the adoption of specific thresholds that are technically justified. We also note that the Criteria and its revisions do not go through the standards development process, so that thresholds may change with little warning and without triggering an implementation plan for facilities that may be swept into the BES as a result.
Mission Valley Power	No	Mission Valley Power - Referencing the Criteria which in turn references the BES definition creates a circular definition. Mission Valley Power encourages the adoption of specific thresholds that are technically justified. We also note that the Criteria and its revisions do not go through the standards development process, so that thresholds may change with little warning and without triggering an implementation plan for facilities that may be swept into the BES as a result.

Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.

> **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.

The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications

Organization	Yes or No	Question 3 Comment
that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
City of Austin dba Austin Energy	No	We recommend removing the reference of the ERO Statement of Compliance Registry Criteria (Registry Criteria). The BES Definition should be the governing document and independent of ERO registration requirements. The definition should drive what appears in the Registry Criteria. Additionally, we support using the BES Phase 2 technical analysis to identify and provide technical support for determining the appropriate minimum MVA rating that a single unit, or the aggregation of multiple units, must meet to be part of the BES.
The Dow Chemical Company	No	Comments: Dow agrees with the proposed revisions to Inclusion I2, particularly the proposal to expressly reference the ERO Statement of Compliance Registry Criteria, but the following phrase should be added at the end "unless excluded under Exclusion E2".

Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project due to numerous comments received.

> **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Organization	Yes or No	Question 3 Comment
Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. *Element is defined* in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either		

Organization	Yes or No	Question 3 Comment
include or exclude an Element.		
LCRA Transmission Services Corporation	No	
Response: Without a specific comment the SDT is unable to respond.		
Kansas City Power and Light Company	No	Nameplate rating of the generator is not a reflection of what can be actually injected into the transmission system with resulting electrical impacts on transmission loading and behavior. Recommend the BES definition be based on a generators established net accredited generating capacity instead of what it could do by nameplate rating. In addition, many generators do not achieve their nameplate rating due to limitations imposed by the limitations and capabilities of their turbine/boiler capabilities. Using the nameplate rating will not allow the exclusion of some generators that should be excluded. Recommend the following language: Generating resource(s) with a net accredited capability per the ERO Statement of Compliance Registry Criteria and including the generator terminals through the high-side of the step-up transformer(s), connected at a voltage of 100 kV or above.
Response: For Phase 1, the SDT has used nameplate rating in order to maintain consistency with the ERO Statement of Compliance Registry Criteria. No change made. The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values		

Organization	Yes or No	Question 3 Comment
and provide compelling justification for modifications to the existing values.		
Ameren	No	a) This definition becomes dependent on a document that can be changed without direct correlation to the BES definition. Remove the reference to the ERO Statement of Compliance Registry Criteria, and simply state the criteria as currently used. There is no need to look up another definition in another document to identify what is included in the BES definition. b) All MOD Standards' requirements for generators should also follow this definition.
Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project. **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above. b) Coordination between the BES Definition and the MOD Standards will be addressed in Phase 2.		
Tacoma Power	Yes	Tacoma Power generally supports Inclusion I2 and deferring the appropriate quantitative thresholds to those that will be determined in Phase 2. However, the term “gross individual” and “gross aggregate” nameplate rating, although industry used terms, are not industry defined or uniformly understood and applied. Nameplate ratings are determined from discussions and negotiations between the designer, supplier and the owner and it is the owner that makes the final determination of the generating station equipment nameplate ratings. Nameplate ratings for thermal or hydro plants may be based on such things as: fuel mix (best, worst and average), fuel delivery capacity, reservoir level, best efficiency point, normal operating point, ancillary equipment capacities, emissions and discharge restrictions, continuous versus peak output and designed versus installed and tested capacities. It would be more uniform to establish new or use existing criteria to

Organization	Yes or No	Question 3 Comment
		define “gross individual” and “gross aggregate” nameplate ratings, such as that used in the Code of Federal Regulations CFR 18, Part 11.1, “Authorized Installed Capacity” for hydraulic units and CFR 18, Part 287.101, “Determination of Powerplant Design Capacity” for steam electric, combustion turbine and combined cycle units.
Response: For Phase 1, the SDT has used nameplate rating in order to maintain consistency with the ERO Statement of Compliance Registry Criteria. No change made. The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
Hydro-Quebec TransEnergie		We believe that automatic inclusion of such generation and the path to connect them to the BES would bring a great amount of facilities in the BES. Generation should be considered on a different level such as "BES Support Elements" and provisions should be made so that some specific reliability standards would apply to them.
Response: The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the		

Organization	Yes or No	Question 3 Comment
technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
Snohomish County PUD Kootenai Electric Cooperative	Yes	SNPD supports the changes made in Inclusion 2 and believe that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support the SDT's proposal for a Phase 2 of the BES Definition process to examine the technical justification for these thresholds and to establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less due process and industry input than the Standards Development Process. Compare NERC Rules of Procedure Â§ 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC Â¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase 2 through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little due process. SNPD also believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this

Organization	Yes or No	Question 3 Comment
		approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify “candidates for registration.” SCRC at p.3, Â§ 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase 2 should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC.We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes to include generation in the BES if the “Generation resource(s)” has a “nameplate rating per the ERO Statement of Compliance Registry.” We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase 2 but we believe simply stating that the threshold will be “per the ERO Statement of Compliance Registry” is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: “Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100 kV or above.” Two definitions would then be added to the note at the end of the definition to read as follows:"For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria.""For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring

Organization	Yes or No	Question 3 Comment
		registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria."The “materiality threshold” is intended to refer to the generator threshold developed in Phase 2. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase 2 without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase 2 process based upon the technical analysis planned for Phase 2, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase 2 is completed.Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase 2 are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase 2 on the threshold issue is completed. Fourth, the phrase “or that meets the materiality threshold to be included in this definition” is intended to preserve the SDT’s flexibility to make a determination that generators below a specific threshold are not “necessary to” maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any

Organization	Yes or No	Question 3 Comment
		threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Hence, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase 2 under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100 kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100 kV or above." Finally, as discussed further in our answer to Questions 5 and 6, SNPD believes more clarity may be achieved by collapsing Inclusion 5, addressing Reactive Power resources, and Inclusion 4, which addresses dispersed renewable resources, into a single Inclusion that addresses "power producing resources" (the language used in current Inclusion 4).

Organization	Yes or No	Question 3 Comment
Response: Thank you – the SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project. **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above. Please see detailed responses to Q5 and Q6.		
Independent Electricity System Operator	Yes	While we agree with Inclusion I2, we suggest removing the parentheses enclosing the text “with gross individual...” since their inclusion may lead to an erroneous reading of provision to include generators that do not meet ERO Statement of Compliance Registry Criteria.
Puget Sound Energy	Yes	The term "per" should be replaced by "greater than the levels specified for a Generator Owner/Operator in". For a definition of this importance, the term "per" is too vague.
Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2,		

Organization	Yes or No	Question 3 Comment
instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project. **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.		
Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperatve (CEC) Clearwater Power Company (CPC) Consumer's Power Inc. Douglas Electric Cooperative (DEC) Fall River Rural Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric	Yes	CLPD supports the changes made in Inclusion 2 and believe that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support that aspect of the SDT's proposal for a Phase 2 of the BES Definition process that would examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach becauseif the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less due process and industry input than the Standards Development Process. Compare NERC Rules of Procedure Â§ 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC Â¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase 2 through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little due process.CLPD believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance

Organization	Yes or No	Question 3 Comment
Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC)		upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, Â§ 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase 2 should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC.We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes that generation be included in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase 2 but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100 kV or above." Two definitions would then be added to the note at the end of the definition to read as follows:For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria.For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating unitsthat are

Organization	Yes or No	Question 3 Comment
		connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance RegistryCriteria..The "materiality threshold" is intended to refer to the generator threshold developed in Phase 2. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase 2 without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase 2 process based upon the technical analysis planned for Phase 2, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase 2 is completed.Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase 2 are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase 2 on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate

Organization	Yes or No	Question 3 Comment
		that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase 2 under the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100 kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100 kV or above."
Response: The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing		

Organization	Yes or No	Question 3 Comment
deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project. **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.		
Southern Company Generation	Yes	Yes, provided that the minimum gross individual nameplate rating threshold is the same as the gross aggregate nameplate rating (currently > 75MVA). The MVA ratings are specified in many places in the BES definition, where a reference is made in I2 to using the Statement of Compliance Registry Criteria. We believe that the BES definition should point to the Statement of Compliance Registry Criteria and not include MVA values. We also believe individual units < 75MVA should be excluded unless they have been shown to be critical to BES reliability through a technical justification study performed by the transmission planning authority.
Michigan Public Power Agency	Yes	MPPA supports the changes made in Inclusion 2 and believe that the definition in its current form adds clarity. In particular, we support the SDT's decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. MPPA also supports the SDT's proposal for a Phase 2 of the BES Definition process that would

Organization	Yes or No	Question 3 Comment
		examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC's Rules of Procedure, it can be changed with considerably less due process and industry input than the Standards Development Process. Compare NERC Rules of Procedure Â§ 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC Â¶ 61,210 at P 4 (2011) ("Order No. 743 directed the ERO to revise the definition of 'bulk electric system' through the NERC Standards Development Process" (emph. added)). Addressing all aspects of Phase 2 through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little due process. MPPA also believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify "candidates for registration." SCRC at p.3, Â§ 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase 2 should be incorporated directly into the BES Definition rather than being incorporated by

Organization	Yes or No	Question 3 Comment
		reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes to include generation in the BES if the "Generation resource(s)" has a "nameplate rating per the ERO Statement of Compliance Registry." We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase 2 but we believe simply stating that the threshold will be "per the ERO Statement of Compliance Registry" is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: "Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100 kV or above." Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria..The "materiality threshold" is intended to refer to the generator threshold developed in Phase 2. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller

Organization	Yes or No	Question 3 Comment
		generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase 2 without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase 2 process based upon the technical analysis planned for Phase 2, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase 2 is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase 2 are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase 2 on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT's decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase 2 under

Organization	Yes or No	Question 3 Comment
		the rubric of "contiguous vs. non-contiguous BES," and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT's analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC "GO-TO Team," regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing ". . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above" so that the Inclusion covers transformers with terminals "connected at a voltage of 100 kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100 kV or above." MPPA and its members believe it is essential that regional entities and NERC recognize that "facilities used in the local distribution of electric energy" are not included in the definition of BES, regardless of the gross individual or gross aggregate nameplate rating of generation resources. While the addition of the second sentence in the core definition makes this clarification, MPPA and its members believes it is necessary that regional entities and NERC recognize that neither this Inclusion nor any of the Inclusions may be used as a basis to compel registration and compliance in such instances, regardless of the size of the generators. The statutory exemption of facilities used in the local distribution of electric energy is not limited by generator number or capacity. NERC's definitions cannot impose limitations that are not set forth in the statute. For purposes of the exclusion of facilities that might otherwise meet the definition of BES, the thresholds for determining what generating resources

Organization	Yes or No	Question 3 Comment
		constitute BES facilities should be modified from the current levels (gross individual nameplate capacity of 20 MVA or gross aggregate nameplate rating of 75 MVA). MPPA and its members would support modification of the thresholds to not less than 100 MVA (gross individual capacity) and 300 MVA (gross aggregate nameplate).

Response: The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.

> **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.

Texas Industrial Energy Consumers	Yes	The interplay between Inclusion I2, which references the Statement of Registry Compliance, and Exclusions E1-E3 is unclear. Under the Registry criteria, "a customer-owned or operated generator/generation that serves all or part of retail load with electric energy on the customer's side of the retail meter may be excluded as a candidate for registration ... if (i) the net capacity provided to the bulk power system does not exceed the criteria above." It appears that the SDT intended to invoke this provision by referencing the Statement of Registry Compliance, which counts only the "net" capacity provided, by referencing the Statement of Compliance

Organization	Yes or No	Question 3 Comment
		Registry Criteria. However, Exclusions E1 and E3 exclude generation on the basis of "gross nameplate ratings." For customer-owned facilities, this treatment is inconsistent with netting treatment provided in the Statement of Registry Compliance. Exclusions E1-E3 should be revised to reference the Statement of Compliance Registry Criteria as well so that customer-owned generation is included or excluded based on its net capacity to the grid rather than its gross nameplate capacity. TIEC also supports revisiting and potentially raising the thresholds that trigger registration as a Generation Owner or Operator. TIEC understands that the SDT has decided to maintain the status quo as reflected in NERC's Registry Criteria at this time. TIEC looks forward to addressing potential modifications to the thresholds in the appropriate context.

Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. *Element is defined* in the NERC Glossary of Terms as:

> "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Organization	Yes or No	Question 3 Comment
Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power,	Yes	The word "identified" should be replaced with "designated".

Organization	Yes or No	Question 3 Comment
MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative		
Response: The SDT believes this comment was intended for Q4 and directs you to the detailed response provided there.		
Dominion	Yes	Dominion interprets the revised language to exclude generating resources connected at less than 100 kV. If this interpretation is not accurate, then Dominion does not support the revised language.
Response: The I2 inclusion refers only to generation " … through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above."		
Transmission Access Policy Study Group	Yes	TAPS supports the intent of proposed Inclusion I2. For the sake of clarity, we suggest revising "per the ERO Statement of Compliance Registry Criteria" to "as described in the ERO Statement of Compliance Registry Criteria."
ACES Power Marketing Standards Collaborators	Yes	We'd prefer to see the language from the ERO Statement of Compliance Registry Criteria repeated within the BES Definition itself instead of referencing an outside document. As it stands right now, the Compliance Registry Criteria needs to stay intact for Phase 1 of this project. That makes the Compliance Registry Criteria reliant on the BES Definition and vice versa. We understand that the Statement of Compliance Registry Criteria may be reviewed/revised at the same time Phase 2 of this project is being developed, therefore we agree with Inclusion I2 of this draft.
Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed		

Organization	Yes or No	Question 3 Comment
and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project. **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.		
Florida Municipal Power Agency	Yes	Please see comments to Question 1
Response: Please see response to Q1.		
Redding Electric Utility	Yes	Redding believes that the definition should drive what appears in the Registry Criteria, therefore we only support this on a temporary basis based on the premise that the BES Phase 2 technical analysis will identify and provide technical support for determining the appropriate minimum MVA rating for a single unit or the aggregation of multiple units.
City of Redding	Yes	Redding believes that the definition should drive what appears in the Registry Criteria, therefore we only support this on a temporary basis based on the premise that the BES Phase 2 technical analysis will identify and provide technical support for determining the appropriate minimum MVA rating for a single unit or the aggregation of multiple units.
MEAG Power	Yes	We agree in general with the revisions to I2 for generation; however, we maintain that 200kV and above is the correct bright line for the Bulk Electric System.
Tennessee Valley Authority	Yes	TVA agrees in general with the revisions to I2 for generation; however, we maintain that 200kV and above is the correct bright line for generation connected to the Bulk Electric System, and requests that the Phase 2 for the project use 200kV and above or develop a transmission voltage and/or an MVA threshold that is technically based.

Organization	Yes or No	Question 3 Comment
SERC Planning Standards Subcommittee	Yes	We are concerned that the generator MVA limits are too low and strongly support addressing this issue in Phase 2 of this project.
NERC Staff Technical Review	Yes	The drafting team's proposed approach for Inclusion I2 (generation), including the reference to the ERO Statement of Compliance Registry Criteria, is generally acceptable given the scope of this project and the breaking of the project into two phases. Thresholds for generator MVA rating and interconnection voltage should be considered in the second phase of this project.
SERC OC Standards Review Group	Yes	We agree in general with the revisions to I2 for generation; however, we maintain that 200kV and above is the correct bright line for the Bulk Electric System.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
ATC LLC	Yes	
Westar Energy	Yes	
Portland General Electric Company	Yes	

Organization	Yes or No	Question 3 Comment
Georgia System Operations Corporation	Yes	
Oncor Electric Delivery Company LLC	Yes	
National Grid	Yes	
Cowlitz County PUD	Yes	Cowlitz also strongly supports Phase 2 to address the lack of technical justification of the MVA bright line criteria.
Utility Services, Inc.	Yes	
PSEG Services Corp	Yes	
ISO New England Inc	Yes	
Manitoba Hydro	Yes	
Long Island Power Authority	Yes	
Z Global Engineering and Energy Solutions	Yes	
Consumers Energy	Yes	
Metropolitan Water District of Southern California	Yes	
Duke Energy	Yes	

Organization	Yes or No	Question 3 Comment
Central Hudson Gas and Electric Corporation	Yes	
City of Anaheim	Yes	
ReliabilityFirst	Yes	
Southern Company	Yes	
FirstEnergy Corp.	Yes	
Exelon	Yes	
Western Area Power Administration	Yes	
IRC Standards Review Committee	Yes	
WECC Staff	Yes	
Bonneville Power Administration	Yes	BPA agrees with the I2 changes and feels that they are excellent.
Southwest Power Pool Standards Review Team	Yes	
BGE	Yes	No comment.
Response: Thank you for your support. However, the SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the		

Organization	Yes or No	Question 3 Comment
possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project. **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.		

4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: The directive by FERC to revise the definition of the BES has been interpreted by the SDT to include all Facilities necessary for reliably operating the interconnected transmission system under both normal and emergency conditions. This interpretation by the SDT includes situations related to Blackstart Resources and system restoration. Blackstart Resources have the ability to be started without the support of the interconnected transmission system in order to meet a Transmission Operators restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The SDT maintains that Blackstart Resources must be included in the definition however their associated Cranking Paths are not included in the BES definition as they can fall within distribution class levels. Cranking Paths will be discussed further in Phase 2 of this project.

No changes were made to Inclusion I3 from the previous posting.

Organization	Yes or No	Question 4 Comment
SERC OC Standards Review Group	No	We agree with the changes but believe clarity would be added by changing the word “identified” to “designated”.
Tennessee Valley Authority	No	TVA agrees with the changes but believe clarity would be added by changing the word “identified” to “designated”.
Southern Company	No	We agree with the changes but believe clarity would be added by changing the word “identified” to “designated”.
MEAG Power	No	We agree with the changes but believe clarity would be added by changing the word “identified” to “designated”.
Response: ‘Identified’ is consistent with the wording in EOP-005-2. The SDT does not feel that this change would add any additional clarity. No change made.		

Organization	Yes or No	Question 4 Comment
Texas Reliability Entity	No	We feel that the Cranking Path should be included in the BES definition. Inclusion of the Cranking Path is vital to a functional, sustainable and reliable system restoration (and restoration plan) regardless of where the Cranking Path is located. CIP-002-4 Attachment 1 recognizes the critical nature of the Cranking Path.
NERC Staff Technical Review	No	The cranking path(s) identified in the Transmission Operator's restoration plan should be included in the BES definition.
Response: Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system Elements. The Transmission Operator's restoration plans identify a number of possible system restoration scenarios to address the uncertainty of the actual requirements needed to address a particular restoration event including Cranking Paths. Therefore, the SDT maintains that Cranking Paths are not required to be included in the BES definition as they are essentially a moving target and could include distribution Elements. The Cranking Paths issue will be discussed anew in Phase 2 of this project. No change made.		
NESCOE	No	While NESCOE appreciates that cranking paths were excluded in response to industry comments, as we stated in comments to the prior posting of the BES definition, blackstart units should be excluded from the BES. Such units are appropriately covered under regional restoration procedures and applicable NERC standards (see for example, Emergency Operating Procedure EOP-005-2). However, should blackstart units be included in subsequent postings of the definition, we suggest that the language be revised to state that only those units "material to" the BES are included.
Ontario Power Generation Inc.	No	To assure availability of the generation blackstart resources identified in the Transmission Operator's Power System Restoration Plan the generators are tested according to the requirements of reliability standard EOP-009. Blackstart resources are only required post LOBES (Loss of Bulk Electric System) and in many cases do not contribute to the reliability of the BES under normal operating conditions. OPG recommends that this inclusion be removed from the new definition of BES.
IRC Standards Review	No	We support the SDT's decision to exclude the cranking paths from the BES definition since testing and verification of the use of facilities in the cranking path is already

Organization	Yes or No	Question 4 Comment
Committee		covered by the appropriate EOP standards. This inclusion is extraneous given there is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. We therefore suggest removing Inclusion I3.
Hydro One Networks Inc.	No	We agree with the SDT in excluding the cranking paths from the BES definition, a point we had raised in our comments to the previous posting. We also disagree with the inclusion of blackstart resources and reiterate our view that their inclusion is superfluous given there is already a designation specific for system restoration covered by an existing standard, to recognize their reliability impacts and to ensure their expected performance. NERC Standard EOP-005-2 stipulates the requirements for testing blackstart resources and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. We therefore suggest completely removing Inclusion I3.We suggest the SDT to drop I3 on the basis that: o The availability and performance expectations of blackstart resources are ensured by existing related standards; and o Unless they meet the BES definition under inclusion I2, there is no perceived reliability value in everyday operation of the BES.
Northeast Power Coordinating Council	No	Eliminating I3 should be considered based on the availability and performance expectations of black start resources being ensured by existing standards, and unless they meet the BES definition under the I2 inclusion they do not have any reliability impact on BES operation. If I3 is retained, suggest rewording Inclusion I3 to read as follows: Black start resources material to and designated as part of the Transmission

Organization	Yes or No	Question 4 Comment
		Operator's restoration plan.
Independent Electricity System Operator	No	We thank the SDT for excluding the cranking paths from the BES definition, a point we had raised in our comments to the previous posting. However, we had also disagreed with the inclusion of Blackstart Resources and reiterate our view that their inclusion is superfluous given there is already a designation specific for system restoration covered by an existing standard, to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. We therefore suggest removing Inclusion I3 entirely.
FirstEnergy Corp.	Yes	We agree with the team's conclusion to remove cranking paths from the BES definition since NERC (i.e. EOP standards) specifically address reliability matters associated with cranking paths. Although we believe item I3 (blackstart unit) is unnecessary as part of the BES Definition, we will not object to its inclusion. A blackstart unit is a facility necessary for BES restoration, but not necessarily required to be included within the BES Definition.

Response: The SDT disagrees that Blackstart Resources should not be included in the BES Definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES elements. No change made.

Organization	Yes or No	Question 4 Comment
ACES Power Marketing Standards Collaborators	No	Blackstart Resources can actually be on the distribution system. There is still the question of whether the distribution system would then be subjected to the enforceable standards. If so, there would most likely be a significant cost increase associated with tracking compliance for these distribution systems without a commensurate increase in reliability since Blackstart Resources are rarely used. This could very well cause entities to un-designate Blackstart Resources on distribution systems to avoid these distribution systems from becoming part of the BES. The same rationale that was used for eliminating cranking paths could also be applied to Blackstart Resources.
Response: Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system Elements. The Transmission Operator's restoration plans identify a number of possible system restoration scenarios to address the uncertainty of the actual requirements needed to address a particular restoration event including Cranking Paths. Therefore, the SDT maintains that Cranking Paths are not required to be included in the BES definition as they are essentially a moving target and could include distribution Elements. The Cranking Paths issue will be discussed anew in Phase 2 of this project. The SDT feels that the situation described would fall within a minimal percentage of units and therefore would be subject to the Exception Process as applicable. No change made.		
ReliabilityFirst	No	Blackstart Resource is a defined NERC term, but as outlined in the definition, it could be read to include the transmission assets that also make up the resource as part of the TOP plan. Is that the intent? ReliabilityFirst Staff also feels that without including the Cranking Paths, the reliable operation of the system could be jeopardized if a restoration is required and the Cranking Paths are unavailable due to non-compliance to Reliability Standards.
Response: The SDT does not agree that the definition of Blackstart Resource necessarily encompasses transmission assets. No change made. Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system Elements. The Transmission Operator's restoration plans identify a number of possible system restoration scenarios to address the uncertainty of the actual requirements needed to address a particular restoration event including Cranking Paths. Therefore,		

Organization	Yes or No	Question 4 Comment
the SDT maintains that Cranking Paths are not required to be included in the BES definition as they are essentially a moving target and could include distribution Elements. The Cranking Paths issue will be discussed anew in Phase 2 of this project. No change made.		
Central Maine Power Company	No	Inclusion I3 should be changed to include the phrase, “material to,” currently in the Statement of Compliance Registry Criteria (Section 3C3). Based on the definition wording, the Generator Step-Up transformer (GSU) would not be BES if the generator would not otherwise already be included as BES under another definition provision.
Rochester Gas and Electric and New York State Electric and Gas	No	Inclusion I3 should be changed to include the phrase, “material to,” currently in the Statement of Compliance Registry Criteria (Section 3C3). Based on the definition wording, the Generator Step-Up transformer (GSU) would not be BES if the generator would not otherwise already be included as BES under another definition provision.
Orange and Rockland Utilities, Inc.		Minimum Power system and material? NERC registry criteria for generation section "3C3"
Massachusetts Department of Public Utilities	No	The inclusion should be revised to specify that only those blackstart units that are “material to” the BES are included in the definition.
Consolidated Edison Co. of NY, Inc.	No	We suggest using wording from the Statement of Compliance Registry Criteria:Any generator regardless of size which is material to ... [Ref: Statement of Compliance Registry Criteria, III.c.3-Blackstart]Define “material to” as a generator listed as a necessary part of the TOP-defined minimum system to restore the BES. This term “material to” should exclude Blackstart-capable generators not necessary for BES restoration or only used for local distribution system restoration. Wording Recommendation: Following the words “identified in” add the words “and material to” so that the new Inclusion reads:I3 - Blackstart Resources identified in and material to the Transmission Operator’s restoration plan.
Response: The SDT believes that adding language such as “material to” does not provide clarity and remains immeasurable. No		

Organization	Yes or No	Question 4 Comment
change made.		
Manitoba Hydro	No	Inclusion I3 should specifically state that only the Blackstart Resources specified through EOP-005-2 R1.4 are included in the BES since "Transmission Operator restoration plan' is not a NERC defined term. Suggested wording:"I3 - Blackstart Resources identified through EOP-005-2 R1.4"
Response: The SDT appreciates your concern but does not believe it is appropriate to reference a standard in the definition. Any modification to the standard including an interpretation or a simple re-versioning for errata would change the standard number and thus require that the definition be updated. No change made.		
ISO New England Inc	No	The SDT has interpreted the FERC Directive to revise the BES definition in a manner that goes beyond the mandate of ensuring that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT states that operation is interpreted as being under both normal and emergency conditions. However, loss of all electric power is the end state condition when all normal and emergency remediating actions have failed to prevent a collapse of the grid. System restoration involves the use of blackstart generators that are not resources necessary for operating the electrical grid but rather a means to recover following (not part of the emergency itself) an extreme emergency. The SDT should simply refer to the current Compliance Registry, which, for now, appears to adequately deal with the issue of how to treat Blackstart resources. I3 states "Blackstart Resources identified in the Transmission Operator's restoration plan". This is contrary to the preferred language that is part of the approved ERO Statement of Compliance Registry, III.C.3 that states, "Any generator, regardless of size, that is a blackstart unit material to (emphasis added) and designated as part of a transmission operator entity's restoration plan". This language is necessary to distinguish between those Blackstart Resources that are depended upon to restore the BES following an emergency ("Key Facilities") as compared to those Blackstart Resources that are used to restore power to customer load.

Organization	Yes or No	Question 4 Comment
		Additionally, discussions with others during the preparation of comments have revealed that some interpret this requirement to include the GSU. We do not interpret this in this manner, but this should be clarified to avoid confusion.
Response: The SDT disagrees that Blackstart Resources should not be included in the BES Definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator's restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator's restoration plan. For these reasons, the SDT continues to include Blackstart Resources indentified in the Transmission Operator's restoration plan as BES elements. No change made. The SDT does not agree that the definition of Blackstart Resource necessarily encompasses transmission assets such as GSUs.		
SRP	No	The Blackstart 'Cranking Path' has been deleted from Inclusion 3 of the BES definition. However, NERC Standards EOP-005 and CIP-002, R1.2.4, require documenting the Cranking Path. In addition, CIP-002—4 identifies the Cranking Path as a Critical Asset in Attachment 1. Compliance to the NERC Standards needs to be an exact science whenever possible. SRP does not argue the inclusion or exclusion of Cranking Path. However, if it is excluded, guidance must be provided on whether or not a Cranking Path is subject to the previously mentioned Standards.
Response: Cranking Paths are subject to any standard in which they are specifically spelled out.		
Tacoma Power	Yes	Tacoma Power generally support Inclusion I3 as written. We continue to believe the BES should only include the Blackstart Resources that support a regional recovery. We propose changing Inclusion I3 to read,"Blackstart Resources identified in the Transmission Operator's restoration plan and included in a regional restoration plan."

Organization	Yes or No	Question 4 Comment
Response: The SDT does not agree that the definition should specify Blackstart Resources included in regional restoration plans as those regional systems may not be included in the BES nor have any impact on the BES. No change made.		
Ameren	Yes	a)The definition should include only those black start generators connected 100 kV and above and included in the restoration plan. b)We agree with the changes but believe clarity would be added by changing the word "identified" to "designated".
Response: Blackstart Resources are required to be registered regardless of connected voltage level. The SDT is remaining consistent with its earlier position on that point. No change made. 'Identified' is consistent with the wording in EOP-005-2. The SDT does not feel that this change would add any additional clarity at this time. No change made.		
Utility Services, Inc.	Yes	Utility Services supports suggestions by others that request that the language of the Inclusion use the exact language of the SCRC III.3.c. Leaving the language as is will likely increase the number of black start facilities beyond those currently applicable.
Response: Adding language such as "material to" found in the ERO Statement of Compliance Registry Criteria does not provide clarity and remains immeasurable. No change made.		
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power	Yes	In general, we agree with this revision. However, the aggregate MVA threshold should be 150 MVA or greater, and threshold voltage level should be 200kV or higher.

Organization	Yes or No	Question 4 Comment
Cooperative		
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
City of Redding	Yes	Redding recommends the following rewording: "The Primary Blackstart resources designated in the Transmission Operator's restoration plan." We believe it reduces reliability if all Blackstart generation either primary or secondary are required to be BES. Requiring all Blackstart capable units to be BES creates an incentive to leave certain blacstart units out of restoration plans in order to avoid BES inclusion. By making only the primary Blackstart unit a BES element then Transmission Operators will be more willing to include ALL Blackstart units in their plan thus creating a complete procedure for the Transmission Operator to restore the system.
Redding Electric Utility	Yes	Redding recommends the following rewording: "The Primary Blackstart resources designated in the Transmission Operator's restoration plan." We believe it reduces reliability if all Blackstart generation either primary or secondary are required to be BES. Requiring all Blackstart capable units to be BES creates an incentive to leave certain blacstart units out of restoration plans in order to avoid BES inclusion. By making only the primary Blackstart unit a BES element then Transmission Operators will be more willing to include ALL Blackstart units in their plan thus creating a complete procedure for the Transmission Operator to restore the system.

Organization	Yes or No	Question 4 Comment
City of Austin dba Austin Energy	Yes	We recommend rewording Inclusion I3 as follows: "Only Primary Blackstart resources designated as part of the Transmission Operator's restoration plan." We have concerns that making all Blackstart generation either primary or secondary BES elements creates an incentive to remove those secondary Blackstart capable units in an effort to avoid BES inclusion. We believe that making the primary Blackstart unit the only BES element will remove this incentive. In so doing, this will allow the secondary Blackstart units to remain in the Transmission Operator's plan and training program as an alternate tool for the Transmission Operator to restore the system.
Sacramento Municipal Utility District	Yes	We recommend rewording Inclusion I3 as follows: "Only Primary Blackstart resources designated as part of the Transmission Operator's restoration plan." We have concerns that making all Blackstart generation either primary or secondary BES elements will create an incentive to remove those secondary Blackstart capable units in order to avoid BES inclusion. Making the primary Blackstart unit the only BES element will remove this incentive. In so doing, this will allow the secondary Blackstart units to remain in the Transmission Operator's plan and training program as an alternate tool for the Transmission Operator to restore the system.
Balancing Authority Northern California	Yes	We recommend rewording Inclusion I3 as follows: "Only Primary Blackstart resources designated as part of the Transmission Operator's restoration plan." We have concerns that making all Blackstart generation either primary or secondary BES elements will create an incentive to remove those secondary Blackstart capable units in order to avoid BES inclusion. Making the primary Blackstart unit the only BES element will remove this incentive. In so doing, this will allow the secondary Blackstart units to remain in the Transmission Operator's plan and training program as an alternate tool for the Transmission Operator to restore the system.
Response: The SDT discussed the recommended wording and determined that it did not provide further clarity to the definition. Utilizing "primary" and "secondary" as a deterministic method for inclusion would create regional inconsistencies with application of the definition which is contrary to the intent to create a consistent continent-wide definition. No change made.		

Organization	Yes or No	Question 4 Comment
WECC Staff	Yes	WECC agrees with the inclusion of the blackstart units, but does not agree with the deletion of the cranking path from the I3. The cranking path should be included in the definition since the NERC standards EOP-005 and CIP-002 R1.2.4 require documenting the cranking path. The revised CIP-002-4 Standard identifies the cranking path as a critical asset in Attachment 1 (1.5).
Response: Cranking Paths identified in a Transmission Operator's restoration plans are often composed of distribution system Elements. The Transmission Operator's restoration plans identify a number of possible system restoration scenarios to address the uncertainty of the actual requirements needed to address a particular restoration event including Cranking Paths. Therefore, the SDT maintains that Cranking Paths are not required to be included in the BES definition as they are essentially a moving target and could include distribution Elements. The Cranking Paths issue will be discussed anew in Phase 2 of this project. No change made.		
Florida Municipal Power Agency	Yes	Please see comments to Question 1
Response: Please see response to Q1.		
ExxonMobil Research and Engineering	Yes	
ATC LLC	Yes	
Westar Energy	Yes	
Northern Wasco County PUD	Yes	We agree with the removal of the voltage language, since the inclusions and exclusions apply only to equipment over 100 kV.
Farmington Electric Utility System	Yes	

Organization	Yes or No	Question 4 Comment
South Houston Green Power, LLC	Yes	
Portland General Electric Company	Yes	
Georgia System Operations Corporation	Yes	
Nebraska Public Power District	Yes	
LCRA Transmission Services Corporation	Yes	
National Grid	Yes	
Kansas City Power and Light Company	Yes	
Oncor Electric Delivery Company LLC	Yes	
Umatilla Electric Cooperative (UEC)	Yes	UEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Central Lincoln	Yes	We agree with the removal of the voltage language, since the inclusions and exclusions apply only to equipment over 100 kV.
Harney Electric Cooperative,	Yes	HEC agrees with the inclusions to the core definition.

Organization	Yes or No	Question 4 Comment
Inc.		
Cowlitz County PUD	Yes	
PSEG Services Corp	Yes	
Hydro-Quebec TransEnergie	Yes	
Pacific Northwest Generating Cooperative (PNGC)	Yes	PNGC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Raft River Rural Electric Cooperative (RAFT)	Yes	RAFT supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
West Oregon Electric Cooperative	Yes	WOEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Lincoln Electric Cooperative (LEC)	Yes	LEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Northern Lights Inc. (NLI)	Yes	NLI supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is

Organization	Yes or No	Question 4 Comment
		simply a specific type of such an interconnection facility.
Okanogan County Electric Cooperative (OCEC)	Yes	OCEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Douglas Electric Cooperative (DEC)	Yes	DEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Fall River Rural Electric Cooperative (FALL)	Yes	FALL supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Lane Electric Cooperative (LEC)	Yes	LEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Clearwater Power Company (CPC)	Yes	CPC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Snohomish County PUD	Yes	SNPD supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.

Organization	Yes or No	Question 4 Comment
Consumer's Power Inc.	Yes	CPI supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Central Electric Cooperatve (CEC)	Yes	CEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Coos-Curry Electric Cooperative (CCEC)	Yes	CCEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Blachly-Lane Electric Cooperative (BLEC)	Yes	BLEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Long Island Power Authority	Yes	
The Dow Chemical Company	Yes	
City of St. George	Yes	
American Electric Power	Yes	
Tillamook PUD	Yes	Tillamook PUD agrees with the removal of the voltage language since the inclusions and exclusions only apply to equipment over 100 kV.

Organization	Yes or No	Question 4 Comment
NV Energy	Yes	
Z Global Engineering and Energy Solutions	Yes	
Consumers Energy	Yes	
Mission Valley Power	Yes	Mission Valley Power - We agree with the removal of the voltage language, since the inclusions and exclusions apply only to equipment over 100 kV.
Puget Sound Energy	Yes	
Central Hudson Gas and Electric Corporation	Yes	
City of Anaheim	Yes	
Chevron U.S.A. Inc.	Yes	
Metropolitan Water District of Southern California	Yes	
Duke Energy	Yes	
Clallam County PUD No.1	Yes	CLPD supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Exelon	Yes	

Organization	Yes or No	Question 4 Comment
Michigan Public Power Agency	Yes	
Idaho Falls Power	Yes	We support the inclusion as drafted.
Tri-State GandT	Yes	
Western Area Power Administration	Yes	
Texas Industrial Energy Consumers	Yes	
PacifiCorp	Yes	PacifiCorp supports the removal of reference to Cranking Paths in I3. There is no reason to classify as BES the facilities interconnecting a BES generator to the interconnected transmission system.
Tri-State Generation and Transmission Assn., Inc. Energy Management	Yes	
MRO NERC Standards Review Forum (NSRF)	Yes	
Electricity Consumers Resource Council (ELCON)	Yes	
Southern Company Generation	Yes	
Pepco Holdings Inc and Affiliates	Yes	Agree with the SDT decision to delete the inclusion of Black Start Cranking Paths.

Organization	Yes or No	Question 4 Comment
Dominion	Yes	
Bonneville Power Administration	Yes	
Texas RE NERC Standards Subcommittee	Yes	
SERC Planning Standards Subcommittee	Yes	
Southwest Power Pool Standards Review Team	Yes	
BGE	Yes	No comment.
Response: Thank you for your support.		

5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: Several comments sought clarification that Inclusion I4 was directed at including resources such as wind and solar farms and sought a distinction between Inclusions I2 and I4. The SDT believes this is presently clear in the definition. Inclusion I4 specifically addresses wind and solar farms being dispersed power producing resources that "utilize[e] a system designed primarily for aggregating capacity." The essential distinction between Inclusion I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose.

The SDT also clarifies that Inclusion I4 speaks towards the inclusion of the generation resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2.

There were a number of comments seeking clarification on the location of the common point of connection. While the SDT does not believe additional clarification of the term "common point" is needed in the BES definition, the following guidance is provided. The common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system.

Some stakeholders asked for clarity on the issue of units on the customer's side of the retail meter. Generating units on the customer's side of the retail meter are not included under Inclusion I4 since customer-side retail generation typically does not "utilize[e] a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above."

Several comments sough clarification of the definitional difference between "dispersed power" and "distributed generation" as used in the BES definition. While the SDT does not believe that further clarity of these terms is needed in the BES definition, it clarifies that distributed generation is generally defined as: a generator that is located close to the particular Load that it is intended to serve and is interconnected to the utility distribution system. The U.S Energy Information Administration (EIA) and FERC generally use this as a basic definition. The language of Inclusion I4 stating "Dispersed power producing resources . . . utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above" was selected so as not to confuse what is traditionally considered distributed generation with the types of systems to be included in Inclusion I4.

The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

No changes were made to Inclusion I4 based on comments provided in response to this question.

Organization	Yes or No	Question 5 Comment
Northeast Power Coordinating Council	No	Suggest the term “common point” needs clarification and/or definition (is risk of single mode failure intended, i.e. where all the resources could be lost for a single event?). Suggest the following wording: “connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 KV or above.” Dispersed power producing sources such as wind and solar should not be included as BES elements because of the variable and intermittent nature of these resources. If these dispersed power producing resources had dedicated energy storage facilities only then that could make them BES elements. Generally the collector systems for these resources (from the bulk transmission system reliability perspective) do not differ from distribution systems which are excluded from the BES.
Response: While the SDT does not believe that additional clarification of the term “common point” is needed in the BES definition, the following guidance is provided. The common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the		

Organization	Yes or No	Question 5 Comment
individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system. No change made. The SDT disagrees with excluding dispersed power producing sources such as wind and solar from the BES definition. These resources comprise a significant share of the North American resource mix. No change made. The SDT does not believe further clarification of Dispersed Power Resources is needed. Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources "utilize[e] a system designed primarily for aggregating capacity." Furthermore, Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.		
Southwest Power Pool Standards Review Team	No	We believe that the removal of the wording "single site" in I2 would remove the need to cover dispersed power producing resources in I4. What is the reason for keeping I4 in this version? Also we understand that 75MVA is held in I4 because of no direct link to the registry criteria, but feel that this number could change in phase two of the project which would create unnecessary work in the future.
Response: The essential distinction between Inclusions I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources "utilize[e] a system designed primarily for aggregating capacity." No change made. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry		

Organization	Yes or No	Question 5 Comment
stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
Pepco Holdings Inc and Affiliates	No	The SDT reworded Inclusion I4 to use the phrase "utilizing a system designed primarily for aggregating capacity". This was to address a concern that the previous definition could ensnare distributed generation or small generators in a distribution system. We agree with the intent of this modification. I4 was intended solely to address wind and solar farms that use a collector system to aggregate their capacity. Therefore, to provide better clarity on the intent of this Inclusion, perhaps it would be better to specifically mention these examples in the wording: "Dispersed power producing resources (such as wind and solar farms, etc.) which utilize a system designed primarily for aggregating capacity, where the capacity is greater than 75MVA (gross aggregate nameplate rating) and the facility is connected at a common point at a voltage of 100kV or above."
Response: Use of the term 'etc.' is not suitable for a definition as it is completely open ended. Inclusion of a list is problematic as it may not be complete especially with regard to future technology enhancements which could force a revision of the definition. The SDT does not believe the suggested change provides any additional clarity. The SDT does not believe further clarification of Dispersed Power Resources is needed. Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources "utilize[e] a system designed primarily for aggregating capacity." No change made.		
Hydro One Networks Inc.	No	Although we agree with the I4 concept, we suggest that the SDT should consider that this category primarily includes wind and solar farms and their collector system. We believe these facilities should not be included

Organization	Yes or No	Question 5 Comment
		as BES elements but rather as supporting elements (see comments under I2) for the following reasons: a) Any additional benefit of classifying these resources as BES is insignificant for the reliability of supply (capacity and energy), considering the intermittent and widely variable nature of these resources. The planning and operational standards and practices make sure that their unavailability or unexpected (sudden) loss, which are significantly more likely due to the natural elements than those due to mechanical or electrical causes, will not jeopardize the reliability of the supply; and b) The reliability of the aspects of the collector system of these resources (their impact on reliability of the bulk transmission system) is not different from that of distribution systems (load serving feeders) which are excluded from the BES. We agree with the revised portion of Inclusion I4 which does indeed clarify that there is no requirement for a contiguous BES path from the dispersed generation resources to the point of interconnection to the BES.
Response: The SDT disagrees with excluding dispersed power producing sources such as wind and solar from the BES definition. These resources comprise a significant share of the North American resource base. No change made. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.		
Western Area Power Administration	No	Need to clarify the systems associated with this inclusion. The phrase "dispersed power producing resources" in inclusion (I4) is confusing and does not clearly communicate the focus of this inclusion. Without reviewing the reference information provided in the 1st draft comment form, it's not clear that dispersed power producing resources refer to wind and solar resources. Recommendation: Include examples after phrase "dispersed power producing resources" for clarification to this

Organization	Yes or No	Question 5 Comment
		inclusion. Change I4 to read - Dispersed power producing resources (i.e. wind and solar resources) with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above.
Response: The SDT does not believe that the suggestion provides any additional clarity. No change made.		
PacifiCorp	No	Setting a dispersed power producing resource limit to 75 MVA at a common point discriminates against single generator owners who own generators between 20 MVA and 75 MVA (inclusion I1), typically connected at a common point and requires such owners to be subject to additional standards that dispersed power producing owners are not required. However, even with this concern, PacifiCorp supports the entire BES definition in its current form based on the timeframe under which the SDT is operating and with an emphasis based on a phase II SAR to address PacifiCorp's objections regarding generation levels. Under the attached scenario, please identify which elements would be considered BES: This response included a drawing. This format will not allow the submission of the drawing. The drawing will be sent separately in an email. Reference "Proj 2010-17 PAC Drawing".
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. All recommendations for modifications to the technical		

Organization	Yes or No	Question 5 Comment
aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System will be considered. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. The examples provided will be reviewed as part of Phase 2.		
Massachusetts Department of Public Utilities	No	The aggregate 75 MVA of connected generation does not appear to be adequately supported by technical analysis and appears, on its face, as too low. Among our concerns is that such a low level will have a potential adverse impact on the development of renewable generation resources. In addition, the inclusion needs to be clarified in order that entities have clear guidance on what is meant by "common point of interconnection."
NESCOE	No	NESCOE continues to disagree with this proposed inclusion. NESCOE is concerned with the potential adverse impact this may have on the development of renewable generation resources. In addition, NESCOE suggests that the aggregate 75 MVA of connected generation is too low and is not adequately supported by technical analysis. The threshold value should be related to the largest contingency the applicable control area is designed to operate to. A level of 300 MVA would be appropriate. Finally, the inclusion needs to be clarified in order that entities have clear guidance on what is meant by "common point of interconnection."
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded		

Organization	Yes or No	Question 5 Comment
the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. The SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. While the SDT does not believe that additional clarification of the term "common point" is needed in the BES definition, the following guidance is provided. The SDT believes the common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system. No change made.		
Idaho Falls Power	No	As drafted, it appears to draw in all generation resources that sum to 75 MVA or higher. We question then if there is value of categorizing every wind turbine on a >75MVA wind farm as a BES asset and, what would be the unintended consequences. Perhaps language delineating the point of aggregation as the demarcation point of a BES asset would better serve.
Response: Inclusion I4 denotes an aggregate threshold. This is clear from the requirement inclusion threshold of "aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)." Once this aggregate threshold is met, all generation resources that comprise the facility would be included. No change made. While the SDT does not believe that additional clarification of the term "common point" is needed in the BES definition, the following guidance is provided. The SDT believes the common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system. No change made.		

Organization	Yes or No	Question 5 Comment
ReliabilityFirst	No	The term "Dispersed Power Producing Resource" is not a defined term and needs further clarification. However, I4 is not needed and is already included in I2. I4 does not add any additional facilities that are not already included in I2. How are "dispersed power producing resources" different from "generating resources" described in I2? If the intent of I4 is to include wind generators but exclude wind farm collector systems in the BES, ReliabilityFirst Staff disagrees. To maintain reliability, the BES cannot have pockets of generation that are not connected to the BES via BES facilities. ReliabilityFirst Staff believes that without including the paths from BES generators in the BES, the reliable operation of the system could be jeopardized if the paths are unavailable due to non-compliance to Reliability Standards. For example, wind farm collector systems at voltages operated at less than 100 kV should be included in the BES for the above reason. I4 could be deleted.
Response: The SDT does not believe further clarification of Dispersed Power Resources is needed. Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources "utilize[e] a system designed primarily for aggregating capacity." No change made. The essential distinction between Inclusions I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made. The contiguous nature of the BES will be discussed as part of Phase 2 of the project. No change made.		
Xcel Energy	No	Xcel Energy believes that this inclusion is still a little vague and could use some clarification. For instance, if a wind farm has an aggregated capacity greater than 75 MVA (and therefore meets Inclusion I4) exactly

Organization	Yes or No	Question 5 Comment
		what facilities are included as part of the BES, every turbine, all distribution transformers and cables, etc. If all equipment is included, what level of detail is required of this BES facility for modeling purposes, and who is responsible for modeling this system. Or, is the intent to only include the facilities at the common point of connection, whereby the facility could be modeled as 1 large facility?
Response: Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.		
Central Maine Power Company	No	The term "common point" needs clarification and/or definition. (e.g., is it intended to apply to the risk of single mode failure, where all the resources could be lost for a single event?) Some northeast industry expert colleagues interpret I2 to mean the collector system itself needs to be 100 kV or above in order to be BES. I2 seems to not include the collector system itself in BES. I4 should be restated as follows: "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system connected at a common point. BES includes the interconnecting substation with the step-up transformer(s) connected at a voltage of 100 kV or above."[alternatively, replace "interconnecting substation with" with, "generator terminals through the high-side of" if the entire collector system is intended to be BES]Also note that some wind collector systems require supplemental dynamic reactive resources or special control system to met reliability standards. As written, these reactive resources or controls may not be considered to be BES.
New York State Dept of Public Service	No	I4 reference to a "common point" lacks clarity that can lead to confusion and required clarifications. Suggested wording change: ... connected at a common point through a dedicated step-up transformer with a high-

Organization	Yes or No	Question 5 Comment
		side voltage of 100 kV or above."
American Electric Power	No	We believe more clarity is needed as to where exactly the "common point" is, for example in the case of a wind farm. This first common point could be interpreted as the output voltage of the wind generator, would be less than the 100kv threshold and thereby could (unintentionally?) exclude the facility as a whole. If this was unintentional, we recommend rewording I4 in a manner similar to I2.
Response: While the SDT does not believe that additional clarification of the term "common point" is needed in the BES definition, the following guidance is provided. The SDT believes the common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system. No change made.		
The Dow Chemical Company	No	It is not clear how "Dispersed power producing resources" differ from "Generating Resource (s)" in I2. Inclusion I4 should clarify this. We suggest that the phrase "Variable Energy Resources" be used instead of "Dispersed power producing resources". Variable Energy Resources should be defined as "Resources producing electricity using wind or solar energy." The following phrase should be added at the end "unless excluded under Exclusion E2".
Response: The essential distinction between Inclusion I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made. The SDT does not believe that the suggestion provides any additional clarity. No change made.		

Organization	Yes or No	Question 5 Comment
The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " An Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.		

Organization	Yes or No	Question 5 Comment
Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition does not provide a definitive determination on whether an Element is classified as BES or non-BES, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made.		
City of St. George	No	This language follows the 75 MVA plant requirements from the Registration Criteria. See comments to question 3 (for I2) above. Additional detail is needed to clarify exactly at what point in the dispersed system the BES starts and what is not BES.
Response: Please see response to Q3. While the SDT does not believe that additional clarification of the term "common point" is needed in the BES definition, the following guidance is provided. The SDT believes the common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system. No change made.		
ISO New England Inc	No	I4 is unclear as to whether or not the collector system (or system designed primarily for aggregating capacity) itself is BES or just the resource."Utilizing a system designed primarily for aggregating capacity" needs to be more clearly defined to account for multiple systems that may exist out of one common point. A suggestion would be to modify the end of the sentence to say "connected at any common point." I4 will allow for significant amounts of dispersed power producing resources to be excluded from the BES. This includes wind resources which are increasing in numbers and having a significant impact on system operations. It does not seem appropriate that having ten 70 MVA (total of 700 MVA) installations each with their own connection to a 115

Organization	Yes or No	Question 5 Comment
		kV bus should fall outside of the BES. As currently written, they would fall outside of the inclusion if they do not utilize the same collector system. It is unclear whether or not supplemental equipment associated with the dispersed power producing resources is included in the BES. As an example, many wind resources are being interconnected utilizing supplemental dynamic and static reactive devices which are crucial to the operation of these resources. The dynamic devices are often controlling themselves and static reactive devices, which may or may not be connected above 100 kV. Leaving these devices out of the BES definition seems to be a potential gap.
Response: The essential distinction between Inclusion I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made. The clustering of dispersed power producing resources and supplemental equipment will be discussed as part of Phase 2 of the project. No change made.		
Rochester Gas and Electric and New York State Electric and Gas	No	The term “common point” needs clarification and/or definition. (e.g., is it intended to apply to the risk of single mode failure, where all the resources could be lost for a single event?) Some northeast industry expert colleagues interpret I2 to mean the collector system itself needs to be 100 kV or above in order to be BES. I2 seems to not include the collector system itself in BES. I4 be restated as follows:”Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system connected at a common point. BES includes the interconnecting substation with the step-up transformer(s) connected at a voltage of 100 kV or above.”[alternatively, replace the bold italics with,

Organization	Yes or No	Question 5 Comment
		"generator terminals through the high-side of"] Also note that some wind collector systems require supplemental dynamic reactive resources or special control system to met reliability standards. As written, these reactive resources or controls may not be considered to be BES.
Response: While the SDT does not believe that additional clarification of the term "common point" is needed in the BES definition, the following guidance is provided. The SDT believes the common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system. No change made. The essential distinction between Inclusion I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made. The inclusion of supplemental equipment will be discussed as part of Phase 2 of the project. No change made.		
LCRA Transmission Services Corporation	No	LCRA TSC suggests consistency between this inclusion criteria and the criteria used in I2 for "generation".
Response: The essential distinction between Inclusion I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.		
Kansas City Power and Light Company	No	It is not clear that it is the injection at the collection point that is the defining point for the injection. Nameplate rating of the generator is not a reflection of what can be actually injected into the transmission system with resulting electrical impacts on transmission loading and behavior. Recommend the BES definition be based on a generating resource(s)

Organization	Yes or No	Question 5 Comment
		established net accredited generating capacity at the common point instead of what it could do by nameplate rating that may not be achievable. Recommend the following language: Dispersed power producing resources utilizing a system designed primarily for aggregating capacity connected through a common point at a voltage of 100 kV or above with aggregate net accredited capacity at the common point of greater than 75 MVA.
Response: For Phase 1, the SDT has used nameplate rating in order to maintain consistency with the ERO Statement of Compliance Registry Criteria. No change made. This can be discussed in Phase 2 of the project. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
Farmington Electric Utility System	No	FEUS feels additional clarity should be added to I4. It appears I4 is not intended to include each individual wind turbine generating unit in a wind farm as a BES element, but rather to include the point at which the aggregation becomes large enough to meet the aggregate capacity threshold of 75MVA.
Response: inclusion I4 denotes an aggregate threshold. This is clear from the requirement inclusion threshold		

Organization	Yes or No	Question 5 Comment
of "aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)." Once this aggregate threshold is met, all generation resources that comprise the facility would be included. No change made.		
South Houston Green Power, LLC	No	Further clarification of "Dispersed power producing resources" is needed. Multiple small resources should not be included. The following phrase should be added at the end of Inclusion I4 "unless excluded under Exclusion E2".
Response: The SDT does not believe that additional clarification is needed. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made. The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " An Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.		

Organization	Yes or No	Question 5 Comment
Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition does not provide a definitive determination on whether an Element is classified as BES or non-BES, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made.		
Westar Energy	No	We believe that the removal of the wording "single site" in I2 would eliminate the need to include dispersed power producing resources in I4. We feel that I4 should be removed to reduce redundancy in the definition, unless there is some other reason to include it. Also, we understand that 75 MVA is retained in I4 because there is no direct link to the ERO Statement of Compliance Registry Criteria, but we have concerns that this number could change in phase two of the project, creating unnecessary work in the future.
Response: The essential distinction between Inclusion I2 and I4 is that I2 may not include generating resources that use lower voltage collection systems while I4 is specifically designed to accomplish this purpose, therefore I4 is needed. No change made.		

Organization	Yes or No	Question 5 Comment
The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. The SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
Hydro-Quebec TransEnergie		Same comment than Q. 3. Also, since the path to connect the dispersed generation is often done at distribution voltage, that lower voltage path should not be included in BES.
Response: Please see response to Q3. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.		
Tacoma Power	Yes	Tacoma Power generally supports the Inclusion I4 as currently written. However, we support further refinement of the aggregate nameplate rating definition and support deferring the appropriate quantitative thresholds to those that will be determined in Phase 2.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders		

Organization	Yes or No	Question 5 Comment
No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. The SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
Ameren	Yes	a)For a consistent application, we suggest that the definition of the terms "Dispersed power producing resources" is included. Consider including some examples also.
Response: The SDT does not believe further clarification of Dispersed Power Resources is needed. Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources "utilize[e] a system designed primarily for aggregating capacity." No change made.		
Cowlitz County PUD	Yes	However, Cowlitz suggests Inclusion 4 be made parallel with Inclusion 2: ...(greater than the gross aggregate name plate rating per the ERO Statement of Compliance Registry Criteria) utilizing...
Response: The SDT believes that Inclusions I2 and I4 do use consistent language and this point has been clarified with the clarifying language changes to Inclusion I2. No change made.		
Long Island Power Authority	Yes	Need to define the term "common point"
Response: While the SDT does not believe that additional clarification of the term "common point" is needed in the BES definition, the following guidance is provided. The SDT believes the common point of connection,		

Organization	Yes or No	Question 5 Comment
which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system.		
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative	Yes	This inclusion should be limited to reactive devices 150 MVAR or greater (gross aggregate nameplate rating) connected through a common point at the 200 kV level or higher level.
Manitoba Hydro	Yes	Manitoba Hydro agrees with I4 but it does create a discrepancy between the BES Definition and the Registration Criteria Document. The Registration Criteria document should be updated and I2 and I4 should be combined into a single Inclusion.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. The SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for		

Organization	Yes or No	Question 5 Comment
modifications to the existing values. Possible revisions to the ERO Statement of Compliance Registry Criteria will be discussed as part of Phase 2 of the project. No change made.		
Consumers Energy	Yes	We agree, but would like further clarification on what wind farm equipment (e.g., collector systems or other equipment) would be considered a part of the BES. Is the system designed for aggregating capacity considered to be part of the dispersed plant or part of the BES.
Response: Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.		
Michigan Public Power Agency Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperatve (CEC) Clearwater Power Company (CPC) Snohomish County PUD Consumer's Power Inc. Douglas Electric Cooperative (DEC) Fall River Rural Electric	Yes	MPPA supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e, "resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). Instead, we urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation Resources," which is discussed in more detail in our response to Question 3. This language, or some equivalent, will preserve the SDT's ability to revise the 75 MVA threshold in Phase 2, with the result of Phase 2 included in the BES Definition by operation rather than requiring further revision of the Definition. More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT's stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units. We are also concerned that the language, as proposed, could have

Organization	Yes or No	Question 5 Comment
Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC) Kootenai Electric Cooperative		unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a "collector system" and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a LN. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be established by the SDT in Phase 2. Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons. Finally, we suggest that the SDT add the phrase ". . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2." This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders		

Organization	Yes or No	Question 5 Comment
No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. The SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. The essential distinction between Inclusions I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. No change made. Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources "utilize[e] a system designed primarily for aggregating capacity." Furthermore, Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. Therefore distribution systems would not be inadvertently included. No change made.		
National Grid	Yes	We agree with Inclusion I4, however we feel that the inclusion could be interpreted in some different ways. This inclusion could be interpreted to exclude dispersed generation greater than 75 MVA if the first common point is less than 100 kV. To eliminate any confusion in the interpretation of this inclusion, we suggest this wording: Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected to a Transmission Element at 100 kV or above, utilizing a system designed primarily for aggregating capacity which includes all transformers between the generator(s) and the Transmission Element.

Organization	Yes or No	Question 5 Comment
MRO NERC Standards Review Forum (NSRF)	Yes	I4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above starting at the point of aggregation to 75 MVA or more through to the point of interconnection at 100 kV or above."
Response: The SDT does not believe that the suggested change provides additional clarity. No change made.		
Electricity Consumers Resource Council (ELCON)	Yes	The term "dispersed power" and "dispersed generation" are often synonymous with distributed generation, which includes behind-the-meter generation (CHP). The Inclusion should be clarified by specifically referencing wind and solar, or adopt the FERC term "Variable Energy Resources." Also, to distinguish this Inclusion from Inclusion I2, the SDT might want to clarify that the collection system (usually at voltage below 100 KV anyway) is not part of the BES-just the resources and any transformers included by I1, if this is indeed the intent of this Inclusion. The following phrase should be added at the end "unless excluded under Exclusion E2."
Response: The SDT believes that inclusion of a list is problematic as it may not be complete especially with regard to future technology enhancements which could force a revision of the definition. Furthermore, the SDT does not believe further clarification of Dispersed Power Resources is needed. Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources "utilize[e] a system designed primarily for aggregating capacity." No change made. The SDT does not believe that additional clarification is needed. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.		

Organization	Yes or No	Question 5 Comment
ACES Power Marketing Standards Collaborators	Yes	Further clarification on what "dispersed power" means would be helpful. How does it compare to distributed generation?
Response: While the SDT believes that further clarity of the terms "dispersed power" and "distributed generation" is not needed, it notes that distributed generation is generally defined as: a generator that is located close to the particular load that it is intended to serve and is interconnected to the utility distribution system. The U.S EIA and FERC generally use this as a basic definition. The language of Inclusion I4 stating "Dispersed power producing resources . . . utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above" was selected so as not to confuse what is traditionally considered distributed generation with the types of systems to be included in Inclusion I4. No change made.		
Texas RE NERC Standards Subcommittee	Yes	To distinguish this Inclusion from Inclusion I2, the SDT might want to clarify that the collection system (usually at voltage below 100 KV anyway) is not part of the BES-just the resources and any transformers included by I1, if this is indeed the intent of this Inclusion.
Response: The SDT does not believe that additional clarification is needed. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.		
ExxonMobil Research and Engineering	Yes	The BES SDT should clarify the difference between "dispersed power producing resources" and "generation resources" in such a manner that it is clear that an industrial plant containing providing the BES with power from ten 7.5MVA machines connected at a common point at a voltage of 100 kV or higher meets the qualifications for generation resources and does not meet the qualifications for a "dispersed power producing resource".
Portland General Electric	Yes	PGE requests additional clarity in the wording of Inclusion 4. Inclusion 4 is not intended to include each individual wind turbine generating unit in a

Organization	Yes or No	Question 5 Comment
Company		wind farm as a BES element, but rather to include the point at which the aggregation becomes large enough to meet the aggregate capacity threshold of 75 MVA. However, the response to comments from the last comment posting and the current wording of Inclusion 4 does not provide sufficient clarity to answer this question.
Bonneville Power Administration	Yes	BPA suggests adding, "Including generating terminals of the high side" as clarifying language to the end of the sentence. (Specifically where the 100kV is to be measured as clarified in I2). BPA believes that Inclusion 4 is not intended to include each individual wind turbine/generator unit in a wind farm as a BES element, but rather to include the point at which the aggregation becomes large enough to meet the aggregate capacity threshold of 75 MVA.
WECC Staff	Yes	WECC seeks further clarification on Inclusion 4. Several comments were submitted in the last round of comments whether each individual wind turbine in a wind farm, will be included in the BES. WECC believes the language change to I4 by the SDT did not address this issue. The current language in I4 could be interpreted as each individual turbine (example 1MW) would be part of the BES. WECC believes that I4 is not intended to include each individual wind turbine in a wind farm as a BES element but rather to include the point at which the aggregation becomes large enough to meet the aggregate capacity threshold of 75 MVA. WECC recommends the SDT modify the language in I4 to clarify this issue.
Response: The SDT does not believe that additional clarification is needed. Inclusion I4 denotes an aggregate threshold. This is clear from the requirement wording of "aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)." Once this aggregate threshold is met, all generation resources that comprise the facility would be included. No change made.		
Transmission Access Policy	Yes	We recommend clarifying that the dispersed power resources covered by

Organization	Yes or No	Question 5 Comment
Study Group		this inclusion do not include generators on the retail side of the retail meter. Specifically, we recommend that the Inclusion read: "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100kV or above, but not including generation on the retail side of the retail meter."
Florida Municipal Power Agency	Yes	We recommend clarifying that the dispersed power resources covered by this inclusion do not include generators on the retail side of the retail meter. Specifically, we recommend that the Inclusion read: "Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100kV or above, but not including generation on the retail side of the retail meter."
Response: The SDT does not believe that additional clarification is needed. The SDT further clarifies that generating units on the customer's side of the retail meter are not included under Inclusion I4 since customer-side retail generation typically does not "utilize[e] a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above." No change made.		
Redding Electric Utility	Yes	
City of Redding	Yes	
ATC LLC	Yes	
City of Austin dba Austin Energy	Yes	

Organization	Yes or No	Question 5 Comment
Georgia System Operations Corporation	Yes	
MEAG Power	Yes	
Northern Wasco County PUD	Yes	Northern Wasco County PUD agrees both with the inclusion and with the revised language. The revised language removes the need to provide a separate definition for “Collector System”.
Sacramento Municipal Utility District	Yes	We support using the BES Phase 2 technical analysis to identify and provide technical support for determining the appropriate minimum MVA rating that the aggregation of multiple units must meet to be considered part of the BES. We also support using the Phase 2 studies to identify an appropriate minimum MVA level that a single unit of the aggregation of multiple units must be considered BES.
Oncor Electric Delivery Company LLC	Yes	
Utility Services, Inc.	Yes	
Harney Electric Cooperative, Inc.	Yes	HEC agrees with the inclusions and revised language to the definition
Central Lincoln	Yes	Central Lincoln agrees both with the inclusion and with the revised language. The revised language removes the need to provide a separate definition for “Collector System”.
Independent Electricity	Yes	The revised Inclusion I4 does indeed clarify that there is no requirement

Organization	Yes or No	Question 5 Comment
System Operator		for a contiguous BES path from the dispersed generation resources to the point of interconnection to the BES.
PSEG Services Corp	Yes	
Mission Valley Power	Yes	Mission Valley Power agrees both with the inclusion and with the revised language. The revised language removes the need to provide a separate definition for “Collector System”.
Puget Sound Energy	Yes	
Tillamook PUD	Yes	Tillamook PUD agrees both with the inclusion and with the revised language. The revised language removes the need to provide a separate definition for “Collector System”.
NV Energy	Yes	
Z Global Engineering and Energy Solutions	Yes	
Metropolitan Water District of Southern California	Yes	
Duke Energy	Yes	
Ontario Power Generation Inc.	Yes	

Organization	Yes or No	Question 5 Comment
Central Hudson Gas and Electric Corporation	Yes	
City of Anaheim	Yes	This is OK because the 75 MVA is connected at 100 kV or above.
Chevron U.S.A. Inc.	Yes	
Southern Company	Yes	
FirstEnergy Corp.	Yes	
Texas Industrial Energy Consumers	Yes	
Tri-State GandT	Yes	
Tennessee Valley Authority	Yes	
IRC Standards Review Committee	Yes	The revised Inclusion I4 does clarify that there is no requirement for a contiguous BES path from the dispersed generation resources to the point of interconnection to the BES.
Tri-State Generation and Transmission Assn., Inc. Energy Management	Yes	
Southern Company Generation	Yes	
Dominion	Yes	

Organization	Yes or No	Question 5 Comment
Balancing Authority Northern California	Yes	
SERC Planning Standards Subcommittee	Yes	
SERC OC Standards Review Group	Yes	
NERC Staff Technical Review	Yes	
BGE	Yes	No comment.
Response: Thank you for your support.		

6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: In response to comments, the SDT added further clarification to Inclusion I5 to exclude small generators that would be improperly brought into the BES.

The SDT believes Inclusion I5 incorporates the necessary resources for the reliable operation of the BES, without unintentionally including any distribution devices, or including any of the dedicated transformers which are not identified in the core definition or Inclusion I1.

Additionally, Exclusion E4 will further exclude those non-generator Reactive Power resource devices that were identified through the core definition or through Inclusion I5 which are on the load side of the customer meter solely for the customer's own use.

Using a threshold for inclusion of non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

I5 –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.

Organization	Yes or No	Question 6 Comment

Organization	Yes or No	Question 6 Comment
SERC OC Standards Review Group	No	We feel that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common point.
Tennessee Valley Authority	No	TVA feels that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVAR (gross aggregate nameplate rating) connected through a common point at a voltage of 200kV or above, and requests that the Phase 2 for the project use 75 MVAR connected at 200kV or above or develop a transmission voltage and/or an MVAR threshold that is technically based.
Tri-State GandT	No	There should be a limitation on what reactive components needs to be included. The limits could be based on capacity of the units or on the voltage step that occurs upon switching of the device.
Western Area Power Administration	No	This inclusion should be worded to only include static or dynamic reactive devices which are necessary to meet the NERC Planning Criteria in terms of normal and post-disturbance voltage profiles. We shouldn't have to include smaller shunt cap banks and reactors which are used primarily for voltage support (not voltage collapse). Recommendation: Change I5 to read - Static or dynamic devices dedicated to supplying or absorbing Reactive Power which are necessary to meet the NERC Planning Criteria in terms of normal and post-disturbance voltage profiles that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1
Southern Company	No	We believe that the size of the reactive power resource should be considered as a key factor to be part of BES. When considering generating resources, the size, e.g., greater than 75 MVA, was a key part of criteria to be included or excluded as BES. A similar approach should be applied when considering reactive power resources. We also suggest the removal of static reactive resources from this inclusion.
Response: Using a threshold for inclusion of non-generator Reactive Power resource devices in the BES will be considered in		

Organization	Yes or No	Question 6 Comment
Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
New York State Dept of Public Service	No	I5 - which has been newly added and significantly expands the BES definition - should be dropped due to lack of technical justification.
Northeast Power Coordinating Council	No	Technical studies need to be conducted to confirm reactive resource impacts on the reliability of the BES. The inclusion of reactive resources is a significant expansion of the current BES definition and therefore requires technical justification for inclusion. Inclusion I5 as written is confusing with a reference to Inclusion I1 in the definition. Suggest removing references to reactive resources from Phase 1 until technical justification can be demonstrated (as part of Phase 2).
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects of the definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will provide compelling justification.		

Organization	Yes or No	Question 6 Comment
No change made.		
Southwest Power Pool Standards Review Team	No	We understand that this inclusion is used to capture those devices other than generation resources, but the language leads us to believe that it could include all generators used to supply or absorb reactive power. We would suggest that I5 be changed to read "-Static or dynamic devices specifically used for supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.
Consumers Energy	No	This inclusion appears to pull small generators that have an AVR that are connected to 138 kV into the BES. These generators are primarily intended to provide real power.
Response: The SDT added further clarifications to Inclusion I5 to specifically exclude generators. **I5** –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.		
Dominion	No	The language in the last part of Inclusion I5 "....or through a transformer that is designated in Inclusion I1" introduces ambiguity. Specifically, it is not clear how implememtation of this language would result in the inclusion of any Static or dynamic device that is not already included. Dominion suggests that the language in I5 be revised to read "Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or connected through a dedicated transformer with at least one terminal voltage of 100 kV or higher." Dominion understands that the SDT intended for this Inclusion to not address generators or power producing resources because they are covered elsewhere (I2 and I4) and requests that the SDT confirm this understanding.
Response: The SDT believes these qualifications on non-generator Reactive Power resource devices in Inclusion I5 do include the		

Organization	Yes or No	Question 6 Comment
necessary resources for the reliable operation of the BES, without unintentionally including any distribution devices, or including any of the dedicated transformers which are not identified in the core definition or Inclusion I1. No change made. The SDT confirms that Dominion's understanding of the intent of this inclusion is correct. In response to comments, the SDT added further clarifications to Inclusion I5. **I5** –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.		
Pepco Holdings Inc and Affiliates	No	Agree in principle. However, the last phrase "or through a transformer that is designated in Inclusion I1" is unnecessary, since if the resource were connected through a transformer meeting Inclusion I1 it would by nature be connected at 100kV or higher.
Response: The SDT believes the Inclusion I1 wording is necessary to capture those devices dedicated to supplying or absorbing Reactive Power. No change made.		
MRO NERC Standards Review Forum (NSRF)	No	NSRF recommends the following proposed language for I5 to address the concern:"I5 - Static or dynamic devices which 1) are dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1 and 2) are pertinent to meeting the NERC Planning Criteria in terms of normal and post-disturbance voltage profiles."
Response: The SDT does not believe this change provides additional clarity as it diverts from the bright-line concept. No change made.		
PacifiCorp	No	PacifiCorp recommends the addition of the phrase "...unless excluded under E1 or E3." Otherwise, PacifiCorp believes that I5 is currently acceptable. However, phase II should identify limits and technically justify the appropriate limit(s).

Organization	Yes or No	Question 6 Comment
Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		

Organization	Yes or No	Question 6 Comment
Using a threshold for inclusion of non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
Massachusetts Department of Public Utilities	No	The inclusion of all devices that supply reactive power to the BES is unnecessary and will result in unjustified costs to the ratepayer. Static devices (fixed capacitors) should remain excluded from the BES as they are dispatched by operations personnel, and if one fixed capacitor bank fails, the operator can replace its impact by switching in another fixed bank. This represents routine operation of the system. On the other hand, dynamic devices may be important to maintaining voltage stability of the system. These installations typically are rated to supply or absorb 75 MVA or more to or from the BES. Therefore, the MA DPU suggests that dynamic reactive power devices rated at 75 MVA or more could be included in the BES. Further, revised inclusion I5 is a new inclusion that lacks definition (and appears to be redundant with the general BES definition). NERC should provide technical justification for the additional language under Inclusion I5.
NESCOE	No	NESCOE believes that inclusion of all devices that supply reactive power to the BES is unnecessary and will result in transferring unjustified costs to the ratepayer. Static devices (fixed capacitors) should remain excluded from the BES as they are dispatched by operations personnel, and if one fixed capacitor bank fails, the operator can replace its impact by switching in another fixed bank. This represents routine operation of the

Organization	Yes or No	Question 6 Comment
		system. On the other hand, dynamic devices may be important to maintaining voltage stability of the system. These installations typically are rated to supply or absorb 75 MVA or more to or from the BES. Therefore, NESCOE suggests that dynamic reactive power devices rated at 75 MVA or more be included in the BES. Further, revised inclusion I5 is a new inclusion that lacks definition (and appears to be redundant with the general BES definition). NERC should provide additional technical justification for the additional language under Inclusion I5.
Response: The SDT believes these qualifications on non-generator Reactive Power resource devices in Inclusion I5 do include the necessary resources for the reliable operation of the BES, without unintentionally including any distribution devices, or including any of the dedicated transformers which are not identified in the core definition or Inclusion I1. No change made. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will provide compelling justifications.		
Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperatve (CEC) Clearwater Power Company	No	CLPD has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are “power producing resources” and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses “power producing devices.” Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Finally, CLPD believes the appropriate threshold for inclusion or exclusion of Reactive

Organization	Yes or No	Question 6 Comment
(CPC) Snohomish County PUD Consumer's Power Inc Douglas Electric Cooperative (DEC) Fall River Rural Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC) Kootenai Electric Cooperative Cowlitz County PUD		Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase 2 process.

Organization	Yes or No	Question 6 Comment
Michigan Public Power Agency	No	MPPA has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are "power producing resources" and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses "power producing devices." Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices. Finally, MPPA believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase 2 process. Without such analysis either: 1) no threshold except for those connected at 100kV, or: 2) of .95 power factor of a 20 MVA generator, or 6 MVAr and use the fact that most Facility Connection Requirements require a power factor in the range of between 0.85 - 0.9 lagging to 0.9 - 0.95 leading for a generator. Hence, a 20 MVA generator (the smallest to meet the registry criteria) will need to absorb a minimum of 6 MVAr and use that as the technical justification.

Response: The SDT added further clarifications to Inclusion I5 to address your concerns and those of others.

> **I5** –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.

The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical

Organization	Yes or No	Question 6 Comment
aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. .		
Ontario Power Generation Inc.	No	OPG recommends that the wording of this inclusion be made clear that the BES boundary extends to the Low Voltage terminals of the transformer, used in the interface connection, and does not include the static or dynamic reactive power source itself unless it is directly connected to the BES.
Response: The SDT refers the commenter to Inclusion I1 which addresses the situation presented here when used in conjunction with Inclusion I5. No change made.		
Metropolitan Water District of Southern California	No	Inclusion 5 should be changed to be consistent with the core definition and to clarify Reactive Power devices. Under I5, the additional phrase "or through a dedicated transformer with a high side voltage of 100 kV or higher," appears to conflict with the core definition's phrase "and Real Power and Reactive Power resources connected at 100 kV or higher". For example, if you have a device connected to a 69Kv system which is used solely for an end-user's load, but the 69kv system is transformed up to a 115kV system, such device could be included as BES or you would have to define what is meant by "dedicated. If Reactive Power is meant to agree with the definition under NERC's Glossary of Terms, there should be consistency and less verbiage. MWDSC also agrees with WECC's comment that there should be some minimum threshold for Reactive Power devices similar to that identified for generating resources in Inclusion 2. MWDSC recommends that Inclusion 5 be changed as follows: I5 - "Reactive Power devices dedicated to support the BES that are connected at 100kV or higher, or through a transformer that is designated in Inclusion I1."
Response: The SDT does not believe that a contradiction exists. Proper application of the definition and inclusions (see explanation of process immediately following) would seem to preclude the situation described by the commenter. No change		

Organization	Yes or No	Question 6 Comment
made. The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element as defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of		

Organization	Yes or No	Question 6 Comment
the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. The SDT does not believe this change provides additional clarity. No change made.		
LCRA Transmission Services Corporation	No	This inclusion conflicts with exclusion E4. Which one takes priority?
Duke Energy	No	Need to add the exception for exclusions under E1 or E3, and also reword to exclude devices connected to a transformer winding less than 100 kV unless that is the only connection to that winding. Suggested rewording of I5 : “Unless excluded under Exclusions E1 or E3, static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage or 100 kV or higher, or through a transformer winding less than 100 kV that is designated in Inclusion I1 if the winding does not have any circuits or load connected to it.” This would eliminate having to include a capacitor connected to the 69 kV winding of a three winding BES transformer such as 230/138/69 kV if that winding had other connections such as 69 kV circuits. The voltage threshold of 100 kV and above should capture devices connected to 100 kV or

Organization	Yes or No	Question 6 Comment
		higher windings of transformers designated in Inclusion I1.

Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.

Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.

In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either

Organization	Yes or No	Question 6 Comment
include or exclude an Element.		
Tacoma Power	No	Tacoma Power generally supports the intent of Inclusion I5 as currently written. However, we believe the definition of the MVAr threshold level must be included in the Phase 2 evaluation and should be determined in a similar manner to the generator threshold that will be determined for I2.
Farmington Electric Utility System	No	I5 should be modified to identify a minimum Reactive Power threshold for static or dynamic devices. As drafted a 1 MVA device supplying or absorbing Reactive Power that is connected at 100 kV or higher would be included in the BES.
MEAG Power	No	We feel that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common point.
Harney Electric Cooperative, Inc.	No	HEC believes this inclusion should include a technically justified capacity limit on reactive resources to warrant inclusion.
City of St. George	No	A reasonable minimum value for inclusion should be added. As presently written all static or dynamic devices would be included in the BES regardless of size.
Tillamook PUD	No	While we agree that reactive devices of sizable capacity connected at 100 kV or higher are needed for BES reliability, Tillamook PUD fails to see why this inclusion is needed as they are already captured by the 100 kV threshold. We would propose instead to eliminate this inclusion and substitute an exclusion for smaller capacity devices. If the SDT really believes an inclusion for reactive devices is needed, we suggest the SDT provide a technically justified capacity limit within the inclusion. In addition we suggest also including the phrase "...unless excluded under Exclusion E1, E2 or E4" similar to that in I1.

Organization	Yes or No	Question 6 Comment
Mission Valley Power	No	Mission Valley Power - While we agree that reactive devices of sizable capacity connected at 100 kV or higher are needed for BES reliability, Mission Valley Power fails to see why this inclusion is needed as they are already captured by the 100 kV threshold. We would propose instead to eliminate this inclusion and substitute an exclusion for smaller capacity devices. If the SDT really believes an inclusion for reactive devices is needed, we suggest the SDT provide a technically justified capacity limit within the inclusion. In addition we suggest also including the phrase "...unless excluded under Exclusion E1, E2 or E4" similar to that in I1. Please see the answer to Q1 above Q10 below.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
Consolidated Edison Co. of NY, Inc.	No	Normally, static and dynamic devices supply Reactive Power (VARs) to or absorb VARs from the surrounding system. By their nature, VARs do not travel far, e.g., miles. So, VARs by their nature only produce local impacts. Please explain the meaning of the phrase "dedicated to supplying or absorbing Reactive Power," with emphasis on explaining why the term "dedicated" was employed? How does an Entity determine if a particular static or dynamic device is "dedicated" to the BES? What Guidance documents can the BES SDT provide describing "dedicated"

Organization	Yes or No	Question 6 Comment
		static and dynamic devices?
Response: The word 'dedicated' was used to identify those Elements whose sole purpose is supplying or absorbing Reactive Power. The language limits those devices dedicated to voltages at 100 kV and higher (via the core definition or through Inclusion I5), unless it can be excluded via Exclusion E4.		
American Electric Power	No	I5 only specifies voltage limits, and makes no mention of reactive limits. We suggest that the drafting team consider adding reactive capacity to these criteria as well.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
South Houston Green Power, LLC	No	The phrase should be added at the end “unless excluded under Exclusion E4”.
National Grid	No	We see some potential conflicts between this inclusion and the exclusions. Without some additional wording, it seems like some devices that are in a Local Distribution Network would be considered BES. In addition, reference to a transformer in Inclusion I1 is not necessary since the definition includes “all Transmission Elements operated at 100 kV”, thus by definition and I5, those connected to 100 kV and higher are already included. We suggest: Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100kV or higher unless the device is in an area

Organization	Yes or No	Question 6 Comment
		excluded from BES by Exclusion E1 or E3, or through a dedicated transformer with a high-side voltage of 100kV or higher, unless excluded by Exclusion E4.
Orange and Rockland Utilities, Inc.	No	Should also mention "unless excluded under Exclusion E1 or E3".
The Dow Chemical Company	No	The phrase “or through a dedicated transformer with a high-side voltage of 100 kV or higher” is inconsistent with I1 and would bring Reactive Power Equipment that is lower than 100Kv into the BES definition. This phrase should be deleted. The following phrase should be added at the end “unless excluded under Exclusion E4”.

Response: The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the

Organization	Yes or No	Question 6 Comment
exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made.		
Hydro-Quebec TransEnergie	No	
Response: Without specific comments the SDT is unable to respond.		
Northern Wasco County PUD	No	While we agree that reactive devices of sizable capacity connected at 100 kV or higher are needed for BES reliability, Northern Wasco County PUD fails to see why this inclusion is needed as they are already captured by the 100 kV threshold. We would propose instead to eliminate this inclusion and substitute an exclusion for smaller capacity devices. If the SDT really believes an inclusion for reactive devices is needed, we suggest the SDT provide a technically justified capacity limit within the inclusion. In addition we suggest also including the phrase "…unless excluded under Exclusion E1, E2 or E4" similar to that in I1. Please see the answer to Q1 above Q10 below.
Central Lincoln	No	While we agree that reactive devices of sizable capacity connected at 100 kV or higher are needed for BES reliability, Central Lincoln fails to see why this inclusion is needed as they are already captured by the 100 kV threshold. We would propose instead to eliminate this inclusion and substitute an exclusion for smaller capacity devices.If the

Organization	Yes or No	Question 6 Comment
		SDT really believes an inclusion for reactive devices is needed, we suggest the SDT provide a technically justified capacity limit within the inclusion. In addition we suggest also including the phrase "...unless excluded under Exclusion E1, E2 or E4" similar to that in I1. Please see the answer to Q1 above Q10 below.

Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with

Organization	Yes or No	Question 6 Comment
specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made. Please see detailed responses to Q1 and Q10.		
Ameren	No	a)Only those Reactive Power devices applied for the purpose of BES support or BES voltage control should be included. A Reactive Power device connected at >100kV but used for the purpose of voltage support to local load and/or needed to support local networks should be excluded. b)We believe that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common point. c)See the response to question 2: The inclusion is unclear since it includes a certain voltage transformers, but excludes those that have E1 or E3 Exclusion criteria. Each exclusion criteria has multiple stipulations to its applicability, and then has a final inclusive reference to I3. Please make the wording exact and not dependent on

Organization	Yes or No	Question 6 Comment
		clausal statements.

Response: a) The SDT believes that the proper application of the core definition with Inclusion i1 and I5 plus the application of Exclusions E1, E3, and E4 will cover the situation described in most applications. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made.

b) The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

c) The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the

Organization	Yes or No	Question 6 Comment
application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made.		
ExxonMobil Research and Engineering	No	The BES SDT should work on clarifying the differences between Inclusion I5 and Exclusion E4. The phrase "solely for its own use" in Exclusion E4 is vague and open to interpretation. It is unclear whether equipment, such as power factor correction facilities, surge capacitors located in motor terminal boxes and excitation capacitors installed for use by a motor located on the low side of a 138 kV primary transformer would be excluded from the BES. Is the intent of this requirement to capture "reactive resources" that provide VARs to the BES in regions that exhibit voltage stability issues?
Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and		

Organization	Yes or No	Question 6 Comment
non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made. The BES definition is predicated on operations at 100 kV or higher. In the example cited, the equipment in question appears to be below that threshold and thus is not included in the BES. No change made.		
ATC LLC	No	ATC agrees with the inclusion provided the last clause is removed, as noted below.

Organization	Yes or No	Question 6 Comment
		The BES definition is intended to establish a bright line BES definition. The clause "dedicated transformer" is undefined and unclear. Inclusion I5 -Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher (deletion of remainder of clause).
Response: The SDT considered the disposition of the word "dedicated" and determined that retention of this word is necessary to show the SDT's intent that the conditions described by the inclusion are for configurations where the intended device is only going through one transformation. No change made.		
Westar Energy	No	We understand that I5 is being used to capture those devices other than generation resources, but the language used leads us to believe that it could include all generators that supply or absorb reactive power. We also believe the language should be changed to be consistent with I1. We suggest that I5 be changed to read: "Static or dynamic devices specifically used for supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side terminal operated at 100 kV or higher, or through a transformer that is designated in Inclusion I1."
Response: The SDT has clarified the wording of Inclusion I5 to address your concern. **I5** –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1. The SDT does not believe your suggested wording provides additional clarity. No change made.		
Florida Municipal Power Agency		To help clarify and to avoid inclusion of de minimis reactive resources, we propose a size threshold of 6 MVAr consistent with the smallest size generator included in the BES at a 0.95 power factor, which is a common leading power factor used in Facility Connection Requirements for generators. In other words, 6 MVAr is consistent with typically the least amount of MVAr required to be absorbed by the smallest generator

Organization	Yes or No	Question 6 Comment
		meeting the registry criteria.
Redding Electric Utility	Yes	Redding believes that an appropriate MVAr level should be established during Phase 2.
City of Redding	Yes	Redding believes that an appropriate MVAr level should be established in during Phase 2.
City of Austin dba Austin Energy	Yes	Appropriate MVAr level should be established. Reactive resources should be treated similar to generation criteria and included in the technical studies associated with the Phase 2 technical analysis in order to establish the appropriate MVAr level included as BES.
Sacramento Municipal Utility District	Yes	However, appropriate MVAr level should be established. Reactive resources should be treated similar to generation criteria and included in the technical studies associated with the Phase 2 technical analysis in order to establish the appropriate MVAr level included as BES.
Tri-State Generation and Transmission Assn., Inc. Energy Management	No	There should be a limitation on what reactive components needs to be included. The limits could be based on capacity of the units or on the voltage step that occurs upon switching of the device
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power	Yes	This inclusion should be limited to reactive devices 150 MVAR or greater (gross aggregate nameplate rating) connected through a common point at the 200 kV level or higher level.

Organization	Yes or No	Question 6 Comment
Cooperative		
Memphis Light, Gas and Water Division	Yes	We are in general agreement with this inclusion, except that there is no threshold for reactive resources as there is for generators and transformers. We recommend that a minimum level be established for this equipment, such as 100 MVAr, or that studies be conducted to determine an appropriate threshold.
Southern Company Generation	Yes	We believe that the size of the reactive power resource should be considered as a key factor to be part of BES. When considering generating resources, the size, e.g., greater than 75 MVA, was a key part of criteria to be included or excluded as BES. A similar approach should be applied when considering reactive power resources. Moreover, the language at the end of I5, "or through a transformer that is designated in Inclusion I1," appears to be redundant since the reactive power resources are connected to 100 kV or higher already without this additional language. The following language is suggested: I5 - Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, and with an aggregate continuous nameplate rating greater than 30 MVA.
ACES Power Marketing Standards Collaborators	Yes	We understand the SDT's logic behind not setting any threshold values for reactive resources during Phase 1 of this project. Ample time and effort should be given to developing the technical justification behind such values. However, we encourage the SDT to consider adding threshold values in Phase 2 of the project to provide even more clarity to this inclusion.
Balancing Authority Northern California	Yes	However, appropriate MVAr level should be established. Reactive resources should be treated similar to generation criteria and included in the technical studies associated with the Phase 2 technical analysis in order to establish the appropriate MVAr level included as BES.
WECC Staff	Yes	WECC believes I5 should be modified to identify a minimum Reactive Power threshold

Organization	Yes or No	Question 6 Comment
		for static or dynamic devices similar to the threshold identified for generating resources in I2. As worded, any size device dedicated to supplying or absorbing Reactive Power that is conected at 100 kV or higher, no matter how small, would be included in the BES.
Response: Using a threshold for inclusion of non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
Springfield Utility Board	Yes	SUB agrees in general, but does not agree that ALL reactive resources should be automatically included in the BES Definition. For example, is a local network (100 kV or above), which is otherwise excluded, but has a reactive device used for power factor correction (100 kV or above), still excluded? There are a significant number of reactive resources that are used to serve systems that provide service primarily to load, with either no or a minimal amount of generation. If this section is included, the Exclusion language needs to be modified to exclude those reactive resources from the BES that are radial serving only load or local networks that serve load (with less than 75MVa of generation). SUB does not agree with the language referring to only those “retail customer” reactive power devices for Exclusion E.4. This is too narrow and does not accurately reflect the use of reactive power devices installed by registered entities when retail customers do not “fix” their reactive power issues on their own. SUB recommends

Organization	Yes or No	Question 6 Comment
		that the language in I5 and E4 be consistent, and that "retail customer" should include Registered Entities as well as end users. This present language is overly broad and, absent modifications to the BES definition, will generate a significant amount of paperwork. SUB suggests the following language change:I5 -Static or dynamic devices dedicated to supplying or absorbing Reactive Power that:a)are connected at 100 kV or higher and are not part of a radial system or area network that are excluded from the BES, or;b)are connected through a dedicated transformer with a high-side voltage of 100 kV or higher and are not part of a radial system or area network that are excluded from the BES, or;c)are connected through a transformer that is designated in Inclusion I1 and are not part of a radial system or area network that are excluded from the BES .

Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5.

Organization	Yes or No	Question 6 Comment
The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made. The SDT team considered the disposition of the word "retail" in the context of Inclusion I5, and determined that retention of this word is important and correct. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter). No change made.		
FirstEnergy Corp.	Yes	While we do not object to I5, we question its need based on item I2 and believe I2 also covers this item
Response: The SDT added further clarifications to Inclusion I5 to address your concern. **I5** –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.		
Central Maine Power Company	Yes	There is no such thing as "supplying or absorbing Reactive Power" but the intended meaning is sufficiently clear since it is industry 'shorthand'. We suggest an alternative wording of: "Static or dynamic Reactive Power resources that are connected at 100 kV or higher, or..."
Rochester Gas and Electric and New York State Electric and Gas	Yes	There is no such thing as "supplying or absorbing Reactive Power" but the intended meaning is sufficiently clear since it is industry 'shorthand'. Suggest alternative wording:"Static or dynamic Reactive Power resources that are connected at 100 kV or

Organization	Yes or No	Question 6 Comment
		higher, or…"
Response: The SDT elected to also include the word 'dedicated' in front of the quotation listed to identify those Elements whose sole purpose is supplying or absorbing Reactive Power. Re-arranging the words as suggested would not capture the same effect. No change made.		
Portland General Electric Company	Yes	
Georgia System Operations Corporation	Yes	
Kansas City Power and Light Company	Yes	
Oncor Electric Delivery Company LLC	Yes	
Utility Services, Inc.	Yes	
Independent Electricity System Operator	Yes	The provisions of Inclusion I5 fully address the concerns we expressed in our previous comments.
PSEG Services Corp	Yes	
ISO New England Inc	Yes	
Manitoba Hydro	Yes	
Long Island Power Authority	Yes	

Organization	Yes or No	Question 6 Comment
Puget Sound Energy	Yes	
NV Energy	Yes	The SDT has appropriately captured the necessary inclusion of high voltage transmission reactive resources.
Z Global Engineering and Energy Solutions	Yes	
Central Hudson Gas and Electric Corporation	Yes	
City of Anaheim	Yes	
Chevron U.S.A. Inc.	Yes	
Idaho Falls Power	Yes	We have no comments.
ReliabilityFirst	Yes	
Exelon	Yes	
Texas Industrial Energy Consumers	Yes	
Hydro One Networks Inc.	Yes	
IRC Standards Review Committee	Yes	
Transmission Access Policy Study Group	Yes	

Organization	Yes or No	Question 6 Comment
Electricity Consumers Resource Council (ELCON)	Yes	
Bonneville Power Administration	Yes	
Texas RE NERC Standards Subcommittee	Yes	
SERC Planning Standards Subcommittee	Yes	
NERC Staff Technical Review	Yes	
BGE	Yes	No comment.
Response: Thank you for your support.		

7. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: Exclusion E1 is an exclusion for the contiguous transmission Elements connected at or above 100 kV. Generation resources connected within the radial system are qualifiers for this exclusion.

The "single point of connection of 100 kV or higher" is where the radial system will begin if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation.

Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify for exclusion under Exclusion E3. The owner always has the option to seek exclusion through the exception process.

The SDT considered the disposition of the word "transmission" in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element".

The SDT has determined that it should be conservative with regard to allowing exclusion for radial systems that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent radial systems without blackstart resources.

Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion.

Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing

threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 development of the BES definition.

Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment.

No changes were made to Exclusion E1 due to received comments.

Organization	Yes or No	Question 7 Comment
NERC Staff Technical Review	No	While we appreciate the improvement in the text for Exclusion E1, but we continue to believe that E1 should require (i) the normally open switch must not be used to make a parallel connection if the normally switch is operated at 100 kV or higher and (ii) an automatic interrupting device that is part of the BES must be provided at the point of interconnection between the radial system and the BES.
American Electric Power	No	AEP supports the concept of the exclusion of radial systems, however further clarification is needed regarding whether or not the source equipment is included as part of the radial system (for example, ring bus or breaker and a half bus configurations). Regarding the following text: "Note - A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion." We interpret this as not including two radial lines which could be tied together through a normally open switch, are we correct? Additional clarity may be needed regarding this note.
Response: Radial systems should be assessed with the normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment. No change made.		

Organization	Yes or No	Question 7 Comment
The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial and the owner of the bus would need to insure the reliability of the substation. No change made.		
Northeast Power Coordinating Council	No	E1 can be simplified by not dividing in three subsets of a, b and c. The end result is that a Radial system is excluded if it does not have more than 75 MVA aggregate non-retail generation. There seems to be an error with reference to I3. Black start unit paths are not designated as BES and were taken out in this version under I3 so E1 and E3 should not reference I3. This contradicts the radial or LN exclusion from I3. Suggest deleting the reference to I3 in E1 and E3 because this reference is in contradiction to I3. I3 does not require a path to be BES, but it implied that a radial cannot be excluded if there is a black start unit on the radial. Further clarification is needed to the language in the Note referring to the "Normally Open switch". The E1 reference Note should be re-worded to state "Radial systems shall be assessed with all normally open switching devices in their open positions." Explanatory figures should be included to illustrate the system configurations addressed. Black start unit paths must be considered in the construction of E1. In E1c, what is meant by "non-retail"?
Response: The SDT believes that the distinction between Load only, generation only, and Load with generation provides a bright-line exclusion for radial systems that is needed to cover all of the possible scenarios. No change made. The SDT appreciates the suggestion that there could be an appearance of an inconsistency between Inclusion I3 and Exclusions E1 and E3. The SDT has determined that it should be conservative with regard to allowing exclusion for radial systems that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent radial systems without Blackstart Resources. No change made.		

Organization	Yes or No	Question 7 Comment
The SDT agrees that the radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment. Non-retail generation is the generation on the system (supply) side of the meter.		
Consumers Energy	No	In general we agree, but believe the word "transmission" should be removed from "A group of contiguous transmission Elements..."
Southwest Power Pool Standards Review Team	No	Why was the defined term for "T"ransmission dropped in this version of the definition? This should be kept in this version of the definition as well.
Response: The SDT team considered the disposition of the word "transmission" in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element". No change made.		
Bonneville Power Administration	No	BPA believes that a system left connected in a network configuration, via use of a normally open switch for temporary network connection, without the protections afforded through the standards that apply to BES should be limited to less than 24 hours. BPA believes that the term "non-retail generation" in E1(c) should be clearly defined. In addition, BPA believes that there needs to be a means to isolate the radial system from the BES during a fault on the radial system by means of a automatic fault interrupting device. Automatic fault interrupting device should be a defined term.
Response: The exclusion for radial systems does not provide requirements in the operating environment. Any attempt to hard code time duration into the exclusion language will create any number of one off situations when applied on a continent-wide basis. It is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment. No change made. Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-		

Organization	Yes or No	Question 7 Comment
retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made. The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. No change made.		
Dominion	No	Dominion does not agree that exclusion of a radial should be based upon the aggregate capacity of generation. A radial serving only generation should be excluded just as it is for load (as proposed by the SDT in 1a). No reliability gaps exist since the owner and/or operator of generation (with an individual with gross individual or gross aggregate nameplate rating per the ERO Statement of Compliance Registry Criteria) must comply with applicable reliability standards. Dominion requests that the SDT provide technical justification for E1a and E1b as it did for E3, and explain the intent of the footnote in E1.
Response: The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the NERC Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made. Exclusion E1.a is a retained exclusion form the existing definition and as such requires no technical justification at this time. As for Exclusion E1.b, the SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical		

Organization	Yes or No	Question 7 Comment
justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. The SDT believe that the radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment.		
Pepco Holdings Inc and Affiliates	No	1) Additional clarification is needed on whether certain bus sections supplying radial systems would be considered part of the BES. It is critical that the BES definition address this issue, since it will define what transmission Protection Systems fall in scope for PRC-004 and 005. One way to address this issue would be to add a qualifier to Exclusion E1 that states, "if a radial system is supplied from a bus section in a substation, then this bus section is considered part of the radial system and is not considered part of the BES if the tripping of this bus section does not result in an interruption to any BES facilities when the station is operating in its normal configuration." 2) Since the SDT deleted the inclusion of Black Start Cranking Paths in I3 then reference to I3 in criteria E1b and E1c should also be removed. Limits on connected generation should only be constrained by the 75MVA limit. In summary, delete the phrase "not identified in Inclusion I3" from both Exclusions E1b and E1c.
Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial and the owner of the bus would need to insure		

Organization	Yes or No	Question 7 Comment
the reliability of the substation. No change made. The SDT appreciates the suggestion that there could be an appearance of an inconsistency between Inclusion I3 and Exclusions E1 and E3. The SDT has determined that it should be conservative with regard to allowing exclusion for radial systems that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent radial systems without Blackstart Resources. No change made.		
Southern Company Generation	No	Subpart (b) uses the term "generation resources" while subpart (c) uses the term "non-retail generation", why are these different terms used? Further, why is it important that the term "non-retail generation" is used in subpart (c)? In addition, the SDT needs to clarify what the term "non-retail generation" means. Is this what is commonly referred to as "customer owned" or "behind-the-meter" generation? The change in version 2 that removed the requirement that an excluded radial system have an automatic interruption device at the single point of connection to the rest of the BES creates a problem. Three-terminal circuits are common below 230 kV. The "tapped portion" should not be left out of the BES since a fault on that portion takes out the whole line. We propose this revised language in the first sentence on E1: "E1 - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher, where the connection has an automatic interruption device,..." Exclusion E1, subpart (c) uses the phrase "an aggregate capacity of ... less than or equal to 75 MVA ...". Exclusion E3. subpart (a) provides that the local networks "do not have an aggregate capacity of ... greater than 75 MVA ...". Why are these phrases stated differently even though they appear to address the same resources?
Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion.		

Organization	Yes or No	Question 7 Comment
The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial and the owner of the bus would need to insure the reliability of the substation. No change made. The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
IRC Standards Review Committee	No	While we support the provisions of E1 in principle, we are seeking clarification to the following issues. Does the connection voltage of generation referred to in E1.b affect whether a radial system could be excluded under E1? Please clarify the meaning of "non-retail" generation used in E1.c.
Response: Exclusion E1 is an exclusion for the contiguous transmission Elements connected at or above 100 kV. Generation resources connected within the radial system are qualifiers for this exclusion. No change made. Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.		
Hydro One Networks Inc.	No	Although we agree with the exclusion of radial systems, we believe that the reliability of the interconnected transmission network should not be determined by the amount of installed generation on the radial system. We believe that the generation limit is restrictive and has little or no technical basis. It is not the size of a unit on the radial system that should determine the reliability impact on the BES but more importantly its location, configuration and system characteristics such as reliability must run unit.

Organization	Yes or No	Question 7 Comment
		We believe that there is no reason to divide E1 in three subsets of a, b and c. The end result is that a radial system is excluded if it does not have more than 75 MW of aggregate non-retail generation. However, consistent with E2 we suggest replacing "an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating)" with "a maximum net capacity of non-retail generation provided to the BES of 75 MVA." We suggest deleting the references to I3 in E1 and E3 because we believe that this reference is in contradiction to I3 and probably an oversight and should be corrected. I3 does not require path to be BES but it implies here that a radial system cannot be excluded if there is a Blackstart unit on it.
Response: The SDT believes that the distinction between Load only, generation only, and Load with generation provides a bright-line exclusion for radial systems that is needed to cover all of the possible scenarios. No change made. Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made. The SDT appreciates the suggestion that there could be an appearance of an inconsistency between Inclusion I3 and Exclusions E1 and E3. The SDT has determined that it should be conservative with regard to allowing exclusion for radial systems that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent radial systems without Blackstart Resources. No change made.		
Southern Company	No	Subpart (b) uses the term "generation resources" while subpart (c) uses the term "non-retail generation", why are these different terms used? Further, why is it important that the term "non-retail generation" is used in subpart (c)? In addition, the SDT needs to clarify what the term "non-retail generation" means. Is this what is commonly referred to as "customer owned" or "behind-the-meter" generation? The change in version 2 that removed the requirement that an excluded radial system

Organization	Yes or No	Question 7 Comment
		have an automatic interruption device at the single point of connection to the rest of the BES creates a problem. Three-terminal circuits are common below 230 kV. The "tapped portion" should not be left out of the BES since a fault on that portion takes out the whole line. We propose this revised language in the first sentence on E1: "E1 - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher, where the connection has an automatic interruption device,..."Exclusion E1, subpart (c) uses the phrase "an aggregate capacity of ... less than or equal to 75 MVA ...". Exclusion E3. subpart (a) provides that the local networks "do not have an aggregate capacity of ... greater than 75 MVA ...". Why are these phrases stated differently even though they appear to address the same resources?
Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made. The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. No change made. The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
ReliabilityFirst	No	The term radial must be specifically defined in this application. ReliabilityFirst Staff believes this to mean a true radial in the sense that an adverse impact by the radial

Organization	Yes or No	Question 7 Comment
		facilities does NOT affect or impact BES facilities. In the first sentence the word "Element" is capitalized but "transmission" is not, we believe both terms should be capitalized. The phrase "single point of connection" should have guidance so that everyone reading this definition reads the single point of interconnection the same. Some have read this phrase to be a single substation, while others have read this phrase to be one and only one line or supply (i.e. interconnection point), which is it? The "Note" we disagree with. In any and all cases if there is any operation or use of the BES, the facilities should be included. By the wording of this exclusion, one cannot determine if taps (sections of line from a BES transmission line to a single substation) are intended to be included in the BES or not. More specifically, where does the radial facility begin and the BES end? This determination was clearer in the previous version of the definition with the use of the language "...originating with an automatic interruption device...".
Response: The SDT team considered the disposition of the word "transmission" in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element". No change made. The "single point of connection of 100 kV or higher" is where the radial will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used		

Organization	Yes or No	Question 7 Comment
in the normal operating environment. No change made.		
Ontario Power Generation Inc.	No	Non-retail generation needs to be properly defined in the text of the exclusion.
Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion.		
City of St. George	No	Radial systems should be excluded as generally outlined in E1, however the generation levels (of 75 MVA) are too restrictive. The primary criteria should be, does power flow into the radial system? If there is always flow into the radial system, generation levels should not prevent exclusion from the BES.
City of Anaheim	No	The City of Anaheim recommends either changing the E1 (b) language back to that of the previous BES definition draft, i.e. 75 MVA or above connected at 100 kV or above, or limit the amount of generation allowed within a Radial Element or Local Network to 300 MVA or less, which is the amount of uncontrolled load loss that constitutes a reportable "disturbance" pursuant to EOP-004 and DOE Form OE-417. If DOE and NERC do not consider a 300 MW uncontrolled loss of load a reportable event, then why would the potential loss of a 75 MVA of non-critical generator connected at 69 kV make a Radial Element or Local Network critical to the reliability of the BES? The current ERO Statement of Compliance Criteria does not require GO/GOP registration for generation connected below 100 kV as long as it's not critical to the reliability of the BES, i.e. black start, etc., even if the amount of generation is greater than 75 MVA. There is good reason for this because the mere loss of 75 MVA generator would not affect the reliability of a system as big as the Western Interconnection, at all, and a fault at say 69 kV would have sufficient impedance not to affect the BES from an electrical perspective.
Response: Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate		

Organization	Yes or No	Question 7 Comment
amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the NERC Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
Xcel Energy	No	Xcel Energy believes that some more definition is required to clarify the intent of the note under Exclusion E1 related to normal open switching device. A direct statement would remove any ambiguity, such as "a normally open switch in a system that could be interconnected or experience loop flows will be considered (BES/non BES)".
Response: Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.		
Northern Wasco County PUD	No	Northern Wasco County PUD notes that a new term has been introduced, "non-retail generation," with no definition provided. The answer to the question on this during the 9/28 webinar indicated that non-retail generation was behind the retail customer's meter. We can see no reason why the net-metered PV systems should count toward the aggregate limit (exceeding the limit means no exclusion) while a non-blackstart thermal plant doesn't (the radial system is excluded if any amount of load is present). We have also heard the SDT meant just the opposite of what was stated in the webinar. We ask that a reasonable definition for non-retail be provided within the BES definition document. We strongly agree that radial systems should be excluded and that the presence of normally open switching devices between radial systems should not cause them to be considered non-radial. Such a result would cause the removal of these devices to the detriment of the local level of service. We note that the singular "A normally open switching device" is used and suggest that an allowance be made for the possibility of multiple devices. "Normally open switching devices..."

Organization	Yes or No	Question 7 Comment
LCRA Transmission Services Corporation	No	The current wording is unclear with respect to the treatment of normally open switching devices. LCRA TSC suggests the following language to replace the existing language on the note to E1: “Two radial systems connected by a normally open, manually operated switching device, as depicted on prints or one-line diagrams for example, may be considered as radial systems under this exclusion.” The current wording is unclear with respect to “non-retail generation”. The sudden loss of large, radial-supplied load may result in reliability deficiencies. LCRA TSC suggests stating a load level or a load capacity in the exclusion.
Tillamook PUD	No	Tillamook PUD notes that a new term has been introduced, “non-retail generation,” with no definition provided. The answer to the question on this during the 9/28 webinar indicated that non-retail generation was behind the retail customer’s meter. We can see no reason why the net-metered PV systems should count toward the aggregate limit (exceeding the limit means no exclusion) while a non-blackstart thermal plant doesn’t (the radial system is excluded if any amount of load is present). We have also heard the SDT meant just the opposite of what was stated in the webinar. We ask that a reasonable definition for non-retail be provided within the BES definition document.We strongly agree that radial systems should be excluded and that the presence of normally open switching devices between radial systems should not cause them to be considered non-radial. Such a result would cause the removal of these devices to the detriment of the local level of service. We note that the singular “A normally open switching device” is used and suggest that an allowance be made for the possibility of multiple devices. “Normally open switching devices...”
Mission Valley Power	No	Mission Valley Power notes that a new term has been introduced, “non-retail generation,” with no definition provided. The answer to the question on this during the 9/28 webinar indicated that non-retail generation was behind the retail customer’s meter. We can see no reason why the net-metered PV systems should count toward the aggregate limit (exceeding the limit means no exclusion) while a non-blackstart thermal plant doesn’t (the radial system is excluded if any amount of

Organization	Yes or No	Question 7 Comment
		load is present). We have also heard the SDT meant just the opposite of what was stated in the webinar. We ask that a reasonable definition for non-retail be provided within the BES definition document. We strongly agree that radial systems should be excluded and that the presence of normally open switching devices between radial systems should not cause them to be considered non-radial. Such a result would cause the removal of these devices to the detriment of the local level of service. We note that the singular "A normally open switching device" is used and suggest that an allowance be made for the possibility of multiple devices. "Normally open switching devices..."
Central Lincoln	No	Central Lincoln notes that a new term has been introduced, "non-retail generation," with no definition provided. The answer to the question on this during the 9/28 webinar indicated that non-retail generation was behind the retail customer's meter. We can see no reason why the net-metered PV systems should count toward the aggregate limit (exceeding the limit means no exclusion) while a non-blackstart thermal plant doesn't (the radial system is excluded if any amount of load is present). We have also heard the SDT meant just the opposite of what was stated in the webinar. We ask that a reasonable definition for non-retail be provided within the BES definition document. We strongly agree that radial systems should be excluded and that the presence of normally open switching devices between radial systems should not cause them to be considered non-radial. Such a result would cause the removal of these devices to the detriment of the local level of service. We note that the singular "A normally open switching device" is used and suggest that an allowance be made for the possibility of multiple devices. "Normally open switching devices..."
Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.		

Organization	Yes or No	Question 7 Comment
Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment. No change made.		
BGE	No	During the previous comment period, BGE asked for clarification regarding the exclusion of "radial facilities". The particular example configuration in question involved two 115 kV lines emanating from two different points of connection and "tied" on the "low side" at 34.5 kV. The SDT responded that this was not a radial facility but would be excluded under the E3-Local Network exclusion. BGE believes that this particular configuration should be excluded under the E1-Radial Systems exclusion. BGE does not beleive that two otherwise radial lines are made "non-radial" because they are tied at a voltage lower than 100 kV.
Orange and Rockland Utilities, Inc.	No	Please clarify on "single point of connection". It seems like less confusion if "single source" is used here instead of "single point of connection".
Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.		
ISO New England Inc	No	The term "single point" is not clear. A better explanation is necessary. For example, the same bus in a bus/branch model should suffice as a "single point". There should not be a requirement to be at the same node as found in a nodal model. The term "a group of contiguous transmission elements" is ambiguous and needs to

Organization	Yes or No	Question 7 Comment
		be clarified. The "Non-retail" qualifier in E1.c) should be deleted. It adds confusion to the exclusion and is not defined.
Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made. The SDT team considered the disposition of the word "transmission" in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element". No change made. Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.		
Kansas City Power and Light Company	No	Nameplate rating of the generator is not a reflection of what can be actually injected into the transmission system with resulting electrical impacts on transmission loading and behavior. Recommend the BES definition be based on a generating resource(s) established net accredited generating capacity instead of what it could do by nameplate rating that may not be achievable. Recommend the following change to the b) and c) parts of E1:b) Only includes generation resources not identified in Inclusion I3 with an aggregate net accredited capacity less than or equal to 75 MVA. Or, c) Where the radial system serves Load and includes generation resources not identified in Inclusion I3 with an aggregate net accredited capacity of non-retail

Organization	Yes or No	Question 7 Comment
		generation less than or equal to 75 MVA.
Hydro-Quebec TransEnergie	No	Even with the modification proposed, it is too much restrictive to refuse exclusion of radial system when they have generator or multiple generating units of aggregate capacity greater than 75 MVA, especially when a system is able to function reliably with the loss of generation much higher than this amount. To count on the exception procedure to exclude radial system with greater generation is risky since no specific criteria have been given to guide such exclusion. In most cases for radial or local system including generation, the path that connects the generation should not be included in the BES. Generators should be allowed to be considered "BES support elements" and reliability standards should apply to them in specific.
Response: Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
Independent Electricity System Operator	No	We support the provisions of E1 in principle but require clarification of some issues and suggest alternative wording in some cases. It is unclear if the connection voltage of generation referred to in E1.b affects whether a radial system could be excluded under E1 although from the context it appears that it would. For clarity we suggest appending “connected at 100 kV or higher.” Please provide in the BES definition document an explanation of “non-retail” and “retail” generation used in E1.c. Additionally, despite the fact the revisions to Inclusion I3 (Blackstart Resources) removed any reference to Cranking Paths, Exclusion 1 (b) and (c) both indicate that the exclusion of a radial system would not be allowed if generation identified in I3 were connected to it. This implies that the Cranking Path for this Blackstart Resource would have to be BES. This appears to be an inconsistency. We suggest removing the

Organization	Yes or No	Question 7 Comment
		phrase “not identified in Inclusion I3” in both instances. We disagree with notion that the capacity of generation connected to a radial system ought to determine whether that radial system should be classified as BES. Firstly, it is a given that the generation connected to the subject radial that meets the registry criteria would already be captured within the core BES definition and Inclusion I2. The function served by a radial that is of importance in the current context is that of delivering surplus power to the rest of the bulk power system and so, the impact on the BES of loss of the radial system or its connected generation needs to be considered. In our view, the “BES-status” of the radial itself is immaterial and so too is the aggregate capacity of generation resources connected to it. Detailed arguments regarding impact on the BES can be made in support of an application for an exclusion under the Exception Process, but it would be beneficial to avoid unnecessarily including a radial merely because it has more than 75 MVA of qualifying generation connected to it, without equal consideration of the connected load. To put a “bright line” on the consideration of impact referred to above, we suggest: In E1 (b): Replace "an aggregate capacity less than or equal to 75 MVA (gross nameplate rating)" with "a net capacity provided to the BES of less than or equal to 75 MVA." In E1 (c): Replace "an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating)" with "a net capacity of non-retail generation provided to the BES of 75 MVA."This wording would be consistent with E2 (i). Finally the word “affect” stated in the note accompanying E1 lends itself to mis-interpretation. We therefore suggest the following revision to achieve greater clarity:”This exclusion applies to radial systems connected by a normally open switch.”
Response: Exclusion E1 is an exclusion for the contiguous transmission Elements connected at or above 100 kV. Generation resources connected within the radial system are qualifiers for this exclusion. No change made. Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in ExclusionE1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to		

Organization	Yes or No	Question 7 Comment
be unfairly biased against obtaining this exclusion. No change made. The SDT appreciates the suggestion that there could be an appearance of an inconsistency between Inclusion I3 and Exclusions E1 and E3. The SDT has determined that it should be conservative with regard to allowing exclusion for radial systems that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent radial systems without Blackstart Resources. No change made. Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.		
Central Maine Power Company	No	E1 needs to be revised to make it less confusing. “Radial systems” leaves the impression that E1 is not simply a “radial line exclusion”, because of the plural and the word “systems.” Northeast industry expert colleagues are not clear what this sentence specifies: “A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher.” o Does E1 apply only to a single radial transmission line (and its associated “group of Elements”)? o Alternatively, does E1 apply to multiple radial lines “emanating from” the same substation regardless of the bus configuration - would a ring bus or a two-bus system that is connected with a tie breaker be considered as “a single point of connection”? o If the radial line is simply tapped off a BES line without any automatic interruption device, should not the radial line be included as part of the BES since a permanent fault on this radial line will take out the BES line it is tapping off of? If the radial line is defined as part of the BES, it could be subject to certain requirements such as vegetation management for overhead lines. o Should not the exclusion include some description of the

Organization	Yes or No	Question 7 Comment
		operational requirements to help resolve the ambiguity? As it is, the exclusion is scenarios-based. When a specific scenario is overlooked, the oversight becomes a source of ambiguity.This definition is not clear. Clarity is imperative.E1(c) should define or replace the term “non-retail”. Industry needs clarity on exactly what generation this clause applies to, in order to properly apply this definition. The Note referring to the “Normally Open switch” needs further clarification. As written, it seems to conflict with FERC order 743, paragraph 55:”While commenters would like to expand the scope of the term “radial” to exclude certain transmission facilities such as tap lines and secondary feeds via a normally open line, we are not persuaded that such categorical exemption is warranted.” E1 should be restated as follows: “Radial systems: A single transmission line or transformer not otherwise identified in the Inclusions above, with a single point of connection of 100 kV or higher and: a) Only serves Load. Or, b) Only includes generation resources, not identified in the Inclusions above. Or, c) Both serves Load and only includes generation resources not identified in the Inclusions above."
Rochester Gas and Electric and New York State Electric and Gas	No	E1 needs to be revised to make it less confusing. “Radial systems” leaves the impression that E1 is not simply a “radial line exclusion”, because of the plural and the word “systems.” Northeast industry expert colleagues are not clear at all what this sentence specifies: “A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher.” o Does E1 apply only to a single radial transmission line (and its associated “group of Elements”)? o Alternatively, does E1 apply to multiple radial lines “emanating from” the same substation regardless of the bus configuration - would a ring bus or a two-bus system that is connected with a tie breaker be considered as “a single point of connection”? This definition is not clear. Clarity is imperative. E1(c) should define or replace the term “non-retail”. Industry needs clarity on exactly what generation this applies to, in order to properly apply this definition. The Note referring to the “Normally Open switch” needs further clarification. As written, it seems to conflict with FERC order 743, paragraph 55:”While commenters

Organization	Yes or No	Question 7 Comment
		would like to expand the scope of the term "radial" to exclude certain transmission facilities such as tap lines and secondary feeds via a normally open line, we are not persuaded that such categorical exemption is warranted." E1 should be restated as follows:"Radial systems: A single transmission line or transformer not otherwise identified in the Inclusions above, with a single point of connection of 100 kV or higher and: a) Only serves Load. Or, b) Only includes generation resources, not identified in the Inclusions above. Or, c) Both serves Load and only includes generation resources, not identified in the Inclusions above.
Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made. Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made. The SDT does not believe that the suggested wording provides any additional clarity. No change made.		
South Houston Green Power, LLC	No	SHGP generally supports with the proposed revisions to Exclusion E1, but suggests several additional clarifying revisions should be made. First, the phrase "a single point

Organization	Yes or No	Question 7 Comment
		of connection" in the introductory sentence should be revised to read "a single point of connection (including multiple connections to the same ring bus or substation where the energy normally flows in the same direction)". This revision is intended to ensure that radial systems which involve multiple parallel lines and are designed to operate as a single radial system, but that nevertheless connect to the grid through more than line for reliability. Second, for this same reason, an additional (i.e., second) note should be added to the end of Exclusion E1 that reads as follows: "Note, a normally closed switching device that enables multiple lines emanating from the same grid ring bus or different grid buses to operate as a single radial system does not affect this exclusion." Third, the phrase "with an aggregate capacity of non-retail generation less than or equal to 75 MVA should be eliminated.
Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made. Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of		

Organization	Yes or No	Question 7 Comment
further review under Phase 2 of the BES definition. No change made.		
Tacoma Power	Yes	Tacoma Power generally supports the Exclusion E1 as currently written. However, the "note" at the end of E1 is confusing and can be interpreted inconsistently. We recommend moving the language from the "note" to part of the exclusion as its own section, as follows:(d) Normally-open switching devices between radial elements as depicted and properly identified on system one-line diagrams should not be used to deny this exclusion. Additionally, we believe it is not appropriate for E1 to state an MVA threshold in Section b) when determining such thresholds is the purpose for Phase 2. We urge the SDT to defer the determination of a MVA threshold in E1 to Phase 2.
Response: Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made. Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
City of Austin dba Austin Energy	Yes	For the E1 reference "Note," we would benefit from additional clarification identifying the treatment of a normally open switch and offer the following: "Radial systems shall be assessed with all normally open switching devices in their open positions." The wording in Exclusion 1-c should more clearly reflect what is intended by using the term "non-retail generation." Also, as with the technical justification for Inclusions I2 and I4, we recommend that the generation threshold, i.e. gross nameplate values, be deferred to Phase 2.

Organization	Yes or No	Question 7 Comment
Response: Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made. Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made. Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
Ameren	Yes	a)We suggest the wording "non-retail generation' should be clarified with an explanation of why it is used in this exclusion. b)This exclusion criterion has multiple stipulations to its applicability, and also has a final inclusive reference to I3. Please make the wording exact and not dependent on clausal statements.
Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made. The SDT believes that the distinction between Load only, generation only, and Load with generation provides a bright-line exclusion for radial systems that is needed to cover all of the possible scenarios. In addition, the SDT has determined that it should be conservative with regard to allowing exclusion for radial systems that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent radial systems		

Organization	Yes or No	Question 7 Comment
without blackstart resources. No change made.		
Utility Services, Inc.	Yes	Utility Services is very concerned that the "single point of connection" lacks clarity and applications need to be identified. Utility Services suggests that the SDT publish illustrative one-line diagrams to aid the industry in determining when the designations are best applied.
Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made. Publishing diagrams will be considered in Phase 2.		
PSEG Services Corp	Yes	1. If a 50 MVA generator that is included per I2 is connected to an excluded radial system, would the generator be excluded or included per E1b)? If yes, then the language "unless excluded under Exclusion E1 and E3" in I1 needs to be added to I2, I4, and I5. 2. Non-retail generation in E1c) was described behind-the-meter generation in the Webinar. The term "non-retail generation" should be defined because one could infer that generation defined by E2 is "retail generation." Also, is the 75 MVA limit intended apply to the generator (as stated) or its net capacity as defined in E2? If it means the generator MVA, does that mean that generation excluded in E2 cannot exceed 75 MVA when connected to an excluded radial system?3. In general, the definition needs to better define the impact that "exclusion" has on a different "inclusion" or "exclusion."

Organization	Yes or No	Question 7 Comment
Response: Exclusion E1 is an exclusion for the contiguous transmission Elements connected at or above 100 kV. Generation resources connected within the radial system are qualifiers for this exclusion. No change made. Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made. Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
Massachusetts Department of Public Utilities	Yes	The aggregate 75 MVA of connected generation appears too low and would benefit from additional technical justification.
Response: Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
The Dow Chemical Company	Yes	Dow generally agrees with the proposed revisions to Exclusion E1, but believes that several additional clarifying revisions should be made. First, the phrase "a single point of connection" in the introductory sentence should be revised to read "a single point of connection (including multiple connections to the same ring bus or different buses where the energy normally flows in the same direction)". This revision is intended to ensure that radial systems include arrangements involving multiple parallel lines that are designed to operate as a single radial system, but that nevertheless connect at the grid ring bus or different buses on the grid for reliability.

Organization	Yes or No	Question 7 Comment
		Second, for this same reason, an additional (i.e., second) note should be added to the end of Exclusion E1 that reads as follows: "Note, a normally closed switching device that enables multiple lines emanating from the same grid ring bus or different grid buses to operate as a single radial system does not affect this exclusion." Third, in "c)," the phrase "with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating)" is confusing and potentially inconsistent to the extent that "non-retail generation" may be different from "gross nameplate rating." The apparent intent of the clause is to exclude radial systems that serve both load and generation, provided the generation capacity made available to the transmission grid does not exceed 75 MVA. Dow would recommend that the phrase be revised to read "where the net capacity provided to the transmission grid does not exceed 75 MVA." This revision would provide greater clarity and is consistent with the language used in Exclusion E2.

Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.

Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.

Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail

Organization	Yes or No	Question 7 Comment
generation to be unfairly biased against obtaining this exclusion. No change made.		
ExxonMobil Research and Engineering	Yes	The removal of the requirement for an automatic fault interrupting device from this requirement is a welcomed change from the first posting. This Exclusion helps preserve the current NERC Registry and explicitly excludes many facilities used in the distribution of electric power.
Long Island Power Authority	Yes	Need to clarify what is a "single point of interconnection" e.g. is it a bus section or a substation
Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.		
Manitoba Hydro	Yes	Manitoba Hydro agrees with E1 but the wording of the note regarding 'normally open switching devices' is unclear. In the Industry Webinar on September 28th, the Drafting Team made it clear that the note means that if an element can be connected to the BES from multiple points but under normal operating conditions it is only connected to the BES at a single point by means of normally open switches, then the element is still excluded from the BES provided it meets either the E1 a, b, or c criteria. The team also noted that the discretion to operate the normally open switching devices in the best interests of reliability rests with the operating entity. Suggested wording:"Note: The ability to connect a group of contiguous transmission Elements from multiple connection points of 100kV or higher through normally open switching devices does not negate this Exclusion. "

Organization	Yes or No	Question 7 Comment
		As well, part c) of E1 should be changed to “c) Only serves Load and includes...”
Response: The “single point of connection of 100 kV or higher” is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.		
ATC LLC	Yes	Unless there is a specific reason to the contrary, ATC suggests that Exclusion E1b include the qualification of “aggregate capacity of non-retail generation less than or equal to 75 MVA” to be consistent with the wording in E1c.
Puget Sound Energy	Yes	The language addressing generation resources in sections b and c of E1 could be more clear (an example of clearer language is section a of E3). At the least, the language in these two sections should be revised to read "... includes generation resources that are not identified in Inclusion I3 and that do not have an aggregate capacity exceeding 75 MVA ...".
Response: Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		

Organization	Yes or No	Question 7 Comment
NV Energy	Yes	There may be an opportunity to consolidate the sub-items of E1 into a single inclusion statement in order to simplify this exclusion designation. We propose the following replacement option: "E1 - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher and serves any combination of load and/or generation, provided that the generation resources are not identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating)."
Response: The SDT believes that the distinction between Load only, generation only, and Load with generation provides a bright-line exclusion for radial systems that is needed to cover all of the possible scenarios. No change made.		
Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperatve (CEC) Clearwater Power Company (CPC) Snohomish County PUD Consumer's Power Inc. Douglas Electric Cooperative (DEC) Fall River Rural Electric Cooperative (FALL) Lane Electric Cooperative	Yes	CLPD continues to support the radial system exclusion, which is necessary as a legal matter, because, for example, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term "transmission Elements" in the initial paragraph should be changed to "Elements." Radial systems are not transmission systems and including the word "transmission" in the Radial System exclusion is therefore unnecessary and confusing. (2) Subparagraph (b) of Exclusion 1 refers to"generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)"). We urge the SDT to replace this language with the defined term "Qualifying Aggregate Generation

Organization	Yes or No	Question 7 Comment
(LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC) Kootenai Electric Cooperative		Resources," discussed in more detail in our response to Question 3. This language, or some equivalent, will preserve the SDT's ability to revise the 75 MVA threshhold in Phase 2, with the result of Phase 2 included in the BES Definition by operation rather than requiring further revision of the Definition. (3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshhold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC's Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted. (4) The "Note" as drafted by the SDT indicates that "a normally open switching device between radial systems" will not serve to disqualify the Radial from exclusion under Exclusion 1. As noted above, CLPD strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d), rather than a note, because treatment as a "note" suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: (d) Normally-open switching devices between radial elements as depicted and properly identified on system one-line diagrams does not affect this exclusion.This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.
Response: 1) The SDT team considered the disposition of the word "transmission" in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element". No change made. 2) Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent		

Organization	Yes or No	Question 7 Comment
with the existing threshold in the NERC Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made. 3) See response to Q9. 4) Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.		
Michigan Public Power Agency	Yes	MPPA and its members continue to support the radial system exclusion, which is necessary as a legal matter, because, for example, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. But we believe that further clarification is necessary. First, the deletion of "originating with an automatic interruption device" is a step in the right direction. However, "emanates from a single point of connection" could be too narrowly interpreted (i.e., multiple buses within a single substation could be viewed as multiple points of connection). MPPA and its members proposes the following modification: "emanates from a single substation connected to the BES at 100 kV or higher ...". Entities whose only connection emanates from a single substation and otherwise meet the BES definition should not be denied exclusion under E1 solely because they connect to multiple buses within a single substation. Additionally, adoption of "E3- Local Networks" renders specious any argument that clams that connecting to multiple buses within a single suvstation makes a material difference for reliability purposes since local networks would have multiple connections anyway. Additionally, it is not clear why it is necessary to include the note at the end of the revised definition. ("A normally open switching device between radial systems, as

Organization	Yes or No	Question 7 Comment
		depicted on prints or one-line diagrams for example, does not affect this exclusion.") This rasies questions as to what "normally open" means, and wheither the only evidence demonstrating what "normally open" means will be prints or one-line diagrams. Further, it is not entirely clear what is meant by the language "does not affect this exclusion". If the note remains, it should be modified to read something like, "a normally open switching device between radial systems does not prevent application of this exclusion." Finally, the generation threshold limit in E1(b) and E1(c) should be revised as discussed in response to Q1. Specifically, the proposed threshold of 75 MVA for this exclusion should be raised to not lessd than 300 MVA in both E1(b) and E1 (c).

Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.

Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.

Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.

Organization	Yes or No	Question 7 Comment
NESCOE	Yes	NESCOE suggests that the aggregate 75 MVA of connected generation is too low and would benefit from additional technical justification. The threshold value should be related to the largest contingency to which the applicable control area is designed to operate. A level of 300 MVA would be appropriate. This 300 MVA limit represents 25% of the 1200 MVA loss of source that is typically assumed for operation of the Northeast portion of the Eastern Interconnection. Depending on system conditions, this number may be as high as 1500 MVA. Therefore, the suggested value of 300 MVA has a technical basis and falls well within typical loss of source expectations for the Northeast.
Response: The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
Z Global Engineering and Energy Solutions	Yes	As stated in comment one. I recommend the Note is rewritten: "Note - A normally open switching device between radial systems, as depicted on prints or oneline diagrams, for example, does not classify the two or more radial lines as a loop line. The exclusion will still apply."
Harney Electric Cooperative, Inc.	Yes	HEC strongly agrees that radial systems should be excluded from the BES and that the presence of a normally open switching device between radial systems should not cause them to be considered non-radial
PacifiCorp	Yes	: The note in E1 as written is ambiguous and requires clarification. PacifiCorp assumes the note means that two radial systems separated by a normally open switching device allows for the exclusion of both radial systems. PacifiCorp recommends that the SDT revise the note to serve as a paragraph clarifying E1 that, “Radial systems separated by normally open switching device(s) as depicted on prints or one-line diagrams for example, and operated in the normally open position, except during

Organization	Yes or No	Question 7 Comment
		abnormal operating conditions, qualifies both radial systems under this exclusion."
Response: Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.		
Texas Industrial Energy Consumers	Yes	As noted in response to Question 3, above, Exclusion E1 would only allow exclude radial systems with "aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating)." The reference to "non-retail" generation in subsection (c) indicates that the SDT may have intended to preserve the "netting" approach set forth in the Statement of Registry Compliance, but this should be made clearer. The description in subsection (c) should be revised to exclude "Where the radial system serves Load and includes generation resources not identified in Inclusions I2 or I3," and the remainder of that sentence referencing a 75 MVA gross nameplate rating should be removed. This will provide a reference back to the Statement of Registry Compliance and clarify that only net capacity is considered for customer-owned facilities.
Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
Holland Board of Public Works	Yes	Holland BPW supports the exclusion of radial systems from the BES definition, but believes that further clarification is necessary. First, the deletion of "originating with an automatic interruption device" is a step in the right direction. However,

Organization	Yes or No	Question 7 Comment
		"emanates from a single point of connection" could be too narrowly interpreted (i.e., multiple buses within a single substation could be viewed as multiple points of connection). Holland BPW proposes the following modification: "emanates from a single substation connected to the BES at 100 kV or higher..." Entities whose only connection emanates from a single substation and otherwise meet the BES definition should not be denied exclusion under E1 solely because they connect to multiple buses at that single substation. Additionally, adoption of "E3 - Local Networks" renders specious any argument that claims that connecting to multiple buses within a single substation makes a material difference for reliability purposes since local networks would have multiple connections anyway. Additionally, it is not clear why it is necessary to include the note at the end of the revised definition. ("A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.") This raises questions as to what "normally open" means, and whether the only evidence demonstrating what "normally open" means will be prints or one-line diagrams. Further, it is not entirely clear what is meant by the language "does not affect this exclusion". If the note remains, it should be modified to read something like, "a normally open switching device between radial systems does not prevent application of this exclusion." Finally, the generation threshold limit in E1(b) and E1(c) should be revised as discussed in response to Q1. Specifically, the proposed threshold of 75 MVA for this exclusion should be raised to not less than 300 MVA in both E1(b) and E1(c).
Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner		

Organization	Yes or No	Question 7 Comment
always has the option to seek exclusion through the exception process. No change made. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made. The threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative	Yes	Remove “non-retail” because it is irrelevant to reliability. In general, we agree with the remaining concepts. However transformer voltage threshold should be 200 kV or higher, the power thresholds should be 150 MVA or greater.
Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made. The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the NERC Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.		
Electricity Consumers	Yes	ELCON supports the changes made from the first posting for both E1 and E3 (which complements E1), as this will help maintain the status quo referred to in the

Organization	Yes or No	Question 7 Comment
Resource Council (ELCON)		introductory text. We seek one clarification: Some large industrial customers that operate in remote, rural locations provide distribution services to third parties (usually on a pro bono basis) where the local utility (LSE) is unable or unwilling to serve. These transactions, which are akin to "border-line sales" in utility parlance, are typically de minimis relative to the Load of the entity that delivers the power. While the distribution is at low voltages (less than 100 kV), the power may have been received by the entity at a higher voltage. We seek affirmation by the SDT that such situations are not precluded by Exclusion E1.
Response: This is a bright-line definition for the BES and Exclusion E1 can be used to exclude radial systems for the contiguous transmission Elements connected at or above 100 kV and lower voltage systems are already excluded from the BES. The definition does not draw a distinction between ownership or connection arrangements. Without an exact configuration it is impossible for the SDT to comment further but if this situation somehow slips through the cracks, there is always the option to seek an exception. No change made.		
ACES Power Marketing Standards Collaborators	Yes	The term "non-retail generation" used in Exclusion E1 (item c) and again in E3 (item a) should be clarified (see comments for question 8 below). The Note after item c should also be clarified to indicate that closing a normally open switch doesn't affect this exclusion.
Response: Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made. Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.		
Sacramento Municipal Utility	Yes	For the E1 reference "Note," we would benefit from additional clarification identifying

Organization	Yes or No	Question 7 Comment
District		the treatment of a normally open switch and offer the following: "Radial systems shall be assessed with all normally open switching devices in their open positions." The wording in Exclusion 1-c should more clearly reflect what is intended by using the term "non-retail generation." Also, as with the technical justification for Inclusions I2 and I4, it is recommended that the generation threshold, i.e. gross nameplate values, be deferred to Phase 2.
Balancing Authority Northern California	Yes	For the E1 reference "Note," we would benefit from additional clarification identifying the treatment of a normally open switch and offer the following: "Radial systems shall be assessed with all normally open switching devices in their open positions." The wording in Exclusion 1-c should more clearly reflect what is intended by using the term "non-retail generation." Also, as with the technical justification for Inclusions I2 and I4, it is recommended that the generation threshold, i.e. gross nameplate values, be deferred to Phase 2.

Response: Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.

Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.

The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.

Organization	Yes or No	Question 7 Comment
Florida Municipal Power Agency Transmission Access Policy Study Group	Yes	FMPA supports the exclusion of radial systems from the BES Definition. Such systems are generally not "necessary for operating an interconnected electric transmission network," the standard in Orders 743 and 743-A. We have several suggestions to clarify the proposed language for this Exclusion. Proposed Exclusion E1 refers to "[a] group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher." We appreciate the SDT's clarification of the point of connection requirement, but the term "a single point of connection" should be further defined (more clearly than just by voltage), and should be generic enough to encompass the various bus configurations. It is not the case, for example, that each individual breaker position in a ring bus is a separate point of connection for this purpose; in that situation, a bus at one voltage level at one substation should be considered "a single point of connection." Some examples of configurations that should be considered a single point of connection for this purpose are at https://www.frcc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf, Examples 1-6. Although the core definition (appropriately) refers to "Transmission Elements" (with a capital "T"), proposed Exclusion E1 refers to "transmission Elements" (with a lowercase "t"). To avoid confusion, either "Transmission" should be capitalized in both locations, or the word "transmission" should simply be deleted from Exclusion E1, leaving a "group of contiguous Elements." We understand that the lack of capitalization may have been a deliberate choice by the SDT in an attempt to avoid confusion that SDT members believe exists in the Glossary definition. If the Glossary definition of Transmission is unclear-which FMPA does not necessarily believe is the case-the answer is not to simply abandon the Glossary definition in favor of an entirely undefined term; it is to submit a SAR to improve the Glossary definition. Exclusion E1(c) refers to "an aggregate capacity of non-retail generation less than or equal to 75 MVA." "Non-retail generation" is potentially ambiguous, because it could be read as distinguishing between generation that will be sold at wholesale and generation that is used by the retail provider to meet retail load. On the

Organization	Yes or No	Question 7 Comment
		understanding that the intent is in fact to describe generation behind the end-user meter, sometimes referred to as "behind-the-second-meter generation," we suggest the following revision: "an aggregate generation capacity less than or equal to 75 MVA, not including generation on the retail customer's side of the retail meter." Exclusion E1 concludes with a "Note": "A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion." The Note should not specify the types of evidence required to prove a normally open switch, and the phrase "as depicted on prints or one-line diagrams" should be deleted. This phrase is equivalent to a "Measure" in a standard and should not be embedded in the equivalent of a "Requirement." Since the phrase only gives an "example," it does not in fact add anything to the Note, but may lead to confusion over what sort of evidence is required.

Response: The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100kV or higher. Networks that have multiple connections at 100kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.

The SDT team considered the disposition of the word "transmission" in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element". No change made.

Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.

Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent

Organization	Yes or No	Question 7 Comment
the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment. No change made.		
MRO NERC Standards Review Forum (NSRF)	Yes	Unless there is a specific reason to the contrary the NSRF suggests that E1b include the qualification of "aggregate capacity of non-retail generation less thatn or equal to 75 MVA" be added to be consistent with the wording in E1c.
MEAG Power	Yes	We suggest the wording "non-retail generation' should be clarified with an explanation of why it is used in this exclusion.
SERC OC Standards Review Group	Yes	We suggest the wording "non-retail generation' should be clarified with an explanation of why it is used in this exclusion.
Consolidated Edison Co. of NY, Inc.	Yes	Please define the term "non-retail generation."
Tennessee Valley Authority	Yes	TVA suggests the wording "non-retail generation' should be clarified with an explanation of why it is used in this exclusion.
SERC Planning Standards Subcommittee	Yes	The SDT needs to clarify what is meant by "non-retail generation." Is this what is commonly referred to as "customer owned" or "behind-the-meter" generation?
Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.		
WECC Staff	Yes	The use of the word "affect" in the note may cause problems with interpretation by users. WECC suggests replacing the term "affect" with "alter".
Response: The SDT considered your comments and chose to leave the existing wording unchanged as it does not provide any		

Organization	Yes or No	Question 7 Comment
additional clarity. Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator's responsibility to indicate how a switch is used in the normal operating environment. No change made.		
Westar Energy	Yes	
Redding Electric Utility	Yes	
City of Redding	Yes	
Portland General Electric Company	Yes	
Farmington Electric Utility System	Yes	
Georgia System Operations Corporation	Yes	
Oncor Electric Delivery Company LLC	Yes	
National Grid	Yes	
Cowlitz County PUD	Yes	
Memphis Light, Gas and Water Division	Yes	

Organization	Yes or No	Question 7 Comment
Springfield Utility Board	Yes	SUB supports a radial system exclusion.
Oregon Public Utility Commission Staff	Yes	
Metropolitan Water District of Southern California	Yes	
Duke Energy	Yes	
Chevron U.S.A. Inc.	Yes	This is very important exclusion for an entity operating in remote areas of the country that provides distribution service to third parties where utilities are unable or unwilling to serve. While the distribution is at a low voltage, the power was initially received by the operating entity at a high voltage.
Central Hudson Gas and Electric Corporation	Yes	
Idaho Falls Power	Yes	We support the exclusion as drafted.
FirstEnergy Corp.	Yes	
Exelon	Yes	
Tri-State GandT	Yes	
Western Area Power Administration	Yes	
Tri-State Generation and Transmission Assn., Inc.	Yes	

Organization	Yes or No	Question 7 Comment
Energy Management		
Texas RE NERC Standards Subcommittee	Yes	This is a much needed change from the first posting, as this will maintain the status quo referred to in the introduction text.
Response: Thank you for your support.		

8. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2 (behind-the-meter generation)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: The majority of commenters are in agreement with Exclusion E2 but there were some requests for additional clarification and the SDT responded by clarifying the language as shown below.

There were also questions raised about threshold levels in the exclusion. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

Some commenters have questioned the reasoning behind Exclusion E2 (ii). Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR §292.101 and §292.305(b) for the requirements specific to the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. This is not new ground and is simply clarifying language that has been present in the ERO Statement of Compliance Registry Criteria for quite some time. The SDT believes that the meaning of the definition will be understood in Balancing Authority Areas where it is applicable as it reflects existing practice. Therefore, the SDT has declined to delete condition (ii).

E2 - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail ~~customer~~ Load with electric energy ~~on the customer's side of the retail meter~~ if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.

Organization	Yes or No	Question 8 Comment
MEAG Power	No	Clarification needs to be provided for what is meant by E2 (ii), regarding generation on the customer's side of the retail meter; otherwise we have trouble developing a position on this question.
SERC OC Standards Review Group	No	Clarification needs to be provided for what is meant by E2 (ii), regarding generation on the customer's side of the retail meter; otherwise we have trouble developing a position on this question.
Tennessee Valley Authority	No	Clarification needs to be provided for what is meant by E2 (ii), regarding generation on the customer's side of the retail meter; otherwise we have trouble developing a position on this question.
ReliabilityFirst	No	It is not clear why "ii" is needed. If the net generation exceeds 75 MVA, then it is included in the BES whether or not there are ancillary services provided for that generation. Would customer owned generation less than a net of 75 MVA but greater than 20 MVA be included in the BES if item ii was not met?
FirstEnergy Corp.	No	We suggest striking item "ii"
Dominion	No	Dominion supports exclusion for behind-the-meter generation, (if connected at >100 kV) if the load behind the meter (to which that generation is intended to support) does not rely on generation outside that metered point for purposes of back-up energy or any type of ancillary services at any time. The proposed language appears to suggest that standby, back-up, and maintenance power services are always required. There are alternative means to provide these services, such as reducing load to match 'reliability services' provided by the available behind-the-meter generation. Further, even if standby, back-up, and maintenance power services are always required, the exclusion criteria obligation should be placed on the retail load, not the generation outside the metered point
Response: Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying cogeneration and		

Organization	Yes or No	Question 8 Comment
small power production facilities. For example, see 18 CFR §292.101 and §292.305(b) for the requirements specific to the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. This is not new ground and is simply clarifying language that has been present in the ERO Statement of Compliance Registry Criteria for quite some time. The SDT believes that the meaning of the definition will be understood in Balancing Authority Areas where it is applicable. No change made.		
Northeast Power Coordinating Council	No	Why are references to Balancing Authority, Generator Owner, and Generator Operator included in E2 which is part of the BES definition? The wording of Exclusion E2 should be consistent with the Statement of Compliance Registry Criteria in Section III.c.4.
Response: The roles of the Balancing Authority, Generator Owner, and Generator Operator are implied in the ERO Statement of Compliance Registry Criteria and the terms were added as the result of industry requests for clarification. No change made.		
Southern Company	No	We suggest that clarification is needed for what is meant by E2 (ii), regarding generation on the customer's side of the retail meter. Also, we would like for a clarification of the difference between the terms "retail load" and "retail customer load" as used in exclusions E2 and E3.
Response: Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR §292.101 and §292.305(b) for the requirements specific to the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. This is not new ground and is simply clarifying language that has been present in the ERO Statement of Compliance Registry Criteria for quite some time. The SDT believes that the meaning of the definition will be understood in Balancing Authority Areas where it is applicable. No change made. The SDT accepts your recommendation regarding "retail Load" and has clarified Exclusion E2 to read: **E2** - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail ~~customer~~ Load with electric energy ~~on the customer's side of the retail meter~~ if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator		

Organization	Yes or No	Question 8 Comment
Owner or Generator Operator, or under terms approved by the applicable regulatory authority.		
Southwest Power Pool Standards Review Team	No	This number could change in phase two of the project which would create unnecessary work in the future.
Farmington Electric Utility System	No	E2 should be modified to include a size and threshold for individual generating units, similar to that identified in I2. As currently worded E2 places the same threshold (75 MVA) on a single generating unit as is placed on multiple generating units.
Westar Energy	No	As expressed in our comment to question 5, we have concerns that the 75 MVA number could change in phase two of the project, creating unnecessary work in the future.
American Electric Power	No	It appears an entity with less than 75 MVA would not have been included as part of the earlier inclusions. Is it necessary to note this threshold once again in the exclusion section? Might it be possible to add some of the "behind the meter load" to the inclusion section to reduce the amount of both the inclusions and exclusions? Doing so would likely provide more clarity to the standard.
City of Anaheim	No	Again, 75 MVA should be increased to 300 MVA in E2 for the reasons stated in response to Question 7.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values		

Organization	Yes or No	Question 8 Comment
and provide compelling justification for modifications to the existing values. No change made.		
City of St. George	No	Same basic comments and concerns as question #7.
Response: See response to Q7.		
ISO New England Inc	No	Exclusion E2 is confusing as written and seems counter intuitive. As an example, a 400 MW generator which is behind the meter with a 400 MW load could be excluded. This generator could have a significant impact on the performance of the system and yet it is excluded. As a simple example, loss of the 400 MW generator would require that the 400 MW load be supplied from the system, possibly leading to low voltages and thermal overloads. Additionally, a machine of this size could adversely impact the dynamic response of the system, leading to damping concerns or unit instability. If E2 is to be retained, it is not clear under what load conditions should the load at the facility be measured. Load levels, and resulting net flows to the system, can be significantly different between seasons, time of day, and the status of end user equipment at large industrial/manufacturing sites. The term "Retail Customer Load" needs to be defined. The Balancing Authority should not be included as an entity providing this service. In general the Statement of Compliance Registry has provided the preferred language to use here (Page 9, [Exclusions: second paragraph).
Response: The SDT believes that Exclusion E2 should be dedicated to the situation faced by behind-the-meter (i.e., retail customer owned) generation that are PURPA qualifying facilities (in the US) (e.g., see 18 CFR Part 292 for the regulations that are applicable in the US), and similarly situated generators in Canada. Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying facilities. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. No change made. The roles of the Balancing Authority, Generator Owner, and Generator Operator are implied in the ERO Statement of Compliance Registry Criteria and the terms were added to Exclusion E2 as the result of industry requests for clarification.		

Organization	Yes or No	Question 8 Comment
The SDT has clarified Exclusion E2 to read: **E2** - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail ~~customer~~ Load with electric energy ~~on the customer's side of the retail meter~~ if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.		
Central Maine Power Company	No	E2 should be consistent with the Statement of Compliance Registry Criteria. References to Balancing Authority, Generator Owner, and Generator Operator should not be included in the BES definition. "Net capacity" is unclear - must flow never exceed 75 MVA on an instantaneous or integrated hourly energy basis per either design or operating experience? There is a potential for hundreds of MW to be interconnected at a customer facility, with the "net capacity" (= flow into the transmission system? Instantaneous? Annual average? On an integrated hourly basis at any hour?) being less than 75 MVA - are hundreds of MW of generation "not material" to BES reliability? The conditions under which direction of flow (i.e., "net capacity") is assessed are critical, but E2(i) is silent on this.In E2(ii), the "and", "or", and "or" are not clear - what are the necessary terms of the referenced "binding obligation" and what is an "applicable regulatory authority"? Are "standby" and "back-up" and "maintenance" power services independently defined and provided by a GOP, GO, or BA? Northeast industry expert colleagues do not understand the relevance of E2(ii) to BES reliability.E2 should be restated as follows:"A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the meter if the flow to or from the BES can never exceeds 75 MVA."
Rochester Gas and Electric and New York State Electric and Gas	No	E2 should be consistent with the Statement of Compliance Registry Criteria. References to Balancing Authority, Generator Owner, and Generator Operator should not be included in the BES definition.

Organization	Yes or No	Question 8 Comment
		"Net capacity" is unclear - must flow never exceed 75 MVA on an instantaneous or integrated hourly energy basis per either design or operating experience? There is a potential for hundreds of MW to be interconnected at a customer facility, with the "net capacity" (= flow into the transmission system? Instantaneous? Annual average? On an integrated hourly basis at any hour?) being less than 75 MVA - are hundreds of MW of generation "not material" to BES reliability? The conditions under which direction of flow (i.e., "net capacity") is assessed are critical, but E2(i) is silent on this. In E2(ii), the "and", "or", and "or" are not clear - what are the necessary terms of the referenced "binding obligation" and what is an "applicable regulatory authority"? Are "standby" and "back-up" and "maintenance" power services independently defined and provided by a GOP, GO, or BA? Northeast industry expert colleagues do not understand the relevance of E2(ii) to BES reliability.E2 should be restated as follows:"A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the meter if the flow to or from the BES never exceeds 75 MVA"

Response: The wording of (ii) is essentially the same as the wording on this topic in the ERO Statement of Registry Criteria which has been in existence for several years and is well understood in the industry. Qualifying for Exclusion E2 will be determined the same as every other inclusion or exclusion; there is nothing special about Exclusion E2 that separates it from the rest of the definition. The roles of the Balancing Authority, Generator Owner, and Generator Operator are implied in the ERO Statement of Compliance Registry Criteria and the terms were added to Exclusion E2 as the result of industry requests for clarification.

The SDT believes that Exclusion E2 should be dedicated to the situation faced by behind-the-meter (i.e., retail customer owned) generation that are PURPA qualifying facilities (in the US) (e.g., see 18 CFR Part 292 for the regulations that are applicable in the US), and similarly situated generators in Canada. Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying facilities. The primary purpose of retail customer owned generation in the context of Exclusion E2 is the integrity of steam production that supports a manufacturing process. The electrical load of that process does not exist without steam.

The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves (i.e., standby, backup and maintenance power), is essential for the integrity of the exclusion. These reserves maintain steam generation

Organization	Yes or No	Question 8 Comment
and the load to sustain the manufacturing process. In the US, the terms and conditions of standby, backup and maintenance services are defined and administered by State PSCs (i.e., the "applicable regulatory authority" in the US) subject to FERC oversight. These services are provided under contract or tariff with GOs, GOPs or BAs in regions that do not have ISOs or RTOs, and provided by ISOs and RTOs where so-called "organized markets" operate. The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated, and the residual ("net") amount exported to the BES that was deemed relevant to the exclusion and reliability, not the nameplate rating. The export is subject to the 75 MVA threshold; the requirement for reserves under a "binding obligation" (standby, backup and maintenance power) matches part or all of the on-site load and is not subject to the threshold. No change made.		
LCRA Transmission Services Corporation	No	
Response: Without any specific comment, the SDT is unable to respond.		
Kansas City Power and Light Company	No	Any facilities that are customer owned regardless of size or configuration are not under the jurisdiction or responsibility of the Registered Entity and should not be considered as included with a Registered Entity.
Response: Exclusion E2 was based on the ERO Statement of Compliance Registry Criteria. No change made.		
Ameren	No	a)If retail generation fails to meet (i) or (ii) it appears that the retail generation would be included. The wording of (ii) is complex. Who will police this with retail behind-the-meter generators? b)Clarification needs to be provided for what is meant by E2 (ii), regarding generation on the customer's side of the retail meter; otherwise we have trouble developing a position on this question.
Response: The wording of (ii) is essentially the same as the wording on this topic in the ERO Statement of Registry Criteria which has been in existence for several years and is well understood in the industry. Qualifying for the E2 Exclusion will be determined the same		

Organization	Yes or No	Question 8 Comment
as every other inclusion or exclusion; there is nothing special about Exclusion E2 that separates it from the rest of the definition. Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying facilities. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. No change made.		
Nebraska Public Power District	Yes	However the exclusion needs to be noted in I2, so as to non conflict with I2. (See comment on #2 above.)
Response: Any retail generation that meets the criteria in Exclusion E2 is not in the BES so there is no conflict. No change made.		
National Grid	Yes	We agree with this exclusion, but the intention of point (i), the net capacity provided to the BES does not exceed 75 MVA, is not clear. We suggest this wording:"the net capacity provided to the BES for 90% of the hours of the year does not exceed 75 MVA".
Response: The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. The threshold level for generators will be considered in the Phase 2 review. No change made.		
Utility Services, Inc.	Yes	Utility Services supports the comments offered by others suggesting that the language be revised to be identical to the language in the SCRC.
Response: The SDT modified the language in response to industry requests for clarification. For example, the terms Balancing Authority, Generator Owner, and Generator Operator are implied in the ERO Statement of Compliance Registry Criteria. No change made.		
South Houston Green Power, LLC	Yes	SHGP generally agrees with the proposed revisions to Exclusion E2, but believes that a clarifying revision should be made. Substitute "transmission grid" for "BES" in the phrase "provided to the BES" to insure that the metering is to the grid.

Organization	Yes or No	Question 8 Comment
The Dow Chemical Company	Yes	Dow generally agrees with the proposed revisions to Exclusion E2, but believes that a clarifying revision should be made. Substitute “transmission grid” for “BES” in the phrase “provided to the BES” to insure that the measurement is to the grid.
Response: The SDT believes that BES is the appropriate point of measurement because Exclusion E2 is defined in relation to the BES. No change made.		
Manitoba Hydro	Yes	Manitoba Hydro agrees with E2 but suggests that the phrase ‘A generating unit or multiple generating units’ be replaced with ‘Generating resource(s)’ for clarity and consistency.
Response: The SDT does not see where the suggested change will add any additional clarity. No change made.		
Michigan Public Power Agency Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperatve (CEC) Clearwater Power Company (CPC) Snohomish County PUD Consumer's Power Inc. Douglas Electric Cooperative (DEC)	Yes	MPPA and its members support the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, MPPA and its members urge the SDT to remove the reference to the 75 MVA threshhold and replace it with the defined term “Qualifying Aggregate Generation Resources” or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7. In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation, With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe

Organization	Yes or No	Question 8 Comment
Fall River Rural Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC) Cowlitz County PUD Kootenai Electric Cooperative		the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the		

Organization	Yes or No	Question 8 Comment
technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. The thresholds in Exclusions E1 and E3 apply only to non-retail generators (i.e., generation on the system (supply) side of the retail meter) and are not affected by presence of retail generation. No change made.		
Massachusetts Department of Public Utilities	Yes	While the MA DPU generally supports Exclusion E2, no information has been provided by NERC demonstrating that the 75 MVA rating is based on any sound technical analysis.
NESCOE	Yes	While NESCOE generally supports Exclusion E2, no information has been provided by NERC demonstrating that the 75 MVA rating is based on any sound technical analysis.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
Texas Industrial Energy Consumers	Yes	Please see the response to Question 3, above. Unlike exclusions E1 and E3, this exclusion refers specifically to the “net capacity” provided, which is consistent with existing treatment for generation that is netted against internal load under the Statement of Registry Compliance.
Response: See response to Q3.		

Organization	Yes or No	Question 8 Comment
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative	Yes	E2 "retail meter" should read "retail meter(s)". (i) Should be reworded as "the maximum net impact to the BES does not exceed 150 MVA, connected at 200 kV or higher." (ii) if we understand this clause correctly, we believe our proposed (i) wording will handle the issue. Also, all load's inclusion, within a BA, is dictated within the BAL standards and so remove entirely or additional clarification is needed.

Response: It is accepted use in NERC Reliability Standards that singular words and terms apply to plural conditions as well. No change made.

The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR §292.101 and §292.305(b) for the requirements specific to the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. This is not new ground and is simply clarifying language that has been present in the ERO Statement of Compliance Registry Criteria for quite some time. The SDT believes that the meaning of the definition will be understood in Balancing Authority Areas where it is applicable. No change made.

Organization	Yes or No	Question 8 Comment
Southern Company Generation	Yes	Some editing is needed. The second part, (ii), of the and logic provided for the exclusion criteria E2 is confusing. The initial criteria, (i), seems to be adequate regarding impact to the BES. The criteria listed after "(ii)" does not seem to be relevant to the impact on the BES. What does it mean to provide standby, back-up, and maintenance power services to a generating unit or multiple generating units? It is unclear who is providing the power service. If this is needed, the statement needs to be simplified so it can be understood. What is the difference between the terms "retail Load" and "retail customer Load" as used in Exclusions E2 and E3?
Response: Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR §292.101 and §292.305(b) for the requirements specific to the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. This is not new ground and is simply clarifying language that has been present in the ERO Statement of Compliance Registry Criteria for quite some time. The SDT believes that the meaning of the definition will be understood in Balancing Authority Areas where it is applicable. The SDT accepts your recommendation regarding "retail Load" and hasl clarified Exclusion E2 to read: **E2** - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail ~~customer~~ Load with electric energy ~~on the customer's side of the retail meter~~ if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.		
ACES Power Marketing Standards Collaborators	Yes	"A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter" sounds a lot like "non-retail generation" that is used in E1 and E3 which was described in the webinar as generation that resides on the customer side of the retail meter and is used to supply energy to that customer's load and is owned by the customer. Is E2 assuming that this generation is not owned by the customer?

Organization	Yes or No	Question 8 Comment
		Also, part ii) adds to the confusion. Conceptually we agree with this exclusion but further clarification is preferred.
Response: Exclusion E2 does not apply to non-retail generation, which the SDT defines as generation on the system (supply) side of the retail meter. Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR §292.101 and §292.305(b) for the requirements specific to the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. This is not new ground and is simply clarifying language that has been present in the ERO Statement of Compliance Registry Criteria for quite some time. The SDT believes that the meaning of the definition will be understood in Balancing Authority Areas where it is applicable. No change made.		
Bonneville Power Administration	Yes	BPA believes that if E2 is intended to exclude behind-the-meter generation, the phrase "on the customer's side of the retail meter" should immediately follow "generating units" in the first line. Otherwise, the phrase could be seen as modifying "retail customer Load."
Response: The SDT has clarified Exclusion E2 as suggested. **E2** - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail ~~customer~~ Load with electric energy ~~on the customer's side of the retail meter~~ if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.		
WECC Staff	Yes	E2 is inconsistent with Section III.c. of the NERC Statement of Compliance Registry Criteria and is in conflict with I2. As written, E2 uses a net capacity threshold of 75MVA, which does not distinguish between a single generating unit and multiple generating units. The threshold in the NERC Statement of Compliance Registry Criteria for a single generating unit is 20MVA. As a result, E2 would appear to exclude generators from 20MVA to 75MVA that serve any amount of retail load behind the

Organization	Yes or No	Question 8 Comment
		meter. WECC recommends replacing "(i) the net capacity provided to the BES does not exceed 75 MVA" with "(i) the net capacity provided to the BES does not exceed the individual or gross nameplate ratings provided in the NERC Statement of Compliance Registry Criteria." WECC's recommended change makes E2 consistent with I2 and the SDT's plan to address generator thresholds in Phase 2.
Response: Comments received on Inclusion I2 made it clear that industry did not want circular references in the definition so the SDT has refrained from using the wording suggested here both in Inclusion I2 and Exclusion E2. The threshold levels of generators and the relationship between the ERO Statement of Compliance Registry Criteria and the BES definition will be considered in the Phase 2 review. However, the SDT believes that a value was needed for Phase 1 and decided to proceed with the single 75 MVA threshold. No change made.		
ATC LLC	Yes	
Portland General Electric Company	Yes	
City of Austin dba Austin Energy	Yes	
ExxonMobil Research and Engineering	Yes	
Northern Wasco County PUD	Yes	
Georgia System Operations Corporation	Yes	
Oncor Electric Delivery Company LLC	Yes	

Organization	Yes or No	Question 8 Comment
Central Lincoln	Yes	
Harney Electric Cooperative, Inc.	Yes	
PSEG Services Corp	Yes	
Independent Electricity System Operator	Yes	
Long Island Power Authority	Yes	
Mission Valley Power	Yes	
Puget Sound Energy	Yes	
Tillamook PUD	Yes	
NV Energy	Yes	
Oregon Public Utility Commission Staff	Yes	
Z Global Engineering and Energy Solutions	Yes	
Consumers Energy	Yes	
Metropolitan Water District of Southern California	Yes	

Organization	Yes or No	Question 8 Comment
Duke Energy	Yes	
Chevron U.S.A. Inc.	Yes	This is a very important exclusion for Combined Heat and Power facilities that utilize large amounts of steam and power, and secure and/or provide their own operating reserves.
Ontario Power Generation Inc.	Yes	
Central Hudson Gas and Electric Corporation	Yes	
Idaho Falls Power	Yes	We support the exclusion as drafted.
Exelon	Yes	
PacifiCorp	Yes	
Hydro One Networks Inc.	Yes	
Tri-State GandT	Yes	
Western Area Power Administration	Yes	
Tri-State Generation and Transmission Assn., Inc. Energy Management	Yes	
MRO NERC Standards Review Forum (NSRF)	Yes	

Organization	Yes or No	Question 8 Comment
IRC Standards Review Committee	Yes	
Pepco Holdings Inc and Affiliates	Yes	
Transmission Access Policy Study Group	Yes	
Electricity Consumers Resource Council (ELCON)	Yes	ELCON supports the proposed revisions to Exclusion E2.
Texas RE NERC Standards Subcommittee	Yes	
Florida Municipal Power Agency	Yes	
SERC Planning Standards Subcommittee	Yes	
Redding Electric Utility	Yes	
City of Redding	Yes	
Tacoma Power	Yes	Tacoma Power supports the Exclusion E2 as currently written.
BGE	Yes	No comment.
NERC Staff Technical Review	Yes	

Organization	Yes or No	Question 8 Comment
Response: Thank you for your support. Due to other comments received, the SDT has made a slight clarifying change to Exclusion E2 as shown: **E2** - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail ~~customer~~ Load with electric energy ~~on the customer's side of the retail meter~~ if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.		

9. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3 (local network)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: Commenters were generally supportive of the concept of the local network Exclusion E3 as proposed in the second posting of the BES definition. The most prevalent comments, and the SDT's response to those comments, were as follows:

Several commenters suggested that the requirement under Exclusion E3.b should apply only during normal operating conditions. In other words, commenters felt that some power flow should be allowed to flow from the candidate local network back into the BES as long as it only occurred under abnormal conditions. To address this suggestion, the SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, but determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. . However, the SDT believes that, in circumstances where a local network is unable to utilize the local network exclusion solely because, under abnormal system conditions power flows out of the network, the same network could be a suitable candidate for exclusion under the Exception Process.

Numerous comments were received that either challenged the generator thresholds in Exclusion E3.a or suggested that the Exclusion for local networks should be silent on generator thresholds until the question of appropriate generation thresholds is addressed in Phase 2 of Project 2010-17. The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort. However, to satisfy to the Commission's directives in Orders 743 and 743-A743-A in a timely fashion, the SDT believes it is necessary to use a generation threshold that is consistent with the in-force ERO Statement of Compliance Registry Criteria.

The SDT introduced the term "non-retail generation" in the E3 Exclusion, and a number of commenters questioned the SDT's understanding of the term. For the purpose of Exclusion E3 (and Exclusion E1), the SDT intends "non-retail generation" to mean generation that is on the system (supply) side of the retail meter.

Numerous commenters suggested that the word "transmission" be removed from the phrase in the first paragraph of Exclusion E3. The SDT considered the disposition of the word "transmission" in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element".

Several commenters expressed some confusion about Exclusion E3.b. Commenters felt that two separate and distinct ideas were being addressed in Exclusion E3.b, and that the expression following the colon is expected to clarify the expression preceding the colon. The SDT agrees that these two ideas are separate, but related. The SDT decided to revise Exclusion E3.b to provide this clarity, as follows:

> **E3.b**: Power flows only into the LN~~:~~ and ~~T~~the LN does not transfer energy originating outside the LN for delivery through the LN;

This minor revision is clarifying only, and does not represent any material change to the Exclusion provision.

Organization	Yes or No	Question 9 Comment
SERC OC Standards Review Group	No	We would agree with the exclusion if the wording of the exclusion includes the following phrase (in quotation marks) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN "under normal operating conditions".
Tennessee Valley Authority	No	TVA would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): "Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN under normal operating conditions; and"
MEAG Power	No	We would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN "under normal operating conditions".
Response: The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.		
NERC Staff Technical Review	No	While we appreciate the improvement in the text of Exclusion E3, but we continue to believe that E3 should require automatic interrupting devices that are part of the BES must be provided at the points of interconnection between the Local Network and the BES.
Response: The SDT considered the suggested requirement for separation of the LN via automatic fault interrupting devices during the		

Organization	Yes or No	Question 9 Comment
development of the language for the second posting, and determined that such a qualifier could not be enforced for facilities that are not essential for the reliable operation of an interconnected transmission network. No change made.		
Northeast Power Coordinating Council	No	What is the technical justification for 300kv and higher? Local Network is capitalized (network not capitalized at the beginning of E3) throughout E3, yet it is not defined in the NERC Glossary. The installed generation limit in a Local Network should be addressed in Phase 2. Any studies supporting E3 should be made available.
Response: The threshold of 300 kV is used as a cap, not a minimum. Please refer to the companion document in the second posting of the BES Definition under Project 2010-17 for a description of the technical justification for local network exclusion. The term "local network" is not capitalized anywhere in the Exclusion E3 section of the definition except where it is placed as a section title, and when abbreviated. The SDT understands that "local network" is not a NERC Glossary term. The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort; however, to satisfy the Commission's directives in Order 743 and 743-A in a timely fashion, it is necessary to use a generation threshold that is consistent with the in-force Statement of Compliance Registry Criteria. No change made. Please refer to the companion document in the second posting of the BES Definition under Project 2010-17 for a description of the technical justification for local network exclusion.		
Bonneville Power Administration	No	BPA has several concerns regarding Exclusion E3. First, BPA strongly believes that Exclusion E3 must retain the requirement that the local network (LN) be separable from the BES by an automatic fault interrupting device wherever the LN interconnects with the BES. BPA believes that this is necessary in order to protect both the BES and the LN during faults, especially if there is any possibility that backfeed could occur. BPA recommends retaining the original language: Separable by automatic fault interrupting devices: Wherever connected to the BES, the LN must be connected through automatic fault interrupting devices. In addition, as stated in our comments in May, 2011, "automatic fault interrupting device" should be a defined term.

Organization	Yes or No	Question 9 Comment
		BPA strongly believes that Exclusion E3 should not be allowed for any facilities above 200kV instead of the 300kV limit in shown in the current proposal. Networks operated above 200kV have significant fault duties, carry much more power, and have a greater potential for cascading if something does not operate properly than networks operated below 200kV. Therefore, BPA believes that these networks should be part of the BES. BPA believes the term "non-retail generation" in E3(a) should also be defined.
Response: The SDT considered the suggested requirement for separation of the LN via automatic fault interrupting devices during the development of the language of the second posting, and determined that such a qualifier could not be enforced for facilities that are not essential for the reliable operation of an interconnected transmission network. No change made. As the SDT does not propose the inclusion of the requirement for an automatic fault interrupting device, the definition of the term is not necessary. The threshold cap of 300 kV was a modification added for the second posting of the definition. The prior version of the definition had no upper bound on operating voltage for the local network, and the SDT has now adopted a 300 kV upper limit pursuant to comments received. Please refer to the technical justification document for local networks that accompanied the second posting under Project 2010-17 for details about the selection of 300kV as the cap for local networks. No change made. Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. This is a well understood interpretation which the SDT took from official literature and does not need to be officially defined.		
ACES Power Marketing Standards Collaborators	No	The term "non-retail generation" used in Exclusion E1 (item c) and again in E3 (item a) should be clarified. The following applies to E3 (item c): A flowgate should not be used to limit applicability of E3. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an

Organization	Yes or No	Question 9 Comment
		example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the "permanent" adjective applied to flowgates probably limits the applicability from the “temporary” flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First, flowgates are created to manage congestion. The IDC is more of a congestion management tool than a reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve IROLs that have been violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The characteristics of the flowgate make it a good proxy for estimating how much contractual use has been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROLs, many simply are not.
Response: Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. The SDT believes that the language in Exclusion E3.c prohibiting “Flowgates” from qualifying for definitional exclusion is appropriate and necessary. As a definitional exclusion characteristic, Exclusion E3.c must follow the principle of being a bright-line and easily identifiable, and as such, the SDT feels that the definition cannot allow some types of Flowgates and disallow others. Flowgates must continue to be a prohibiting characteristic under Exclusion E3, since these facilities are more likely to be used in the transfer of bulk power than not. An entity who wishes to make a case for exclusion of a unique type of Flowgate facility can do so through the exception process. The SDT believes that the continued qualifier of “permanent” associated with the term “Flowgate” addresses the majority of the concern in this comment. No change made.		
Dominion	No	Dominion could support if E3a were eliminated.
Response: The SDT continues to believe that it is necessary to establish a limit on the allowable quantity of generation that may be significant to the reliable operation of the surrounding interconnected transmission system. Please note that the issues surrounding the appropriate generation threshold, among other topics, will be taken up in Phase 2 of this BES definition effort. No change made.		

Organization	Yes or No	Question 9 Comment
Pepco Holdings Inc and Affiliates	No	1) In the Drafting Teams Consideration of Comments on the previous version, it was stated, "....It is not the SDT's intent to specifically exclude any facilities in major metropolitan areas; it expects that the specific examples mentioned (NYC, Washington DC) would not qualify for exclusion under the revised Exclusion E3." The currently proposed E3 will result in specific exclusion of major local networks in major metropolitan areas. These major LNs qualify for exclusion under proposed E3, and its qualifiers, in that they distribute power to the local load rather than act as facilities to transfer bulk power across the interconnected system. However, the LNs that supply large amounts of load in very dense load areas should have some transmission reliability considerations. To capture the appropriate LNs in question, consideration should be given to limiting the amount of load supplied by a LN to some load level. For example if an LN has a peak load level of less than 1,000MVA it would qualify for LN exclusion and if it exceeds 1,000MVA it would not qualify for exclusion. There are certainly many LNs that supply relatively small amounts of load, just as radial facilities. They should be excluded. It is important to develop a load level that would provide the proper balance between the small LNs and the major LNs. 2) Since the SDT deleted the inclusion of Black Start Cranking Paths in I3 then reference to I3 in criteria E3a should also be removed. Limits on connected generation should only be constrained by the 75MVA limit. Therefore E3a should then read "Limits on connected generation: The LN and its underlying Elements do not include generation resources with an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating);"
Response: The SDT appreciates your concern about the possible exclusion of large metropolitan load centers through the exclusion for local networks in Exclusion E3. However, the SDT feels that it has accurately captured the characteristics of facilities that are used in the local distribution of electric energy within Exclusion E3 (and Exclusion E1), which the Commission's Order specifically targeted for exclusion. To the suggestion of a 1,000 MW demand cap on the exclusion for local networks, the SDT sees no technical basis upon which to make such a change. Also, the SDT is unaware of any situations of a network of facilities serving a load of that size that would not be precluded in some way under at least one of the three characteristics of Exclusion E3. Finally, an Exception Process will exist in the event that an entity seeks an inclusion of such facilities. No change made. The SDT appreciates the suggestion that the elimination of the inclusion for Cranking Paths, while maintaining the qualifier prohibiting blackstart resources from existing in a qualifying local network could be viewed as an inconsistency. Given that the concept of		

Organization	Yes or No	Question 9 Comment
exclusion of 'local networks' is already an issue requiring careful technical justification, the SDT has determined that it should be conservative with regard to allowing such an exclusion for facilities that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent networks without blackstart resources. It is nevertheless possible to achieve exclusion through the Exception Process. No change made.		
Tri-State Generation and Transmission Assn., Inc. Energy Management	No	1. b) should be reworded to "Normally there is power flow only into the LN: The LN is not normally used to transfer power originating outside of the LN for delivery through the LN." There could be conditions inside the LN, such as large loads shut down for maintenance, which would allow the parallel transmission Elements to allow power to flow through the LN. Those conditions would have no negative or adverse effect on the BES. 2. Capitalize "Network" at the beginning of the Exclusion
Tri-State GandT	No	1. b) should be reworded to "Normally there is power flow only into the LN: The LN is not normally used to transfer power originating outside of the LN for delivery through the LN." There could be conditions inside the LN, such as large loads shut down for maintenance, which would allow the parallel transmission Elements to allow power to flow through the LN. Those conditions would have no negative or adverse effect on the BES.2. Capitalize "Network" at the beginning of the Exclusion.
Response: The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made. The word "network" as used in "local network" is not intended as a defined term; therefore, it is not capitalized. When expressed in abbreviation, "LN" is properly capitalized. No change made.		
MRO NERC Standards Review Forum (NSRF)	No	THE NSRF suggestion considering a different approach for the power flow criteria in [E]3b. [E]3b: No [Firm] Power Transfers are scheduled out of, or [through], the LN in the operating horizon [for BES designations applicable to the operating horizon] and [no] Firm Power Transfers are reserved to flow out of, or through, the LN in the planning horizon [for BES designations applicable to the planning horizon].

Organization	Yes or No	Question 9 Comment
Response: The SDT believes it is vital to ensure both that power flow is always in the direction from the BES toward the LN at all points of connection, and that the LN facilities not be used for "wheeling" type transactions. The SDT believes the existing language accomplishes this. The suggested language in this comment touches on an important aspect, the scheduled use of the facilities, but the SDT believes that the existing language is more appropriate to express this point. No change made.		
Hydro One Networks Inc.	No	We agree with the exclusion concept of LN. However, the reliability of the interconnected transmission network should not be determined by the amount of installed generation in the local network. We believe that the generation limit is restrictive and has little or no technical basis. It is not the size of a unit in the LN that will determine the reliability impact on the BES but more importantly its location, configuration and system characteristics such as reliability must run unit. We suggest that the SDT should address this in phase 2 to increase the installed generation limit in a LN. We suggest deleting the references to I3 in E1 and E3 because we believe that this reference is in contradiction to I3 and probably an oversight and should be corrected. I3 does not require a path to be BES but it implies here that a radial system cannot be excluded if there is a Blackstart unit on it.
Response: The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort; however, to satisfy the Commission's directives in Order 743 and 743-A in a timely fashion, it is necessary to use a generation threshold that is consistent with the in-force Statement of Compliance Registry Criteria. No change made. The SDT appreciates the suggestion that the elimination of the inclusion for Cranking Paths, while maintaining the qualifier prohibiting blackstart resources from existing in a qualifying local network could be viewed as an inconsistency. Given that the concept of exclusion of 'local networks' is already an issue requiring careful technical justification, the SDT has determined that it should be conservative with regard to allowing such an exclusion for facilities that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent networks without blackstart resources. It is nevertheless possible to achieve exclusion through the Exception Process. No change made.		
Holland Board of Public Works	Yes	Holland BPW supports the exclusion of Local Networks (LN) from the definition of BES. Such systems are generally not necessary for the reliable operation of the interconnected transmission network. However, some revisions are necessary. Holland BPW believes that E3(a) and E3(b) can and should be eliminated, provided E3(c) remains. E3(c) provides that an LN is BES if it is classified as a Flow Gate or Transfer Path. The bases for removing E3(a) and E3(b) are as follows: (1) Provision E3(a) establishes a

Organization	Yes or No	Question 9 Comment
		75 MVA limit on connected generation. This is inconsistent with the concept of a LN and should be removed. If not removed, it should be increased to not less than 300 MVA, consistent with the discussion in response to Q1. If an LN does not accommodate bulk power transfer across the interconnected system, the amount of generation that exists and is distributed within that system is immaterial for purposes of the reliable operation of the interconnected transmission system. During the NERC Webinar, NERC representatives suggested that placing an upper limit on generation within a LN might be desirable based upon an assumption that if that entity's internal generation is lost, then replacement generation would have to come from the BES, and could therefore affect reliability. This assumption has not been substantiated. In most instances, generation resources are dispersed throughout the LN - it is unlikely an event would result in the loss in the amount of the aggregate generation. Additionally, LNs have local load shedding and system restoration plans for such contingencies. (2) E3(b) is unnecessary and should be removed. The proposed language in E3(b) appears to be concerned with flows originating from outside of the LN, coming into the LN, and then exiting the LN to loads outside of the LN. As noted above, E3(c) appears to address this concern. If E3(b) is maintained, then the introductory clause ("Power flows only into the LN:") should be deleted, because it is inconsistent with the second clause ("The LN does not transfer energy originating outside the LN for delivery through then LN.") If E3(b) is retained, Holland BPW supports the second clause ("The LN does not transfer energy originating outside the LN for delivery through then LN") because it appears to be the portion of the provision that addresses the concern about flows into, through, and then out of, the LN. (3) E3(b) should also be removed or modified because it fails to recognize typical municipal system operations. An LN may have internal generation that is less than its peak load but in excess of off-peak or holiday load levels. The language "Load flows only into the LN" does not recognize this situation and prevents an LN from making the most economic use of surplus generation. There are no reliability reasons to discourage such sales since with or without such transactions, this generation is not necessary for the reliable operation of the interconnected transmission system.
Response: The SDT believes that a limit on the amount of connected (non-retail) generation within the LN is necessary to ensure that		

Organization	Yes or No	Question 9 Comment
there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the NERC Statement of Compliance Registry Criteria, and this threshold is a subject of further review under the Phase 2 development of the BES definition. The SDT believes that Exclusion E3.b continues to be necessary to ensure that qualifying LN's do not participate in "wheel-through" transactions, and that power always flows in a direction from the BES toward the LN. The SDT has clarified Exclusion E3.b as follows due to your comments and those of others. **E3.b**: Power flows only into the LN~~:~~ and ~~T~~the LN does not transfer energy originating outside the LN for delivery through the LN;		
Texas Industrial Energy Consumers	Yes	As noted in response to Question 3, above, subsection (a) of Exclusion E3 would only exclude Local Networks with "aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating)." The reference to "non-retail" generation in subsection (a) indicates that the SDT may have intended to preserve the "netting" approach set forth in the Statement of Registry Compliance, but this should be made clearer. The description in subsection (a) should be revised to exclude "Where the radial system serves Load and includes generation resources not identified in Inclusions I2 or I3," and the remainder of that sentence referencing a 75 MVA gross nameplate rating should be removed. This will provide a reference back to the Statement of Registry Compliance and clarify that only net capacity is considered for customer-owned facilities. TIEC also disagrees with the 300 kV upper limitation on transmission elements within a Local Network. Consistent with TIEC's comments to FERC, if these facilities are serving a distribution function, their voltage level is irrelevant. The transmission versus distribution distinction should be based on function, not voltage level. The remainder of this exclusion clarifies what constitutes a distribution function, so the 300 kV limit is unnecessary and should be removed.
Response: The SDT evaluated this comment and has concluded that the exclusion must necessarily be based on the gross aggregate nameplate of the generation connected within the candidate systems. The approach that is suggested in your comment could result in significant amounts of generation existing within the excluded area. No change made. The SDT does not agree with the removal of the 300 kV cap that limits the qualification of a group of facilities for local network exclusion. The SDT feels that an upper bound is essential to prevent inappropriate exclusions of facilities that may be important to the reliable operation of the interconnected transmission system. The Exception Process is available for specific circumstances where a 300 kV cap is problematic. No change made.		

Organization	Yes or No	Question 9 Comment
PacifiCorp	Yes	PacifiCorp strongly supports the categorical exclusion of Local Networks ("LNs") from the BES. PacifiCorp believes the exclusion is necessary to ensure that the BES definition complies with FERC's statutory jurisdictional requirements. PacifiCorp recommends the following modifications: o Change "contiguous transmission Elements" to "contiguous Elements". o Modify item b to state, "Power flows only into the LN during normal operating conditions: The LN does not transfer energy originating outside the LN for delivery to loads located outside the LN..." o Add an item (may be included in item b) to provide as follows: "The LN is not critical (or is not relied upon) to maintain the reliability of the interconnected system during abnormal operating conditions."
Response: The SDT considered the disposition of the word "transmission" in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element". No change made. The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made. The SDT does not believe that the statement "The LN is not critical (or is not relied upon) to maintain the reliability of the interconnected system during abnormal operating conditions" lends itself to determination by inspection; hence, it is not an appropriate "bright-line" characteristic for ExclusionE3. No change made.		
Southern Company	No	We would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): "Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN "under normal operating conditions". What does the term "non-retail generation" mean? Can the term "non-retail generation in E3a be changed to simply "generation"?
Response: The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition.		

Organization	Yes or No	Question 9 Comment
For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made. Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E3.a in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.		
ReliabilityFirst	No	ReliabilityFirst Staff proposes to use the LN exclusion as part of the definition of what elements make up the facilities used in the local "distribution" of electric energy and could be included in the Exception Process as a criterion for exclusion.
Response: The SDT believes that Exclusion E3 has sufficient clarity and that its provisions can be readily demonstrated without the need to be handled through the Exception Process. Therefore, it is more appropriately handled within the definition. No change made.		
Ontario Power Generation Inc.	No	Non-retail generation needs to be properly defined in the text of the exclusion.
Mission Valley Power	No	Mission Valley Power - : We strongly agree that local networks should be excluded, since they act much like the radial systems excluded in E1 while providing a higher level of service to customers. These networks should not be discouraged in the name of reliability. We again object to the introduction of the new confusing term "non-retail generation" with no definition provided.
Tillamook PUD	No	We strongly agree that local networks should be excluded, since they act much like the radial systems excluded in E1 while providing a higher level of service to customers. These networks should not be discouraged in the name of reliability.

Organization	Yes or No	Question 9 Comment
		We again object to the introduction of the new confusing term "non-retail generation" with no definition provided.
Central Lincoln	No	We strongly agree that local networks should be excluded, since they act much like the radial systems excluded in E1 while providing a higher level of service to customers. These networks should not be discouraged in the name of reliability. We again object to the introduction of the new confusing term "non-retail generation" with no definition provided.
Northern Wasco County PUD	No	We strongly agree that local networks should be excluded, since they act much like the radial systems excluded in E1 while providing a higher level of service to customers. These networks should not be discouraged in the name of reliability. We again object to the introduction of the new confusing term "non-retail generation" with no definition provided.
Response: Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.		
Central Hudson Gas and Electric Corporation	No	Under the proposed definition, clause E3.b. stipulates that 'power only flows into the Local Network (LN): The LN does not transfer energy originating outside the LN for delivery through the LN.' Clearly, this is a bright line. The Local Network Exclusion document, however, describes that 'power flow "shifts"' of 'negligible fraction' are acceptable. Further, the document acknowledges that parallel flows through the LN, 'as governed by the fundamentals of parallel circuits' will occur. Finally, the document goes on to exhibit that flows through the LN, however minimal, will result from both power transfer distribution factor (PTDF) and line outage distribution factor (LODF) analysis. If this is the case, what bright line criterion should be applied for this Exclusion Principal if no maximum PTDF and/or LODF are specified?
Response: Exclusion E3.b does in fact prohibit power flow at the BES interface points of the LN from entering the BES. The accompanying technical justification document merely addresses the insignificance of the power flow shifts that will occur in an example system. Clearly, in the example system of the technical justification document, power flow is shown to always be in a direction from the BES toward the LN, albeit with only a slight magnitude shift in the PTDF and LODF analyses. The technical justification document does not attempt to set any threshold on the magnitude of this shift; it merely is a demonstration on a sample		

Organization	Yes or No	Question 9 Comment
system. The only bright-line criterion that is applicable to this question is that power flow shall always be from the BES toward the LN.		
City of Anaheim	No	Again, 75 MVA should be increased to 300 MVA in E2 for the reasons stated in response to Question 7.
Response: The SDT has determined that it must retain the 75 MVA threshold on generation allowed within a qualifying LN in order to remain consistent with the existing ERO Statement of Compliance Registry Criteria. There has not been sufficient technical justification to this point that would support a change from this threshold; however, such threshold will be considered in Phase 2 of this Project 2010-17. No change made.		
Consumers Energy	No	In general we agree, but believe the word "transmission" should be removed from "A group of contiguous transmission Elements..."
Response: The SDT considered the disposition of the word “transmission” in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word “Element”. This is meant to eliminate the generation that would otherwise be included in the term “Element”. No change made.		
Manitoba Hydro	No	Manitoba Hydro agrees with the Local Network Exclusion but disagrees with the drafting team’s removal of the requirement to have protective devices protecting the BES from the LN. We suggest that the following requirement is re-inserted into E3 to meet the LN Exclusion:”a) Wherever connected to the BES, the LN must be connected with a Protection System.”
Response: The SDT considered the suggested requirement for separation of the LN via automatic fault interrupting devices during the development of the language of the second posting, and determined that, consistent with Order 743 and 743a, such a qualifier could not be enforced for facilities that are not essential for the reliable operation of an interconnected transmission network. No change made.		
Long Island Power Authority	No	Main paragraph and items E3b and E3c adequately define a Local Network. It seems like the intent to exclude non bulk distribution systems would still be included because of E3a. E3a should be eliminated. If not eliminated, need to define the term "underlying Elements".

Organization	Yes or No	Question 9 Comment
Response: The SDT continues to believe that it is necessary to establish a limit on the allowable quantity of generation that may be significant to the reliable operation of the surrounding interconnected transmission system. Please note that the issues surrounding the appropriate generation threshold, among other topics, will be taken up in Phase 2 of this BES definition effort. No change made. The SDT believes that the existing phrase in ExclusionE3.a "and its underlying Elements" has sufficient clarity and meets the intent of the exclusion with brevity. No change made.		
City of St. George	No	The exclusion of Local Networks should be provided, however the generation level limits are too restrictive. As long as the power flow is into the system the generation level of the local network shouldn't matter as long as it is being used to serve local load. E3a should be deleted from the definition, or at least some higher level of allowed generation should be included. Another possibility would be a ratio of local load to local generation. Areas with local generation serving local load will have similar characteristics or affects to the BES system as were used in the Local Network justification paper (Appendix 1) included with the documents. If some reasonable level of local generation was added to the example system it is unlikely that the affects to the BES flows would change from what was presented in the example.
Response: The SDT has determined that it must retain the 75 MVA threshold on generation allowed within a qualifying LN in order to remain consistent with the existing ERO Statement of Compliance Registry Criteria. There has not been sufficient technical justification to this point that would support a change from this threshold; however, such threshold will be considered in Phase 2 of this Project 2010-17. The SDT continues to believe that it is necessary to establish an upper limit on the allowable quantity of generation that may be included in the local network since generation in a local network may be significant to the reliable operation of the surrounding interconnected transmission system. Please note that the issues surrounding the appropriate generation threshold, among other topics, will be taken up in Phase 2 of this BES definition effort.		
Orange and Rockland Utilities, Inc.	No	We know that N-1 is assumed when power-flow study is performed, however, N-1 should be mentioned here for clarification.

Organization	Yes or No	Question 9 Comment
Response: The SDT understands this comment to be in reference to the technical justification document that accompanied the definition in its second posting. This technical justification document was merely intended to be illustrative of the insignificance of the interaction of a sample local network on its surrounding interconnected transmission system. The "LODF" values were for a single element taken out of service. No change made.		
ISO New England Inc	No	E3 could result in many large load pockets being excluded from the BES definition and should be deleted. Assuming that it is retained, we offer the following additional comments. The term "a group of contiguous transmission elements" is ambiguous and needs to be clarified. Please clarify in the exclusion if the flows into the LN as described in E3.b) are pre-contingency flows only. Please clarify the system conditions (time of year, peak or off-peak) that should be considered in determining of flow is only into the LN. The "Non-retail" qualifier in E3.a) should be deleted.
Response: The SDT appreciates your concern about the possible exclusion of large metropolitan load centers through the exclusion for local networks in Exclusion E3. However, the SDT feels that it has accurately captured the characteristics of facilities that are used in the local distribution of electric energy within Exclusion E3 (and Exclusion E1), which the Commission's Order specifically targeted for exclusion. No change made. The SDT considered the disposition of the word "transmission" in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element". No change made. The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made. There are no specified conditions applicable to item Exclusion E3.b. In order to qualify for exclusion under this item, this characteristic must be demonstrated under all conditions. This exclusion has been re-stated as follows for additional clarity:		

Organization	Yes or No	Question 9 Comment
E3.b: Power flows only into the LN~~:~~ and ~~T~~the LN does not transfer energy originating outside the LN for delivery through the LN; The SDT has intentionally utilized the term "non-retail generation" in Exclusion E3.a in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.		
Texas Reliability Entity	No	There should be language that includes UFLS, UVLS, or load fully removable for Reserves even in a local network to avoid a lapse in reliability in operation of the BES. Even if it is to be included in any Phase 2 work, it should be mentioned here to avoid gaps.
Response: The SDT is uncertain whether this comment suggests that facilities used in UFLS, UVLS, or as interruptible load for reserve, should be prohibited from exclusion from the BES under Exclusion E3. At any rate, even a facility that is excluded under Exclusion E3 may continue to have obligations under the reliability standards for UFLS, UVLS or other load shedding requirements.		
Independent Electricity System Operator	No	Consistent with our comments in response to Q7, we propose removing E3 (a) since, as explicitly described in E3 (b), one of the characteristic of the LN is that power flows only into the LN. The level of generation contained within the LN is therefore immaterial, particularly where the most onerous contingency or system operating condition occurring within the LN, results in acceptable BES performance as defined by the applicable criteria of the NERC transmission planning standards. The generation connected within the LN that meets the registry criteria would already be captured within the definition of the BES as provided for in Inclusion I2.
Response: The SDT continues to believe that it is necessary to establish a limit on the allowable quantity of generation that may be significant to the reliable operation of the surrounding interconnected transmission system. Please note that the issues surrounding the appropriate generation threshold, among other topics, will be taken up in Phase 2 of this BES definition effort. No change made.		
Rochester Gas and Electric and New York State Electric and Gas	No	"Local Network" is capitalized (network not capitalized at the beginning of E3) throughout E3, yet it is not defined in the NERC Glossary. This exclusion is vague. This exclusion applies to a network with "multiple points of connection" with the purpose "to improve the level of service to retail customer load" - this phrase is intent-based and not reliability-based - most/all transmission "improves service" compared to it not being there. In

Organization	Yes or No	Question 9 Comment
Central Maine Power Company		essence, this exclusion can be obtained if a portion of the network:1. Doesn't have significant generation (again, "non-retail" phrase is unclear)2. Power only flows "into" this portion of the network, and not (ever? Even under any TPL design contingencies?) "out." Is this considering only pre-contingency steady state conditions? During contingency conditions and for the period following a contingency the LN could supply power to other parts of the network depending on the nature of the contingency. The conditions under which direction of flow is assessed are critical, but E3(b) is silent on this.3. This portion of the network is not part of a monitored transmission interfaceThis "Local Network Exclusion" is supported by a technical analysis which relied on transfer distribution factors (see http://www.nerc.com/docs/standards/sar/bes_definition_technical_justification_local_network_20110819.pdf on the NERC BES Definition standard page http://www.nerc.com/filez/standards/Project2010-17_BES.html). This transfer distribution factor (TDF) method was rejected by FERC in Order 743. Paragraph 85 of the Order states: "Given the questionable and inconsistent exclusions of facilities from the bulk electric system by the material impact assessment and the variable results of the Transmission Distribution Factor test proposed in NPCC's compliance filing in Docket No. RC09-3, there are no grounds on which to reasonably assume that the results of the material impact assessment are accurate, consistent, and comprehensive.93 Additionally, we have noted how the results of multiple material impact tests can vary depending on how the test is implemented."Unless E3 is made more specific and clear, it should be stricken.

Response: The term "local network" is not capitalized anywhere in the Exclusion E3 section of the definition except where it is placed as a section title, and when abbreviated. The SDT understands that "local network" is not a NERC Glossary term. No change made.

The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.

The SDT recognizes that the TDF methodology suggested by various entities as a threshold for determining inclusion in the BES was not favored by the Commission. However, as used in the technical justification document, the transfer distribution factors for power flow transfer as well as line outage factors are merely illustrative of the de minimis impact that a sample local network has on its

Organization	Yes or No	Question 9 Comment
surrounding interconnected transmission system. The SDT does not propose the use of TDF as a threshold for determination of BES.		
Kansas City Power and Light Company	No	Although the Technical Justification Local Network guidance document is helpful in explaining the principles and concepts involved with determination of what constitutes a Local Network, criteria needs to be established regarding the impacts of LODF and PTDF that will clearly define what constitutes a Local Network to avoid debate and controversy.
Response: As used in the technical justification document, the transfer distribution factors for power flow transfer as well as line outage factors are merely illustrative of the de minimis impact that a sample local network has on its surrounding interconnected transmission system. The SDT does not propose the use of TDF as a threshold for determination of BES. No change made.		
Nebraska Public Power District	No	In E3 (a): please define "non-retail generation" as usued in E3(a). Also, what is the criterion that makes this genertion BES generation? The MVA rating only, or is there other criteria? A generator may have a 75 MVA gross nameplate rating, but may be limited physically or electrically to below the 75 MVA. Is this a basis for exclusion for this generator?
Response: Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. Consistent with the ERO Statement of Compliance Registry Criteria, the SDT has used language in describing generation thresholds in Exclusion E3.a as being gross aggregate nameplate ratings.		
Ameren	No	a) The exclusion should also be extended to reactive resources needed to support the local area network (see response to Q10). It is also suggested that "local network" be renamed to "local area network" to better describe or distinguish itself from a wide-area network such as the BES. b) We would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN "under normal operating conditions".

Organization	Yes or No	Question 9 Comment
Response: If a candidate local network is granted exclusion under Exclusion E3, the exclusion would apply to the reactive resources within that network as well. No change made. The SDT believes that renaming the local network to "local area network" (LAN) will lead to industry confusion with the identical term used to refer to communications infrastructure. No change made. The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.		
Georgia System Operations Corporation	No	Item (b) is unclear: Although the first sentence says "Power flows only into the LN," which suggests there will be no exports, the second sentence says "The LN does not transfer energy originating outside the LN for delivery through the LN," which suggests it could deliver power originating within the LN. This would seem to be reasonable by comparison to E-2, so long as no more than 75 MVA is exported (which is indeed the limitation on the quantity of "non-retail generation" in the LN). On a related point, if the limit on connected generation is not intended to be a limit on possible exports, and therefore any power from interconnected non-retail generation must be sold within the LN, why does the limit need to be so low; why should the aggregate quantity of such internally-consumed generation be an issue? Also, is the "non-retail" designation intended to exclude customer-owned generation from the 75 MVA calculation?
Response: The SDT has re-stated item Exclusion E3.b for additional clarity. **E3.b**: Power flows only into the LN~~.~~ and ~~T~~the LN does not transfer energy originating outside the LN for delivery through the LN; The limit placed on the aggregate generation within the local network only applies to non-retail generation. To clarify, in order to qualify under Exclusion E3, exports are not permissible from the local network. Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.		

Organization	Yes or No	Question 9 Comment
ATC LLC	No	ATC agrees in general with the exclusions for E3 pending the following changes: Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN under normal operating conditions (n-0 contingency); and ATC suggests considering a different approach for the power flow criteria in Exclusion E3b:Inclusion E3b - No Firm Power Transfers are scheduled to flow out of, or through, the LN in the operating horizon [for BES designations applicable to the operating horizon] and no Firm Power Transfers are reserved to flow out of, or through, the LN in the planning horizon [for BES designations applicable to the planning horizon).
Response: The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made. The SDT believes it is vital to ensure both that power flow is always in the direction from the BES toward the LN at all points of connection, and that the LN facilities not be used for "wheeling" type transactions. The SDT believes the existing language accomplishes this. This suggested language in this comment touches on an important aspect, the scheduled use of the facilities, but the SDT believes that the existing language is more appropriate to express this point. No change made.		
Tacoma Power	No	Tacoma Power does not support the Exclusion E3 as currently written. We strongly believe that Section c) of E3 must replace the term "transfer path" with "Major Transfer Path" to distinguish these paths from any common ATC path. This revision is consistent with the existing language used in the form, Detailed Information to Support an Exception Request. Additionally, we believe it is not appropriate for E3 to state an MVA threshold in Section a) when determining such thresholds is the purpose for Phase 2. We urge the SDT to defer the determination of a MVA threshold in E3 to Phase 2. Finally, the term "non-retail generation" is not a universally understood term in the industry. We suggest that the SDT replace the phrase "non-retail generation" with "generation located on the retail

Organization	Yes or No	Question 9 Comment
		customer's side of the meter."
Response: The existing language posted in the second draft of the BES definition does include the word "major" as a modifier of transfer paths in the Western Interconnection. The definition cannot have this word "major" capitalized, as it is not part of the NERC Glossary of Terms. Accordingly, the SDT believes that there is no need to make the suggested change to Exclusion E3.c. The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort; however, to satisfy the Commission's directives in Order 743 and 743-A in a timely fashion, it is necessary to use a generation threshold that is consistent with the in-force Statement of Compliance Registry Criteria. No change made. Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. The exclusion language of Exclusion E3.a intends to consider only the non-retail (supply side) generation; whereas your comment suggests that the generation to be counted is on the retail side of the meter. With the clarification of the use of the term "non-retail generation", the SDT believes that Exclusion E3.c is appropriate. No change made.		
MEAN	No	MEAN does not agree with the language of E3, b). This language is arbitrary and could be represented in several ways, dependent on the entity making their case. As we all know, electricity doesn't always take the shortest path. MEAN would recommend eliminating E3, b) due to its subjective language and rely on the current E3, c) to evaluate reliability and system impacts. If the language does not change, MEAN would argue to any applicable RE that the language intent was to address facilities that have documentation stating that the facilities are used for transferring energy across (e.g. joint ownership, contribution in aid of construction, etc.) and have an E3 exception denied based on power flow models or other transmission modeling.
Response: The SDT has reviewed the language of Exclusion E3.b, and does not find it to be subjective or arbitrary. However, the SDT does propose a minor revision to re-state E3.b for additional clarity: **E3.b**: Power flows only into the LN~~:~~ and ~~T~~the LN does not transfer energy originating outside the LN for delivery through the LN;		
South Houston Green Power, LLC		SHGP would like to broaden the scope of Local Networks. If a Local Network does not allow transfer of Bulk Power across the Interconnected System, then the Local Network should be excluded regardless of the amount of generation behind the meter. Often, large industrial sites install large combined Heat and Power cogeneration units due to a hefty steam load. Subjecting industrial facilities to additional reporting and coordination efforts [other than those already required by the TO

Organization	Yes or No	Question 9 Comment
		and RTO] may have little, if any, increase in grid reliability. The 75 MVA (gross nameplate rating) needs to be eliminated. To date, none of the Regional Entities has suggested that SHGP or its affiliates register as a Transmission Owner or Transmission Operator with respect to any SHGP or affiliated delivery facilities.
Response: The SDT has determined that it must retain the 75 MVA threshold on generation allowed within a qualifying LN in order to remain consistent with the existing ERO Statement of Compliance Registry Criteria. There has not been sufficient technical justification to this point that would support a change from this threshold; however, such threshold will be considered in Phase 2 of this Project 2010-17. No change made.		
Hydro-Quebec TransEnergie		Same comment than Q7.
Response: See response to Q7.		
ExxonMobil Research and Engineering	Yes	Exclusion E1 and E3 aid in the delineation of distribution and transmission facilities. However, we request that the BES SDT review paragraphs 108 and 109 of FERC Order 743. In order to meet reliability target requirements to safely and economically operate manufacturing and production facilities, many industrial facilities are fed by two or more utility transmission lines that originate at independently fed utility substations. Due to the magnitude of an industrial site's load, these transmission lines are typically designed to operate at levels in excess of 100 kV at the request of the utility company. These transmission lines typically terminate into an interconnection facility, owned by the industrial facility, that spot networks the transmission lines via a ring buss or breaker and a half substation within the industrial facility's private use network in order to serve the load of the facility's private use network. These private use networks typically satisfy the requirements set forth in the definition of a Local Network (power flows in, not a flowgate, etc.); however, the term "non-retail generation" is not a term that is implicitly defined or consistent with this documents use of "net capacity provided..." phrasing in similar exclusions.
Response: Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.		

Organization	Yes or No	Question 9 Comment
Sacramento Municipal Utility District	Yes	It is preferred to hold reference to gross nameplate rating/threshold values until generation technical justification is completed as part of Phase 2; these studies should apply to any real or reactive power threshold reference. For Exclusion E3-b using the phrase "[p]ower flows only into the LN" is too restrictive. An allowable MW threshold of LN power producing resources should be deferred to the Phase 2 BES technical analysis. Where no generation is present in the LN, it is recommended that an allowance for residual flow through the LN.
City of Austin dba Austin Energy	Yes	We prefer to hold reference to gross nameplate rating/threshold values until generation technical justification is completed as part of Phase 2; these studies should apply to any real or reactive power threshold reference. For Exclusion E3-b using the phrase "[p]ower flows only into the Local Network" is too restrictive. An allowable MW threshold of Local Network power producing resources should be deferred to the Phase 2 BES technical analysis. Where no generation is present in the Local Network, it is recommended that an allowance for residual flow through the Local Network.
Response: The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort; however, to satisfy the Commission's directives in Order 743 and 743-A in a timely fashion, it is necessary to use a generation threshold that is consistent with the in-force Statement of Compliance Registry Criteria. No change made. The SDT feels strongly that in order for a network to qualify for exclusion under the Exclusion E3 section of the definition, there must be strict bounds and limits placed on the characteristics of the candidate facilities. Allowances for minor "out-flow" from the local network, or "minimal" flow, as suggested in this comment, will lead to an inconsistent application of the definition and therefore, a lack of bright-line quality in the definition. Situations such as what is proposed in this comment can be referred to the Exception Process for possible exclusion from the BES. No change made.		
Portland General Electric Company	Yes	PGE agrees with Exclusion E3, but believes additional clarification is necessary to facilitate a complete understanding and application of the exclusion criteria. First, there is no specific definition of "non-retail" generation provided. Additionally, E3 b) states "Power flows only into the LN: The LN does not transfer energy originating

Organization	Yes or No	Question 9 Comment
		outside the LN for delivery through the LN." PGE believes that a local network should still qualify for the LN exclusion if power may flow out of the LN at a discrete point or certain discrete points during abnormal operating conditions, but power still flows into the LN on an aggregate basis during all operating conditions, and power flows only into the LN at all discrete points during normal operating conditions.
Response: Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.		
Cowlitz County PUD	Yes	Cowlitz strongly supports the categorical exclusion of Local Networks ("LNs") from the BES. This exclusion will allow conversion of radial systems to LNs without compliance impact, and should be encouraged rather than discouraged as networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. The decision of whether to network radial systems should be made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers will ultimately benefit from the path chosen by the SDT. Cowlitz believes that the word "transmission" does not add clarity to the Exclusion; simply stating "Elements" is sufficient. This will allow for a gradual acceptance that transmission is not defined by a certain voltage, but more a medium in which electrical power is efficiently transported from power resources to load centers where it is distributed. The old convention of transmission versus distribution no longer fits in the current regulatory environment, and as such should be retired. Cowlitz also believes that subparagraphs (a) and (b) are redundant; subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. However, Cowlitz also believes that removing (a) will complicate FERC's acceptance of this exclusion. Therefore this should be addressed in Phase 2. Cowlitz is confused by the use of the term "non-retail generation" in subparagraph (a). From context,

Organization	Yes or No	Question 9 Comment
		we believe the SDT considers "non-retail generation" to mean generation that is not connected through a dedicated step-up transformer to voltages at or above 100 kV, is consumed by the retail customer's load, or consumed within the LN rather than being physically exported and sold to markets outside the LN. Cowlitz suggests that the SDT rewrite subparagraph (a) to read "Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusion I3 and does not have any generation net power flow greater than 75 MVA across any single retail revenue metering point into an Element operated at or greater than 100 kV."
Response: The SDT considered the disposition of the word "transmission" in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element". The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort; however, to satisfy the Commission's directives in Order 743 and 743-A in a timely fashion, it is necessary to use a generation threshold that is consistent with the in-force Statement of Compliance Registry Criteria. No change made. Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. The SDT appreciates the suggested language change for item Exclusion E3.a. The SDT considered this language, and has determined that retention of the existing (non-retail) generation limit of 75 MVA is essential to meet the Commission's order in the first phase of Project 2010-17. No change made.		
National Grid	Yes	We agree with Exclusion E3 on local networks, however we suggest this clarification to the first sentence: A group of contiguous transmission Elements operated at or above 100kV but less than 300kV that distribute power to Load rather than transfer bulk power across the interconnected system under normal ("all-lines-in") configuration and conditions. We also suggest the following clarification to part c, so that the IROLs don't get overlooked: Not part of Flowgate, transfer path, or an Interconnected Reliability Operating Limit (IROL). The LN does not contain a monitored Facility of a permanent Flowgate in the Easter Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec

Organization	Yes or No	Question 9 Comment
		Interconnection, and is not a monitored Facility included in an IROL.
Response: The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made. The SDT believes it has adequately and concisely addressed the IROL characteristic with Exclusion E3.c. No change made.		
Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative	Yes	PNGC strongly supports the exclusion of Local Networks ("LNs") from the BES. The conversion of radial systems to local networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers would ultimately benefit.PNGC also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, PNGC supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." PNGC supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. PNGC believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making

Organization	Yes or No	Question 9 Comment
(CCEC) Central Electric Cooperatve (CEC) Clearwater Power Company (CPC) Consumer's Power Inc. Douglas Electric Cooperative (DEC) Fall River Rural Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (LEC) Northern		a "group of contiguous transmission Elements operated at or above 100kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. PNGC also believes that subparagraphs (a) and (b) are redundant, because whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system - power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the

Organization	Yes or No	Question 9 Comment
Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Umatilla Electric Cooperative (UEC)		system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to be the equivalent of generation that is located behind the retail meter, usually but not always owned by the customer and used to serve the customer's own load. We therefore suggest that the SDT replace the term "non-retail generation" with "generation located behind the retail customer's meter." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. PNGC also believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable

Organization	Yes or No	Question 9 Comment
		transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity - the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is

Organization	Yes or No	Question 9 Comment
		interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours, a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN." Finally, we note that the LN exclusion must not operate in any way as a substitution for the statutory prohibition on including "facilities used in the local distribution of electric energy" in the BES. Therefore, even with the LN exclusion, the SDT must retain this statutory language in the core definition of the BES, as discussed in our answer to Question One. If a certain piece of equipment is a "facility used in the local distribution of electric energy," then it is not part of the BES in the first instance, and so consideration of the LN Exclusion, or of any other Exclusion, any Inclusion, or any Exception, would be both unnecessary and uncalled for.
Response: The SDT considered the disposition of the word "transmission" in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element". The SDT continues to believe that it is necessary to establish a limit on the allowable quantity of generation that may be significant to the reliable operation of the surrounding interconnected transmission system. Please note that the issues surrounding the appropriate generation threshold, among other topics, will be taken up in Phase 2 of this BES definition effort. No change made. The intent of the SDT in structuring the language of Exclusion E3.b was to ensure two things: first that power flow is always in the direction from the BES toward the LN, and second that the LN is not used for "wheel-through" transactions. The suggestion in your comment places an unnecessary qualifier on the "wheel-through" whereby it would only apply if the transaction were serving "loads". The SDT believes this qualifier would inadvertently allow a wholesale transaction to be scheduled through the subject facilities, and this is contrary to the intent of the exclusion provision of Exclusion E3.b. Given the high degree of certainty and assurances regarding the high priority of the Phase 2 efforts on this Project 2010-17, for the purpose of completing the posting of the definition in the first		

Organization	Yes or No	Question 9 Comment
phase of the Project, the SDT believes that it is preferable to continue to use the specific value of 75 MVA within item Exclusion E3.a. No change made. Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. The SDT believes that the existing phrase in Exclusion E3.a "and its underlying Elements" has sufficient clarity and meets the intent of the exclusion with brevity. No change made. The SDT acknowledges the work of Project 2010-07 "GO-TO" task force in identification of various NERC Standard requirements that would promote reliability of the generator-to-transmission interface. This Project 2010-17 SDT believes that the body of work in Project 2010-07 is most pertinent to generator lead-line facilities, rather than the looped and parallel-operated facilities contemplated in Exclusion E3, and therefore, the SDT finds it necessary to continue to require all of the characteristics of Exclusion E3 to be met in order to qualify for exclusion from the BES. No change made. The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made. The SDT has retained the statutory language "facilities used in the local distribution of electric energy" in the core definition section.		
Massachusetts Department of Public Utilities	Yes	The MA DPU generally supports this exclusion but believes it is too narrow. As noted in the response to question 7, Exclusion E3 should likely allow a higher level of aggregate generation MVA on a Local Network. In addition, local networks should not necessarily be ineligible for Exclusion E3 simply because an amount of power may transfer out of the network at times. NERC's draft technical network exclusions document should be amended such that local networks would be permitted to qualify for network exclusions under E3 if power flowing out of the network is minimal and would not likely adversely impact the BES.
Response: The SDT has determined that it must retain the 75 MVA threshold on generation allowed within a qualifying LN in order to remain consistent with the existing ERO Statement of Compliance Registry Criteria. There has not been sufficient technical justification to this point that would support a change from this threshold; however, such threshold will be considered in Phase 2 of		

Organization	Yes or No	Question 9 Comment
this Project 2010-17. No change made. The SDT feels strongly that in order for a network to qualify for exclusion under the Exclusion E3 section of the definition, there must be strict bounds and limits placed on the characteristics of the candidate facilities. Allowances for minor "out-flow" from the local network, or "minimal" flow, as suggested in this comment, will lead to an inconsistent application of the definition and therefore, a lack of bright-line quality in the definition. Situations such as what is proposed in this comment can be referred to the Exception Process for possible exclusion from the BES. No change made.		
The Dow Chemical Company	Yes	Dow is uncertain whether end user-owned, behind-the-meter delivery facilities of the sort it has described above would fall within the scope of the core BES definition proposed by NERC. To date, none of the Regional Entities has suggested that Dow should register as a Transmission Owner or Transmission Operator with respect to any of these Dow-owned delivery facilities. If a literal application of the proposed BES Definition would, because of their voltage level or for any other reason, include such facilities, then Dow has an interest in assuring that the E3 exclusion for "local network" facilities is structured to embrace them. To that end, Dow would propose, first, the elimination of the 300 Kv cap for these facilities. Dow has systems that operate above 300 Kv due solely to the capacity of the lines to supply power over the distance required at our large manufacturing sites. Second, for the same reasons discussed above (in response to question #7), the phrase "do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating)" in "a)" should be changed to "the net capacity provided to the transmission grid does not exceed 75 MVA." Third, the introductory phrase in "b)" -- "Power flows only into the LN" -- is inconsistent with the recognition in "a)" (as amended pursuant to Dow's above suggestion) that power may flow out of an LN and into the transmission grid if there is generation connected to the LN and the 75 MVA limit is observed. Dow recommends either deleting the introductory clause or correcting it to read "Power is not transferred through the LN."
Response: The SDT does not agree with the removal of the 300 kV cap that limits the qualification of a group of facilities for local network exclusion. The SDT feels that an upper bound is essential to prevent inappropriate exclusions of facilities that may be important to the reliable operation of the interconnected transmission system. The Exception Process is available for specific		

Organization	Yes or No	Question 9 Comment
circumstances where a 300kV cap is problematic. The SDT evaluated your comment in regard to Question 7 (Radial) as well as to the local network exclusion, and has concluded that both exclusions must necessarily be based on the gross aggregate nameplate of the generation connected within the candidate systems. The approach that is suggested in your comment could result in significant amounts of generation existing within the excluded area. It remains the intent of the SDT to uphold a 75 MVA limit on the connected (non-retail) generation within a qualifying LN and, at the same time, reinforcing that power flow is always from the BES toward the LN at all points of connection. We believe these characteristics are essential in order to ensure that qualifying LN facilities are not being relied upon for reliable operation of the interconnected transmission system.		
Springfield Utility Board	Yes	SUB strongly supports the exclusion of Local Networks from the BES. SUB particularly agrees with the addition of, "LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to customer Load and not to accommodate bulk power transfer across the interconnected system." language to the draft E3 Exclusion, as well as the LN characterization being more clearly defined.SUB is concerned that the E3 Exclusion does not specify that these power flows would be "under normal operating conditions" and specify if all power flow is considered. SUB recommends that unscheduled power flow should not be considered, but that it is applicable only to scheduled power flow. While SUB supports the exclusion of LNs from the BES, we believe there is additional work that needs to done regarding the Local Network Exclusion Technical Justification. Without specific parameters, determining inclusions and exclusions will be left to the discretion of too many. This will create ambiguity and inconsistency of application.
Response: The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made. The suggestion that only the "scheduled" portion of flow be considered under Exclusion E3.b would ignore the physical impact that the		

Organization	Yes or No	Question 9 Comment
candidate network has on the surrounding interconnected transmission system; therefore, the SDT must retain the provisions of Exclusion E3.b. However, the SDT has made a clarifying change to the exclusion language to address various comments that were received. **E3.b**: Power flows only into the LN~~:~~ and ~~T~~the LN does not transfer energy originating outside the LN for delivery through the LN; The SDT does not intend to perform additional work on the technical justification document at this time. It was not intended to have any specific thresholds or parameters from which exclusions would be granted; it merely illustrates the negligible effects that a sample local network has upon the flows in the surrounding transmission network. No change made.		
Michigan Public Power Agency Clallam County PUD No.1 Snohomish County PUD Kootenai Electric Cooperative	Yes	MPPA and its members strongly supports the categorical exclusion of Local Networks ("LNs") from the BES. We believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement, discussed in our response to Question 1, to exclude all facilities used in the local distribution of electric power. LNs are, of course, probably the most common form of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers will ultimately benefit from the path chosen by the SDT.MPPA and its members also support specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, MPPA supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to "improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system." Snohomish supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either

Organization	Yes or No	Question 9 Comment
		the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers. MPPA believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making a "group of contiguous transmission Elements operated at or above 100 kV" the starting point for identifying a LN would be improved by deleting the term "transmission" from this phrase. This is so because LNs are not used for transmission and the use of the term "transmission Elements" is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word "transmission" if the word is deleted and the Exclusion applies to any "group of Elements operated at 100 kV or above" that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term "transmission Elements" is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions. MPPA also believes that subparagraphs (a) and (b) are redundant in the sense that whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LDN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: "The LN does not transfer energy originating outside the LN for delivery through the LN." We understand this language is intended to distinguish a LN from a link in the transmission system - power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN.

Organization	Yes or No	Question 9 Comment
		While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: "The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN." We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN "transfers energy originating outside the LN for delivery through the LN to loads located within the LN." We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect "non-retail generation greater than 75 MVA (gross nameplate rating)." For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term "Qualifying Aggregate Generation Resources" or some equivalent. We are also uncertain what is meant by the use of the term "non-retail generation" in subparagraph (a). From context, we believe the SDT considers "non-retail generation" to mean generation that is used by retail customers located within a LN rather than being exported and sold on wholesale markets outside the LN. We therefore suggest that the SDT replace the phrase "non-retail generation" with the phrase "generation sold in wholesale markets and transmitted outside the LN." Similarly, we are unsure what is meant by the phrase "the LN and its underlying Elements." We believe the phrase "and its underlying Elements" could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase "the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system." We believe this phrase more accurately reflects the SDT's intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. Finally, MPPA believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer

Organization	Yes or No	Question 9 Comment
		Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system. Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC's Standards Drafting Team for Project 2010-07 and its predecessor, the "GO-TO Task Force" were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as "Transmission" and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities "are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system." White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators "would do little, if anything, to improve the reliability of the Bulk Electric System," especially "when compared to the operation of the equipment that actually produces electricity - the generation equipment itself." Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as "BES" simply because a large generator is embedded in the LN will result in substantial overregulation and

Organization	Yes or No	Question 9 Comment
		unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: "Except in unusual circumstances, power flows only into the LN."

Response: The SDT considered the disposition of the word "transmission" in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word "Element". This is meant to eliminate the generation that would otherwise be included in the term "Element".

The SDT continues to believe that it is necessary to establish a limit on the allowable quantity of generation that may be significant to the reliable operation of the surrounding interconnected transmission system. Please note that the issues surrounding the appropriate generation threshold, among other topics, will be taken up in Phase 2 of this BES definition effort. No change made.

The intent of the SDT in structuring the language of Exclusion E3.b was to ensure two things: first that power flow is always in the direction from the BES toward the LN, and second that the LN is not used for "wheel-through" transactions. The suggestion in your comment places an unnecessary qualifier on the "wheel-through" whereby it would only apply if the transaction were serving "loads". The SDT believes this qualifier would inadvertently allow a wholesale transaction to be scheduled through the subject facilities, and this is contrary to the intent of Exclusion E3.b. Given the high degree of certainty and assurances regarding the high priority of the Phase 2 efforts on Project 2010-17, for the purpose of completing the posting of the definition in the first phase of the Project, the SDT believes that it is preferable to continue to use the specific value of 75 MVA within ExclusionE3.a. No change made.

Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.

The SDT believes that the existing phrase in ExclusionE3.a "and its underlying Elements" has sufficient clarity and meets the intent of

Organization	Yes or No	Question 9 Comment
the exclusion with brevity. No change made. The SDT acknowledges the work of the Project 2010-07 "GO-TO" task force in identification of various NERC Reliability Standard requirements that would promote reliability of the generator-to-transmission interface. The Project 2010-17 SDT believes that the body of work in Project 2010-07 is most pertinent to generator lead-line facilities, rather than the looped and parallel-operated facilities contemplated in the Exclusion E3, and therefore, the SDT finds it necessary to continue to require all of the characteristics of Exclusion E3 to be met in order to qualify for exclusion from the BES. No change made. The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.		
NESCOE	Yes	NESCOE generally supports this exclusion but believes it is too narrow. As noted in the response to question 7, Exclusion E3 should allow a higher level of aggregate generation MVA on a Local Network (at least 300 MVA). In addition, NESCOE believes that local networks should not necessarily be ineligible for Exclusion E3 simply because an amount of power may transfer out of the network at times. NERC's draft technical network exclusions document should be amended such that local networks would be permitted to qualify for network exclusions under E3 if power flowing out of the network is minimal and would not likely adversely impact the BES. For example, transfers of less than or equal to 100 MVA should not have any adverse impact on the BES. The draft technical network exclusions document should be amended to state that transfers of 100 MVA MVA into the BES from the local distribution network are acceptable. The 100 MVA limit suggested here represents 25% of the rated value of a typical 345/115 substation (typically on the order of 400 MVA). Rarely does more than a fraction of the rated MVA flow from the low voltage side to the high voltage side. An allowance of 100 MVA represents a flow level will have no significant impact to the interconnected bulk power network.
Response: The SDT feels strongly that in order for a network to qualify for exclusion under the Exclusion E3 section of the definition, there must be strict bounds and limits placed on the characteristics of the candidate facilities. Allowances for minor "out-flow" from the local network, or "minimal" flow, as suggested in this comment, will lead to an inconsistent application of the definition and therefore, a lack of bright-line quality in the definition. Situations such as what is proposed in this comment can be referred to the		

Organization	Yes or No	Question 9 Comment
Exception Process for possible exclusion from the BES. No change made.		
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative	Yes	We would agree in principle with the LN exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN "under normal operating conditions". Also, the correct BES threshold level should be 200 kV rather than 100 kV. Finally, the nomenclature of Flowgate (FG) components appears to be confused. AECI believes E3 c) should be changed to read "contingent Facility" rather than "monitored Facility". Although unspecified within the NERC Glossary, we believe FG monitored Facilities are typically the impacted facilities in danger of overload, while the contingent facilities are those which, if lost, would cause the monitored Facility to become overloaded. As currently written, a formerly qualified LN could later become disqualified due to an external entity's ill-designing a parallel EHV line, thereby causing one or more potential (N-1) overloaded Facility within that LN. Further, operational FG loading conditions are often relieved by opening-up LN elements near the monitored Facility, with little impact upon BES reliability, yet with lesser reliability to the underlying LN loads. This implies that the monitored elements of Flowgates are typically non-essential to the BES reliability. AECI can support "contingent" FG Facilities disqualifying a LN claim, but it cannot support "monitored" Facilities as disqualifying factors for rejecting a LN claim.
Response: The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made. The SDT appreciates the suggestion of an alternate BES threshold level of 200 kV rather than 100 kV; however, in the absence of a strong technical justification, the SDT must retain the 100 kV threshold in the core definition. No change is being made at this time		

Organization	Yes or No	Question 9 Comment
but all threshold values will be examined in Phase 2. The SDT continues to believe that “monitored” is the most appropriate modifier of “Flowgate” in the text of Exclusion E3.c. Exclusion E3.c is intended to identify the elements that are part of these Flowgates, not necessarily those whose contingency can affect the Flowgate. The elements comprising Flowgates (and major transfer paths in the West) must continue to be prohibited from exclusion via Exclusion E3.c, since these facilities are more likely to be used in the transfer of bulk power than not; therefore, they are more characteristic of serving an interconnected transmission function than distribution. No change made.		
Southern Company Generation	Yes	What does the term "non-retail generation" mean? Can the term "non-retail generation" in E3a be changed to simply "generation."
Response: Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. The SDT has intentionally utilized the term “non-retail generation” in Exclusion E3.a in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.		
Electricity Consumers Resource Council (ELCON)	Yes	This Exclusion and Exclusion E1 aid in the delineation of local distribution versus transmission. We suggest three clarifying revisions. First, the phase “but less than 300 kV” should be deleted. Many large industrial facilities have on-site distribution systems that operate above 300 kV due solely to the capacity of the lines to supply power over the distance required at the manufacturing sites. Second, for the same reasons discussed above (in response to question #7), the phrase “do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating)” in “a)” should be changed to “the net capacity provided to the transmission grid does not exceed 75 MVA.” Third, the introductory phrase in “b)” -- “Power flows only into the LN” -- is inconsistent with the recognition in “a)” that power may flow out of an LN and into the transmission grid if there is generation connected to the LN and the 75 MVA limit is observed. We recommend either deleting the introductory clause or correcting it to read “Power is not transferred through the LN.”
Response: The SDT does not agree with the removal of the 300 kV cap that limits the qualification of a group of facilities for local		

Organization	Yes or No	Question 9 Comment
		network exclusion. The SDT feels that an upper bound is essential to prevent inappropriate exclusions of facilities that may be important to the reliable operation of the interconnected transmission system. The Exception Process is available for specific circumstances where a 300 kV cap is problematic. No change made. The SDT evaluated your comment in regard to Question 7 as well as to the local network exclusion, and has concluded that both exclusions must necessarily be based on the gross aggregate nameplate of the generation connected within the candidate systems. The approach that is suggested in your comment could result in significant amounts of generation existing within the excluded area. No change made. It remains the intent of the SDT to uphold a 75 MVA limit on the connected (non-retail) generation within a qualifying LN and, at the same time, reinforcing that power flow is always from the BES toward the LN at all points of connection. The SDT believes these characteristics are essential in order to ensure that qualifying LN facilities are not being relied upon for reliable operation of the interconnected transmission system. However, the SDT has clarified Exclusion E3.b in response to industry comments: **E3.b**: Power flows only into the LN~~:~~ and ~~T~~the LN does not transfer energy originating outside the LN for delivery through the LN;
Transmission Access Policy Study Group	Yes	TAPS supports the exclusion of Local Networks from the BES. Such systems are generally not "necessary for operating an interconnected electric transmission network," the standard in Orders 743 and 743-A. We have several suggestions to clarify the proposed language for this Exclusion. TAPS' comments in response to Question 7 above regarding "points of connection at 100kV or higher" and "non-retail generation" are applicable to Exclusion E3 as well. The term "bulk power," which occurs twice in Exclusion E3, is vague and could be read incorrectly as a reference to the statutorily-defined "bulk-power system," which is not, we think, the SDT's intent. The word "bulk" should be deleted, so that the Exclusion simply refers to transferring "power" across the interconnected system. TAPS raised this concern in response to the last posting of the BES Definition. In response, the SDT removed some instances of "bulk power" but left the remaining two, stating that "the SDT believes it provides conceptual value to the exclusion principle." The SDT does not state what conceptual value the term is intended to provide; on the assumption that it relates to a distinction between transferring power from local generation to serve local load, and transferring power over longer distances, TAPS suggests, as an alternative to simply deleting the word "bulk," that the Exclusion be revised to refer to "transfers of power from non-LN generation to non-LN load."Exclusion E3(c) states: "Power flows only into the LN: The LN does not transfer energy

Organization	Yes or No	Question 9 Comment
		originating outside the LN for delivery through the LN." This statement is unclear because the two parts mean different things. TAPS proposes rewriting this sentence to state: "Power flows only into the LN, that is, at each individual connection at 100 kV or higher, the pre-contingency flow of power is from outside the LN into the LN for all hours of the previous 2 years" to help clarify the intent. Two years is suggested because it is the time period set out in the draft exception application form for which an applicant should state whether power flows through an Element to the BES.
Response: See response to Q7. The SDT prefers to continue the use of the word "bulk" in the core paragraph of Exclusion E3. The SDT believes this clarifies an important conceptual idea to the industry, and the term "bulk" is not intended to be definitional in this context. This paragraph merely provides an introduction to the concept of the local network, and retaining the term "bulk" conveys the concept effectively. The lettered sub-items under the core paragraph are the prescriptive and precise characteristics that the industry will use to determine qualification for exclusion under Exclusion E3. No change made. The SDT prefers not to add demonstration criteria, such as the suggestion to provide a minimum of 2 years worth of data, within the text of the BES definition. The SDT believes the language, particularly the word "always" adds sufficient clarity. No change made.		
Florida Municipal Power Agency	Yes	: FMPA supports the exclusion of Local Networks from the BES. Such systems are generally not "necessary for operating an interconnected electric transmission network," the standard in Orders 743 and 743-A. However, we have several suggestions to clarify the proposed language for this Exclusion. Exclusion E3(c) states: "Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN." This statement is unclear because the two parts mean different things. FMPA proposes rewriting this sentence to state: "Power flows only into the LN, that is, at each individual connection at 100 kV or higher, the pre-contingency flow of power is from outside the LN into the LN for all hours of the previous 2 years" to help clarify the intent. Two years is suggested because it is the time period set out in the draft exception application form for which an applicant should state whether power flows through an Element to the BES. FMPA' comments in response to Question 7 above regarding "points of connection at 100kV or higher" and "non-retail generation" are applicable to Exclusion E3 as well. The term "bulk power," which occurs twice in Exclusion E3, is vague and could be read incorrectly as a

Organization	Yes or No	Question 9 Comment
		reference to the statutorily-defined "bulk-power system," which is not, we think, the SDT's intent. The word "bulk" should be deleted, so that the Exclusion simply refers to transferring "power" across the interconnected system. FMPA raised this concern in response to the last posting of the BES Definition. In response, the SDT removed some instances of "bulk power" but left the remaining two, stating that "the SDT believes it provides conceptual value to the exclusion principle." The SDT does not state what conceptual value the term is intended to provide; on the assumption that it relates to a distinction between transferring power from local generation to serve local load, and transferring power over longer distances, FMPA suggests, as an alternative to simply deleting the word "bulk," that the Exclusion be revised to refer to "transfers of power from non-LN generation to non-LN load."
Response: Exclusion E3.b was intended to be a combination of two similar properties when it was drafted for the second posting of the BES definition. The SDT has received a number of comments indicating that these are two separate and distinct concepts, and has revised Exclusion E3.b to provide more clarity. **E3.b**: Power flows only into the LN~~:~~ and ~~T~~the LN does not transfer energy originating outside the LN for delivery through the LN; The SDT prefers not to add demonstration criteria, such as the suggestion to provide a minimum of 2 years worth of data, within the text of the BES definition. The SDT believes the language, particularly the word "always" adds sufficient clarity. No change made. See response to Q7. The SDT prefers to continue the use of the word "bulk" in the core paragraph of Exclusion E3. The SDT believes this clarifies an important conceptual idea to the industry, and the term "bulk" is not intended to be definitional in this context. This paragraph merely provides an introduction to the concept of the local network, and retaining the term "bulk" conveys the concept effectively. The lettered sub-items under the core paragraph are the prescriptive and precise characteristics that the industry will use to determine qualification for exclusion under Exclusion E3. No change made.		
SERC Planning Standards Subcommittee	Yes	The term "non-retail generation" in E3a should be changed to simply "generation."
Response: The SDT has intentionally utilized the term "non-retail generation" in Exclusion E3.a in order to specifically isolate that		

Organization	Yes or No	Question 9 Comment
generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation from obtaining this exclusion. No change made.		
Balancing Authority Northern California	Yes	It is preferred to hold reference to gross nameplate rating/threshold values until generation technical justification is completed as part of Phase 2; these studies should apply to any real or reactive power threshold reference. For Exclusion E3-b using the phrase "[p]ower flows only into the LN" is too restrictive. An allowable MW threshold of LN power producing resources should be deferred to the Phase 2 BES technical analysis. Where no generation is present in the LN, it is recommended that an allowance for residual flow through the LN.
Response: The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort; however, to satisfy the Commission's directives in Order 743 and 743-A in a timely fashion, it is necessary to use a generation threshold that is consistent with the in-force Statement of Compliance Registry Criteria. No change made. The SDT feels strongly that in order for a local network to qualify for exclusion under the Exclusion E3 section of the definition, there must be strict bounds and limits placed on the characteristics of the candidate facilities. Allowances for minor "out-flow" from the local network, or "minimal" flow, as suggested in this comment, will lead to an inconsistent application of the definition and therefore, a lack of bright-line quality in the definition. Situations such as what is proposed in this comment can be referred to the Exception Process for possible exclusion from the BES. No change made.		
Westar Energy	Yes	
Redding Electric Utility	Yes	
City of Redding	Yes	
Farmington Electric Utility	Yes	

Organization	Yes or No	Question 9 Comment
System		
Oncor Electric Delivery Company LLC	Yes	
Utility Services, Inc.	Yes	
LCRA Transmission Services Corporation	Yes	
Memphis Light, Gas and Water Division	Yes	
Harney Electric Cooperative, Inc.	Yes	HEC believes that local networks should be excluded from the BES and agrees with exclusions to the definition.
PSEG Services Corp	Yes	
Puget Sound Energy	Yes	
American Electric Power	Yes	

Organization	Yes or No	Question 9 Comment
NV Energy	Yes	
Oregon Public Utility Commission Staff	Yes	
Z Global Engineering and Energy Solutions	Yes	
Chevron U.S.A. Inc.	Yes	This provision complements E1 in defining the difference between distribution and transmission
Metropolitan Water District of Southern California	Yes	
Duke Energy	Yes	
Idaho Falls Power	Yes	We support the exclusion as drafted.
FirstEnergy Corp.	Yes	
Exelon	Yes	
Western Area	Yes	

Organization	Yes or No	Question 9 Comment
Power Administration		
IRC Standards Review Committee	Yes	
Texas RE NERC Standards Subcommittee	Yes	This Exclusion and Exclusion E1 aid in the delineation of distribution versus transmission.
WECC Staff	Yes	
Southwest Power Pool Standards Review Team	Yes	
BGE	Yes	No comment.
Response: Thank you for your support.		

10. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E4 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices. The comments received identified overwhelming support of Exclusion E4 as written.

Some commenters questioned the use of the word 'retail' in Exclusion E4. The SDT determined that retention of this word is important and correct. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the Load side of a customer meter) and would otherwise be included via the core definition and/or Inclusion I5.

Other commenters proposed adding the same threshold qualification language contained in other exclusions. Using a threshold for inclusion of non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

No changes were made to the definition as a result of these comments.

Organization	Yes or No	Question 10 Comment
Westar Energy	No	This particular Exclusion doesn't address the qualifier as to the impact to the BES. We believe the qualification language in E2, in regards to behind the meter generation, should also be included in Exclusion E4 for clarification purposes.

Organization	Yes or No	Question 10 Comment
Southwest Power Pool Standards Review Team	No	This particular Exclusion doesn't address the qualifier as to the impact to the BES. We request that it emulate the language provided for E2 (behind the meter gen) and classified for this specific exclusion.
Response: Using a threshold for inclusion of non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
ISO New England Inc	No	The term "retail customer" is unclear and will lead to confusion. This exclusion should be removed as there are many instances where a generator may be using the reactive power device to meet other interconnection requirements and the reactive device should be held to the same BES requirements as the generator.
Response: The SDT team considered the disposition of the word "retail" in the context of E4, and determined that retention of this word is important and correct. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter). No change made. Exclusion E4 is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter) and would otherwise be included via the core definition and/or Inclusion I5. No change made.		
Central Maine Power Company	No	Consider using other wording to replace "retail"

Organization	Yes or No	Question 10 Comment
Response: The SDT team considered the disposition of the word “retail” in the context of E4, and determined that retention of this word is important and correct. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter). No change made.		
Metropolitan Water District of Southern California	No	Exclusion 4 appears to limit the devices just to retail customers. However, any end-user load, including wholesale or retail, should be included. NERC's Glossary of Terms uses the phrase "end-use customer", not retail customers to describe loads. MWDSC recommends that Exclusion 4 be changed as follows: E4 - Reactive Power devices owned and operated by an end-use customer solely for its own use.
Response: The SDT team considered the disposition of the word “retail” in the context of E4, and determined that retention of this word is important and correct. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter). No change made.		
The Dow Chemical Company	No	The term “solely” should be replaced by the term “primarily”. All devices to control Reactive power behind-the-meter arguably provide some benefit to the transmission grid.
Response: The SDT does not believe these changes provide additional clarity. No change made.		
LCRA Transmission Services Corporation	No	This exclusion conflicts with inclusion item I5. Which one takes priority?
Response: The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: “Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit		

Organization	Yes or No	Question 10 Comment
breaker, bus section, or transmission line. An element may be comprised of one or more components. “ Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
Ameren	No	a)Reactive Power devices connected 100 kV and above applied for the purpose of voltage support to local load and/or local area network should also be excluded.
Response: Reactive Power devices connected at 100kV and above are included in the core definition. Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner.		

Organization	Yes or No	Question 10 Comment
The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element as defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind-the-retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		

Organization	Yes or No	Question 10 Comment
An entity can always request an exception through the Exception Process. No change made.		
Tillamook PUD	No	Any device that might be excluded under E4 has already been included per I5. Unless I5 is removed, or rewritten as suggested above; this exclusion will exclude nothing.
Central Lincoln	No	Please see Central Lincoln's answers to Q1 and Q6. Any device that might be excluded under E4 has already been included per I5. Unless I5 is removed, or rewritten as suggested above; this exclusion will exclude nothing.
Northern Wasco County PUD	No	Please see Northern Wasco County PUD's answers to Q1 and Q6. Any device that might be excluded under E4 has already been included per I5. Unless I5 is removed, or rewritten as suggested above; this exclusion will exclude nothing.

Response: Please see responses to Q1 and Q6.

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element as defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion

Organization	Yes or No	Question 10 Comment
language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind-the-retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices. No change made.		
Northeast Power Coordinating Council	No	Consider using other wording to replace "retail". The statement "owned or operated by the retail customer" is confusing and arguably inaccurate and should be revised. Refer to comments related to reactive resources for Question 6 regarding Inclusion I5. Retail and non-retail generation should be defined.
Response: The SDT team considered the disposition of the word "retail" in the context of E4, and determined that retention of this word is important and correct. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter). No change made. Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.		
American Electric Power	No	Does this refer to distribution level or reactive power resources? If so, it would appear these are not included as part of I5. Or instead, does this refer to customer equipment at BES voltages? If it is the latter, we recommend E4 be reworded to state "Reactive

Organization	Yes or No	Question 10 Comment
		Power devices that meet the Inclusion criteria of I5 that are owned and operated by the retail customer solely for its own use..."

Response: Distribution devices are not included.

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.

Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.

In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the

Organization	Yes or No	Question 10 Comment
interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative	Yes	Ownership is irrelevant, so "owned and operated by the retail customer solely for its own use", should be replaced by "owned and operated solely in conjunction with specific industrial customer loads."
Response: The SDT does not believe this change provides additional clarity. No change made.		
NESCOE	Yes	While we are generally supportive of this exclusion, the term "retail" needs to be clarified (i.e., are retail customers of all sizes intended to be excluded?).
Massachusetts Department of Public Utilities	Yes	While we are generally supportive of this exclusion, the term "retail" needs to be clarified (i.e., are retail customers of all sizes intended to be excluded?).
Response: The SDT reviewed your comment and believes that 'retail' is the correct terminology. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter. No change made. Using a threshold for non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort.		
Long Island Power Authority	Yes	Exclusion should identify a maximum value.
Response: Using a threshold for non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort. No change made.		

Organization	Yes or No	Question 10 Comment
ExxonMobil Research and Engineering	Yes	The BES SDT should work on clarifying the differences between Inclusion I5 and Exclusion E4. The phrase "solely for its own use" in Exclusion E4 is vague and open to interpretation. It is unclear whether equipment, such as power factor correction facilities, surge capacitors located in motor terminal boxes and excitation capacitors installed for use by a motor located on the low side of a 138 kV primary transformer would be excluded from the BES.

Response: It is the intent of the SDT that distribution devises are not included in the BES.

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element as defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion

Organization	Yes or No	Question 10 Comment
I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind-the-retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made.		
Springfield Utility Board	Yes	Reactive power devices used to serve radial networks or Local Networks are often owned and operated by the registered entity (not the "retail customer") to address Area Network - wide reactive power issues. This language should read:"E4. Reactive power devices that are within a radial system excluded under E1 or within a local network excluded under E3" If the current draft language is left as it is, there will likely be a lot of unnecessary paperwork to exclude reactive power devices within radial system or local networks from the BES through the exclusion process. SUB suggests that the language in the E4 Exclusion be consistent with that in the I5 Inclusion.
Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "		

Organization	Yes or No	Question 10 Comment
Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
SERC OC Standards Review Group	Yes	
NERC Staff Technical Review	Yes	
SERC Planning Standards Subcommittee	Yes	
Florida Municipal Power	Yes	

Organization	Yes or No	Question 10 Comment
Agency		
WECC Staff	Yes	
Bonneville Power Administration	Yes	
Texas RE NERC Standards Subcommittee	Yes	This is a needed exception to Inclusion I5 as these reactive power resources are used by retail customers for power factor correction at their own facilities in order avoid imposed power factor penalties.
Balancing Authority Northern California	Yes	
ACES Power Marketing Standards Collaborators	Yes	
Dominion	Yes	
Pepco Holdings Inc and Affiliates	Yes	
Transmission Access Policy Study Group	Yes	
Electricity Consumers Resource Council (ELCON)	Yes	This is a needed exception to Inclusion I5 as these reactive power resources are used by retail customers for power factor correction at their own facilities in order avoid imposed power factor penalties.
Southern Company Generation	Yes	

Organization	Yes or No	Question 10 Comment
Tri-State Generation and Transmission Assn., Inc. Energy Management	Yes	
MRO NERC Standards Review Forum (NSRF)	Yes	
IRC Standards Review Committee	Yes	
Tennessee Valley Authority	Yes	
Hydro One Networks Inc.	Yes	
Tri-State GandT	Yes	
Western Area Power Administration	Yes	
Texas Industrial Energy Consumers	Yes	
PacifiCorp	Yes	
Southern Company	Yes	
FirstEnergy Corp.	Yes	
Exelon	Yes	
Michigan Public Power Agency	Yes	Yes, MPPA and its members support the revised language because retail reactive

Organization	Yes or No	Question 10 Comment
		devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Idaho Falls Power	Yes	We have no comments.
ReliabilityFirst	Yes	
Ontario Power Generation Inc.	Yes	
Central Hudson Gas and Electric Corporation	Yes	
City of Anaheim	Yes	
Chevron U.S.A. Inc.	Yes	
Duke Energy	Yes	
Clallam County PUD No.1	Yes	Yes, CLPD supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
NV Energy	Yes	
Z Global Engineering and Energy Solutions	Yes	
Consumers Energy	Yes	

Organization	Yes or No	Question 10 Comment
Puget Sound Energy	Yes	
Manitoba Hydro	Yes	
City of St. George	Yes	
Orange and Rockland Utilities, Inc.	Yes	
Blachly-Lane Electric Cooperative (BLEC)	Yes	BLEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Coos-Curry Electric Cooperative (CCEC)	Yes	CCEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Central Electric Cooperatve (CEC)	Yes	CEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Clearwater Power Company (CPC)	Yes	CPC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Snohomish County PUD	Yes	Yes, SNPD supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the

Organization	Yes or No	Question 10 Comment
		interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Consumer's Power Inc.	Yes	CPI supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Douglas Electric Cooperative (DEC)	Yes	DEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Fall River Rural Electric Cooperative (FALL)	Yes	FALL supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Lane Electric Cooperative (LEC)	Yes	LEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Lincoln Electric Cooperative (LEC)	Yes	LEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Northern Lights Inc. (NLI)	Yes	NLI supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from

Organization	Yes or No	Question 10 Comment
		the BES definition.
Okanogan County Electric Cooperative (OCEC)	Yes	OCEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Pacific Northwest Generating Cooperative (PNGC)	Yes	PNGC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Raft River Rural Electric Cooperative (RAFT)	Yes	RAFT supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
West Oregon Electric Cooperative	Yes	WOEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
PSEG Services Corp	Yes	
Hydro-Quebec TransEnergie	Yes	
Independent Electricity System Operator	Yes	
Umatilla Electric Cooperative (UEC)	Yes	UEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the

Organization	Yes or No	Question 10 Comment
		interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Memphis Light, Gas and Water Division	Yes	
Harney Electric Cooperative, Inc.	Yes	HEC agrees with E4.
Cowlitz County PUD	Yes	
Utility Services, Inc.	Yes	
National Grid	Yes	
Kansas City Power and Light Company	Yes	
Oncor Electric Delivery Company LLC	Yes	
Sacramento Municipal Utility District	Yes	
Georgia System Operations Corporation	Yes	
MEAG Power	Yes	
Farmington Electric Utility System	Yes	

Organization	Yes or No	Question 10 Comment
South Houston Green Power, LLC	Yes	
Portland General Electric Company	Yes	
City of Austin dba Austin Energy	Yes	
Kootenai Electric Cooperative	Yes	KEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
ATC LLC	Yes	
Redding Electric Utility	Yes	
City of Redding	Yes	
Tacoma Power	Yes	Tacoma Power supports the Exclusion E4 as currently written.
BGE	Yes	No comment.
Response: Thank you for your support.		

11. Are there any other concerns with this definition that haven't been covered in previous questions and comments remembering that the exception criteria are posted separately for comment?

Summary Consideration: Comments received for Question 11 were mostly re-statements of comments expressed in the previous questions. No changes were made to the core definition or Inclusions or Exclusions based solely on question 11 comments. However, changes were made to the Implementation Plan to clarify the compliance obligation date of the revised definition as shown below.

Some commenters have expressed frustration over the lack of high level guidance for the exception process. The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by

either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication.

Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result ofa sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved."

The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Finally, the SDT would point to the draft SAR for Phase 2 of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase 1 of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

Some comments were received about the lack of a cost benefit analysis with regard to revision to the definition. The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.

Several comments were received questioning how to apply the definition with the inclusions and exclusions. The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.

Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.

In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.

Finally, there were comments on the lack of a technical basis for the threshold values employed in the definition. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

Implementation Plan - Compliance obligations for all newly identified Elements included by the definition shall begin 24 months after the applicable effective date of the definition.

Organization	Yes or No	Question 11 Comment
SERC OC Standards Review Group	Yes	The definition of the BES is referenced in several existing standards and the Statement of Compliance Registry Criteria. The SERC OC standards Review Group is concerned how this revised definition will impact entity registration, i.e., how will the revised definition be integrated into the Compliance Registry Criteria. The implementation plan should include how the integration is going to occur. The Rules of Procedure exception process should be further defined or referenced in this definition."The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review Group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."
Southern Company	Yes	The definition of the BES is referenced in several existing standards and the Statement of Compliance Registry Criteria. Southern Companies are concerned how this revised definition will impact entity registration, i.e., how will the revised definition be integrated into the Compliance Registry Criteria. The implementation plan should include how the integration is going to occur. The Rules of Procedure exception process should be further defined or referenced in this definition.

Response: The revised definition of Bulk Electric System will be applied in the same manner as it is today. This is based on language contained in FERC Order No. 693, which states: "…the Commission will rely on the NERC definition of bulk electric system and NERC's registration process to provide as much certainty as possible regarding the applicability to and the responsibility of specific entities to comply with the Reliability Standards in the start-up phase of a mandatory Reliability Standard regime". As the SDT progresses through Phase 2 of the project, it is envisioned that the technical aspects contained in the definition and in the ERO Statement of Compliance Registry will be merged and ultimately incorporated into the definition of the Bulk Electric System. At that time the ERO Statement of Compliance Registry Criteria will be revised to point to the BES definition for the technical aspects in regards to BES Elements. No change made.

The Rules of Procedure exception process is referenced in the current draft version of the BES definition in a note which states: "Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process". No change made.

Organization	Yes or No	Question 11 Comment
Northeast Power Coordinating Council	Yes	Technical bases have not been provided for the proposed definition of the BES. Additionally, the cost impacts have not been assessed and weighed against thepotential benefits of this proposal. There is confusion arising from the construction and interactions of the Inclusion, and Exclusion sections. System diagrams, put in a separate guidance document, would help in understanding. The situation of using Exceptions to understand Exclusions must be avoided. Suggest consider incorporating Inclusions directly, and leave the Exclusions as is format wise. The Implementation period discusses a 24 month timeframe (the Order suggests 18) from when the standard becomes effective to begin Compliance obligations. If construction is required to become compliant or meet performance requirements with standards, or CIP Version 5 standards increase the amount of BES assets this will be insufficient when considering budgeting, designing, siting requirements, and permitting. Concern exists over the paradigm that the definition should “mirror” the NERC Compliance Registry Criteria regarding who is registered. Some RSC members believe the definition should drive any changes to the registry criteria and not the criteria perpetuating the thresholds in the definition. However, there is a need to confirm that Phase 2 of this project will address this. The Inclusions and Exclusions listed need clarifications and perhaps diagrams and accompanying guidelines to clarify and explain the intent.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These		

Organization	Yes or No	Question 11 Comment
		and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. The technical aspects of the definition have remained identical to the current definition and identical to the application of the ERO Statement of Compliance Registry Criteria and therefore do not require a technical justification to support maintaining the status-quo. The SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission. The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit

Organization	Yes or No	Question 11 Comment
		breaker, bus section, or transmission line. An element may be comprised of one or more components. “ Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. The development of a guidance document which contains generic diagrams is a portion of the overall project that the SDT feels is necessary to ensure the consistent application of the BES definition going forward. Therefore the SDT has determined that such a document will be developed during Phase 2 of the project. The SDT agrees that a potential reformatting of the definition (core, Inclusions and Exclusions) would improve the understanding of the application of the definition. However, these types of changes would require a significant amount of revisions to the current draft and could be seen as substantive in nature and prevent the SDT from moving forward with a recirculation ballot. This scenario would require a successive ballot which would place the project schedule in jeopardy of achieving a successful filing by January 25, 2012. The

Organization	Yes or No	Question 11 Comment
SDT will be exploring the reformatting of the definition (core, Inclusions and Exclusions) during Phase 2 of the project. In proposing a 24 month period in the Implementation Plan before the definition is applied in assessing compliance obligations, the SDT considered several activities that may require additional time to complete for an entity to become fully compliant. One of these activities is the development of transition plans in cases where significant issues may have been identified as potentially preventing an entity from meeting the compliance obligations within the 24 month period. These transition plans are to be developed by the Regional Entity and the Registered Entity in a cooperative manner to best address the identified concerns and establish an agreed to mitigation plan which results in full compliance by the Registered Entity. Phase 1 of the project, as explained above, is addressing Commission directives established in Order No. 743 within a relatively short time period. The SDT has decided to maintain the status quo with respect to applicability and the technical aspects contained in the ERO Statement of Compliance Registry Criteria as the prudent path to take to ensure a successful conclusion to Phase 1 of the project. The status quo was established in FERC Order No. 693, which states: "…the Commission will rely on the NERC definition of bulk electric system and NERC's registration process to provide as much certainty as possible regarding the applicability to and the responsibility of specific entities to comply with the Reliability Standards in the start-up phase of a mandatory Reliability Standard regime". As the SDT progresses through Phase 2 of the project, it is envisioned that the technical aspects contained in the definition and in the ERO Statement of Compliance Registry will be merged and ultimately incorporated into the definition of the Bulk Electric System. At which time the ERO Statement of Compliance Registry Criteria will be revised to point to the BES definition for the technical aspects in regards to BES Elements.		
Westar Energy	Yes	We believe a reference should be made to the ROP changes which also provide a mechanism whereby Elements may be excluded or included in the BES. Without that reference, the proposed definition is not all inclusive of all means for exclusions or inclusions. We would suggest the definition be expanded to say "Unless modified by the lists shown below or as provided by Appendix 5C of the NERC Rules of Procedure, all Transmission..." This comment was submitted in response to the original posting and the response received was that it was inadvertently left out and that it would be placed back in, but we don't see the reference in this draft of the definition.
Southwest Power Pool Standards Review Team	Yes	A reference needs to be made to the ROP changes which also provide a mechanism whereby Elements may be excluded/included in the BES. Without that reference the proposed definition does not completely include all means for exceptions/inclusions.

Organization	Yes or No	Question 11 Comment
		We would suggest the definition be expanded to say '...modified by the list shown below or as provided by Appendix 5C of the NERC Rules of Procedure. We submitted this in the original posting and the response received was that it was inadvertently left out and that it would be placed back in. We don't see the reference in this draft of the definition.
Response: The Rules of Procedure exception process is referenced in the current draft version of the BES definition in a note which states: "Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process". No change made.		
WECC Staff	Yes	Following are additional comments not covered in previous questions: o Under the section "Effective Dates": There may be confusion with the statement "Compliance Obligations for Elements included by definition shall begin 24 months after the applicable effective data of the definition." The phrase "included by definition" can be interpreted broadly. o WECC notes that a generation threshold of 75MVA is specified in Exclusions E1, E2, and E3. WECC believes that generation thresholds for Exclusions should be addressed in Phase 2 when generation thresholds for Inclusions are being considered.
Response: The complete statement from the Implementation Plan states: "Compliance obligations for all newly identified Elements included by the definition shall begin 24 months after the applicable effective date of the definition." The SDT's intent with this language is to identify newly identified BES Elements based on the revised definition. In other words, Elements that were not considered to be BES Elements based on the exiting definition of BES in the NERC Glossary of Terms, but are now included as a result of revising the exiting definition. The Implementation Plan has been clarified as shown: **Implementation Plan** - Compliance obligations for all newly identified Elements included by the definition shall begin 24 months after the applicable effective date of the definition. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a		

Organization	Yes or No	Question 11 Comment
change from the current values that exist through the application of the definition today. Phase 1 of the project is addressing Commission directives established in Order No. 743 within a relatively short time period. Therefore the decision to maintain the status quo as far as application of the definition and the technical aspects contained in the ERO Statement of Compliance Registry Criteria is the prudent path to take to ensure a successful conclusion to Phase 1 of the project. The status quo was established in FERC Order No. 693, which states: "…the Commission will rely on the NERC definition of bulk electric system and NERC's registration process to provide as much certainty as possible regarding the applicability to and the responsibility of specific entities to comply with the Reliability Standards in the start-up phase of a mandatory Reliability Standard regime". These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
ExxonMobil Research and Engineering	Yes	It would be worthwhile to explain the relationship (timeline) between the BES Definition implementation plan and the compliance implementation plan proposed in the BES RoP team's new Appendix 5C for the NERC Rules of Procedure.
Texas RE NERC Standards Subcommittee	Yes	It might be worthwhile to explain the relationship (timeline) between the BES Definition implementation plan and the compliance implementation plan proposed in the BES RoP team's new Appendix 5C for the NERC Rules of Procedure.
Response: For a newly identified Element(s) under the revised BES definition, the time period to be in full compliance with all applicable Reliability Standards is 24 months from the effective date of the definition. If the entity wishes to file for an exception of a newly identified Element(s) under the revised BES definition through the Rules of Procedure Exception Process, the entity will have 12 months from the effective date of the revised BES definition in which to file such a request. If the exception request is rejected or disapproved and the classification of the Element(s) remains as a BES Element, the Regional Entity and the owner of such a BES Element(s) shall agree to an Implementation Plan for full compliance obligations, which will establish an implementation date no earlier than the date established by the definition Implementation Plan (24 months from the effective date of the definition).		
Dominion	Yes	As a general policy, Dominion believes that attempting to precisely refine the definition of the BES may not be the best way to insure BES reliability. Instead,

Organization	Yes or No	Question 11 Comment
		industry effort should be focused on developing specific reliability standard requirements targeted toward solving problems that need to be addressed. Stated differently, every Element that could have an impact on the BES does not need to be included in the definition of the BES. NERC's Functional Model addresses the broad range of functions performed by the electric utility industry. When reliability concerns are identified and can best be addressed via a standard, modifying the requirements in that standard as applicable to that functional model should occur rather than attempting to modify the BES definition. Effort spent on developing specific reliability standard requirements mentioned above is superior to the industry engaging in definitional debates that do not address to the underlying reliability drivers. It is not essential that each reliability standard explicitly apply to each registered entity. The existing reliability requirements, as applied to the various functional entities require communication of information necessary to insure there are no reliability gaps, either directly or indirectly among the various entities. The existing standards typically have a hierarchy wherein: o Planners (PA, TP) receive information predominately from the owners (GO, DP, TO) and those that represent end-use customers (LSE and PSE); o Reliability entities (BA, RC and TOP) receive information predominately from operating entities (GOP, TOP) and those that represent end-use customers (LSE and PSE); o Planners provide reliability assessments to Reliability entities (BA, RC and TOP) and receive feedback on these reliability assessments (including validity of assumptions and result); and o Reliability entities (BA, RC and TOP) give instructions (including when necessary directives) to operating entities (GOP, TOP) and those that represent end-use customers (LSE and PSE). This is how the industry has historically operated, how it operates today and why the standards in place today are structured as they are. Reliability is best served when the standards themselves contain the appropriate requirements and are applied to either an Element or Facility or to the appropriate functional entity (DP, GO, GOP, LSE, TO, TOP, etc.). Definitional boundaries can create the potential for false positives in reliability and, in fact, may be detrimental to reliability in the longer term if they impose additional compliance burdens without closing a reliability gap.

Organization	Yes or No	Question 11 Comment
Response: The SDT acknowledges and appreciates the comments and recommendations associated with concepts for alternatives to the revision of the exiting definition of BES. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, and is bound to answering those directives in a manner that achieves industry consensus while remaining responsive to the language contained in the Orders. No change made.		
Pepco Holdings Inc and Affiliates	Yes	1) From the proposed BES definition and Exclusion E1 it is very clear that a 138-12kV distribution transformer serving radial load would not be considered part of the BES. However, suppose this transformer was connected to a position in a ring-bus or a breaker-and-a-half arrangement. Would the physical bus between the transformer high side terminals and the two breakers in the ring-bus, or breaker-and-a-half-bus, be considered part of the BES? They would be contiguous transmission elements (bus) operating at 138kV and supplying a radial distribution transformer. Also, tripping of this "radial" bus section would not interrupt any BES facilities, due to the station bus arrangement. As such, by definition and Exclusion E1 this 138kV bus section (element) would not be part of the BES, and no special exclusion filing would be required. Is this correct? However, take the same 138-12kV transformer but this time connected in a typical line-bus arrangement. The transformer by definition is not a BES element. As was the case above, the bus section between the transformer and the two breakers in the line-bus would be contiguous elements (bus) operating at 138kV and supplying a radial distribution transformer. Again, by definition and Exclusion E1 this bus section (element) would not be part of the BES. However, in this case tripping of the "radial" bus section would result in an interruption to the through path of the station, and could therefore interrupt the through flow on BES facilities. Does this make either the transformer, or its associated bus section, or both part of the BES? Based on the above examples, if the type of bus connection could influence whether an element is included in the BES or not, then additional language needs to be added to the definition (either as an Inclusion or Exclusion) to make this point clear. The BES definition needs to be specific enough to eliminate any confusion as to what is included, and what is not included, and thereby greatly minimize, if not eliminate, the need to request interpretations. A sample FAQ document, with examples, would be

Organization	Yes or No	Question 11 Comment
		extremely helpful, but should not be a substitute for a BES description which leaves little room for interpretation. 2) As seen from the above attempt to describe issues that need clarification, without a diagram to show specific situations, it is difficult to fully explain the concerns on ensuring that the BES definition stands on its own. Since the commenting process does not accommodate diagrams, PHI is sending separately a white paper with diagrams in an attempt to clarify the definition and make it as unambiguous as possible, leaving little room for interpretation. This paper may be helpful in developing a FAQ document. 3) The definition should state that it applies to a system "normal" configuration. It does not include maintenance or N-1 or any abnormal configurations. 4) There was no place on the comment forms to comment on the proposed Implementation Plan for the BES definition. So comments are included here. The proposed plan states "compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition." This is fine for most applications; however, there is an effect with PRC-005 compliance. PRC-005 (Protection System Maintenance Standard) requires that evidence for the last two maintenance intervals, in order to demonstrate that you are following the prescribed intervals in your maintenance plan. If additional facilities are brought into scope by the new BES definition, and the protection systems associated with these facilities were not previously maintained on the same interval as other BES facilities, then it may not be possible within the allotted 24 months to demonstrate the facilities were maintained within the prescribed intervals for BES facilities. An implementation plan at least as long as one full maintenance cycle would be required to assure compliance. This issue needs to be addressed or coordinated with PRC-005.
Response: 1) Exclusion E1 identifies a Radial system as "a group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher" (with additional criteria identified in parts E1a, b and c). The SDT interprets the language 'single point of connection' as a tapped point where the radial system originates. Therefore in a ring-bus, a breaker-and-a-half or a		

Organization	Yes or No	Question 11 Comment
typical line bus arrangement, the bus between the breakers and the breakers themselves are considered to be BES Elements. Under these circumstances the bus position is the 'single point of connection', not a contiguous group of Elements as suggested in the comment. 2) The development of a guidance document which contains generic diagrams is a portion of the overall project that the SDT feels is necessary to ensure the consistent application of the BES definition going forward. Therefore the SDT has determined that such a document will developed during Phase 2 of the project. 3) The SDT does not believe that system state affects the definition and therefore there is no need to declare that the definition only applies to normal state. No change made. 4) The BES definition Implementation Plan addresses the implementation of the revised definition. The SDT is not in a position to comment on compliance obligations associated with the Reliability Standards. However, in circumstances where data may not be available due to the revised definition requirements, the SDT expects an entity to work with its Regional Entity to come up with a plan to satisfy the obligation.		
Southern Company Generation	Yes	1) On page 1, the year of the anticipated date for the BOT adoption is correctly 2012. 2) We believe that the last two sentences of the first paragraph of the Background Information section of the 2nd draft of the definition document is incorrect. The statements read: " It should be noted that the revised definition does not address functional entity registration or standards requirements applicability. Those are separate issues." The definition of the BES that is approved will govern the scope of the equipment that is relevant to many of the reliability standards. This issue cannot be separated from the applicability of the requirements of the reliability standards. What is the purpose of creating a continent wide definition of the BES if is is not to provide instruction the enetties subject to the requirements of the standards? Refer to these sample standard requirements to see that this definition already plays a major part in the applicability of the requirements: EOP-005-2 R1, R4; EOP-006-2 R1; EOP-008-1 R1; FAC-008-1 R1.2; and PRC-005-1a for example - there are many others.
Response: 1) The SDT has made the revision to the BOT adoption date to correctly identify the year as 2012.		

Organization	Yes or No	Question 11 Comment
2) The SDT acknowledges that the linkage between the BES definition and the Reliability Standards may have been understated in the *Background Information* contained in the comment form. However, the goal of the SDT in addressing the Commission directives is to develop modifications to the definition in response to the directives without significantly expanding or contracting the scope of the BES and not drive registration changes in the industry. The SDT believes that they have met these goals, as evidenced by a detailed review of the NERC Reliability Standards. The SDT determined that potentially the scope of applicability of certain requirements may change due to the establishment of a bright-line definition. However, this potential change did not dictate a need for modification of the language contained in the requirements.		
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative	Yes	: AECI supports the bright-line concept, but believes the SDT should adopt a core voltage threshold of "200 kV or higher", and MVA capacity of "150 MVA or greater". A proper threshold is critical, because an inappropriately low threshold will divert significant industry attention and resource away from what truly benefits the BES reliability. (The number of facilities tend to rise more geometrically than linearly as the voltage threshold drops.)We believe that an evaluation of the transmission-line Surge Impedance Loading (SIL), at various kV levels, could provide technical insight as to why many industry planning engineers believe sub-230kV Facilities, in general do not belong within the BES. AECI suggests that the SDT consider a more consistent bright-line facility threshold of 150 MVA capability for all equipment. This would include transmission lines as well, where an Surge Impedance Loading analysis demonstrates that lines below 230 kV, can support 150 MVA flow up to 280 miles (applying 1.1 p.u. line-loadability of SIL, IEEE Transactions on Power Apparatus and Systems, Vol.PAS-98, No.2 March/April 1979, p 609, Figure 7),without additional reactive compensation. In comparison, single-conductor 138 kV lines, in same table, can support 150 MVA transfers no more than 50 miles, while 345 kV lines are capable of supporting 150 MVA transfers well over 600 miles.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These		

Organization	Yes or No	Question 11 Comment
and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.		
MRO NERC Standards Review Forum (NSRF)	Yes	NSRF recommends that the following statement be added after I5. If an element is not included based upon the core definition or I1 - I5, the elements is not consider to be a part of the BES.
Response: The SDT is attempting through the BES definition to identify facilities that should be classified as BES Elements. Adding a statement that emphasizes the opposite of what the definition is intending to accomplish would be redundant and would negate the efforts of the SDT to improve clarity and remove the ambiguity that currently exists the definition today. No change made.		
IRC Standards Review Committee	Yes	(1) We support a phased approach proposed in the draft supplemental SAR. Development of the revised BES definition is an important and complex undertaking. The product of this work is fundamental to establishing the applicability of NERC Reliability Standards. The issues identified for attention in Phase 2 of this project warrant careful investigation and as such allowing additional time to properly research and provide for stakeholders to vett them is justified. Specific to the assessment of raising the generator rating threshold from 20 MVA to 75 MVA per unit, we would point out that this needs to be looked at from a different perspective. Industry debates so far have been on the apparent lack of reliability contribution and economic benefits for keeping the threshold at 20 MVA. The former point implies that any negative reliability impact that could be contributed by a generator higher than 20 MVA but lower than 75 MVA could be negligible. Some examples of the standards that the 20-75 MVA units may need to comply with to ensure reliability are: o Voltage and frequency ride through capability o Voltage control (AVR, etc.) o Underfrequency trip setting o Protection relay setting coordination o Data submission for modeling; verification of capability and model A Venn diagram developed by an industry group shows that generators at 20 to 74.99 MVA account for about 13.8% of the total

Organization	Yes or No	Question 11 Comment
		installed capacity in the US. Out of this, 3.0% are currently deemed non-BES whereas the other 10.8% are BES. We do not know how the BES reliability may be affected if these 10.8% generators are no longer deemed BES facilities (after an increase of threshold to 75 MVA) and subject to compliance with NERC standards, including those mentioned above. An assessment from both a positive contribution and a negative impact viewpoints are thus required to aid the determination of the merit of raising the rating threshold. (2) The draft Implementation Plan for the BES definition states "Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition." We are concerned that the stated implementation period may be insufficient time to complete transition plans for newly identified BES Elements and Facilities, where those plans require procurement, installation and commissioning of additional equipment. We believe a period of 24 months may be more appropriate.
Response: 1) The SDT agrees with the commenter that the best opportunity to address the industry concerns associated with the technical aspects of the definition is through Phase 2 of the project. The SDT also agrees with the commenter in that any assessment utilized to determine the correct threshold for generating resources should be accomplished without any preconceived threshold value as a target for justification. The full scope of the assessments will be determined through a joint effort between the SDT and the appropriate NERC Technical Committee. 2) In proposing a 24 month period in the Implementation Plan before the definition is applied in assessing compliance obligations, the SDT considered several activities that may require additional time to complete for an entity to become fully compliant. One of these activities is the development of transition plans in cases where significant issues may have been identified as potentially preventing an entity from meeting the compliance obligations within the 24 month period. These transition plans are to be developed by the Regional Entity and the Registered Entity in a cooperative manner to best address the identified concerns and establish an agreed to mitigation plan which results in full compliance by the Registered Entity.		
Tennessee Valley Authority	Yes	The definition of the BES is referenced in several existing standards and the Statement of Compliance Registry Criteria. TVA is concerned with this revised definition's impact on entity registrations, i.e., how will the revised definition be integrated into the

Organization	Yes or No	Question 11 Comment
		Compliance Registry Criteria. The implementation plan should include how the integration is going to occur. The 24 month period for new facilities that are to become BES elements as a result of this definition is very important to successful implementation of the definition. An period shorter that 24 months would be very problematic for the industry.
Response: Phase 1 of the project, as explained above, is addressing Commission directives established in Order No. 743 within a relatively short time period. The SDT has decided to maintain the status quo with respect to applicability and the technical aspects contained in the ERO Statement of Compliance Registry Criteria as the prudent path to take to ensure a successful conclusion to Phase 1 of the project. The status quo was established in FERC Order No. 693, which states: "…the Commission will rely on the NERC definition of bulk electric system and NERC's registration process to provide as much certainty as possible regarding the applicability to and the responsibility of specific entities to comply with the Reliability Standards in the start-up phase of a mandatory Reliability Standard regime". As the SDT progresses through Phase 2 of the project, it is envisioned that the technical aspects contained in the definition and in the ERO Statement of Compliance Registry will be merged and ultimately incorporated into the definition of the Bulk Electric System. At which time the ERO Statement of Compliance Registry Criteria will be revised to point to the BES definition for the technical aspects in regards to BES Elements. The SDT agrees with the commenter in regards to the implementation time period of 24 months. In proposing a 24 month period in the Implementation Plan before the definition is applied in assessing compliance obligations, the SDT considered several activities that may require additional time to complete for an entity to become fully compliant. One of these activities is the development of transition plans in cases where significant issues may have been identified as potentially preventing an entity from meeting the compliance obligations within the 24 month period. These transition plans are to be developed by the Regional Entity and the Registered Entity in a cooperative manner to best address the identified concerns and establish an agreed to mitigation plan which results in full compliance by the Registered Entity.		
Hydro One Networks Inc.	Yes	o The definition of the Bulk Electric System (BES) is a foundational construct for the North American Electric Reliability Corporation (NERC). FERC Orders 743 and 743-A do not mandate a 100 kV approach. Instead, it states that a 100 kV bright line threshold is one approach to defining the BES. It further states that only "some" 115/138 kV facilities are necessary for the reliable operation of the bulk system. We believe that if one subset issue (such as 20 MVA vs. 75 MVA) of the entire definition, requires more

Organization	Yes or No	Question 11 Comment
		time and resources to arrive at the correct answer, the much larger and more fundamental issue of how to define BES should not have been dismissed without the appropriate analysis before another definition is proposed to be adopted by the ERO. o The proposed definition, in combination with other new and/or modified Reliability Standards such as newly modified and approved TPL Standards will require significant system upgrades with high dollar investments. We are deeply concerned that a) no such assessment has been undertaken by the SDT and/or the ERO and b) the proposed definition of the BES is not based on a technical analysis that will enhance the reliability of the interconnected transmission network. o The NERC as the ERO should at least undertake a cost and incremental reliability benefit analysis for its proposed definition of BES. Furthermore, cost impacts and reliability benefit assessments of the BES definition coupled with other new and modified reliability standards (such as the TPL Standards) must also be undertaken and weighed against the potential benefits, if any, of this or any proposal. Not providing such an assessment but using the 100 kV level as a starting point for the BES definition, gives no assurances of benefits for any stakeholder including respective governmental and regulatory authorities and rate payers in Canada or the USA. o The proposed definition would significantly increase the population of BES elements. Many of the standards requirements for these new elements will introduce administrative burden and operating expenses. This would impose significant costs, costs that ratepayers will have to bear, with little or no gain in reliability benefits for the interconnected transmission system. We suggest that the resulting BES definition must identify incremental reliability benefits by the ERO for the interconnected transmission network based on sound technical analysis to justify the change to those who will pay for any required system upgrades - the ratepayer. o The draft Implementation Plan for the BES definition states “Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition.” We are concerned that the stated implementation period will give insufficient time to complete transition plans for newly identified BES

Organization	Yes or No	Question 11 Comment
		Elements and Facilities, where those plans require approval, procurement, installation and commissioning of additional equipment. We believe a period of 60 months at a minimum is more appropriate. Finally, we believe that the SDT proposed approach for exception criteria is reasonable recognizing that one method/criteria can not be applicable to everyone and every situation within the ERO footprint. However, we believe that there is a huge gap and lack of any transparency on how the exception application will be evaluated and processed. We strongly suggest that the SDT develop a reference or a guidance document as part of the RoP that should provide guidance to Registered Entities, Regional Entities and the ERO on how an exception application should be processed. Else, (a) it will pose a challenge for each of the entities including ERO, and (b) may introduce Regional discretion and be perceived as having no transparency for the registered entities.

Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System including the 100 kV bright-line level. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.

The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to

Organization	Yes or No	Question 11 Comment
		improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. The technical aspects of the definition have remained identical to the current definition and identical to the application of the ERO Statement of Compliance Registry Criteria and therefore do not require a technical justification to support maintaining the status-quo. In proposing a 24 month period in the Implementation Plan before the definition is applied in assessing compliance obligations, the SDT considered several activities that may require additional time to complete for an entity to become fully compliant. One of these activities is the development of transition plans in cases where significant issues may have been identified as potentially preventing an entity from meeting the compliance obligations within the 24 month period. These transition plans are to be developed by the Regional Entity and the Registered Entity in a cooperative manner to best address the identified concerns and establish an agreed to mitigation plan which results in full compliance by the Registered Entity. The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one

Organization	Yes or No	Question 11 Comment
		has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication. Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result ofa sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal. Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or

Organization	Yes or No	Question 11 Comment
disapproved." The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals. Finally, the SDT would point to the draft SAR for Phase 2 of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase 1 of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.		
Western Area Power Administration	Yes	Yes, the definition should also provide clarification on mobile equipment installed to support maintenance or equipment failures. Adding mobile equipment is a common practice for our industry and should be addressed in the definition to bring a general awareness and common understanding of the practice regarding the NERC standards. Recommendation: Add the following Exclusion to BES definition for mobile equipment. Exclude all mobile equipment on stand-by that has not been placed into service as well as all components of mobile equipment that does not meet the inclusion criteria for the primary function of the device being installed (e.g. ,battery bank on mobile transformer installed on radial feed would also be excluded)
Response: The SDT acknowledges the commenter's concern and has determined that the need for an exclusion identifying mobile equipment is not appropriate. The SDT believes that the BES definition is identifying Elements that support the reliable operation of the interconnected transmission grid. This premise implies that the Element is electrically connected to the system and is performing a reliability related service. The SDT believes that the time the mobile equipment is placed in service is when the equipment would be classified as a BES Element and subject to compliance obligations. No change made.		
NESCOE	Yes	NESCOE offers the following additional comments: 1) Phased Approach. While well-intentioned, separating the BES definition project into two separate phases is

Organization	Yes or No	Question 11 Comment
		problematic from both a procedural and substantive perspective. While we recognize that the filing due date is rapidly approaching, the BES definition cannot be considered in a vacuum, divorced from the concerns raised by a number of parties in response to past postings of the BES definition. The issues NERC has identified for consideration during the proposed "Phase 2" are inseparable from the development of the BES definition and should be squarely addressed before a definition is adopted. In particular, the development of criteria for determining what facilities are "necessary for the reliable operation" of the interconnected system cannot be put off for a second phase. Contrary to FERC's direction, NERC's proposal will force ratepayers to incur costs related to compliance with mandates that may or may not be revised through the second phase of the project. The importance of considering and resolving such concerns before adopting a definition is heightened by the proposed two-year implementation requirement. This short implementation period almost guarantees that entities will commit resources shortly after adoption of the definition to ensure compliance within the mandated period. In other words, ratepayers will bear costs related to compliance irrespective of any change resulting from the Phase 2 process or the exception process. Expediency, while understandable given the filing deadline, must be balanced against the risk that a multi-phased approach could lead to significant consumer costs without attendant meaningful reliability benefits. 2) Cost-Benefit Analysis. A cost impact analysis should be performed as part of developing any reliability standard. However, the development of the BES definition has failed to consider the cost impacts of the definition (and its inclusions and exclusions) and weigh these impacts against identified benefits that the definition would achieve. NESCOE stated in its May 21, 2011 comments on the last posting of the BES definition that "any new costs a revised definition imposes - which fall ultimately on consumers - should provide meaningful reliability benefits." A cost-benefit analysis should be integral to the development of a BES definition and, indeed, any reliability standard. This analysis should include a probabilistic risk assessment examining the likelihood of an event and the costs and risks resulting from such event, which should be weighed against the costs of complying with the proposed reliability

Organization	Yes or No	Question 11 Comment
		measures. 3) Technical Justification. In addition to performing a cost-benefit analysis, a technical basis must be provided to justify a proposed reliability standard. However, as we state above, the proposed BES definition does not provide a technical justification for the 100 kV threshold. Nor does it provide a technical justification for the threshold for generation resources or other elements of the definition. As stated above, while well-intentioned and understandable, deferring this technical justification to a later and separate phase of the project is a flawed and potentially costly approach. Providing a technical justification for a reliability standard is a core function of standards development and should be addressed at the forefront of the process rather than relegated to a separate phase largely undertaken after a standard is filed.

Response: 1) The SDT acknowledges the commenter's concerns; however the SDT (and the ERO) has an obligation to respond to the Commission directives established in Order No. 743 within the time frame allotted by the Order. The narrow scope of the directives and the limited timeframe for project completion has prevented the SDT from fully vetting the concerns of the industry as expressed through the development process. To best address the Commission directives and stakeholder concerns, the SDT has opted to separate the project into phases. The revised project plan has been fully endorsed by the NERC Members Representative Committee and the Board of Trustees. Additionally the NERC Standards Committee has committed to the continued development of a revised definition by retaining the project as a high priority project and by dedicating the resources necessary to fully vet the issues raised by stakeholders.

2) The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition

Organization	Yes or No	Question 11 Comment
any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission. 3) The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. The technical aspects of the definition have remained identical to the current definition and identical to the application of the ERO Statement of Compliance Registry Criteria and therefore do not require a technical justification to support maintaining the status-quo.		
ReliabilityFirst	Yes	This definition needs to be clear and easy enough for anyone to pickup, read, understand, apply and arrive at the same conclusion on whether the facility or element is included or excluded. This definition leaves room for continued debate and interpretation. To help make this definition clearer, ReliabilityFirst Staff has provided a redline version of the core definition under a separate cover (file titled "Bulk Electric System definition by RFC Staff 10-4-2011").
Response: The SDT believes that the revised definition of the BES has provided the necessary clarity to allow for consistent application on a continent-wide basis. The issues identified in the commenter's redline (provided following the responses to question 11) have been fully vetted by the SDT and addressed in the responses to the comments for the applicable question related to the specific issue.		
Ontario Power Generation Inc.	Yes	Further to comments submitted in Question #1, OPG disagrees in general with proceeding to implement a 100 kV brightline definition in the absence of a properly quantified cost/benefit analysis. Entities are being asked to incur a high cost for no demonstrated benefit in wide-area reliability.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has		

Organization	Yes or No	Question 11 Comment
pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.		
Central Hudson Gas and Electric Corporation	Yes	Due to the movement to a phased BES definition development process and assuming the definition is approved as proposed, there is an urgent need for NERC to provide clear guidance to Registered Entities regarding how to proceed with facilities and address changes to the NERC Compliance Registry registration obligations brought in/on by the application of the new definition. The problem stems from a likely scenario whereby the affected Registered Entities may be faced with an Implementation Plan and an Exception Request Procedure which must be completed prior to the completion of the Phase 2 definition development process. If that is the case, many Registered Entities will be confronted with either (1) spending large amounts of human and financial resources, not yet acquired, to address facilities/procedures necessary to address possible new compliance obligations only to find their efforts rendered unnecessary by the results produced in Phase 2 or, (2) waiting until the results of Phase 2 are provided and risking being found non-compliant and subject to substantial penalties in the future. Neither option can be viewed as a desirable, or for that matter, an acceptable position to be placed in.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has		

Organization	Yes or No	Question 11 Comment
pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Therefore, the SDT believes that best opportunity to address cost and resources issues will be through the development of Regional transition plans once the definition has been approved by the Commission. The SDT recommends that the commenter pursue achieving full compliance with the revised definition in the appropriate time period (see Implementation Plan) while utilizing the Rules of Procedure exception process to specific exceptions from the BES definition.		
Springfield Utility Board	Yes	When submitting BES Definition comments, SUB would suggest a “not-applicable”, “no-impact” or “abstain” option in addition to “yes” or “no”. In some cases, the draft language has no impact on an entity’s system, yet that entity’s selection of “yes” or “no” may imply agreement or disagreement rather than expressing lack of applicability. This could skew the perception of agreement or disagreement, and create a potential issue for those who are directly impacted by the changes.
Response: The SDT understands the commenter’s concern; however the formatting of the comment form (including the electronic version) is governed by the ERO and beyond the control of the SDT. Your comment will be forwarded to the NERC Standards staff for consideration.		
Mission Valley Power	Yes	Mission Valley Power - In order to help meet the fast approaching target date, Mission Valley Power will be voting affirmative in this ballot, with the hope these comments will be addressed in Phase 2. If the ballot should fail, please address these comments in this phase. Thanks to the team for their good work.
Response: The SDT acknowledges and appreciates the continued support of the project. The SDT will consider all recommendations for modifications to the technical aspects of the definition for project inclusion at the appropriate time during Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing		

Organization	Yes or No	Question 11 Comment
values.		
Consolidated Edison Co. of NY, Inc.	Yes	Con Edison shares the concerns raised by the State of New York Department of Public Service (NYPSC) in its September 12, 2011 letter to NERC Chairman Anderson. The NYPSC expressed concern that the proposed BES Definition "would impose significant costs, costs that New York ratepayers will be expected to bear, with little or no increase in reliability benefits." The BES definition is being revised without an assessment of costs or benefits. The SDT is encouraged to work with NERC Staff to perform such an assessment prior to providing the revised BES definition to the NERC Board. Regional Entities share this concern with cost effectiveness. In NPCC, the Board of Directors directed NPCC Staff to develop a methodology to assess the cost and benefit of Standards. This NPCC Cost Effectiveness Analysis Procedure (CEAP) establishes a process to address those concerns. The CEAP introduces two assessments of the estimated industry-wide costs of requirements into that Standard's development process. The procedure adds supporting information and background for the NPCC stakeholders, ballot body and the NPCC Board of Directors. Moreover, during a 2010 FERC technical conference the Commission recognized that "reliability does not come without cost." As a result, significant interest was expressed in development of a process to identify the costs for draft reliability Standards and the ability of the proposed standards to achieve the reliability objective(s) sought in a cost effective manner. We understand that it is a NERC priority to define adequate level of reliability and use it as the basis for determining the cost effectiveness of a proposed rule. While this has not yet been finalized, NERC could use this proposed standard as a test case for determining the relationship between costs and benefits.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES		

Organization	Yes or No	Question 11 Comment
definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.		
Northern Wasco County PUD	Yes	In order to help meet the fast approaching target date, Northern Wasco County PUD will be voting affirmative in this ballot, with the hope these comments will be addressed in Phase 2. If the ballot should fail, please address these comments in this phase. Thanks to the team for their good work.
Tillamook PUD	Yes	If Tillamook PUD had signed up to ballot in time, we would be voting yes with the hope that these comments would be addressed in Phase 2. If the ballot fails, please address these comments in this phase.
Response: The SDT acknowledges and appreciates the continued support of the project. The SDT will consider all recommendations for modifications to the technical aspects of the definition for project inclusion at the appropriate time during Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
American Electric Power	Yes	There needs to be some clarification regarding the default status of an asset, as well as the order and priority of the inclusion and exclusion classifications within the definition. First, prior to any evaluation by virtue of the definition, is an asset by default excluded from the BES, or rather, it is included? In addition, once the definition is used to evaluate an asset which has both inclusion attributes and exclusion attributes, which of the two classifications has greater weight? For example, if an asset is first included by the BES definition inclusion criteria can it then be excluded by BES

Organization	Yes or No	Question 11 Comment
		definition exclusion criteria? Or instead, if an asset is first excluded by BES definition exclusion criteria can it then be included by the BES definition inclusion criteria? AEP's recommendation is that an asset, by default, not be considered part of the BES. Next, the asset would be evaluated by the inclusion criteria as specified within the definition. Next, any asset explicitly included by the inclusion criteria is then evaluated using the exclusion criteria. Once the entity has made their determination based on the definition, exception requests could then be made to include or exclude assets as appropriate. We believe our interpretation is what is implied by the draft definition, however, this needs to be explicitly communicated within the definition itself.

Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be

Organization	Yes or No	Question 11 Comment
applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
City of St. George	Yes	The small utility exclusion issues discussed in the first draft of the documents are not included (draft 1 proposed E4) nor addressed in the draft 2 documentation. Under the present definition many small utilities with local generation to serve its own local load will be required to register for additional functions, or at a minimum go through a long, expensive, time consuming process to get an individual exclusion from the BES. The topics that have been postponed to Phase 2 of the project are critical to and will have a direct impact to many utilities. Phase 2 needs to have specific shorter than normal timelines established, similar to what Phase 1 has had. The present definition and standards in general makes little or no consideration for the actual impact of an entity or facility on the bulk system. As such small utilities with a few miles of 115 kV or 138 kV lines and some generation are required to meet the same requirements as large utilities with 100's or 1,000's of miles of 345 kV or 500 kV lines and that operate very large generation plants of several hundred MVA of capacity. All utilities support reliability improvement, but the requirements and associated costs need to match their actual impact to the overall system.
Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., potential small utility exclusion) of the BES definition. However, it is important to emphasize the fact that the SDT is developing a definition to identify the Elements that support the reliable operation of the interconnected transmission network regardless of ownership or operational responsibility. Small utility issues are very similar to the issues raised through the GOTO project and are best addressed through the applicability of the individual reliability standards, not through the definition of the BES.		

Organization	Yes or No	Question 11 Comment
No change made.		
ISO New England Inc	Yes	There are a number of possible scenarios where an element falls under both an inclusion and exclusion. The definition is unclear as to whether or not this would have the element be BES or not. During the webinar an example was given about a static shunt device meeting the requirements of I5, but is part of a radial network. The response during the webinar was that this would be excluded. If this is correct, it means that an exclusion takes precedence over an inclusion. Is this always the case? This needs to be clarified and stated somewhere in this document. To be consistent with regard to the terms "Operated at 100 kV" and "Connected at 100 kV ", we suggest that reference to generators should state, "Connected at a transmission element operated at 100 kV". This will avoid confusion in cases where a generator is connected to a transmission element rated at 100 kV but operated at a lower voltage.
Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.		

Organization	Yes or No	Question 11 Comment
Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. The BES definition refers to operating voltage (as emphasized in FERC Order No. 743-A) and the SDT does not feel that the language "connected at a voltage of 100kV or above" creates any confusion on the intent of the Inclusion. No change made.		
NBPT	Yes	o When an exclusion and inclusion principles overlap which takes precedence? For example I5 may be excluded if in a LN (E3) o The Local Network Exclusion criterion does not appear to consider voltage support and the effects of shifting of load or impacts due to a loss of load. The 75 MW generation threshold has no technical basis. The LN exclusion should allow for studies demonstrating no through flow benefit regardless if there is. o 75 MW Generation has no technical justification. o Black Start resources should not be included in all GO/GOP standards except for those standards specific to black start units.
Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will		

Organization	Yes or No	Question 11 Comment
identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis. Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as: "Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. " Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy. Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES. Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES. Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1. Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2. Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. The local network exclusion has established a bright-line with specific characteristics that must be met to be eligible for exclusion.		

Organization	Yes or No	Question 11 Comment
Exclusion E3b states: "Power flows only into the LN and the LN does not transfer energy originating outside the LN for delivery through the LN". This characteristic applies under all operating conditions including any variations in network load. It is not clear to the SDT what the commenter is referring to in regards to voltage support. Exclusion E3 addresses transmission Elements and does not exclude Real Power or Reactive Power resources from the BES. The concept of the 75 MVA threshold is based on the generation inclusion criteria for plant/facility arrangements by carrying through the concept of the reliability impact that the aggregated loss of 75 MVA or greater would have on the overall reliability of the interconnected transmission grid. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. The SDT has determined that Blackstart Resources serve a reliability benefit to the interconnected transmission grid and therefore have been included in the scope of the BES. This is consistent with current practice and specifically with the registration requirements that identify the owner, operators, and users of Blackstart Resources be registered as Generator Owner/Generator Operator. Specific concerns with the applicability of individual standards should be addressed through the Standard Development Process for the individual Reliability Standards in question.		
Texas Reliability Entity	Yes	(1) It is unclear exactly what is intended by "non-retail generation" in Exclusion E1(c). We suggest that the term be explained or defined in the BES definition or in a collateral document. This term does not have a commonly understood unambiguous meaning in our Region. (2) Phase 2 has to be completed or explicitly defined/scoped to fully capture all of the components necessary for reliable operation of the BES.

Organization	Yes or No	Question 11 Comment
Response: (1) Non-retail generation is the generation on the system (supply) side of the retail meter. (2) The supplemental SAR for Phase 2 of the project will be posted for industry comment at which time the SDT will be accepting recommendations for specific issues to be addressed by the SDT during phase 2 of the project.		
New York State Dept of Public Service	Yes	o Per NERC's obligations under the Energy Power Act of 2005 to provide FERC technical advice, no technical justification has been provided for basing the BES definition on the 100 kV and MVA thresholds. o No cost analysis on either the reliability benefits of the overall definition or on the implementation plan has been performed to determine whether the likely high cost of the definition to ratepayers is justified. o The definition of the BES should be the driver for the application of all other NERC reliability standards and criteria. The definition uses the Statement of Compliance Registry Criteria as a driver of the definition when the reverse should be taking place; contents of the Statement should be driven by the BES definition.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the definition has not been altered in regards to the bright-line or the generation thresholds and therefore does not require the development of technical justification to maintain the status quo. SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission		

Organization	Yes or No	Question 11 Comment
grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission. The SDT has revised the language in Inclusion I2 to eliminate the circular reference to the ERO Statement of Compliance Registry Criteria. Inclusion I2 has been revised to read: **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.		
Hydro-Quebec TransEnergie	Yes	In the Implementation plan, it is given only 24 months for compliance after applicable regulatory approval. Considering the possibility that a proposed transition plan may involve commissioning of long term projects, a provision for such situation should be made with longer delay.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. With that being said, the SDT believes that an implementation time period of 24 months is sufficient time to address the development of regional transition plans, address any necessary registration changes, file for exceptions through the Rules of Procedure exception process and address any required training. The SDT also acknowledges that the potential exists for extenuating circumstances that will need to be addressed through the regional transition plans.		
Independent Electricity System Operator	Yes	We wish to also express our support for phased approach proposed in the draft supplemental SAR. Development of the revised BES definition is an important and

Organization	Yes or No	Question 11 Comment
		complex undertaking. The product of this work is fundamental to establishing the applicability of NERC Reliability Standards. The issues identified for attention in Phase 2 of this project warrant careful investigation and as such allowing additional time to properly research and stakeholder them is justified. The draft Implementation Plan for the BES definition sates "Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition." We are concerned that the stated implementation period may be insufficient time to (1) prepare and file exception requests and have these assessed; and (2) in cases where these exception requests are not approved, to develop and complete transition plans for newly identified BES Elements and Facilities, particularly where those plans require major investments for the procurement, installation and commissioning of additional equipment. We therefore propose the following alternative wording for the Implementation Plan: "Compliance obligations for elements included by the definition shall be evaluated and an implementation schedule established within 24 months." Throughout the document various phrases are used to describe generating units/resource, viz. "generation resources", "generating resources", "generating unit" and "power producing resources". Please review these to identify and address any possible inconsistencies.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. With that being said, the SDT believes that an implementation time period of 24 months is sufficient time to address the development of regional transition plans,		

Organization	Yes or No	Question 11 Comment
address any necessary registration changes, file for exceptions through the Rules of Procedure exception process and address any required training. The SDT also acknowledges that the potential exists for extenuating circumstances that will need to be addressed through the regional transition plans. The SDT has reviewed the applicable documents for inconsistencies related to the terms generating units/resource, viz. “generation resources”, “generating resources”, “generating unit” and “power producing resources”. The SDT has made the appropriate modifications to address any issues resulting from the inconsistencies.		
Central Lincoln	Yes	We note that the SAR for Phase 2, like that for Phase 1, does not include all entity types. We see no reason to maintain dual definitions for the different entity types, and the resulting confusion. In order to help meet the fast approaching January target date, Central Lincoln will be voting affirmative in this ballot, with the hope these comments will be addressed in Phase 2. If the ballot should fail, please address these comments in this phase. Thanks to the team for their good work.
Response: The draft SAR developed for Phase 2 of Project 2010-17 Definition of the Bulk Electric System, similar to the SAR for Phase 1 has purposefully omitted the Interchange Authority and the Purchase Selling Entity functional entities because these entities do not own or operate BES Elements. This conclusion does not necessitate the need for dual definitions; the definition of the BES does not impact the functional responsibilities of these entities. The SDT acknowledges and appreciates the continued support of the project. The SDT will consider all recommendations for modifications to the technical aspects of the definition for project inclusion at the appropriate time during Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.		
Utility Services, Inc.	Yes	Utility Services would like to raise the question of whether SCRC III.3.d (the so-called "Generator Materiality" clause) is incorporated within the BES Inclusion Designations. One theory suggests that given that I2 is designed to deal with III.3.a and III.3.b and I3 reflects the need to incorporate black start generation; then generators under the materiality clause are not identified with the inclusion criteria. However, the second theory suggests that resources identifed through I2 reflect the entire III.c.1-4 language

Organization	Yes or No	Question 11 Comment
		of the SCRC, then the generators in the material clause are captured under I2. But if this is the case, then I3 is redundant to I2 and does not need to separately addressed.
Response: The SDT has revised the language in Inclusion I2 to clearly identify the applicability of generating resources. The revised language is as follows: **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.		
FirstEnergy Corp.	Yes	FE supports the SDT's phased project approach which was well articulated in the NERC BES Definition Fact Sheet
LCRA Transmission Services Corporation	Yes	LCRA TSC supports the direction the standards drafting team taking with this project on the BES Definition and encourages further clarification as noted in these comments for proper application.
Response: The SDT acknowledges and appreciates the continued support of the project.		
National Grid	Yes	The proposed implementation period in the draft definition is too short. The new BES definition will likely result in increased operational costs during the implementation period that will ultimately be borne by customers. Implicit in the Commission's directive to change the BES definition is the Commission's determination that the benefits of this change, including consistency among the regions, outweigh the ratepayer impacts. However, National Grid remains concerned that the ratepayer impacts have not been fully taken into account. The implementation period is a tool that can allow NERC to meet the Commission's directive while softening any resulting ratepayer impacts. Implementation can and should be staged in order to mitigate and even out rate increases. National Grid suggests that the implementation period be flexible to allow entities who anticipate that large and/or expensive upgrades to the BES will be necessary to meet compliance can submit an alternate implementation plan to spread compliance and the associated rate changes over a longer period; we

Organization	Yes or No	Question 11 Comment
		would suggest a minimum of 7 years. This time period was also recognized as a reasonable implementation time period in the recent TPL-001-2 for those portions of the standard that would also result in plans that would require siting, permitting and construction activities. This BES definition is likely to have similar impacts for some entities and allowing for an implementation timeline with the definition change enables achievement of the goals while recognizing the realities of constructing facilities in today's environment.
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. With that being said, the SDT believes that an implementation time period of 24 months is sufficient time to address the development of regional transition plans, address any necessary registration changes, file for exceptions through the Rules of Procedure exception process and address any required training. The SDT also acknowledges that the potential exists for extenuating circumstances that will need to be addressed through the regional transition plans. In proposing a 24 month period in the Implementation Plan before the definition is applied in assessing compliance obligations, the SDT considered several activities that may require additional time to complete for an entity to become fully compliant. One of these activities is the development of transition plans in cases where significant issues may have been identified as potentially preventing an entity from meeting the compliance obligations within the 24 month period. These transition plans are to be developed by the Regional Entity and the Registered Entity in a cooperative manner to best address the identified concerns and establish an agreed to mitigation plan which results in full compliance by the Registered Entity.		
Rochester Gas and Electric	Yes	If the definition and inclusions and exclusions are not sufficiently specific and clear,

Organization	Yes or No	Question 11 Comment
and New York State Electric and Gas		stakeholders will flood NERC and RROs with interpretation requests and/or apply the definition and its inclusions or exclusions incorrectly. Explanatory figures with one-line diagrams should be developed and shared to illustrate the system configurations included and excluded in this BES Definition. This would be very helpful for definition clarity. This should be done as part of an "Application Guide" for the BES Definition - this has precedence in CIP-002 version 5. Attached is a sample set of one-line diagrams with interpretations based upon the inclusions and exclusions developed by Northeast Power Coordinating Council members for discussion purposes as an example, but note that there is not a uniform agreement on these diagrams based on the BES Definition as written, due to lack of clarity.
Response: The development of a guidance document which contains generic diagrams is a portion of the overall project that the SDT feels is necessary to ensure the consistent application of the BES definition going forward. Therefore the SDT has determined that such a document will be developed during Phase 2 of the project. The SDT thanks Rochester for the appended drawings but wishes to point out that the SDT does not agree with some of the depictions shown on the drawings thus pointing out the need for an eventual guidance document.		
Central Maine Power Company	Yes	If the definition and inclusions and exclusions are not sufficiently specific and clear, stakeholders will flood NERC and RROs with interpretation requests and/or apply the definition and its inclusions or exclusions incorrectly. Explanatory figures with one-line diagrams should be developed and shared to illustrate the system configurations included and excluded in a BES Definition. This would be very helpful for definition clarity. This should be done as part of an "Application Guide" for the BES Definition - there is precedence for an "Application Guide" with graphical support in CIP-002 version 5. A sample set of one-line diagrams with interpretations based upon the inclusions and exclusions developed by Northeast Power Coordinating Council members for discussion purposes is available as an example, but note that there is not a uniform agreement on these diagrams based on the BES Definition as written, due to lack of clarity.

Organization	Yes or No	Question 11 Comment
Nebraska Public Power District	Yes	Regarding the Local Network: Can there be some additional technical documents or examples provided for the most common configurations? The LN document is a good document to provide guidance, however the supply of common configuration examples would be very helpful in determining LN applicability. Examples where technical document with examples would be helpful: 1. If a breaker and a half source substation provides two parallel 115 kV lines feeding a load only substation from separate breaker and a half legs at the source substation, would the two parallel lines feeding the load be a LN distribution network feed since they are from the same source substation? 2. if there is a radial feed from a ring bus or a breaker and a half configuration to a radial load on a single line can the portion of the ring bus or breaker and a half bus between the line breakers and the breakers themselves at the source substation be excluded from the BES? 3. Can some legs of a 115kV breaker and a half substation be disgnated BES and the other legs be non BES depending on how the BES lines and loads tie in to the breaker and half legs? 4. In determining if elements are BES is there any consideration to fault locations and if these faults would interrupt BES flow on ring bus or breaker and a half configurations to help determine what is BES? If so, how many contingencies would be considered to interrupt BES flow?
Response: The development of a guidance document which contains generic diagrams is a portion of the overall project that the SDT feels is necessary to ensure the consistent application of the BES definition going forward. Therefore the SDT has determined that such a document will be developed during Phase 2 of the project.		
Ameren	Yes	a) We believe this revised definition is an improvement over the previous posting, a step in the right direction. b) The definition of the BES is referenced in several existing standards and the Statement of Compliance Registry Criteria. Our concern is how this revised definition will impact entity registration, i.e., how will the revised definition be integrated into the Compliance Registry Criteria. The implementation plan should include how the integration is going to occur. The Rules of Procedure exception process should be further defined or referenced in this definition.

Organization	Yes or No	Question 11 Comment
		c) See Question 1 response: The general concept is sound, but the Inclusion and Exclusion sections create so many circular references it is virtually impossible to take a definitive stance on whether an asset is included or excluded to the BES definition. Please revise the inclusion and exclusion criteria to give pinpointed statements that are final and do not reference other criteria, that then again reference other criteria
Response: a) The SDT acknowledges and appreciates the continued support of the project. b) The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. The BES definition will be utilized in conjunction with the ERO Statement of Compliance Registry Criteria to determine how entities will be registered. As the SDT progresses through phase 2 of the project, consideration will be given to establish a definition that will eventually be the definitive document to determine registration requirements. The Rules of Procedure exception process is referenced in the current draft version of the BES definition in a note which states: "Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process". c) The SDT has made several revisions that the address the clarity issues raised by commenter's. For a detailed response concerning the specific clarifications made by the SDT, see the individual responses for the appropriate question. The application of the bright-line definition of the BES is explained in the detail in the Summary Consideration at the beginning of this question.		
MEAG Power	Yes	The definition of the BES is referenced in several existing standards and the Statement of Compliance Registry Criteria. We are concerned how this revised definition will impact entity registration, i.e., how will the revised definition be integrated into the Compliance Registry Criteria. The implementation plan should include how the integration is going to occur.

Organization	Yes or No	Question 11 Comment
Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. The BES definition will be utilized in conjunction with the ERO Statement of Compliance Registry Criteria to determine how entities will be registered. As the SDT progresses through phase 2 of the project, consideration will be given to establish a definition that will eventually be the definitive document to determine registration requirements. The current Implementation Plan is determining the effective dates of the revised definition and the extended time period for meeting compliance obligations. The revised definition and the current ERO Statement of Compliance Registry Criteria will continue to be utilized in the same manner as today for registration determinations. In proposing a 24 month period in the Implementation Plan before the definition is applied in assessing compliance obligations, the SDT considered several activities that may require additional time to complete for an entity to become fully compliant. One of these activities is the development of transition plans in cases where significant issues may have been identified as potentially preventing an entity from meeting the compliance obligations within the 24 month period. These transition plans are to be developed by the Regional Entity and the Registered Entity in a cooperative manner to best address the identified concerns and establish an agreed to mitigation plan which results in full compliance by the Registered Entity.		
Redding Electric Utility	Yes	
City of Redding	Yes	Redding is concerned that phase 2 will not produce significant rules or criteria that further define the BES; the desire to dedicate adaquate resourses is currently high since FERC has a looming deadline upon NERC, however without deadlines Redding believes that NERC will find it difficult to find the expertise or desire to finish the Project.
Response: The NERC Standards Committee (SC) has approved Phase 2 of Project 2010-17 Definition of the Bulk Electric System as a 'high priority' project. Additionally, the SC has retained the existing SDT and committed to providing the necessary resources through the NERC Technical Committees in providing analysis of technical issues to be addressed in Phase 2 of the project. Furthermore, the		

Organization	Yes or No	Question 11 Comment
SDT will be developing a project schedule for Phase 2, subject to approval by the SC, which will identify the appropriate deadlines throughout the project.		
Indeck Energy Services	Yes	As acknowledged in the response to Question 12 comments on the previous BES definition, the BES definition is expansive compared to the definition of the BPS in the FPA Section 215. The inclusion of the limited Exclusions is an attempt to remedy the situation. However, the Exclusions need to include a fifth one that if, based on studies or other assessments, it can be shown that any tranmission or generator element otherwise identified as part of the BES is not important to the reliability of the BPS, then that element should be excluded from the mandatory standards program. There has never been a study to show that elements, such as a 20 MW wind farm, 60 MW merchant generator (which operates infrequently in the depressed market) in a large BA (eg NYISO) or a radial transmission line connecting a small generator are important to the reliability of the BPS. They are covered by the mandatory standards program through the registration criteria. The BES Definition is the opportunity to permit an entity to demonstrate that an element is unimportant to reliability of the BPS. The SDT has identified a small subset of elements that it is willing to exclude. By their very nature, these exclusions dim the bright line that is the stated goal of this project. However, the SDT's foresight seems limited in its selections. Analytical studies are used to evaluate contingencies that could lead to the Big Three (cascading outages, instability or voltage collapse). Such a study showing that a transmission or generation element is bounded by the N-1 or N-2 contingency would exclude it from the BES definition. For example, in a BA with a NERC definition Reportable Disturbance of approximately 400 MW (eg NYISO), a 20 MW wind farm, 60 MW merchant generator or numerous other smaller facilities would be bounded by larger contingencies. It would take more than six 60 MW merchant generators with close location and common mode failure to even be a Reportable Disturbance, much less become the N-1 contingency for the Big Three. Exclusion E5 should be "E5 - Any facility that can be demonstrated to the Regional Entity by analytical study or other assessment to be unimportant to the reliability of the BPS (with periodic reports by

Organization	Yes or No	Question 11 Comment
		the Regional Entity to NERC of any such assessments)."
Response: The concerns of the commenter are addressed by the implementation of the Rules of Procedure exception process, which establishes the exclusion methods described by the commenter. The commenter's suggested language leaves Regional discretion in the process, which is a cited concern requiring elimination by the Commission, in the Orders No. 743 and 743-A. The SDT has provided a reference to the Rules of Procedure exception process in the definition with the following language: "Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process."		
Kootenai Electric Cooperative Michigan Public Power Agency Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperatve (CEC) Clearwater Power Company (CPC) Snohomish County PUD Consumer's Power Inc. Douglas Electric Cooperative (DEC) Fall River Rural Electric Cooperative (FALL) Lane Electric Cooperative	No	KEC extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. KEC strongly supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, KEC is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that KEC specifically supports the changes made by the SDT in the "Effective Date" provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. KEC supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to

Organization	Yes or No	Question 11 Comment
(LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC)		come into compliance with newly-applicable Reliability Standards. KEC also supports the 24-month transition period for the reasons laid out by the SDT.
Response: The SDT acknowledges and appreciates the continued support of the project.		
PacifiCorp	No	It is absolutely imperative that phase II continue as proposed by the STD. If phase II was not proposed PacifiCorp would vote no on this proposal.
Response: Phase 2 will start as soon as Phase 1 is completed and the SDT resources are freed up. .		
Farmington Electric Utility System	No	
Portland General Electric Company	No	

Organization	Yes or No	Question 11 Comment
City of Austin dba Austin Energy	No	
Georgia System Operations Corporation	No	
Kansas City Power and Light Company	No	
Oncor Electric Delivery Company LLC	No	
Memphis Light, Gas and Water Division	No	We appreciate the work the drafting team has done in preparing this document.
Harney Electric Cooperative, Inc.	No	
Cowlitz County PUD	No	Cowlitz appreciates the opportunity to comment, and the hard work of the SDT.
PSEG Services Corp	No	
Massachusetts Department of Public Utilities	No	
Manitoba Hydro	No	
Long Island Power Authority	No	
The Dow Chemical Company	No	

Organization	Yes or No	Question 11 Comment
Puget Sound Energy	No	
NV Energy	No	
Z Global Engineering and Energy Solutions	No	
Consumers Energy	No	
City of Anaheim	No	
Chevron U.S.A. Inc.	No	
Metropolitan Water District of Southern California	No	
Duke Energy	No	
Idaho Falls Power	No	
Exelon	No	
Texas Industrial Energy Consumers	No	
Tri-State GandT	No	
ATC LLC	No	
Tacoma Power	No	Tacoma Power does not have any other concerns at this time. Thank you for consideration of our comments.

Organization	Yes or No	Question 11 Comment
Arizona Public Service Company	No	
Tri-State Generation and Transmission Assn., Inc. Energy Management	No	
Electricity Consumers Resource Council (ELCON)	No	
ACES Power Marketing Standards Collaborators	No	
Bonneville Power Administration	No	
SERC Planning Standards Subcommittee	No	The comments expressed herein represent a consensus of the views of the above-named members of the SERC EC Planning Standards Subcommittee only and should not be construed as the position of SERC Reliability Corporation, its board, or its officers"
NERC Staff Technical Review	No	
BGE	No	No comment.
Response: Thank you for your support.		

RFC Suggested changes to definition:

Bulk Electric System (BES): Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. ~~This does not include facilities used in the local distribution of electric energy.~~ The BES includes:

~~**Inclusions:**~~

- I1 - Transformers with primary and secondary terminals operated at 100 kV or higher. ~~unless excluded under Exclusion E1 or E3~~for local distribution or retail customers~~.~~
- I2 - Generating resources as described in the ERO Statement of Compliance Registry Criteria including the generator terminals through the high-side of the step-up transformer(s), connected at a voltage of 100 kV or above.
- I3 - Blackstart Resources and associated designated ~~blackstart~~ Cranking Paths operated at 100 kV or higher, identified in the Transmission Operator's restoration plan. ~~regardless of voltage level.~~
- ~~I4 - Dispersed power producing resources as described in the ERO Statement of Compliance Registry Criteria utilizing a system designed primarily for aggregating capacity, connected at common point at a voltage of 100 kV or above.~~
- **I4~~5~~** –Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in ~~Inclusion~~ I1.

This definition does not include facilities used in the local distribution of electric energy or retail customers, which are:~~-~~

~~**Exclusions:**~~

- E1 - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher from a single transmission source originating with a single~~n~~ automatic interruption device and:
    a) Only serves Load. Or,
    b) Only includes generation resources not identified in ~~Inclusion~~ I3, with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,
    c) Where the radial system serves Load and includes generation resources, not identified in ~~Inclusion~~ I3,~~-~~ with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

  Note - A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

- E2 - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if:
  - (i) the net capacity provided to the BES does not exceed 75 MVA, and
  - (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.
- E3 - Local Network (LN): A group of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the interconnected system. LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The LN is characterized by all of the following:

  a) Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in ~~Inclusion~~ I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating);
  b) Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN; and;
  c) Not part of a Flowgate or transfer path: The LN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
- **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

Pacificorp additional comments:

5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

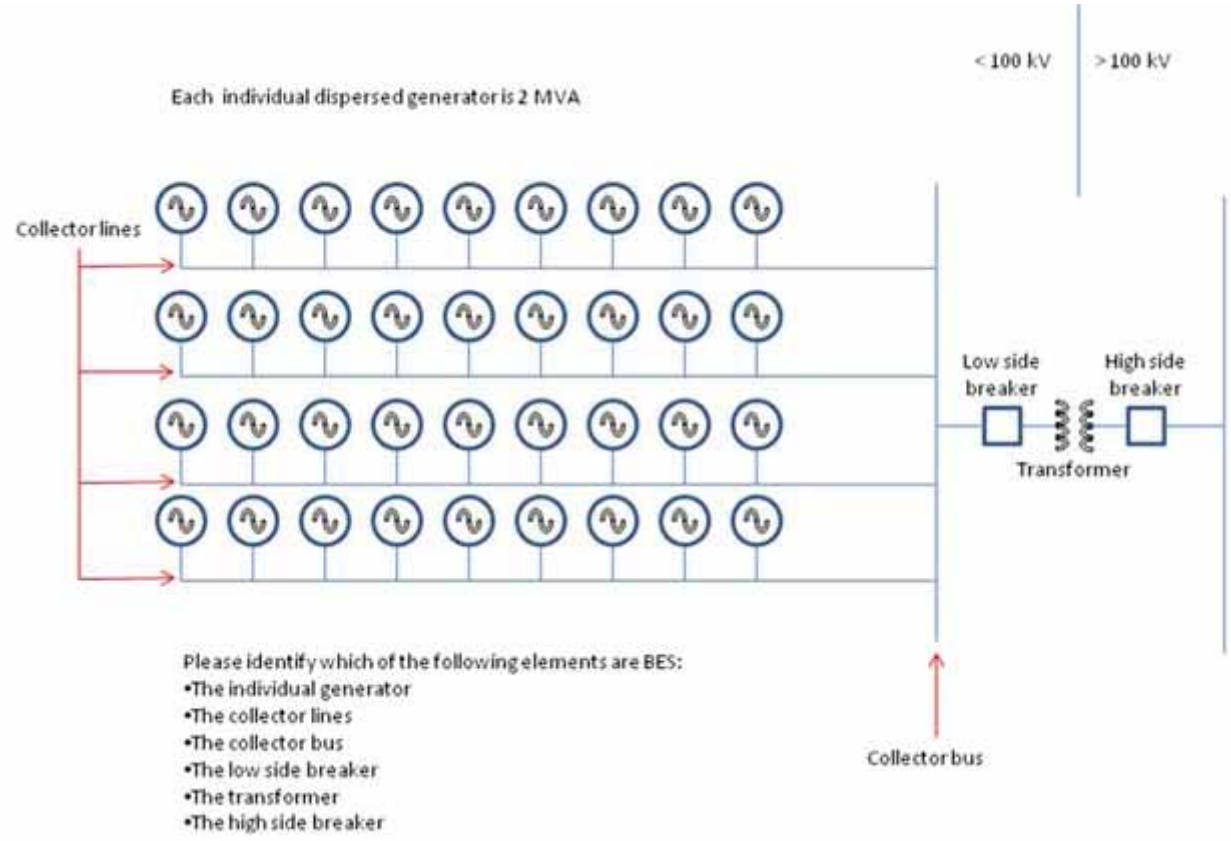
Yes:

No: X

Comments: Setting a dispersed power producing resource limit to 75 MVA at a common point discriminates against single generator owners who own generators between 20 MVA and 75 MVA (inclusion I1), typically connected at a common point and requires such owners to be subject to additional standards that dispersed power producing owners are not required.

However, even with this concern, PacifiCorp supports the entire BES definition in its current form based on the timeframe under which the SDT is operating and with an emphasis based on a phase II SAR to address PacifiCorp's objections regarding generation levels.

Under the attached scenario, please identify which elements would be considered BES:


< 100 kV
> 100 kV
Each individual dispersed generator is 2 MVA
Collector lines
Low side breaker
High side breaker
Transformer
Collector bus
Please identify which of the following elements are BES:
•The individual generator
•The collector lines
•The collector bus
•The low side breaker
•The transformer
•The high side breaker

Rochester Diagrams: These diagrams were supplied by Rochester as examples and do not reflect the SDT's opinion of what is and isn't a BES Element.

Figure 1 (Inclusion I1):

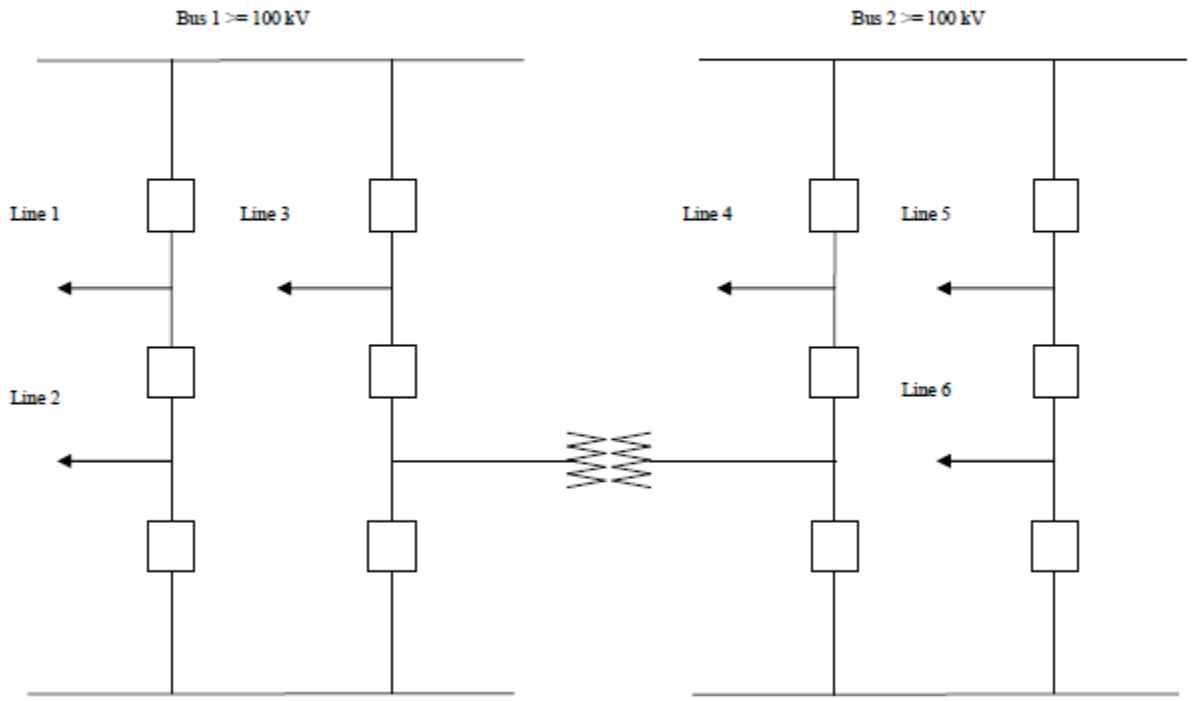


Figure 2 (Inclusion I1): **Non-BES in Red (Exclusions E1a, E1b, E1c)**

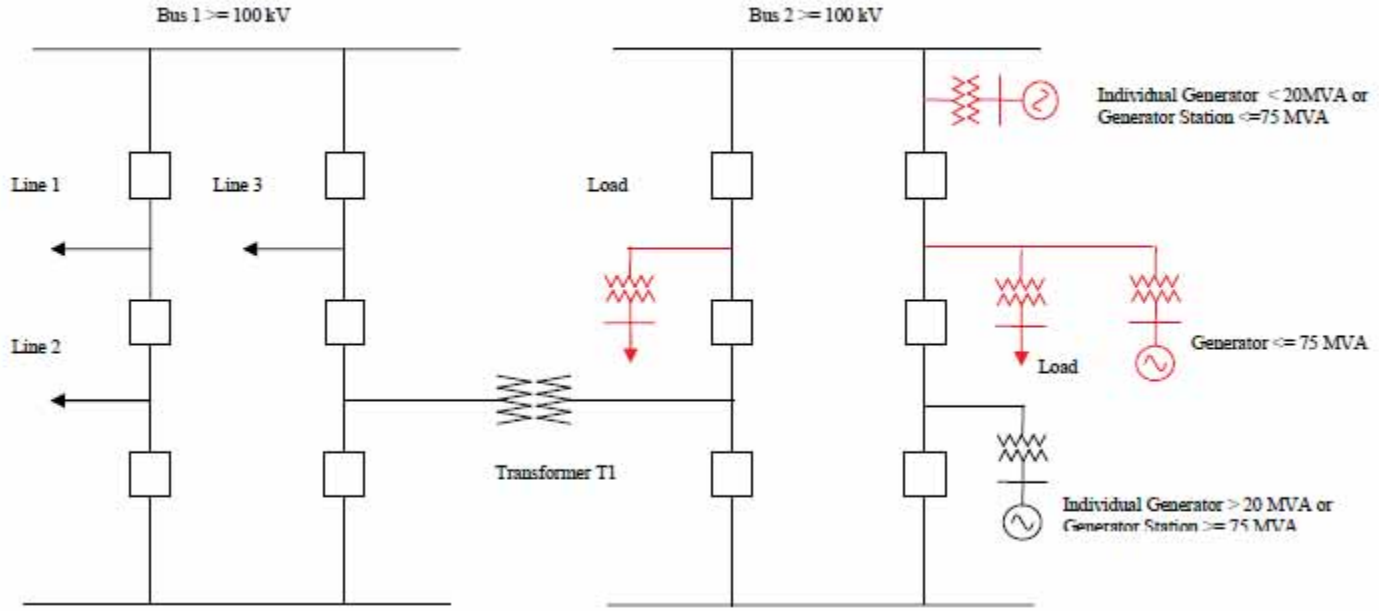


Figure 3 (Inclusion I2): **Non-BES in Red**

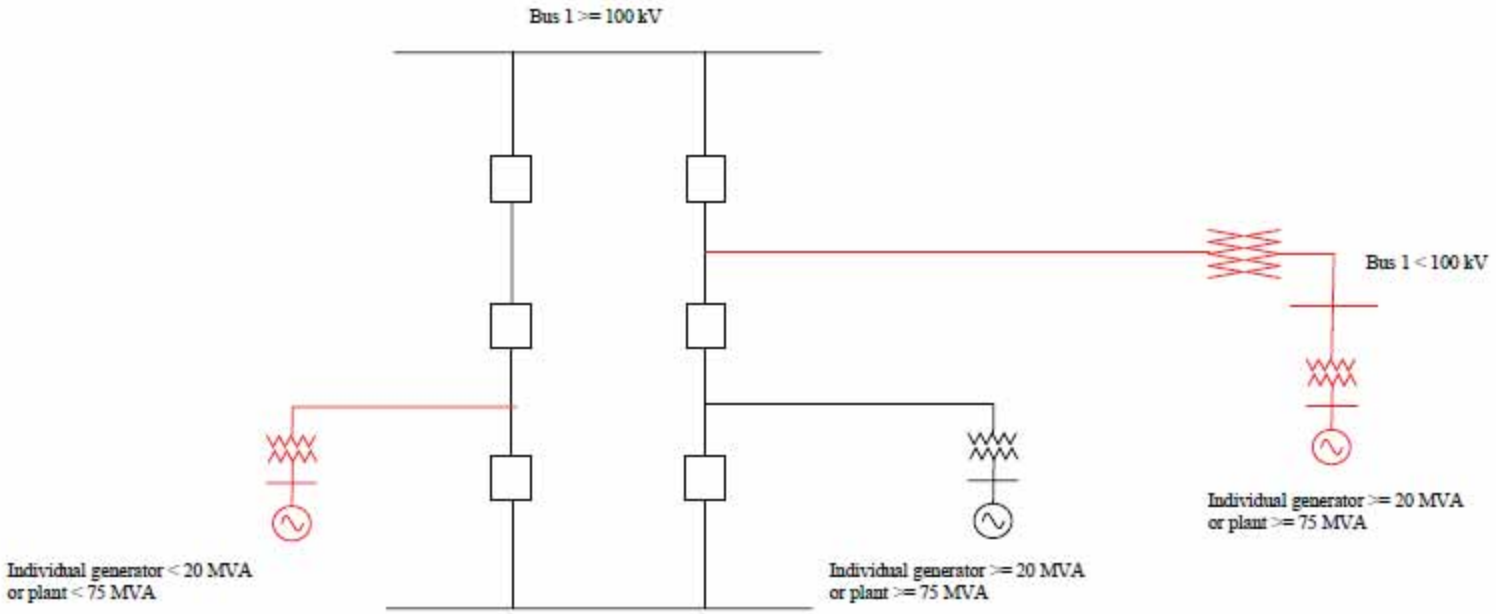


Figure 4 (Inclusion I3):Non-BES in Red

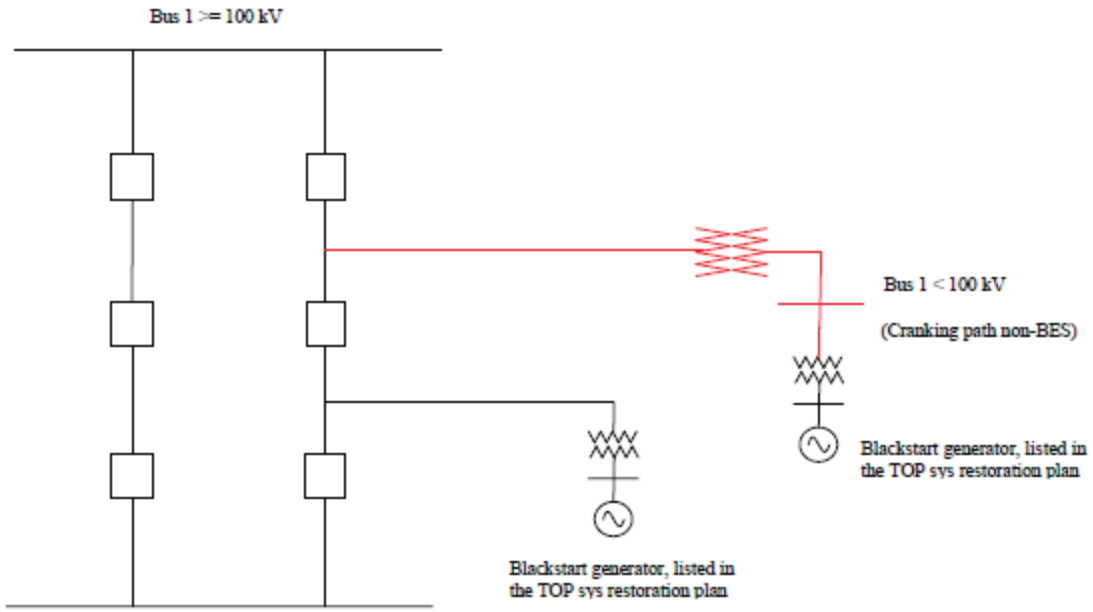


Figure 5 (Inclusion I4):Non-BES in Red

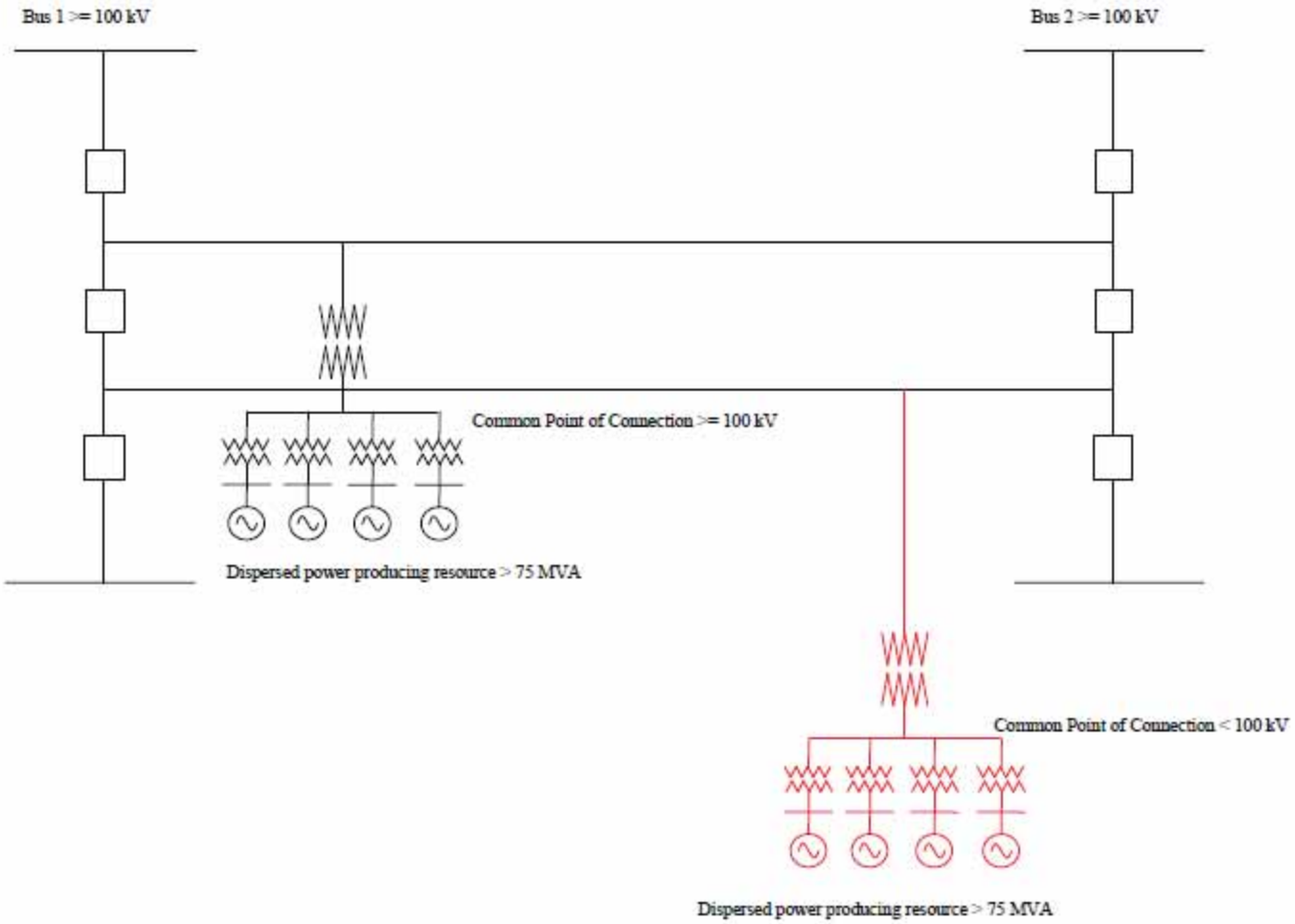


Figure 6 (Inclusion I5):**Non-BES in Red**

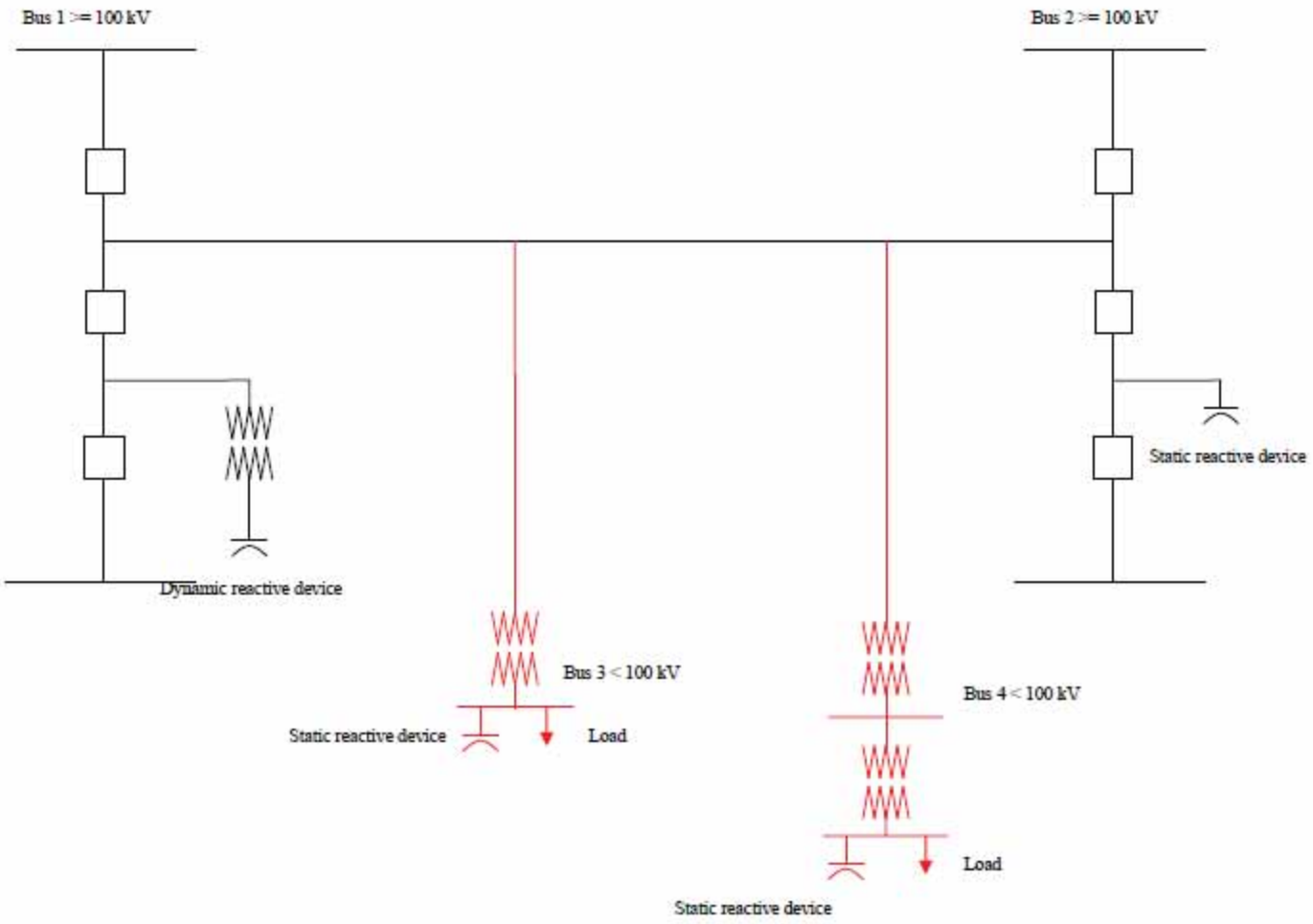


Figure 7 (Exclusion E1):Non-BES in Red

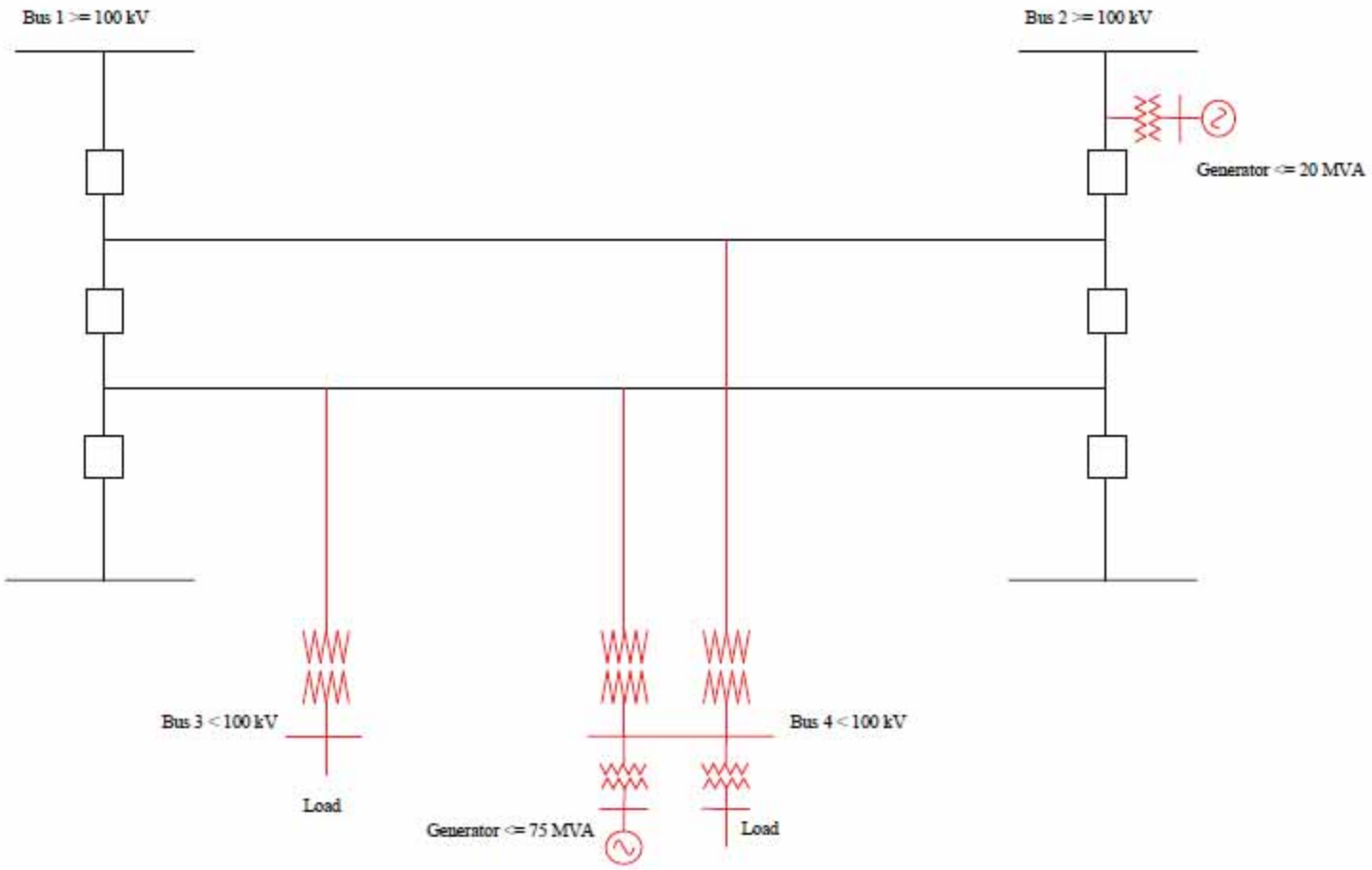


Figure 8b (Exclusion E1):
Single Point of Connection
Non-BES in Red

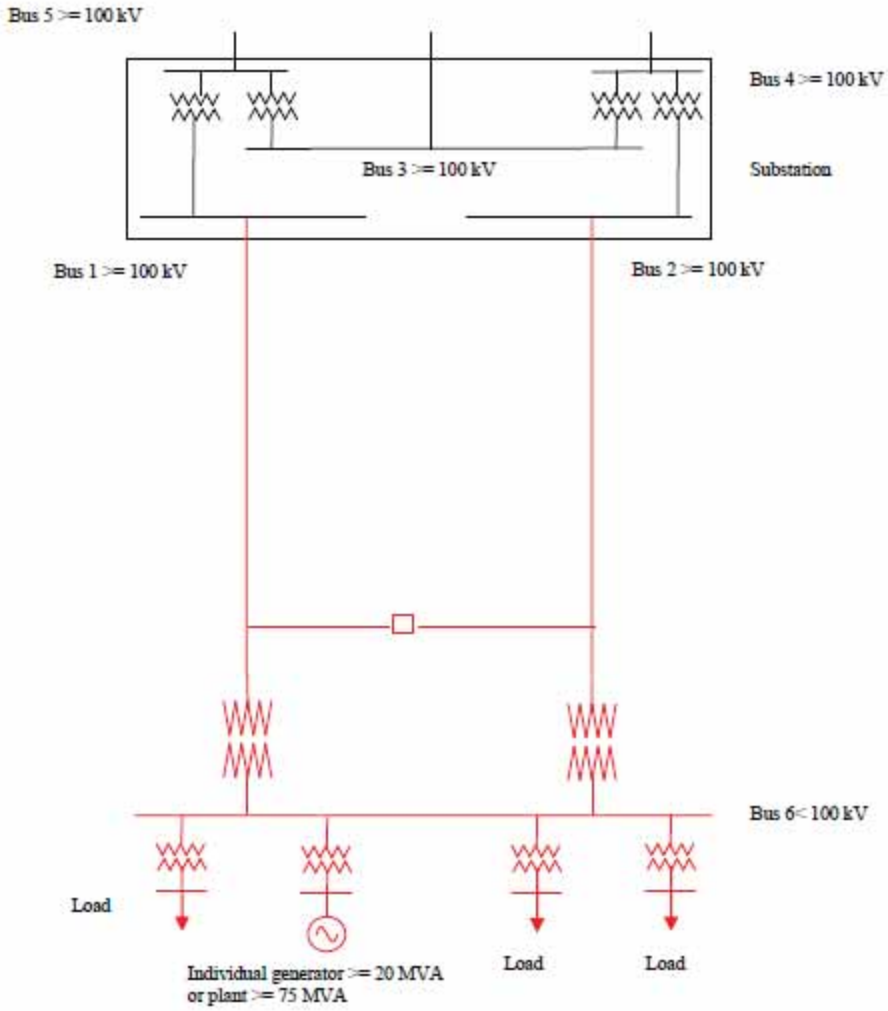


Figure 9 (Exclusion E2):Non-BES in Red

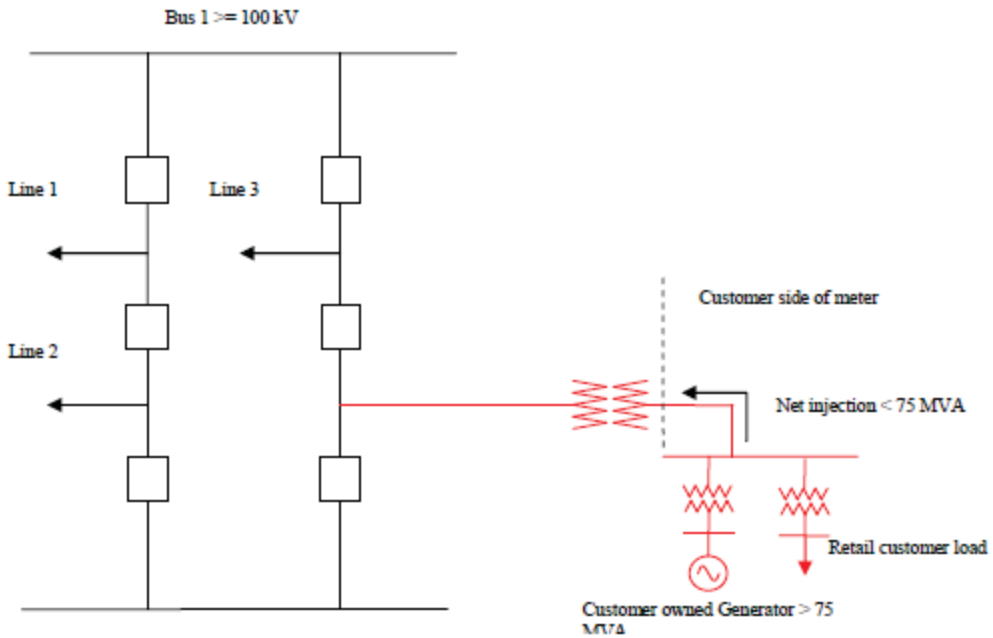
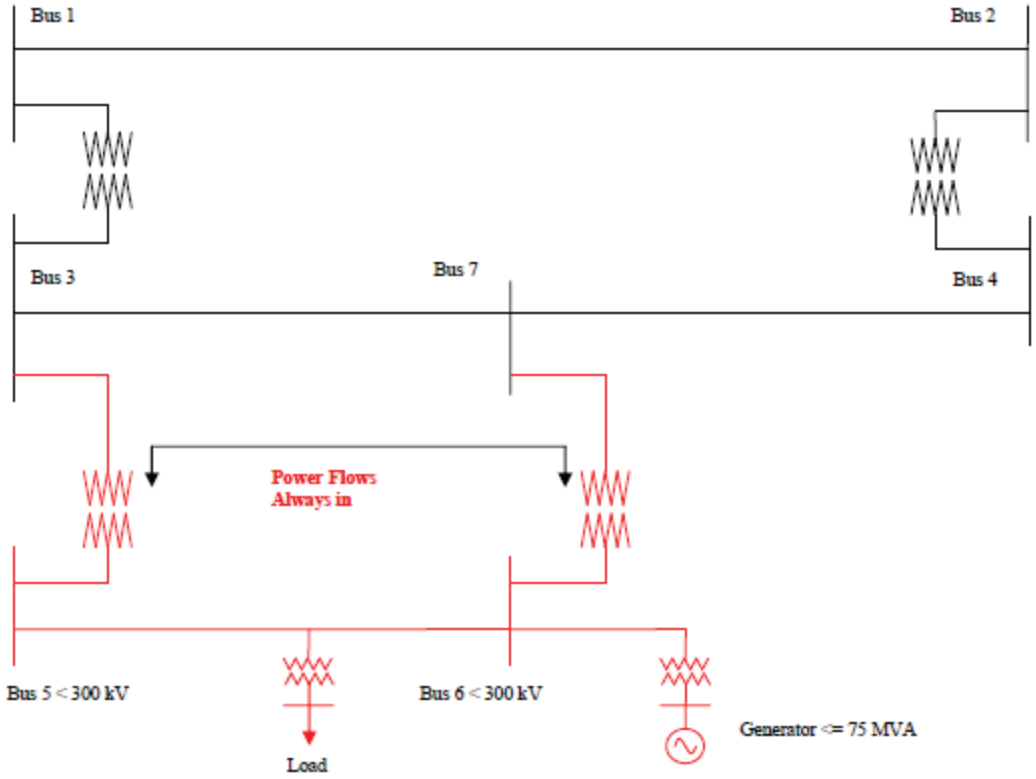


Figure 10 (Exclusion E3):**Non-BES in Red**



Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed

1. SAR posted for comment 12/17/10 – 1/21/11
2. SC authorized moving the SAR forward to standard development 3/25/11
3. First posting of definition 4/28/11 – 5/27/11
4. First posting of criteria 5/11/11 – 6/10/11
5. Second posting of definition and criteria plus initial ballot 8/26/11 – 10/10/11

Description of Current Draft

This draft is the third posting and recirculation ballot of the revised definition of the Bulk Electric System (BES). It is for a 10-day recirculation voting period.

Anticipated Actions	Anticipated Date
30-day Formal Comment Period	4/28/11
45-day Formal Comment Period with Parallel Initial Ballot	September 2011
Recirculation ballot	November 2011
BOT adoption	January 2012

Effective Dates

This definition shall become effective on the first day of the second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, the definition will go into effect on the first day of the second calendar quarter after Board of Trustees adoption. Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition.

Version History

Version	Date	Action	Change Tracking
1	TBD	Respond to FERC Order No. 743 to clarify the definition of the Bulk Electric System	N/A

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

Bulk Electric System (BES): Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. This does not include facilities used in the local distribution of electric energy.

Inclusions:

- **I1** - Transformers with the primary terminal and at least one secondary terminal operated at 100 kV or higher unless excluded under Exclusion E1 or E3.
- **I2** - Generating resource(s) with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.
- **I3** - Blackstart Resources identified in the Transmission Operator's restoration plan.
- **I4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above.
- **I5** –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.

Exclusions:

- **E1** - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher and:
    a) Only serves Load. Or,
    b) Only includes generation resources, not identified in Inclusion I3, with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,
    c) Where the radial system serves Load and includes generation resources, not identified in Inclusion I3, with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

  Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

- **E2** - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail Load with electric energy if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.
- **E3** - Local networks (LN): A group of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the interconnected system. LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The LN is characterized by all of the following:
    a) Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ;
    b) Power flows only into the LN and the LN does not transfer energy originating outside the LN for delivery through the LN; and
    c) Not part of a Flowgate or transfer path: The LN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
- **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed

1. SAR posted for comment 12/17/10 – 1/21/11
2. SC authorized moving the SAR forward to standard development 3/25/11
3. First posting of definition 4/28/11 – 5/27/11
4. First posting of criteria 5/11/11 – 6/10/11
4.5. Second posting of definition and criteria plus initial ballot 8/26/11 – 10/10/11

Description of Current Draft

This draft is the ~~second~~third posting and recirculation ballot of the revised definition of the Bulk Electric System (BES). It is for a ~~45-day formal comment and parallel~~ 10-day recirculation voting period.

Anticipated Actions	Anticipated Date
30-day Formal Comment Period	4/28/11
45-day Formal Comment Period with Parallel Initial Ballot	September 2011
Recirculation ballot	~~December~~November 2011
BOT adoption	January 201~~1~~2

Effective Dates

This definition shall become effective on the first day of the second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, the definition will go into effect on the first day of the second calendar quarter after Board of Trustees adoption. Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition.

Version History

Version	Date	Action	Change Tracking
1	TBD	Respond to FERC Order No. 743 to clarify the definition of the Bulk Electric System	N/A

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

Bulk Electric System (BES): Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. This does not include facilities used in the local distribution of electric energy.

Inclusions:

- **I1** - Transformers with the primary terminal and at least one secondary terminal~~s~~ operated at 100 kV or higher unless excluded under Exclusion E1 or E3.
- **I2** - Generating resource(s) ~~(~~with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA ~~per the ERO Statement of Compliance Registry Criteria)~~ including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.
- **I3** - Blackstart Resources identified in the Transmission Operator's restoration plan.
- **I4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above.
- **I5** –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.

Exclusions:

- **E1** - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher and:
  a) Only serves Load. Or,
  b) Only includes generation resources, not identified in Inclusion ~~-~~I3, ~~-~~with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,
  c) Where the radial system serves Load and includes generation resources, not identified in Inclusion ~~-~~I3, with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

  Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

- **E2** - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail ~~customer~~ Load with electric energy ~~on the customer's side of the retail meter~~ if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.
- **E3** - Local networks (LN): A group of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the interconnected system. LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The LN is characterized by all of the following:
    a) Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ;
    b) Power flows only into the LN~~:~~ and ~~T~~the LN does not transfer energy originating outside the LN for delivery through the LN; and
    c) Not part of a Flowgate or transfer path: The LN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
- **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Implementation Plan for Project 2010-17:
Definition of BES

Prerequisite Approvals

There are no other Reliability Standards or Standard Authorization Requests (SARs), in progress or approved, that must be implemented before this project can be implemented. However, this definition relies heavily on the fact that an approved exception process exists in the NERC Rules of Procedure.

Effective Dates

This definition shall become effective on the first day of the second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required the definition shall go into effect on the first day of the second calendar quarter after Board of Trustees adoption.

Compliance obligations for all newly identified Elements included by the definition shall begin 24 months after the applicable effective date of the definition.

The SDT realizes that Order 743 suggested a maximum of 18 months for implementation of a revised definition of the BES. The 24 month period cited here is based on the various rehearing requests filed by entities expected to be affected by the revised definition. Thus, the SDT believes that this is a more realistic timeframe in which to effect any changes.

The SDT believes that the timeframe shown is needed to:

- Effectively produce reasonable transition plans – As shown in Order 743, part of the overall process of revising the definition of BES is for the ERO and Regional Entities to develop transition plans on a region by region basis to accommodate any changes needed in those regions due to the revised definition. The transition plans will include any actions necessary for entities to achieve compliance on any issues brought about by the revised definition.
- Submit any necessary registration changes – While Order 743 states that a revised definition should provide clarity and not necessarily require major changes to registration; it is possible that the revised definition may cause some registration changes. Entities will need time to submit their changes and for those changes to work their way through the process.
- File for exceptions – The revised definition does not exist in a vacuum. There is a corresponding process for entities to request exceptions for specific equipment or configurations. This process will be defined in the NERC Rules of Procedure and will involve individual entities or the Regional Entities having to make a technical case to justify the exception. This process will take some time to complete and it would be expected that there will be an initial backlog of cases to process.
- Provide training – Entities will need to train their operators and personnel on changes to their operations brought about by the revised definition.

The existing definition of BES shall be retired at midnight of the day immediately prior to the effective date of the new definition of BES in the particular jurisdiction in which the new definition is becoming effective.

Implementation Plan for Project 2010-17:
Definition of BES

Prerequisite Approvals

There are no other Reliability Standards or Standard Authorization Requests (SARs), in progress or approved, that must be implemented before this project can be implemented. However, this definition relies heavily on the fact that an approved exception process exists in the NERC Rules of Procedure.

Effective Dates

This definition shall become effective on the first day of the second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required the definition shall go into effect on the first day of the second calendar quarter after Board of Trustees adoption.

Compliance obligations for all newly identified Elements included by the definition shall begin 24 months after the applicable effective date of the definition.

The SDT realizes that Order 743 suggested a maximum of 18 months for implementation of a revised definition of the BES. The 24 month period cited here is based on the various rehearing requests filed by entities expected to be affected by the revised definition. Thus, the SDT believes that this is a more realistic timeframe in which to effect any changes.

The SDT believes that the timeframe shown is needed to:

- Effectively produce reasonable transition plans – As shown in Order 743, part of the overall process of revising the definition of BES is for the ERO and Regional Entities to develop transition plans on a region by region basis to accommodate any changes needed in those regions due to the revised definition. The transition plans will include any actions necessary for entities to achieve compliance on any issues brought about by the revised definition.
- Submit any necessary registration changes – While Order 743 states that a revised definition should provide clarity and not necessarily require major changes to registration; it is possible that the revised definition may cause some registration changes. Entities will need time to submit their changes and for those changes to work their way through the process.
- File for exceptions – The revised definition does not exist in a vacuum. There is a corresponding process for entities to request exceptions for specific equipment or configurations. This process will be defined in the NERC Rules of Procedure and will involve individual entities or the Regional Entities having to make a technical case to justify the exception. This process will take some time to complete and it would be expected that there will be an initial backlog of cases to process.
- Provide training – Entities will need to train their operators and personnel on changes to their operations brought about by the revised definition.

The existing definition of BES shall be retired at midnight of the day immediately prior to the effective date of the new definition of BES in the particular jurisdiction in which the new definition is becoming effective.

Detailed Information to Support an Exception Request

Entities that have Element(s) designated as excluded, under the BES definition and designations, do not have to seek exception for those Elements under the Exception Procedure.

General Instructions:

A one-line breaker diagram identifying the Element(s) for which the exception is requested must be supplied with every request. The diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested.

Entities are required to supply the data and studies needed to support their submittal. Studies should:

- Be based on an Interconnection-wide base case that is suitably complete and detailed to reflect the electrical characteristics and system topology
- Clearly document all assumptions used
- Address key performance measures of BES reliability through steady-state power flow, and transient stability analysis as necessary to support the entity's request, consistent with the methodologies described in the Transmission Planning (TPL) standard and commensurate with the scope of the request

Supporting statements for your position from other entities are encouraged.

List any attached supporting documents and any additional information that is included to support the request:

DRAFT

Detailed Information to Support an Exception Request

For Transmission Elements:

1. Is there generation connected to the Element(s)?

   ☐ Yes ☐ No

   If yes, what are the individual gross nameplate values of each unit?

   Description/Comments:

2. How do/does the Element(s) impact permanent Flowgates in the Eastern Interconnection, major transfer paths within the Western Interconnection, or a comparable monitored facility in the ERCOT Interconnection or the Quebec Interconnection?

   Please list the Flowgates or paths considered in your analysis along with any studies or assessments that illustrate the degree of impact:

3. Is/Are the Element(s) included in an Interconnection Reliability Operating Limit (IROL) in the Eastern Interconnection, ERCOT Interconnection, or Quebec Interconnection or a major transfer path rating in the Western Interconnection?

   ☐ Yes ☐ No

   Please provide the appropriate list for the operating area where the Element(s) is located:

4. How does an outage of the Element(s) impact the over-all reliability of the BES? Please provide study results that demonstrate the most severe system impact of the outage of the Element(s) and the rationale for your response:

DRAFT

Detailed Information to Support an Exception Request

5. Is/Are the Element(s) used for off-site power supply to a nuclear power plant as designated in a mutually agreed upon Nuclear Plant Interface Requirement (NPIR)?

   ☐ Yes ☐ No

   Description/Comments:

6. Is/Are the Element(s) part of a Cranking Path identified in a Transmission Operator's restoration plan?

   ☐ Yes ☐ No

   Description/Comments:

7. Does power flow through the Element(s) into the BES?

   ☐ Yes ☐ No

   If yes, then using metered or SCADA data for the most recent consecutive two calendar year period, what is the minimum and maximum magnitude of the power flow out of the Element(s)? Describe the conditions and the time duration when this occurs?

DRAFT

Detailed Information to Support an Exception Request

For Generation Resources:

1. What is the MW value of the host Balancing Authority's most severe single Contingency and what is the generation resources percent of this value?

   Please provide the values and a reference to supporting documents:

2. Is the generation resource used to provide reliability-related Ancillary Services?

   ☐ Yes ☐ No

   If so, what reliability-related Ancillary Services are the generation resource supplying:

3. Is the generation resource designated as a must run unit for reliability?

   ☐ Yes ☐ No

   Please provide the appropriate reference for your operating area:

4. How does an outage of the generation resource impact the over-all reliability of the BES? Please provide study results that demonstrate the most severe system impact of the outage of the generator and the rationale for your response:

5. Does the generation resource use the BES to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load?

   ☐ Yes ☐ No

   Description/Comments:

DRAFT

Detailed Information to Support an Exception Request

Entities that have Element(s) designated as excluded, under the BES definition and designations, do not have to seek exception for those Elements under the Exception Procedure.

General Instructions:

A one-line breaker diagram identifying the ~~facility~~ Element(s) for which the exception is requested must be supplied with every ~~application~~request. The diagram(s) supplied should also show the Protection Systems at the interface points associated with the Elements for which the exception is being requested.

Entities are required to supply the data and studies needed to support their submittal. Studies should:

- Be based on an Interconnection-wide base case that is suitably complete and detailed to reflect the ~~facility's~~ electrical characteristics and system topology
- Clearly document all assumptions used
- Address key performance measures of BES reliability through steady-state power flow, and transient stability analysis as necessary to support the entity's ~~application~~request, consistent with the methodologies described in the Transmission Planning (TPL) standard and commensurate with the scope of the request

Supporting statements for your position from other entities are encouraged.

List any attached supporting documents and any additional information that is included to ~~support~~s the request:

DRAFT

Detailed Information to Support an Exception Request

For Transmission ~~Facilities~~Elements:

1. Is there generation connected to the ~~facility~~ Element(s)?

   ☐ Yes ☐ No

   If yes, what are the individual gross nameplate values of each unit?

   Description/Comments:

2. How do/does the ~~facility~~ Element(s) impact permanent Flowgates in the Eastern Interconnection, major transfer paths within the Western Interconnection, or a comparable monitored facility in the ERCOT Interconnection or the Quebec Interconnection?

   Please list the Flowgates or paths considered in your analysis along with any studies or assessments that illustrate the degree of impact:

3. Is/Are the ~~facility~~Element(s) included in an Interconnection Reliability Operating Limit (IROL) in the Eastern Interconnection, ERCOT Interconnection, or Quebec Interconnection or a major transfer path rating in the Western Interconnection?

   ☐ Yes ☐ No

   Please provide the appropriate list for ~~your~~the operating area where the Element(s) is located:

4. How does an outage of the ~~facility~~Element(s) impact the over-all reliability of the BES? Please provide study results that demonstrate the most severe system impact of the outage of the ~~facility~~Element(s) and the rationale for your response:

DRAFT

Detailed Information to Support an Exception Request

5. Is/Are the ~~facility~~Element(s) used for off-site power supply to a nuclear power plant as designated in a mutually agreed upon Nuclear Plant Interface Requirement (NPIR)?

   ☐ Yes ☐ No

   Description/Comments:

6. Is/Are the ~~facility~~ Element(s) part of a Cranking Path ~~associated with a Blackstart Resource~~ identified in a Transmission Operator's restoration plan?

   ☐ Yes ☐ No

   Description/Comments:

7. Does power flow through ~~this~~ the ~~facility~~Element(s) into the BES?

   ☐ Yes ☐ No

   ~~If yes,~~ ~~☐ under 10% of the calendar year~~ ~~☐ 10% - 25% of the calendar year~~
   ~~☐ 25% - 50% of the calendar year~~ ~~☐ More than 50% of the calendar year~~

   If yes, then using metered or SCADA data for the most recent consecutive two calendar year period, what is the minimum and maximum magnitude of the power flow out of the ~~facility~~ Element(s)? ~~and d~~Describe the conditions and the time duration when this ~~could~~ occurs?

DRAFT

Detailed Information to Support an Exception Request

For Generation ~~Facilities~~Resources:

1. What is the MW value of the host Balancing Authority's most severe single Contingency and what is the ~~generator's, or generator facility's~~ generation resource's, percent of this value?

   Please provide the values and a reference to supporting documents:

2. Is the ~~generator or generator facility~~ generation resource used to provide reliability-related Ancillary Services?

   ☐ Yes ☐ No

   ~~Describe~~If so, what reliability-related Ancillary Services are the ~~generator or generator facility~~ generation resource ~~is~~ supplying:

3. Is the ~~generator~~ generation resource designated as a must run unit for reliability?

   ☐ Yes ☐ No

   Please provide the appropriate reference for your operating area:

4. How does an outage of the ~~generator~~ generation resource impact the over-all reliability of the BES? Please provide study results that demonstrate the most severe system impact of the outage of the generator and the rationale for your response:

5. Does the ~~generator~~ generation resource use the BES to deliver its actual or scheduled output, or a portion of its actual or scheduled output, to Load?

   ☐ Yes ☐ No

   Description/Comments:

DRAFT

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standards Announcement

Project 2010-17 Definition of Bulk Electric System

Two Recirculation Ballot Windows Open: Thursday, November 10 – Monday, November 21, 2011

Now Available

Two recirculation ballot windows are now open for Project 2010-17 Definition of Bulk Electric System (BES). The first is for the definition of Bulk Electric System and the associated Implementation Plan, and the second is for a draft application form titled *Detailed Information to Support an Exception Request* referenced in the proposed Rules of Procedure BES Definition Exception Process. Both recirculation ballots are open through 8 p.m. Eastern on Monday, November 21, 2011.

Since the initial ballot, the drafting team has considered all comments received during the formal comment period and initial ballots of the definition and *Detailed Information to Support an Exception Request* form, and made clarifying modifications to the Bulk Electric System Definition and Implementation Plan in the following areas:

- Clarified the wording in Inclusion I1 to indicate that at least one secondary terminal must be at 100 kV or higher to accommodate multiple terminal transformers.
- Removed the reference to the ERO Statement of Compliance Registry Criteria in Inclusion I2 so that there is no chance of the registry values being changed and affecting the definition prior to resolution of threshold values in Phase 2 of this project.
- Clarified that generators were not part of Inclusion I5 to avoid improperly pulling in small generators.
- Clarified the issue of power flow into the local network in Exclusion E3.b.
- Clarified the compliance obligation date of the revised definition in the Implementation Plan.

The drafting team made the following clarifying modifications to the *Detailed Information to Support an Exception Request form* referenced in the Rules of Procedure Exception Process:

- General – Clarified that it was the intent of the drafting team to allow an entity to submit any data or information that it feels supports the exception request.
- General – Clarified the use of facility versus Element(s).
- Generation Questions:

- Clarified several questions by consistently using 'generation resource's' vs. 'generator's' or 'generator facility's'.
- Clarified several questions by clearly identifying reliability-related purposes associated with the generation resources.

In response to industry concerns, the drafting team has provided a detailed explanation of the hierarchy of the BES definition, including the proper application of the Inclusions and Exclusions for the identification of BES Elements (See Consideration of Comments report posted on project page of the NERC website). Additionally, the drafting team explained the rationale behind the creation of the *Detailed Information to Support an Exception Request* form and the guidance it provides for evaluating a request.

A presentation made in support of the NERC Standards and Compliance Workshop held in Atlanta, GA on October 26 – 30, 2011 provides a detailed explanation of the 'phased' project approach to the revision of the BES definition as well as addressing the modifications to the BES definition, the Implementation Plan, and the application form titled *Detailed Information to Support an Exception Request*. The presentation (audio and power-point) is available on the NERC website at the following link: http://www.nerc.com/page.php?cid=2|247|326.

Documents associated with this project, including clean and redline copies of the definition, the Implementation Plan, the *Detailed Information to Support an Exception Request* form referenced in the Rules of Procedure Exception Process and the drafting team's consideration of comments submitted during the parallel formal comment period and initial ballot that ended on October 10, 2011, have been posted on the project page.

Instructions for Balloting in the Recirculation Ballots

In a recirculation ballot, votes are counted by exception. Only members of the ballot pool may cast a ballot; all ballot pool members may change their prior votes. A ballot pool member who failed to cast a ballot during the last ballot window may cast a ballot in the recirculation ballot window. If a ballot pool member does not participate in the recirculation ballot, that member's last vote cast in the initial ballot that ended on October 10, 2011 will be carried over and will be used to determine if there are sufficient affirmative votes for approval.

Members of the two ballot pools associated with the definition and application form may log in and submit their votes in the recirculation ballots from the following page: https://standards.nerc.net/CurrentBallots.aspx.

Next Steps

If the definition and application form achieve ballot pool approval, they will be presented to the Board of Trustees for adoption and subsequently filed with regulators for approval along with the proposed Rules of Procedure additions (Sections 509 and 1703). FERC Orders 743 and 743-A require that the revised definition and an approach to determine exceptions be filed with FERC by January 25, 2012.

The Standards Committee and NERC Board of Trustees have recommended that the drafting team address issues such as generation thresholds in a second phase of this project. This approach will ensure that the drafting team has sufficient time to adequately consider and develop a sound technical basis for an approach, and will allow the drafting team to meet the regulatory deadline in FERC Orders 743 and 743A (filing by January 25, 2012). The drafting team has posted a draft Supplemental Standards Authorization Request (SAR) for information purposes only; the SAR will be posted for comment at a future time.

Additional information about the project, including a Fact Sheet and additional informational documents, has been posted on the project page.

Background

On November 18, 2010 FERC issued Order 743 (amended by Order 743A) and directed NERC to revise the definition of Bulk Electric System so that the definition encompasses all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. Additional specificity will reduce ambiguity and establish consistency across all Regions in distinguishing between BES and non-BES Elements and Facilities.

In addition, NERC was directed to develop a process for identifying any Elements or Facilities that should be excluded from the BES. NERC is working to address these directives with two activities – the definition of Bulk Electric System is being revised through the standard development process and a BES Definition Exception Process is being developed as proposed modifications to the Rules of Procedure. The proposed modifications to the Rules of Procedure were posted for a comment period through October 27, 2011.

The work of the BES Definition Exception Process (Rules of Procedure) team has been publicly posted at: http://www.nerc.com/filez/standards/Rules_of_Procedure-RF.html.

Standards Development Process

The Standard Processes Manual contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate. For more information or assistance, please contact Monica Benson at monica.benson@nerc.net.

For more information or assistance, please contact Monica Benson, Standards Process Administrator, at monica.benson@nerc.net or at 404-446-2560.

North American Electric Reliability Corporation
116-390 Village Blvd.
Princeton, NJ 08540
609.452.8060 | www.nerc.com

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standards Announcement

Project 2010-07 Definition of Bulk Electric System

Recirculation Ballot Results

Now Available

Two recirculation ballots, for the definition of Bulk Electric System (BES) and for the application form titled 'Detailed Information to Support a Request for a BES Exception,' closed on November 21, 2011. Both recirculation ballots achieved stakeholder approval.

Voting statistics for each ballot are listed below, and the Ballot Results Web page provides a link to the detailed results.

BES Definition	Detailed Information to Support a Request for BES Exception
Quorum: 95.92%	Quorum: 93.02%
Approval: 81.32%	Approval: 81.48%

Next Steps

The definition of Bulk Electric System, its associated implementation plan and the supporting application form titled 'Detailed Information to Support a BES Exception Request' will be presented to the NERC Board of Trustees for adoption and subsequently filed with regulatory authorities. A set of proposed changes to the Rules of Procedure to provide a process for determining exceptions to the definition of BES is near completion and will be presented to the NERC Board of trustees for approval at the same time as the BES definition. The regulatory deadline in FERC Orders 743 and 743A requires that the revised definition of BES and process for handling exceptions be filed by January 25, 2012.

Additional information about the project, including a Fact Sheet and additional informational documents, has been posted on the project page.

Background

On November 18, 2010 FERC issued Order 743 (amended by Order 743A) and directed NERC to revise the definition of Bulk Electric System so that the definition encompasses all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. Additional specificity will reduce ambiguity and establish consistency across all Regions in distinguishing between BES and non-BES Elements and Facilities.

In addition, NERC was directed to develop a process for identifying any Elements or Facilities that should be excluded from the BES. NERC addressed these directives with two activities – the definition of Bulk Electric System was revised through the standard development process and a BES Definition Exception Process has been developed as proposed modifications to the Rules of Procedure. The work of the BES Definition Exception Process has been publicly posted at: http://www.nerc.com/filez/standards/Rules_of_Procedure-RF.html.

Standards Development Process

The Standard Processes Manual contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate. For more information or assistance, please contact Monica Benson at monica.benson@nerc.net.

For more information or assistance, please contact Monica Benson, Standards Process Administrator, at monica.benson@nerc.net or at 404-446-2560.

North American Electric Reliability Corporation
116-390 Village Blvd.
Princeton, NJ 08540
609.452.8060 | www.nerc.com

Ballot Results	
Ballot Name:	Project 2010-17 BES Definition_Initial Ballot_rc
Ballot Period:	11/10/2011 - 11/21/2011
Ballot Type:	recirculation
Total # Votes:	423
Total Ballot Pool:	441
Quorum:	**95.92 % The Quorum has been reached**
Weighted Segment Vote:	81.32 %
Ballot Results:	**The Standard has Passed**

Summary of Ballot Results

Segment	Ballot Pool	Segment Weight	Affirmative # Votes	Affirmative Fraction	Negative # Votes	Negative Fraction	Abstain # Votes	No Vote
1 - Segment 1.	102	1	81	0.862	13	0.138	7	1
2 - Segment 2.	11	0.9	6	0.6	3	0.3	2	0
3 - Segment 3.	125	1	107	0.947	6	0.053	4	8
4 - Segment 4.	35	1	30	0.938	2	0.063	2	1
5 - Segment 5.	86	1	64	0.831	13	0.169	4	5
6 - Segment 6.	51	1	43	0.915	4	0.085	4	0
7 - Segment 7.	1	0.1	1	0.1	0	0	0	0
8 - Segment 8.	11	0.9	7	0.7	2	0.2	1	1
9 - Segment 9.	12	1	5	0.5	5	0.5	0	2
10 - Segment 10.	7	0.7	6	0.6	1	0.1	0	0
Totals	**441**	**8.6**	**350**	**6.993**	**49**	**1.608**	**24**	**18**

Individual Ballot Pool Results

Segment	Organization	Member	Ballot	Comments
1	Ameren Services	Kirit Shah	Affirmative	
1	American Electric Power	Paul B. Johnson	Negative	View
1	American Transmission Company, LLC	Andrew Z Pusztai	Affirmative	
1	Arizona Public Service Co.	Robert Smith	Affirmative	View
1	Associated Electric Cooperative, Inc.	John Bussman	Affirmative	View
1	Austin Energy	James Armke	Abstain	
1	Balancing Authority of Northern California	Kevin Smith	Affirmative	
1	Baltimore Gas & Electric Company	Gregory S Miller	Affirmative	

1	BC Hydro and Power Authority	Patricia Robertson	Abstain	
1	Beaches Energy Services	Joseph S Stonecipher	Affirmative	
1	Black Hills Corp	Eric Egge	Affirmative	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	View
1	Brazos Electric Power Cooperative, Inc.	Tony Kroskey	Abstain	
1	CenterPoint Energy Houston Electric	Dale Bodden	Negative	View
1	Central Electric Power Cooperative	Michael B Bax	Affirmative	
1	Central Maine Power Company	Kevin L Howes	Negative	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Affirmative	
1	Colorado Springs Utilities	Paul Morland	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative	
1	Consumers Power Inc.	Stuart Sloan	Affirmative	View
1	CPS Energy	Richard Castrejana	Affirmative	
1	Dairyland Power Coop.	Robert W. Roddy	Affirmative	
1	Dayton Power & Light Co.	Hertzel Shamash	Affirmative	
1	Dominion Virginia Power	Michael S Crowley	Affirmative	View
1	Duke Energy Carolina	Douglas E. Hils	Affirmative	
1	East Kentucky Power Coop.	George S. Carruba	Affirmative	
1	Entergy Services, Inc.	Edward J Davis	Affirmative	
1	FirstEnergy Corp.	William J Smith	Affirmative	View
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Negative	
1	Florida Power & Light Co.	Mike O'Neil	Affirmative	
1	Gainesville Regional Utilities	Luther E. Fair	Affirmative	View
1	Georgia Transmission Corporation	Harold Taylor	Affirmative	
1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon	Affirmative	
1	Hydro One Networks, Inc.	Ajay Garg	Negative	View
1	Hydro-Quebec TransEnergie	Bernard Pelletier	Negative	View
1	Idaho Power Company	Ronald D. Schellberg	Affirmative	
1	Imperial Irrigation District	Tino Zaragoza	Affirmative	
1	International Transmission Company Holdings Corp	Michael Moltane	Affirmative	
1	KAMO Electric Cooperative	Walter Kenyon	Affirmative	
1	Kansas City Power & Light Co.	Michael Gammon	Affirmative	View
1	Lakeland Electric	Larry E Watt	Affirmative	
1	Lee County Electric Cooperative	John W Delucca	Affirmative	
1	Long Island Power Authority	Robert Ganley	Negative	View
1	Los Angeles Department of Water & Power	Ly M Le		
1	Lower Colorado River Authority	Martyn Turner	Negative	View
1	M & A Electric Power Cooperative	William Price	Affirmative	
1	Manitoba Hydro	Joe D Petaski	Affirmative	View
1	MEAG Power	Danny Dees	Affirmative	
1	Memphis Light, Gas and Water Division	Allan Long	Affirmative	
1	Metropolitan Water District of Southern California	Ernest Hahn	Negative	View
1	Mid-Continent Area Power Pool	Larry E. Brusseau	Abstain	
1	MidAmerican Energy Co.	Terry Harbour	Affirmative	View
1	Minnkota Power Coop. Inc.	Richard Burt	Affirmative	View
1	Muscatine Power & Water	Tim Reed	Affirmative	View
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Affirmative	
1	National Grid	Saurabh Saksena	Abstain	View
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Negative	
1	New York Power Authority	Arnold J. Schuff	Affirmative	View
1	North Carolina Electric Membership Corp.	Gary Ofner	Affirmative	View
1	Northeast Missouri Electric Power Cooperative	Kevin White	Affirmative	
1	Northeast Utilities	David Boguslawski	Affirmative	
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative	
1	NorthWestern Energy	John Canavan	Affirmative	
1	Ohio Valley Electric Corp.	Robert Mattey	Negative	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Affirmative	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	View
1	Oncor Electric Delivery	Brenda Pulis	Affirmative	
1	Orlando Utilities Commission	Brad Chase	Affirmative	View
1	Otter Tail Power Company	Daryl Hanson	Affirmative	

1	PECO Energy	Ronald Schloendorn	Affirmative	
1	Platte River Power Authority	John C. Collins	Affirmative	
1	Portland General Electric Co.	John T Walker	Affirmative	
1	Potomac Electric Power Co.	David Thorne	Affirmative	View
1	PPL Electric Utilities Corp.	Brenda L Truhe	Affirmative	
1	Progress Energy Carolinas	Brett A Koelsch	Affirmative	
1	Public Service Company of New Mexico	Laurie Williams	Affirmative	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Affirmative	
1	Public Utility District No. 1 of Okanogan County	Dale Dunckel	Affirmative	
1	Puget Sound Energy, Inc.	Denise M Lietz	Affirmative	View
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	View
1	Santee Cooper	Terry L Blackwell	Affirmative	
1	Seattle City Light	Pawel Krupa	Affirmative	View
1	Sho-Me Power Electric Cooperative	Denise Stevens	Affirmative	
1	Sierra Pacific Power Co.	Rich Salgo	Affirmative	View
1	Snohomish County PUD No. 1	Long T Duong	Affirmative	View
1	South California Edison Company	Steven Mavis	Negative	View
1	South Texas Electric Cooperative	Richard McLeon	Affirmative	
1	Southwest Transmission Cooperative, Inc.	James Jones	Affirmative	View
1	Sunflower Electric Power Corporation	Noman Lee Williams	Affirmative	View
1	Tampa Electric Co.	Beth Young	Affirmative	
1	Tennessee Valley Authority	Larry Akens	Affirmative	View
1	Transmission Agency of Northern California	Bryan Griess	Affirmative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	View
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Vermont Electric Power Company, Inc.	Kim Moulton	Abstain	
1	Westar Energy	Allen Klassen	Negative	
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Wolverine Power Supply Coop., Inc.	Michelle Denike	Abstain	
2	Alberta Electric System Operator	Mark B Thompson	Affirmative	View
2	BC Hydro	Venkataramakrishnan Vinnakota	Abstain	
2	California ISO	Rich Vine	Affirmative	
2	Electric Reliability Council of Texas, Inc.	Charles B Manning	Affirmative	
2	Independent Electricity System Operator	Barbara Constantinescu	Negative	View
2	ISO New England, Inc.	Kathleen Goodman	Abstain	
2	Midwest ISO, Inc.	Marie Knox	Negative	View
2	New Brunswick System Operator	Alden Briggs	Negative	View
2	New York Independent System Operator	Gregory Campoli	Affirmative	
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative	
2	Southwest Power Pool, Inc.	Charles Yeung	Affirmative	
3	AEP	Michael E Deloach		
3	Alameda Municipal Power	Douglas Draeger	Affirmative	
3	Ameren Services	Mark Peters	Affirmative	
3	APS	Steven Norris	Affirmative	
3	Associated Electric Cooperative, Inc.	Chris W Bolick	Affirmative	View
3	Atlantic City Electric Company	NICOLE BUCKMAN	Affirmative	
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain	
3	Benton Rural Electric Association	Clint Gerkensmeyer	Affirmative	
3	Big Bend Electric Cooperative, Inc.	Benjamin Friederichs	Affirmative	View
3	Blachly-Lane Electric Co-op	Bud Tracy	Affirmative	View
3	Blue Ridge Electric	James L Layton	Affirmative	View
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	View
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Affirmative	View
3	Central Electric Power Cooperative	Ralph J Schulte	Affirmative	
3	Central Hudson Gas & Electric Corp.	Thomas C Duffy	Affirmative	View
3	Central Lincoln PUD	Steve Alexanderson	Affirmative	View
3	City of Austin dba Austin Energy	Andrew Gallo	Affirmative	
3	City of Bartow, Florida	Matt Culverhouse	Affirmative	
3	City of Cheney	Joe Noland	Affirmative	View
3	City of Clewiston	Lynne Mila		
3	City of Farmington	Linda R Jacobson	Affirmative	
3	City of Garland	Ronnie C Hoeinghaus	Abstain	
3	City of Green Cove Springs	Gregg R Griffin	Affirmative	View

3	City of McMinnville	John C Dietz	Affirmative	
3	City of Redding	Bill Hughes	Affirmative	
3	City of Ukiah	Colin Murphey	Affirmative	
3	Clatskanie People's Utility District	Brian Fawcett	Affirmative	View
3	Clay Electric Cooperative	Howard M. Mott Jr.	Affirmative	View
3	Clearwater Power Co.	Dave Hagen	Affirmative	View
3	Cleco Corporation	Michelle A Corley	Affirmative	
3	Colorado Springs Utilities	Lisa Cleary	Affirmative	
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	View
3	Constellation Energy	CJ Ingersoll	Affirmative	
3	Consumers Energy	Richard Blumenstock	Negative	View
3	Consumers Power Inc.	Roman Gillen	Affirmative	View
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Affirmative	View
3	Cowlitz County PUD	Russell A Noble	Affirmative	View
3	CPS Energy	Jose Escamilla	Affirmative	
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Dominion Resources Services	Michael F. Gildea	Affirmative	View
3	Douglas Electric Cooperative	Dave Sabala	Affirmative	View
3	Duke Energy Carolina	Henry Ernst-Jr	Affirmative	View
3	East Kentucky Power Coop.	Patrick Woods	Affirmative	
3	Fall River Rural Electric Cooperative	Bryan Case	Affirmative	View
3	Fayetteville Public Works Commission	Allen R Wallace	Affirmative	
3	FirstEnergy Energy Delivery	Stephan Kern	Affirmative	View
3	Flathead Electric Cooperative	John M Goroski	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Affirmative	View
3	Florida Power Corporation	Lee Schuster	Affirmative	
3	Georgia Systems Operations Corporation	William N. Phinney	Affirmative	View
3	Grays Harbor PUD	Wesley W Gray	Affirmative	
3	Great River Energy	Sam Kokkinen	Affirmative	
3	Harney Electric Cooperative, Inc.	Shane Sweet	Affirmative	
3	Holland Board of Public Works	William Bush	Abstain	View
3	Hydro One Networks, Inc.	David Kiguel	Negative	View
3	Idaho Falls Power	Richard Malloy	Affirmative	
3	Imperial Irrigation District	Jesus S. Alcaraz	Affirmative	
3	JEA	Garry Baker	Affirmative	
3	KAMO Electric Cooperative	Theodore J Hilmes	Affirmative	
3	Kansas City Power & Light Co.	Charles Locke	Affirmative	View
3	Kissimmee Utility Authority	Gregory D Woessner	Affirmative	View
3	Kootenai Electric Cooperative	Dave Kahly	Affirmative	View
3	La Plata Electric Association	Ronald Meier	Affirmative	
3	Lakeview Light & Power	Robert Truesdell	Affirmative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Affirmative	View
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Affirmative	View
3	Lincoln Electric System	Jason Fortik	Affirmative	View
3	Lost River Electric Cooperative	Richard Reynolds		
3	Louisville Gas and Electric Co.	Charles A. Freibert	Affirmative	
3	M & A Electric Power Cooperative	Stephen D Pogue	Affirmative	
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	Manitowoc Public Utilities	Thomas E Reed	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik		
3	Mission Valley Power	Kerry Wiedrich	Affirmative	
3	Mississippi Power	Jeff Franklin	Affirmative	View
3	Modesto Irrigation District	Jack W Savage	Negative	View
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	View
3	Muscatine Power & Water	John S Bos	Negative	View
3	Nebraska Public Power District	Tony Eddleman	Affirmative	View
3	New York Power Authority	Marilyn Brown	Affirmative	View
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Abstain	View
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann	Affirmative	
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	Northern Lights Inc.	Jon Shelby	Affirmative	View
3	Northern Wasco County People's Utility District (PUD)	Paul Titus	Affirmative	
3	NW Electric Power Cooperative, Inc.	David McDowell	Affirmative	
3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Affirmative	View
3	Omaha Public Power District	Blaine R. Dinwiddie	Negative	

3	Orange and Rockland Utilities, Inc.	David Burke	Affirmative	
3	Oregon Trail Electric Cooperative	ned ratterman	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Affirmative	View
3	Owensboro Municipal Utilities	Thomas T Lyons	Affirmative	
3	Pacific Gas and Electric Company	John H Hagen	Affirmative	View
3	PacifiCorp	John Apperson		
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter	Affirmative	
3	Progress Energy Carolinas	Sam Waters	Affirmative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Affirmative	
3	Public Utility District No. 1 of Clallam County	David Proebstel	Affirmative	
3	Public Utility District No. 1 of Franklin County	Linda Esparza	Affirmative	
3	Public Utility District No. 2 of Grant County	Greg Lange	Affirmative	View
3	Raft River Rural Electric Cooperative	Heber Carpenter	Affirmative	View
3	Rayburn Country Electric Coop., Inc.	Eddy Reece		
3	Rutherford EMC	Thomas M Haire	Affirmative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salem Electric	Anthony Schacher	Affirmative	View
3	Salmon River Electric Cooperative	Ken Dizes		
3	Salt River Project	John T. Underhill	Affirmative	View
3	Santee Cooper	James M Poston	Affirmative	
3	Seattle City Light	Dana Wheelock	Affirmative	View
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Sho-Me Power Electric Cooperative	Jeff L Neas	Affirmative	
3	South Carolina Electric & Gas Co.	Hubert C Young	Affirmative	
3	Southern California Edison Co.	David Schiada		
3	Springfield Utility Board	Jeff Nelson	Affirmative	View
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L Donahey	Affirmative	
3	Tennessee Valley Authority	Ian S Grant	Affirmative	View
3	Tri-State G & T Association, Inc.	Janelle Marriott	Affirmative	
3	Umatilla Electric Cooperative	Steve Eldrige	Affirmative	View
3	Vigilante Electric Cooperative	Dave Alberi	Affirmative	
3	West Oregon Electric Cooperative, Inc.	Marc M Farmer	Affirmative	View
3	Wisconsin Electric Power Marketing	James R Keller	Affirmative	View
3	Xcel Energy, Inc.	Michael Ibold	Negative	View
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power	Kevin Koloini	Affirmative	
4	American Public Power Association	Allen Mosher	Affirmative	View
4	Arkansas Electric Cooperative Corporation	Ronnie Frizzell	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache	Affirmative	View
4	City of Clewiston	Kevin McCarthy		
4	City of Redding	Nicholas Zettel	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	View
4	Consumers Energy	David Frank Ronk	Negative	View
4	Flathead Electric Cooperative	Russ Schneider	Affirmative	
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	View
4	Fort Pierce Utilities Authority	Thomas Richards	Affirmative	View
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Affirmative	View
4	Imperial Irrigation District	Diana U Torres	Affirmative	
4	Indiana Municipal Power Agency	Jack Alvey	Affirmative	
4	Integrys Energy Group, Inc.	Christopher Plante	Abstain	
4	LaGen	Richard Comeaux	Abstain	
4	Madison Gas and Electric Co.	Joseph DePoorter	Affirmative	View
4	Modesto Irrigation District	Spencer Tacke	Negative	View
4	National Rural Electric Cooperative Association	Barry R. Lawson	Affirmative	
4	North Carolina Eastern Municipal Power Agency	Cecil Rhodes	Affirmative	
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	View
4	Oklahoma Municipal Power Authority	Ashley Stringer	Affirmative	
4	Old Dominion Electric Coop.	Mark Ringhausen	Affirmative	
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Affirmative	View
4	Public Power Council	Nancy Baker	Affirmative	
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	View

4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seattle City Light	Hao Li	Affirmative	View
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Transmission Access Policy Study Group	William Gallagher	Affirmative	
4	Western Montana Electric G&T	William Drummond	Affirmative	
5	AEP Service Corp.	Brock Ondayko	Negative	View
5	AES Corporation	Leo Bernier	Negative	View
5	Amerenue	Sam Dwyer	Affirmative	
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Associated Electric Cooperative, Inc.	Brad Haralson	Negative	
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Black Hills Corp	George Tatar	Affirmative	
5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla		
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	View
5	BrightSource Energy, Inc.	Chifong Thomas	Affirmative	
5	City and County of San Francisco	Daniel Mason	Affirmative	
5	City of Austin dba Austin Energy	Jeanie Doty	Affirmative	
5	City of Grand Island	Jeff Mead	Abstain	
5	City of Redding	Paul Cummings	Affirmative	View
5	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Max Emrick	Affirmative	
5	City of Tallahassee	Brian Horton	Affirmative	
5	Cleco Power	Stephanie Huffman	Affirmative	
5	Cogentrix Energy, Inc.	Mike D Hirst	Affirmative	
5	Colorado Springs Utilities	Jennifer Eckels	Affirmative	
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Affirmative	
5	Constellation Power Source Generation, Inc.	Amir Y Hammad	Affirmative	
5	Consumers Energy Company	David C Greyerbiehl	Negative	View
5	Covanta Energy	Samuel Cabassa		
5	CPS Energy	Robert Stevens	Affirmative	
5	Detroit Edison Company	Christy Wicke	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Affirmative	View
5	Duke Energy	Dale Q Goodwine	Affirmative	
5	Dynegy Inc.	Dan Roethemeyer	Negative	View
5	East Kentucky Power Coop.	Stephen Ricker	Affirmative	
5	Electric Power Supply Association	John R Cashin		
5	Entegra Power Group, LLC	Kenneth B Parker	Affirmative	
5	Exelon Nuclear	Michael Korchynsky	Affirmative	
5	ExxonMobil Research and Engineering	Martin Kaufman	Negative	
5	Florida Municipal Power Agency	David Schumann	Affirmative	View
5	Great River Energy	Preston L Walsh	Affirmative	View
5	Green Country Energy	Greg Froehling	Affirmative	
5	Imperial Irrigation District	Marcela Y Caballero	Affirmative	
5	Indeck Energy Services, Inc.	Rex A Roehl	Negative	View
5	Invenergy LLC	Alan Beckham	Negative	View
5	JEA	John J Babik	Affirmative	
5	Kissimmee Utility Authority	Mike Blough	Affirmative	
5	Lakeland Electric	James M Howard	Affirmative	View
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver		
5	Lower Colorado River Authority	Tom Foreman	Affirmative	
5	Manitoba Hydro	S N Fernando	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	View
5	Michigan Public Power Agency	Gary Carlson	Abstain	View
5	MidAmerican Energy Co.	Christopher Schneider	Affirmative	View
5	Muscatine Power & Water	Mike Avesing	Negative	
5	Nebraska Public Power District	Don Schmit	Affirmative	View
5	New York Power Authority	Gerald Mannarino	Affirmative	
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Affirmative	
5	Northern Indiana Public Service Co.	William O. Thompson	Affirmative	
5	Occidental Chemical	Michelle R DAntuono	Affirmative	
5	Oklahoma Gas and Electric Co.	Kim Morphis	Affirmative	
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Ontario Power Generation Inc.	Colin Anderson	Negative	View

5	Orlando Utilities Commission	Richard Kinas		
5	Otter Tail Power Company	Stacie Hebert	Affirmative	
5	PacifiCorp	Sandra L. Shaffer	Affirmative	
5	Platte River Power Authority	Roland Thiel	Affirmative	
5	Portland General Electric Co.	Gary L Tingley	Affirmative	View
5	PowerSouth Energy Cooperative	Tim Hattaway	Affirmative	
5	PPL Generation LLC	Annette M Bannon	Affirmative	
5	Progress Energy Carolinas	Wayne Lewis	Affirmative	
5	PSEG Fossil LLC	Mikhail Falkovich	Affirmative	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Negative	View
5	Puget Sound Energy, Inc.	Tom Flynn	Affirmative	
5	Sacramento Municipal Utility District	Bethany Hunter	Affirmative	
5	Salt River Project	Glen Reeves	Affirmative	View
5	Santee Cooper	Lewis P Pierce	Affirmative	
5	Seattle City Light	Michael J. Haynes	Affirmative	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	View
5	Southern California Edison Co.	Denise Yaffe	Negative	
5	Southern Company Generation	William D Shultz	Affirmative	View
5	Tampa Electric Co.	RJames Rocha	Affirmative	
5	Tenaska, Inc.	Scott M Helyer	Affirmative	
5	Tennessee Valley Authority	David Thompson	Affirmative	
5	Tri-State G & T Association, Inc.	Barry Ingold	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	
5	Westar Energy	Bo Jones	Negative	View
5	Wisconsin Electric Power Co.	Linda Horn	Affirmative	View
5	Wisconsin Public Service Corp.	Leonard Rentmeester	Affirmative	
6	AEP Marketing	Edward P. Cox	Negative	View
6	Ameren Energy Marketing Co.	Jennifer Richardson	Affirmative	
6	APS	RANDY A YOUNG	Affirmative	
6	Associated Electric Cooperative, Inc.	Brian Ackermann	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	View
6	City of Austin dba Austin Energy	Lisa L Martin	Affirmative	
6	City of Redding	Marvin Briggs	Affirmative	
6	Cleco Power LLC	Robert Hirchak	Affirmative	
6	Colorado Springs Utilities	Lisa C Rosintoski	Affirmative	
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Affirmative	
6	Constellation Energy Commodities Group	Brenda Powell	Affirmative	View
6	Dominion Resources, Inc.	Louis S. Slade	Affirmative	View
6	Duke Energy Carolina	Walter Yeager	Affirmative	
6	Exelon Power Team	Pulin Shah	Affirmative	
6	FirstEnergy Solutions	Kevin Querry	Affirmative	View
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative	View
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	View
6	Florida Power & Light Co.	Silvia P. Mitchell	Abstain	
6	Great River Energy	Donna Stephenson	Affirmative	
6	Imperial Irrigation District	Cathy Bretz	Affirmative	
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Affirmative	
6	Lakeland Electric	Paul Shipps	Affirmative	
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Manitoba Hydro	Daniel Prowse	Affirmative	View
6	MidAmerican Energy Co.	Dennis Kimm	Affirmative	View
6	Muscatine Power & Water	John Stolley	Affirmative	
6	New York Power Authority	William Palazzo	Affirmative	View
6	North Carolina Municipal Power Agency #1	Matthew Schull	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	NRG Energy, Inc.	Alan Johnson	Abstain	
6	Omaha Public Power District	David Ried	Negative	View
6	Orlando Utilities Commission	Claston Augustus Sunanon	Affirmative	View
6	PacifiCorp	Scott L Smith	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Affirmative	
6	PPL EnergyPlus LLC	Mark A Heimbach	Affirmative	
6	Progress Energy	John T Sturgeon	Affirmative	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Affirmative	
6	Public Utility District No. 1 of Chelan County	Hugh A. Owen	Affirmative	
6	Sacramento Municipal Utility District	Claire Warshaw	Affirmative	View
6	Salt River Project	Steven J Hulet	Affirmative	View

6	Santee Cooper	Michael Brown	Affirmative	
6	Seattle City Light	Dennis Sismaet	Affirmative	View
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Snohomish County PUD No. 1	William T Moojen	Abstain	View
6	South California Edison Company	Lujuanna Medina	Negative	View
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Affirmative	
6	Tenaska Power Services Co.	John D Varnell	Abstain	View
6	Tennessee Valley Authority	Marjorie S. Parsons	Affirmative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F. Lemmons	Negative	View
7	Siemens Energy, Inc.	Frank R. McElvain	Affirmative	View
8		Roger C Zaklukiewicz	Affirmative	
8		Edward C Stein	Affirmative	
8		Merle Ashton	Affirmative	
8		James A Maenner	Negative	View
8	INTELLIBIND	Kevin Conway		
8	JDRJC Associates	Jim Cyrulewski	Negative	
8	Montana Consumer Counsel	Larry Nordell	Abstain	View
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Affirmative	View
8	Transmission Strategies, LLC	Bernie M Pasternack	Affirmative	
8	Utility Services, Inc.	Brian Evans-Mongeon	Affirmative	
8	Volkmann Consulting, Inc.	Terry Volkmann	Affirmative	
9	Alabama Public Service Commission	John Free	Affirmative	
9	California Energy Commission	William M Chamberlain	Affirmative	View
9	Central Lincoln PUD	Bruce Lovelin	Affirmative	View
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Negative	View
9	Michigan Public Service Commission	Donald J Mazuchowski		
9	National Association of Regulatory Utility Commissioners	Diane J Barney	Negative	View
9	New Hampshire Public Utilities Commission	Michael Harrington		
9	New York State Department of Public Service	Thomas Dvorsky	Negative	View
9	Oregon Public Utility Commission	Jerome Murray	Affirmative	View
9	Pennsylvania Public Utility Commission	darren gill	Negative	
9	Public Service Commission of South Carolina	Philip Riley	Negative	View
9	Utah Public Service Commission	Ric Campbell	Affirmative	
10	New York State Reliability Council	Alan Adamson	Affirmative	View
10	Northeast Power Coordinating Council, Inc.	Guy V. Zito	Affirmative	View
10	ReliabilityFirst Corporation	Anthony E Jablonski	Affirmative	View
10	SERC Reliability Corporation	Carter B. Edge	Affirmative	
10	Southwest Power Pool RE	Stacy Dochoda	Affirmative	View
10	Texas Reliability Entity, Inc.	Donald G Jones	Negative	View
10	Western Electricity Coordinating Council	Steven L. Rueckert	Affirmative	View

Legal and Privacy : 609.452.8060 voice : 609.452.9550 fax : 116-390 Village Boulevard : Princeton, NJ 08540-5721
Washington Office: 1120 G Street, N.W. : Suite 990 : Washington, DC 20005-3801

Account Log-In/Register

Copyright © 2010 by the North American Electric Reliability Corporation. : All rights reserved.
A New Jersey Nonprofit Corporation

Ballot Results	
Ballot Name:	Project 2010-17 Technical Information to Support BES Exception_rc
Ballot Period:	11/10/2011 - 11/21/2011
Ballot Type:	recirculation
Total # Votes:	400
Total Ballot Pool:	430
Quorum:	**93.02 % The Quorum has been reached**
Weighted Segment Vote:	81.48 %
Ballot Results:	**The Standard has Passed**

Summary of Ballot Results

Segment	Ballot Pool	Segment Weight	Affirmative # Votes	Affirmative Fraction	Negative # Votes	Negative Fraction	Abstain # Votes	No Vote
1 - Segment 1.	99	1	75	0.852	13	0.148	8	3
2 - Segment 2.	11	1	6	0.6	4	0.4	1	0
3 - Segment 3.	124	1	98	0.925	8	0.075	4	14
4 - Segment 4.	34	1	28	0.933	2	0.067	2	2
5 - Segment 5.	82	1	54	0.806	13	0.194	6	9
6 - Segment 6.	50	1	41	0.891	5	0.109	4	0
7 - Segment 7.	1	0	0	0	0	0	0	1
8 - Segment 8.	11	1	8	0.8	2	0.2	0	1
9 - Segment 9.	11	0.9	6	0.6	3	0.3	2	0
10 - Segment 10.	7	0.7	6	0.6	1	0.1	0	0
Totals	**430**	**8.6**	**322**	**7.007**	**51**	**1.593**	**27**	**30**

Individual Ballot Pool Results

Segment	Organization	Member	Ballot	Comments
1	Ameren Services	Kirit Shah	Affirmative	
1	American Electric Power	Paul B. Johnson	Affirmative	View
1	American Transmission Company, LLC	Andrew Z Pusztai	Affirmative	
1	Arizona Public Service Co.	Robert Smith	Negative	View
1	Associated Electric Cooperative, Inc.	John Bussman	Affirmative	View
1	Austin Energy	James Armke	Abstain	
1	Balancing Authority of Northern California	Kevin Smith	Affirmative	
1	Baltimore Gas & Electric Company	Gregory S Miller	Affirmative	

1	BC Hydro and Power Authority	Patricia Robertson	Abstain	
1	Beaches Energy Services	Joseph S Stonecipher	Affirmative	
1	Black Hills Corp	Eric Egge	Affirmative	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	View
1	Brazos Electric Power Cooperative, Inc.	Tony Kroskey	Abstain	
1	CenterPoint Energy Houston Electric	Dale Bodden	Abstain	
1	Central Electric Power Cooperative	Michael B Bax	Affirmative	
1	Central Maine Power Company	Kevin L Howes	Negative	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Affirmative	
1	Colorado Springs Utilities	Paul Morland	Negative	View
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative	View
1	Consumers Power Inc.	Stuart Sloan	Affirmative	View
1	CPS Energy	Richard Castrejana	Negative	
1	Dairyland Power Coop.	Robert W. Roddy	Affirmative	
1	Dayton Power & Light Co.	Hertzel Shamash		
1	Dominion Virginia Power	Michael S Crowley	Affirmative	View
1	Duke Energy Carolina	Douglas E. Hils	Affirmative	
1	East Kentucky Power Coop.	George S. Carruba	Affirmative	
1	Entergy Services, Inc.	Edward J Davis	Affirmative	
1	FirstEnergy Corp.	William J Smith	Affirmative	View
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Negative	
1	Florida Power & Light Co.	Mike O'Neil	Affirmative	
1	Gainesville Regional Utilities	Luther E. Fair	Affirmative	
1	Georgia Transmission Corporation	Harold Taylor	Affirmative	View
1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon	Affirmative	
1	Hydro One Networks, Inc.	Ajay Garg	Negative	View
1	Hydro-Quebec TransEnergie	Bernard Pelletier	Negative	View
1	Idaho Power Company	Ronald D. Schellberg	Affirmative	
1	Imperial Irrigation District	Tino Zaragoza	Affirmative	
1	International Transmission Company Holdings Corp	Michael Moltane	Affirmative	
1	JEA	Ted Hobson	Affirmative	
1	KAMO Electric Cooperative	Walter Kenyon	Affirmative	
1	Kansas City Power & Light Co.	Michael Gammon	Affirmative	
1	Lakeland Electric	Larry E Watt	Affirmative	
1	Lee County Electric Cooperative	John W Delucca	Affirmative	
1	Long Island Power Authority	Robert Ganley	Affirmative	
1	Los Angeles Department of Water & Power	Ly M Le		
1	Lower Colorado River Authority	Martyn Turner	Negative	View
1	M & A Electric Power Cooperative	William Price	Affirmative	
1	Manitoba Hydro	Joe D Petaski	Negative	View
1	MEAG Power	Danny Dees	Affirmative	
1	Memphis Light, Gas and Water Division	Allan Long	Abstain	
1	Metropolitan Water District of Southern California	Ernest Hahn	Negative	View
1	MidAmerican Energy Co.	Terry Harbour		
1	Minnkota Power Coop. Inc.	Richard Burt	Affirmative	View
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Affirmative	
1	National Grid	Saurabh Saksena	Affirmative	
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Negative	
1	New York Power Authority	Arnold J. Schuff	Affirmative	View
1	Northeast Missouri Electric Power Cooperative	Kevin White	Affirmative	
1	Northeast Utilities	David Boguslawski	Affirmative	
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative	
1	NorthWestern Energy	John Canavan	Affirmative	
1	Ohio Valley Electric Corp.	Robert Mattey	Affirmative	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Abstain	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Brenda Pulis	Affirmative	
1	Orlando Utilities Commission	Brad Chase	Affirmative	View
1	Otter Tail Power Company	Daryl Hanson	Affirmative	
1	PECO Energy	Ronald Schloendorn	Affirmative	
1	Platte River Power Authority	John C. Collins	Affirmative	

1	Portland General Electric Co.	John T Walker	Affirmative	View
1	Potomac Electric Power Co.	David Thorne	Affirmative	View
1	PPL Electric Utilities Corp.	Brenda L Truhe	Affirmative	
1	Public Service Company of New Mexico	Laurie Williams	Affirmative	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Affirmative	
1	Public Utility District No. 1 of Okanogan County	Dale Dunckel	Affirmative	
1	Puget Sound Energy, Inc.	Denise M Lietz	Affirmative	
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	View
1	Santee Cooper	Terry L Blackwell	Affirmative	
1	Seattle City Light	Pawel Krupa	Affirmative	
1	Sho-Me Power Electric Cooperative	Denise Stevens	Affirmative	
1	Sierra Pacific Power Co.	Rich Salgo	Affirmative	View
1	Snohomish County PUD No. 1	Long T Duong	Affirmative	View
1	South California Edison Company	Steven Mavis	Negative	View
1	South Texas Electric Cooperative	Richard McLeon	Affirmative	
1	Southwest Transmission Cooperative, Inc.	James Jones	Affirmative	View
1	Sunflower Electric Power Corporation	Noman Lee Williams	Affirmative	View
1	Tampa Electric Co.	Beth Young	Affirmative	
1	Tennessee Valley Authority	Larry Akens	Affirmative	
1	Transmission Agency of Northern California	Bryan Griess	Affirmative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	View
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Vermont Electric Power Company, Inc.	Kim Moulton	Abstain	
1	Westar Energy	Allen Klassen	Negative	
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Wolverine Power Supply Coop., Inc.	Michelle Denike	Abstain	
2	Alberta Electric System Operator	Mark B Thompson	Affirmative	View
2	BC Hydro	Venkataramakrishnan Vinnakota	Abstain	
2	California ISO	Rich Vine	Affirmative	
2	Electric Reliability Council of Texas, Inc.	Charles B Manning	Affirmative	
2	Independent Electricity System Operator	Barbara Constantinescu	Negative	View
2	ISO New England, Inc.	Kathleen Goodman	Negative	View
2	Midwest ISO, Inc.	Marie Knox	Negative	View
2	New Brunswick System Operator	Alden Briggs	Negative	View
2	New York Independent System Operator	Gregory Campoli	Affirmative	
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative	
2	Southwest Power Pool, Inc.	Charles Yeung	Affirmative	
3	AEP	Michael E Deloach		
3	Alameda Municipal Power	Douglas Draeger	Affirmative	
3	Ameren Services	Mark Peters	Affirmative	
3	APS	Steven Norris	Negative	
3	Associated Electric Cooperative, Inc.	Chris W Bolick	Affirmative	View
3	Atlantic City Electric Company	NICOLE BUCKMAN	Affirmative	
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain	
3	Benton Rural Electric Association	Clint Gerkensmeyer	Affirmative	
3	Big Bend Electric Cooperative, Inc.	Benjamin Friederichs	Affirmative	View
3	Blachly-Lane Electric Co-op	Bud Tracy	Affirmative	View
3	Blue Ridge Electric	James L Layton		
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	View
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Affirmative	View
3	Central Electric Power Cooperative	Ralph J Schulte	Affirmative	
3	Central Hudson Gas & Electric Corp.	Thomas C Duffy	Affirmative	View
3	Central Lincoln PUD	Steve Alexanderson	Affirmative	View
3	City of Austin dba Austin Energy	Andrew Gallo	Affirmative	
3	City of Bartow, Florida	Matt Culverhouse	Affirmative	
3	City of Cheney	Joe Noland	Affirmative	
3	City of Clewiston	Lynne Mila		
3	City of Farmington	Linda R Jacobson	Affirmative	
3	City of Garland	Ronnie C Hoeinghaus	Abstain	
3	City of Green Cove Springs	Gregg R Griffin	Affirmative	View
3	City of McMinnville	John C Dietz	Affirmative	
3	City of Redding	Bill Hughes	Affirmative	
3	City of Ukiah	Colin Murphey	Affirmative	

3	Clatskanie People's Utility District	Brian Fawcett	Affirmative	
3	Clay Electric Cooperative	Howard M. Mott Jr.	Affirmative	
3	Clearwater Power Co.	Dave Hagen	Affirmative	View
3	Cleco Corporation	Michelle A Corley	Affirmative	
3	Colorado Springs Utilities	Lisa Cleary	Negative	
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	View
3	Constellation Energy	CJ Ingersoll	Affirmative	
3	Consumers Energy	Richard Blumenstock	Negative	View
3	Consumers Power Inc.	Roman Gillen	Affirmative	View
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Affirmative	View
3	Cowlitz County PUD	Russell A Noble	Affirmative	
3	CPS Energy	Jose Escamilla	Negative	View
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Dominion Resources Services	Michael F. Gildea	Affirmative	
3	Douglas Electric Cooperative	Dave Sabala	Affirmative	View
3	Duke Energy Carolina	Henry Ernst-Jr	Affirmative	
3	Fall River Rural Electric Cooperative	Bryan Case	Affirmative	View
3	Fayetteville Public Works Commission	Allen R Wallace	Affirmative	
3	FirstEnergy Energy Delivery	Stephan Kern	Affirmative	View
3	Flathead Electric Cooperative	John M Goroski	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Affirmative	View
3	Florida Power Corporation	Lee Schuster	Affirmative	
3	Georgia Systems Operations Corporation	William N. Phinney	Affirmative	View
3	Grays Harbor PUD	Wesley W Gray	Affirmative	
3	Great River Energy	Sam Kokkinen	Affirmative	
3	Harney Electric Cooperative, Inc.	Shane Sweet	Affirmative	
3	Holland Board of Public Works	William Bush	Affirmative	View
3	Hydro One Networks, Inc.	David Kiguel	Negative	View
3	Idaho Falls Power	Richard Malloy	Abstain	
3	Imperial Irrigation District	Jesus S. Alcaraz	Affirmative	
3	JEA	Garry Baker	Affirmative	
3	KAMO Electric Cooperative	Theodore J Hilmes	Affirmative	
3	Kansas City Power & Light Co.	Charles Locke	Affirmative	
3	Kissimmee Utility Authority	Gregory D Woessner	Affirmative	View
3	Kootenai Electric Cooperative	Dave Kahly	Affirmative	
3	La Plata Electric Association	Ronald Meier	Affirmative	
3	Lakeview Light & Power	Robert Truesdell	Affirmative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Affirmative	View
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Affirmative	View
3	Lincoln Electric System	Jason Fortik	Affirmative	View
3	Lost River Electric Cooperative	Richard Reynolds		
3	Louisville Gas and Electric Co.	Charles A. Freibert	Affirmative	View
3	M & A Electric Power Cooperative	Stephen D Pogue	Affirmative	
3	Manitoba Hydro	Greg C. Parent	Negative	
3	Manitowoc Public Utilities	Thomas E Reed	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik		
3	Mission Valley Power	Kerry Wiedrich	Affirmative	
3	Mississippi Power	Jeff Franklin	Affirmative	
3	Modesto Irrigation District	Jack W Savage	Negative	View
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	View
3	Muscatine Power & Water	John S Bos	Negative	View
3	Nebraska Public Power District	Tony Eddleman	Abstain	
3	New York Power Authority	Marilyn Brown	Affirmative	View
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	North Carolina Electric Membership Corp.	Doug White	Affirmative	View
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann	Affirmative	
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	Northern Lights Inc.	Jon Shelby	Affirmative	View
3	Northern Wasco County People's Utility District (PUD)	Paul Titus		
3	NW Electric Power Cooperative, Inc.	David McDowell	Affirmative	
3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Affirmative	View
3	Omaha Public Power District	Blaine R. Dinwiddie		
3	Orange and Rockland Utilities, Inc.	David Burke	Affirmative	
3	Oregon Trail Electric Cooperative	ned ratterman	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Affirmative	View

3	Owensboro Municipal Utilities	Thomas T Lyons	Affirmative	
3	Pacific Gas and Electric Company	John H Hagen	Affirmative	View
3	PacifiCorp	John Apperson		
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter	Affirmative	
3	Progress Energy Carolinas	Sam Waters	Affirmative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Affirmative	
3	Public Utility District No. 1 of Clallam County	David Proebstel	Affirmative	
3	Public Utility District No. 1 of Franklin County	Linda Esparza		
3	Public Utility District No. 2 of Grant County	Greg Lange	Affirmative	View
3	Rayburn Country Electric Coop., Inc.	Eddy Reece		
3	Rutherford EMC	Thomas M Haire	Affirmative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salem Electric	Anthony Schacher	Affirmative	View
3	Salmon River Electric Cooperative	Ken Dizes		
3	Salt River Project	John T. Underhill	Affirmative	View
3	Santee Cooper	James M Poston	Affirmative	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Sho-Me Power Electric Cooperative	Jeff L Neas	Affirmative	
3	South Carolina Electric & Gas Co.	Hubert C Young	Affirmative	
3	Southern California Edison Co.	David Schiada		
3	Springfield Utility Board	Jeff Nelson	Affirmative	View
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L Donahey	Affirmative	
3	Tennessee Valley Authority	Ian S Grant	Affirmative	View
3	Tri-State G & T Association, Inc.	Janelle Marriott	Affirmative	
3	Umatilla Electric Cooperative	Steve Eldrige	Affirmative	View
3	Vigilante Electric Cooperative	Dave Alberi		
3	West Oregon Electric Cooperative, Inc.	Marc M Farmer	Affirmative	View
3	Wisconsin Electric Power Marketing	James R Keller		
3	Xcel Energy, Inc.	Michael Ibold	Affirmative	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power	Kevin Koloini	Abstain	
4	American Public Power Association	Allen Mosher	Affirmative	View
4	Arkansas Electric Cooperative Corporation	Ronnie Frizzell	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache	Affirmative	View
4	City of Clewiston	Kevin McCarthy		
4	City of Redding	Nicholas Zettel	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	View
4	Consumers Energy	David Frank Ronk	Negative	View
4	Flathead Electric Cooperative	Russ Schneider	Affirmative	
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	View
4	Fort Pierce Utilities Authority	Thomas Richards	Affirmative	
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Affirmative	View
4	Imperial Irrigation District	Diana U Torres	Affirmative	
4	Indiana Municipal Power Agency	Jack Alvey	Affirmative	
4	Integrys Energy Group, Inc.	Christopher Plante	Abstain	
4	Madison Gas and Electric Co.	Joseph DePoorter	Affirmative	View
4	Modesto Irrigation District	Spencer Tacke	Negative	View
4	National Rural Electric Cooperative Association	Barry R. Lawson	Affirmative	
4	North Carolina Eastern Municipal Power Agency	Cecil Rhodes	Affirmative	
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	View
4	Oklahoma Municipal Power Authority	Ashley Stringer	Affirmative	
4	Old Dominion Electric Coop.	Mark Ringhausen	Affirmative	View
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Affirmative	View
4	Public Power Council	Nancy Baker		
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	View
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Transmission Access Policy Study Group	William Gallagher	Affirmative	

4	Western Montana Electric G&T	William Drummond	Affirmative	
5	AEP Service Corp.	Brock Ondayko	Affirmative	View
5	AES Corporation	Leo Bernier	Affirmative	
5	Amerenue	Sam Dwyer	Affirmative	
5	Arizona Public Service Co.	Edward Cambridge	Negative	
5	Associated Electric Cooperative, Inc.	Brad Haralson	Negative	
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla		
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	BrightSource Energy, Inc.	Chifong Thomas	Affirmative	View
5	City and County of San Francisco	Daniel Mason	Abstain	
5	City of Austin dba Austin Energy	Jeanie Doty	Affirmative	
5	City of Grand Island	Jeff Mead	Abstain	
5	City of Redding	Paul Cummings	Affirmative	View
5	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Max Emrick	Affirmative	
5	Cogentrix Energy, Inc.	Mike D Hirst	Abstain	
5	Colorado Springs Utilities	Jennifer Eckels	Affirmative	
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Affirmative	View
5	Constellation Power Source Generation, Inc.	Amir Y Hammad	Affirmative	
5	Consumers Energy Company	David C Greyerbiehl	Negative	View
5	Covanta Energy	Samuel Cabassa		
5	CPS Energy	Robert Stevens	Negative	
5	Detroit Edison Company	Christy Wicke	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Affirmative	View
5	Duke Energy	Dale Q Goodwine	Affirmative	
5	Dynegy Inc.	Dan Roethemeyer	Negative	View
5	East Kentucky Power Coop.	Stephen Ricker	Affirmative	
5	Electric Power Supply Association	John R Cashin		
5	Exelon Nuclear	Michael Korchynsky	Affirmative	
5	ExxonMobil Research and Engineering	Martin Kaufman	Negative	
5	Florida Municipal Power Agency	David Schumann	Affirmative	View
5	Great River Energy	Preston L Walsh	Affirmative	
5	Green Country Energy	Greg Froehling	Affirmative	
5	Imperial Irrigation District	Marcela Y Caballero	Affirmative	
5	Indeck Energy Services, Inc.	Rex A Roehl	Negative	
5	Invenergy LLC	Alan Beckham	Affirmative	
5	JEA	John J Babik	Affirmative	
5	Kissimmee Utility Authority	Mike Blough	Affirmative	
5	Lakeland Electric	James M Howard	Affirmative	View
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver		
5	Lower Colorado River Authority	Tom Foreman	Affirmative	
5	Manitoba Hydro	S N Fernando	Negative	View
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	Michigan Public Power Agency	Gary Carlson	Affirmative	View
5	MidAmerican Energy Co.	Christopher Schneider	Affirmative	View
5	Muscatine Power & Water	Mike Avesing	Negative	
5	Nebraska Public Power District	Don Schmit	Abstain	
5	New York Power Authority	Gerald Mannarino	Affirmative	
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Affirmative	
5	Northern Indiana Public Service Co.	William O. Thompson	Affirmative	
5	Occidental Chemical	Michelle R DAntuono	Affirmative	View
5	Oklahoma Gas and Electric Co.	Kim Morphis		
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Ontario Power Generation Inc.	Colin Anderson	Negative	View
5	Orlando Utilities Commission	Richard Kinas		
5	Otter Tail Power Company	Stacie Hebert	Affirmative	
5	PacifiCorp	Sandra L. Shaffer	Affirmative	
5	Platte River Power Authority	Roland Thiel	Negative	View
5	Portland General Electric Co.	Gary L Tingley	Affirmative	
5	PowerSouth Energy Cooperative	Tim Hattaway		
5	PPL Generation LLC	Annette M Bannon	Affirmative	
5	Progress Energy Carolinas	Wayne Lewis	Affirmative	
5	Proven Compliance Solutions	Mitchell E Needham		

5	PSEG Fossil LLC	Mikhail Falkovich	Affirmative	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Negative	View
5	Puget Sound Energy, Inc.	Tom Flynn	Affirmative	
5	Sacramento Municipal Utility District	Bethany Hunter	Affirmative	
5	Salt River Project	Glen Reeves	Affirmative	View
5	Santee Cooper	Lewis P Pierce	Affirmative	
5	Seattle City Light	Michael J. Haynes	Affirmative	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	View
5	Southern California Edison Co.	Denise Yaffe	Negative	
5	Southern Company Generation	William D Shultz	Affirmative	View
5	Tampa Electric Co.	RJames Rocha	Affirmative	
5	Tenaska, Inc.	Scott M Helyer	Affirmative	
5	Tennessee Valley Authority	David Thompson	Affirmative	
5	Tri-State G & T Association, Inc.	Barry Ingold	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	
5	Wisconsin Electric Power Co.	Linda Horn		
5	Wisconsin Public Service Corp.	Leonard Rentmeester	Affirmative	
6	AEP Marketing	Edward P. Cox	Affirmative	View
6	Ameren Energy Marketing Co.	Jennifer Richardson	Affirmative	
6	APS	RANDY A YOUNG	Negative	
6	Associated Electric Cooperative, Inc.	Brian Ackermann	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa L Martin	Affirmative	
6	City of Redding	Marvin Briggs	Affirmative	
6	Cleco Power LLC	Robert Hirchak	Affirmative	
6	Colorado Springs Utilities	Lisa C Rosintoski	Negative	View
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Affirmative	View
6	Constellation Energy Commodities Group	Brenda Powell	Affirmative	View
6	Dominion Resources, Inc.	Louis S. Slade	Affirmative	View
6	Duke Energy Carolina	Walter Yeager	Affirmative	
6	Entergy Services, Inc.	Terri F Benoit	Affirmative	
6	Exelon Power Team	Pulin Shah	Affirmative	
6	FirstEnergy Solutions	Kevin Querry	Affirmative	View
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative	View
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	View
6	Florida Power & Light Co.	Silvia P. Mitchell	Abstain	
6	Great River Energy	Donna Stephenson	Affirmative	
6	Imperial Irrigation District	Cathy Bretz	Affirmative	
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Affirmative	
6	Lakeland Electric	Paul Shipps	Affirmative	
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Manitoba Hydro	Daniel Prowse	Negative	View
6	MidAmerican Energy Co.	Dennis Kimm	Affirmative	
6	New York Power Authority	William Palazzo	Negative	View
6	North Carolina Municipal Power Agency #1	Matthew Schull	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	NRG Energy, Inc.	Alan Johnson	Abstain	
6	Omaha Public Power District	David Ried	Affirmative	
6	Orlando Utilities Commission	Claston Augustus Sunanon	Affirmative	View
6	PacifiCorp	Scott L Smith	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Affirmative	
6	PPL EnergyPlus LLC	Mark A Heimbach	Affirmative	
6	Progress Energy	John T Sturgeon	Affirmative	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Affirmative	
6	Public Utility District No. 1 of Chelan County	Hugh A. Owen	Affirmative	
6	Sacramento Municipal Utility District	Claire Warshaw	Affirmative	View
6	Salt River Project	Steven J Hulet	Affirmative	View
6	Santee Cooper	Michael Brown	Affirmative	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Snohomish County PUD No. 1	William T Moojen	Abstain	View
6	South California Edison Company	Lujuanna Medina	Negative	View
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Affirmative	
6	Tenaska Power Services Co.	John D Varnell	Abstain	View
6	Tennessee Valley Authority	Marjorie S. Parsons	Affirmative	

6	Xcel Energy, Inc.	David F. Lemmons	Affirmative	
7	Siemens Energy, Inc.	Frank R. McElvain		
8		Roger C Zaklukiewicz	Affirmative	
8		James A Maenner	Negative	
8		Edward C Stein	Affirmative	
8		Merle Ashton	Affirmative	
8	INTELLIBIND	Kevin Conway		
8	JDRJC Associates	Jim Cyrulewski	Affirmative	
8	Montana Consumer Counsel	Larry Nordell	Negative	View
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Affirmative	View
8	Transmission Strategies, LLC	Bernie M Pasternack	Affirmative	
8	Utility Services, Inc.	Brian Evans-Mongeon	Affirmative	
8	Volkmann Consulting, Inc.	Terry Volkmann	Affirmative	
9	Alabama Public Service Commission	John Free	Affirmative	
9	California Energy Commission	William M Chamberlain	Affirmative	View
9	Central Lincoln PUD	Bruce Lovelin	Affirmative	View
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Abstain	
9	Michigan Public Service Commission	Donald J Mazuchowski	Affirmative	
9	National Association of Regulatory Utility Commissioners	Diane J Barney	Negative	View
9	New York State Department of Public Service	Thomas Dvorsky	Negative	
9	Oregon Public Utility Commission	Jerome Murray	Affirmative	
9	Pennsylvania Public Utility Commission	darren gill	Negative	
9	Public Service Commission of South Carolina	Philip Riley	Abstain	
9	Utah Public Service Commission	Ric Campbell	Affirmative	
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council	Guy V. Zito	Affirmative	View
10	ReliabilityFirst Corporation	Anthony E Jablonski	Affirmative	View
10	SERC Reliability Corporation	Carter B. Edge	Affirmative	
10	Southwest Power Pool RE	Stacy Dochoda	Negative	View
10	Texas Reliability Entity, Inc.	Donald G Jones	Affirmative	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Affirmative	View

Legal and Privacy : 609.452.8060 voice : 609.452.9550 fax : 116-390 Village Boulevard : Princeton, NJ 08540-5721
Washington Office: 1120 G Street, N.W. : Suite 990 : Washington, DC 20005-3801

Account Log-In/Register

Copyright © 2010 by the North American Electric Reliability Corporation. : All rights reserved.
A New Jersey Nonprofit Corporation

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standards Authorization Request

Title of Proposed Standard definition	NERC Glossary of Terms - Phase 2: Revision of the Bulk Electric System
Request Date	December 2, 2011

SAR Requester Information	SAR Type (Check all that apply)	
Name: Project 2010-17 Definition of Bulk Electric System (BES) SDT	☐	New Standard
Primary Contact: Peter Heidrich (Manager of Reliability Standards, FRCC) , Project 2010-17 Definition of Bulk Electric System (BES) SDT Chair	X	Revision to existing Standard
Telephone: (813) 207-7994 Fax: (813) 289-5646	☐	Withdrawal of existing Standard
E-mail: pheidrich@frcc.com	☐	Urgent Action

SAR Information
Industry Need (What is the industry problem this request is trying to solve?)
This project supports the ERO's obligation to identify the Elements necessary for the reliable operation of the interconnected transmission network to ensure that the ERO, the Regional Entities, and the industry have the ability to properly identify the applicable entities and Elements subject to the NERC Reliability Standards.
Purpose or Goal (How does this request propose to address the problem described above?)
Research possible revisions to the definition of BES (Phase 2) to address the issues identified through Project 2010-17 Definition of Bulk Electric System (BES) (Phase 1). The definition encompasses all Elements necessary for the reliable operation of the interconnected transmission network. The definition development may include other improvements to the definition as deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing a high quality and

SAR Information
technically sound definition of the Bulk Electric System (BES).
Identify the Objectives of the proposed standard's requirements (What specific reliability deliverables are required to achieve the goal?)
Revise the BES definition to identify the appropriate electrical components necessary for the reliable operation of the interconnected transmission network.
Brief Description (Provide a paragraph that describes the scope of this standard action.)
Collect and analyze information needed to support revisions to the definition of Bulk Electric System (BES) developed in Phase 1 of this project to provide a technically justifiable definition that identifies the appropriate electrical components necessary for the reliable operation of the interconnected transmission network. The definition development may include other improvements to the definition as deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing a high quality and technically sound definition of the BES.
Detailed Description (Provide a description of the proposed project with sufficient details for the standard drafting team to execute the SAR. Also provide a justification for the development or revision of the standard, including an assessment of the reliability and market interface impacts of implementing or not implementing the standard action.)
Collect and analyze information needed to support revisions to the definition of BES developed in Phase 1 of this project to provide a technically justifiable definition that identifies the appropriate electrical components necessary for the reliable operation of the interconnected transmission network. The definition development will include an analysis of the following issues which were identified during the development of Phase 1 of Project 2010-17 Definition of the BES. Clarification of these issues will appropriately define which Elements are necessary for the reliable operation of the interconnected transmission network. • Develop a technical justification to set the appropriate threshold for Real and Reactive Resources used in the operation of the Bulk Electric System (BES) • Determine if there is a technical justification to support the assumption that there is a reliability benefit of a contiguous BES • Determine if there is technical justification for including the equipment which "supports" the reliable operation of the BES • Determine if there is a technical justification to support an automatic interrupting device in Exclusions E1 and E3 • Determine if there is a technical justification to support the inclusion of Cranking Paths and

SAR Information
Blackstart Resources • Determine if there is a technical justification for selection of 100 kV as the bright-line voltage level • Determine if there is a technical justification to support allowing power flow out of the local network under certain conditions and if so, what the maximum allowable flow should be Provide improved clarity to the following: • The relationship between the BES definition and the ERO Statement of Compliance Registry Criteria established in FERC Order 693 • The use of the term "non-retail generation" • The language for Inclusion I4 on dispersed power resources • The appropriate 'points of demarcation' between Transmission, Generation, and Distribution Phase 2 of the definition development may include other improvements to the definition as deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing a high quality and technically justifiable definition of the BES. Based on the potential revisions to the definition of the BES and an analysis of the application of, and the results from, the exception process, the drafting team will review and if necessary propose revisions to the 'Technical Principles' associated with the Rules of Procedure Exception Process to ensure consistency in the application of the definition and the exception process.

Reliability Functions

The Standard will Apply to the Following Functions (Check box for each one that applies.)		
This section is not applicable as the SAR is for a definition which is about Elements. Elements of the BES may impact all functions, however Applicability to entities is covered in Section 4 of each Reliability Standard.		
☐	Regional Reliability Organization	Conducts the regional activities related to planning and operations, and coordinates activities of Responsible Entities to secure the reliability of the Bulk Electric System within the region and adjacent regions.

The Standard will Apply to the Following Functions (Check box for each one that applies.)		
☐	Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
☐	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports Interconnection frequency in real time.
☐	Interchange Authority	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
☐	Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
☐	Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within a Planning Coordinator area.
☐	Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within its portion of the Planning Coordinator area.
☐	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
☐	Transmission Owner	Owns and maintains transmission facilities.
☐	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
☐	Distribution Provider	Delivers electrical energy to the End-use customer.
☐	Generator Owner	Owns and maintains generation facilities.
☐	Generator	Operates generation unit(s) to provide real and reactive power.

The Standard will Apply to the Following Functions (Check box for each one that applies.)		
	Operator	
☐	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
☐	Market Operator	Interface point for reliability functions with commercial functions.
☐	Load-Serving Entity	Secures energy and transmission service (and reliability-related services) to serve the End-use Customer.

Reliability and Market Interface Principles

Applicable Reliability Principles (Check box for all that apply.)	
X	1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
X	2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
X	3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.
X	4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented.
X	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems.
X	6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.

Applicable Reliability Principles (Check box for all that apply.)	
X	7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis.
X	8. Bulk power systems shall be protected from malicious physical or cyber attacks.
Does the proposed Standard comply with all of the following Market Interface Principles? (Select 'yes' or 'no' from the drop-down box.)	
1. A reliability standard shall not give any market participant an unfair competitive advantage. Yes	
2. A reliability standard shall neither mandate nor prohibit any specific market structure. Yes	
3. A reliability standard shall not preclude market solutions to achieving compliance with that standard. Yes	
4. A reliability standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes	

Related Standards

Standard No.	Explanation

Related SARs

SAR ID	Explanation

SAR ID	Explanation

Regional Variances

Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
SERC	
RFC	
SPP	
WECC	

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed

1. SAR posted for comment 12/17/10 – 1/21/11
2. SC authorized moving the SAR forward to standard development 3/25/11
3. First posting of definition 4/28/11 – 5/27/11
4. First posting of criteria 5/11/11 – 6/10/11
5. Second posting of definition and criteria plus initial ballot 8/26/11 – 10/10/11

Description of Current Draft

This draft is the third posting and recirculation ballot of the revised definition of the Bulk Electric System (BES). It is for a 10-day recirculation voting period.

Anticipated Actions	Anticipated Date
30-day Formal Comment Period	4/28/11
45-day Formal Comment Period with Parallel Initial Ballot	September 2011
Recirculation ballot	November 2011
BOT adoption	January 2012

Effective Dates

This definition shall become effective on the first day of the second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, the definition will go into effect on the first day of the second calendar quarter after Board of Trustees adoption. Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition.

Version History

Version	Date	Action	Change Tracking
1	TBD	Respond to FERC Order No. 743 to clarify the definition of the Bulk Electric System	N/A

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

Bulk Electric System (BES): Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. This does not include facilities used in the local distribution of electric energy.

Inclusions:

- **I1** - Transformers with the primary terminal and at least one secondary terminal operated at 100 kV or higher unless excluded under Exclusion E1 or E3.
- **I2** - Generating resource(s) with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.
- **I3** - Blackstart Resources identified in the Transmission Operator's restoration plan.
- **I4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above.
- **I5** –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.

Exclusions:

- **E1** - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher and:
    a) Only serves Load. Or,
    b) Only includes generation resources, not identified in Inclusion I3, with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,
    c) Where the radial system serves Load and includes generation resources, not identified in Inclusion I3, with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

  Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

- **E2** - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail Load with electric energy if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.
- **E3** - Local networks (LN): A group of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the interconnected system. LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The LN is characterized by all of the following:
    a) Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ;
    b) Power flows only into the LN and the LN does not transfer energy originating outside the LN for delivery through the LN; and
    c) Not part of a Flowgate or transfer path: The LN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
- **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Project 2010-17 Phase 2 - Definition of BES

Please **DO NOT** use this form for submitting comments. Please use the electronic form to submit comments on the SAR. The electronic comment form must be completed by **February 3, 2012.**

If you have questions please contact Ed Dobrowolski at ed.dobrowolski@nerc.net or by telephone at 1.609.947.3673.

2010-17 Definition of BES project page

Background Information

This posting is for soliciting comment.

This SAR is a direct result of the industry comment periods for Project 2010-17 Definition of BES Phase 1 where the industry indicated a need for further detailed examination of the technical concepts underlying the BES definition. Due to time constraints in Phase 1 brought about by the FERC Orders driving the revised definition, any expansion of the scope of Phase 1 was deferred to Phase 2 where time deadlines would be less of an issue. The language of the SAR is such that any and all aspects of the Phase 1 definition are open to discussion and possible revision. However, the SDT outlined some of the major points that were brought up in Phase 1 by bulleting them in the SAR description. The SDT does not consider this list to be an all exclusive one – it is simply a brief listing of those issues that were identified in Phase 1.

You do not have to answer all questions. Enter all comments in simple text format. Bullets, numbers, and special formatting will not be retained.

Insert a “check” mark in the appropriate boxes by double-clicking the gray areas.

The scope of this project includes:

Collect and analyze information needed to support revisions to the definition of BES developed in Phase 1 of this project to provide a technically justifiable definition that identifies the appropriate electrical components necessary for the reliable operation of the interconnected transmission network. The definition development will include an analysis of the following issues which were identified during the development of Phase 1 of Project 2010-17 Definition of the BES. Clarification of these issues will appropriately define which Elements are necessary for the reliable operation of the interconnected transmission network.

- Develop a technical justification to set the appropriate threshold for Real and Reactive Resources used in the operation of the Bulk Electric System (BES)
- Determine if there is a technical justification to support the assumption that there is a reliability benefit of a contiguous BES
- Determine if there is a technical justification for the equipment which "supports" the reliable operation of the BES but is installed on the distribution system
- Determine if there is a technical justification to support an automatic interrupting device in Exclusions E1 and E3
- Determine if there is a technical justification to support the inclusion of Cranking Paths and Blackstart Resources
- Determine if there is a technical justification for selection of 100 kV as the bright-line voltage level
- Determine if there is a technical justification to support allowing power flow out of the local network under certain conditions and if so, what the maximum allowable flow should be

Provide improved clarity to the following:

- The relationship between the BES definition and the ERO Statement of Compliance Registry Criteria established in FERC Order 693
- The use of the term "non-retail generation"
- The language for Inclusion I4 on dispersed power resources
- The appropriate 'points of demarcation' between Transmission, Generation, and Distribution

Phase 2 of the definition development may include other improvements to the definition as deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing a high quality and technically justifiable definition of the Bulk Electric System (BES).

Based on the potential revisions to the definition of the Bulk Electric System (BES) and an analysis of the application of, and the results from, the exception process, the drafting team will review and if necessary propose revisions to the 'Technical Principles' associated with the Rules of Procedure Exception Process to ensure consistency in the application of the definition and the exception process.

1. Do you agree with this scope? If not, please explain.

   ☐ Yes

   ☐ No

   Comments:

The SDT has identified several issues that are included in the scope of Phase 2 of the project that are associated with the technical aspects of the definition and require technical justification to drive a revision to the definition. Compelling technical justification is an essential component in moving any revision forward that addresses the technical nature of the BES definition. The SDT is seeking to identify existing technical justifications (i.e., completed studies, technical papers, etc.) and requests your assistance to properly identify resources available to the SDT which will facilitate the SDT's work in prioritizing its efforts.

Note: The SDT does not intend to respond to all responses associated with an entity's knowledge of existing technical justification (i.e. analysis methodologies, completed studies, technical papers, etc.). The SDT is collecting potential resources that could assist in the development of compelling technical justification.

2. Do you agree that the SDT should pursue the development of technical justification to set thresholds for Real and Reactive Power Resources used in the reliable operation of the BES different from those presently existing in the BES definition?

   ☐ Yes

   ☐ No

   Comments:

   a. Are you aware of existing technical justification (i.e., analysis methodologies, completed studies, technical papers, etc.) that would assist the SDT in the development of technical justification for this issue? If so, please provide details in the 'Comments' field.

   ☐ Yes

   ☐ No

   Comments:

3. Do you agree that the SDT should pursue technical justification that supports the assumption that there is a reliability benefit of a contiguous BES?

   ☐ Yes

   ☐ No

   Comments:

a. Are you aware of existing technical justification (i.e., analysis methodologies, completed studies, technical papers, etc.) that would assist the SDT in the development of technical justification for this issue? If so, please provide details in the 'Comments' field.

☐ Yes

☐ No

Comments:

4. Do you agree that the SDT should pursue technical justification for including in the BES definition the equipment which "supports" the reliable operation of the BES?

☐ Yes

☐ No

Comments:

a. Are you aware of existing technical justification (i.e. analysis methodologies, completed studies, technical papers, etc.) that would assist the SDT in the development of technical justification for this issue? If so, please provide details in the 'Comments' field.

☐ Yes

☐ No

Comments:

5. Do you agree that the SDT should pursue technical justification to support including an automatic interrupting device in Exclusions E1 and E3?

☐ Yes

☐ No

Comments:

a. Are you aware of existing technical justification (i.e., analysis methodologies, completed studies, technical papers, etc.) that would assist the SDT in the development of technical justification for this issue? If so, please provide details in the 'Comments' field.

☐ Yes

☐ No

Comments:

6. Do you agree that the SDT should pursue technical justification to support the inclusion of Cranking Paths in the BES definition and to retain Blackstart Resources as part of the BES definition?

   ☐ Yes

   ☐ No

   Comments:

   a. Are you aware of existing technical justification (i.e., analysis methodologies, completed studies, technical papers, etc.) that would assist the SDT in the development of technical justification for this issue? If so, please provide details in the 'Comments' field.

   ☐ Yes

   ☐ No

   Comments:

7. Do you agree that the SDT should pursue technical justification for selection of 100 kV as the bright-line voltage level?

   ☐ Yes

   ☐ No

   Comments:

   a. Are you aware of existing technical justification (i.e. analysis methodologies, completed studies, technical papers, etc.) that would assist the SDT in the development of technical justification for this issue? If so, please provide details in the 'Comments' field.

   ☐ Yes

   ☐ No

   Comments:

8. Do you agree that the SDT should pursue technical justification to support allowing power flow out of the local network under certain conditions and if so, what the maximum allowable flow should be?

   ☐ Yes

   ☐ No

   Comments:

a. Are you aware of existing technical justification (i.e., analysis methodologies, completed studies, technical papers, etc.) that would assist the SDT in the development of technical justification for this issue? If so, please provide details in the 'Comments' field.

☐ Yes

☐ No

Comments:

9. Do you have any other issues that require technical justification that you feel need to be added to the SAR? If so, please provide a detailed explanation of the issue and why it should be included.

☐ Yes

☐ No

Comments:

10. Do you have any other issues that are associated with improving the clarity of the definition created in Phase 1 that will assist the Registered Entity in the identification of BES Elements without altering the intent or scope of the definition? If so, please provide a detailed explanation of the issue and why it should be included.

☐ Yes

☐ No

Comments:

11. Are you aware of any regional variances associated with approved NERC Reliability Standards that will be needed as a result of this project? If yes, please identify the Regional Variance.

☐ Yes

☐ No

Comments:

12. Are you aware of any business practice that will be needed or that will need to be modified as a result of this project? If yes, please identify the business practice:

    ☐ Yes

    ☐ No

    Comments:

13. If you have any other comments on this SAR that you haven't already mentioned above, please provide them here:

    Comments:

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standards Announcement

Project 2010-17 Definition of Bulk Electric System Phase 2

Comment Period Now Open: January 4 – February 3, 2012

Now Available

The Definition of Bulk Electric System Standard Drafting Team (DBES SDT) has posted a Standard Authorization Request (SAR) for Phase 2 of Project 2010-17 Definition of Bulk Electric System for comment through 8 p.m. Eastern on Friday, February 3, 2012.

During Phase 1 of this project, stakeholders identified a number of possible refinements to clarify which Elements are necessary for the reliable operation of the interconnected transmission network, but because of the regulatory deadline imposed by FERC Orders 743 and 743-A, the team was not able to develop the technical justification required to support making such refinements. The Standards Committee and NERC Board of Trustees supported initiation of Phase 2 of the project to provide an opportunity to further evaluate and develop technical justification for refinements proposed by stakeholders.

The team is seeking comments on the scope of the proposed Phase 2 project as well as specific suggestions for existing sources of data or technical input to support revisions.

Instructions for Commenting

A comment period is open through **8 p.m. Eastern on Friday, February 3, 2012**. Please use this electronic form to submit comments. If you experience any difficulties in using the electronic form, please contact Monica Benson at monica.benson@nerc.net. An off-line, unofficial copy of the comment form is posted on the project page.

Next Steps

The drafting team will review the comments and determine whether to make changes to the SAR before proceeding with Phase 2 of the project. The drafting team is not obligated to provide individual responses to each comment on existing sources of data or technical input to support revisions but will provide a summary Consideration of Comments on those items.

Background

On November 18, 2010 FERC issued Order 743 and directed NERC to revise the definition of Bulk Electric System so that the definition encompasses all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. Phase 1 of Project 2010-17 Definition of Bulk Electric System achieved stakeholder approval of a revised definition of Bulk Electric

System and application form titled 'Detailed Information to Support an Exception Request' referenced in the Rules of Procedure Exception Process, and the revised definition and exception process will be filed with FERC by the required January 25, 2012 deadline.

Phase 2 of the project is being initiated to develop and analyze technical justification for refinements to the definition that were suggested by stakeholders during Phase 1.

Standards Development Process

The Standard Processes Manual contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate. For more information or assistance, please contact Monica Benson at monica.benson@nerc.net.

For more information or assistance, please contact Monica Benson, Standards Process Administrator, at monica.benson@nerc.net or at 404-446-2560.

North American Electric Reliability Corporation
116-390 Village Blvd.
Princeton, NJ 08540
609.452.8060 | www.nerc.com

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF A REVISED DEFINITION OF "BULK ELECTRIC SYSTEM"
IN THE NERC GLOSSARY OF TERMS USED IN RELIABILITY STANDARDS

EXHIBIT F

DRAFTING TEAM ROSTER AND BIOGRAPHICAL INFORMATION

FOR NERC STANDARDS DEVELOPMENT

PROJECT 2010-17 DEFINITION OF BULK ELECTRIC SYSTEM

Project 2010-17 Definition of Bulk Electric System
Drafting Team Roster

Name and Title	Company and Address	Contact Info	Bio
Pete Heidrich Mgr. of Reliability Standards and SDT Chair	Florida Reliability Coordinating Council 1408 N. Westshore Blvd. Suite 1002 Tampa, FL 33607-4512	1.813.207.7994 pheidrich@frcc.com	Peter Heidrich is Manager of Reliability Standards at the Florida Reliability Coordinating Council (FRCC). Peter joined FRCC in August, 2008 after 16 years at DTE Energy (Detroit Edison) and 8½ years of military service in the United States Navy Nuclear Power Program. Peter is responsible for the development of the FRCC Regional Reliability Standards and associated reliability related policies and procedures (i.e., Regional Criteria, Regional Interpretations, & FAQs, Regional Definitions, etc.) and oversight of the FRCC Reliability Standards Development Process. Additionally, Peter actively participates as the FRCC representative in NERC Reliability Standards development and on various committees, subcommittees, and working groups (i.e., NERC Standards Committee (SC), SC Process Subcommittee, ERO Regional Standards Group (Vice-Chair), Functional Model Working Group, and Results-Based Standard Initiative).
Barry Lawson Associate Director, Power Delivery & Reliability and SDT Vice Chair	National Rural Electric Cooperative Association 4301 Wilson Blvd. GR11-253 Arlington, VA 22203	1.703.907.5781 barry.lawson@nreca.coop	Barry Lawson is the Associate Director, Power Delivery & Reliability at the National Rural Electric Cooperative Association (NRECA). Barry joined NRECA in April 2001, after 18 years in positions with Dominion Virginia Power, Edison Electric Institute, Columbia Gas Transmission, and KEMA Consulting. At NRECA, Barry's current focus is on NERC reliability policy/governance issues, standards development and compliance process developments, and critical infrastructure protection policy issues. In addition, Barry actively participates in BOT, MRC, and SC activities and he is currently the Chair of NERC's Critical Infrastructure Protection Committee (CIPC).
Jennifer Dering Mgr. Operations Planning – Transmission	New York Power Authority 123 Main St. White Plains, NY 10601-3170	1.914.287.3179 Jennifer.dering@nypa.gov	Jennifer Dering is Manager of Operations Planning at the New York Power Authority. Jennifer joined the New York Power Authority 18 years ago after beginning her career at IBM. Jennifer is responsible for the short term operational planning of NYPA's transmission assets that range from 69 kV to 765 kV and span the entire state of New York. Jennifer has held a variety of positions at NYPA prior to her current role in Transmission including roles within Nuclear Licensing, Energy Efficiency, Project

			Management, and Engineering. Jennifer is also a licensed Professional Engineer in the state of New York and a Certified Energy Manager.
Brian Evans-Mongeon Pres. & CEO	Utility Services 25 Crossroad Suite 201 Waterbury, VT 05676	1.802.552.4022 brian.evans-mongeon@utilitysvcs.com	Brian Evans-Mongeon is the President and CEO of Utility Services, Inc., a service firm formed in 2007, specializing in assisting registered entities in the Electric Reliability Organization (ERO) program. As the President and CEO of Utility Services, Brian is responsible for oversight of ERO Compliance and Monitoring for client's in regions across the U.S.; ISO & NEPOOL markets; and Renewable Energy Trading and associated activities. Utility Services is a member in five of the eight NERC regions and its' staff hold a number of committee positions within those regions. Brian is a member of NPCC's Compliance and Regional Standards Committee, and is a participant in the NPCC task force for regional standards on disturbance monitoring. At NERC, Brian is a participant in the Standard Drafting Team for the Under Frequency Load Shedding program (NERC Project 2007-01), is currently a member of the Definition of Bulk Electric System (BES) team (NERC Project 2010-17), and is the current chair of the Standard Drafting Team for Disturbance and Sabotage Reporting (NERC Project 2009-01). Previously, Brian has over twenty years of experience in the electrical utility business working for both Green Mountain Power Corporation as a Power Operations & Administration Manager and Vermont Public Power Supply Authority as a Marketing Services Manager.
Phil Fedora Asst. VP, Reliability Services	Northeast Power Coordinating Council 1040 Avenue of the Americas (6th Ave.) 10th Floor New York, NY 10018-3703	1.212.840.4909 pfedora@npcc.org	Philip Fedora is the Assistant Vice President of Reliability Services, Northeast Power Coordinating Council (NPCC) where he oversees a wide range of power system reliability activities associated with the coordination of system planning, system studies and protection, the assessment of adequacy, and multi-Area Regional planning. Phil is responsible for NPCC's Reliability Assessment and Performance Analysis program area, including liaison with state, federal and provincial governmental/regulatory officials. Phil joined NPCC in July, 1999 after 15 years at ISO-New England/New England Power Planning (NEPOOL), where he was responsible for the management of the ISO-New England Power Supply Reliability activities, and 8 years at Westinghouse Electric, Advanced Systems Technology, providing consulting services for domestic

			and foreign utilities. Phil is NPCC's representative on the NERC Planning Committee, has authored several technical papers on power system modeling and assessment, and is a member of the IEEE – Power Engineering Society and CIGRE. He is a licensed Professional Engineer in the Commonwealth of Pennsylvania.
Ajay Garg Mgr. Policy and Approvals	Hydro One Networks 483 Bay St., TCT St-04 Toronto, Ontario, Canada M5G 2P5	1.416.345.5420 ajay.garg@hydroone.com	Ajay Garg is Manager, Policy & Approvals within Asset Management at Hydro One Networks Inc (formerly Ontario Hydro). Ajay joined Hydro One in 2000, after 15 years in positions with Nova Scotia Power and NPCC. At Hydro One, Ajay's current focus is on NERC reliability policy/governance issues, standards development and compliance process, along with addressing non-jurisdictional regulatory issues. Ajay has been actively involved with the development of NERC and NPCC Standards/Criteria for many years along with his participation on the 2003 NERC blackout investigation team. Ajay also represents Hydro One and/or Canada on various other committees of IEC, IEEE, NERC, NPCC, CEA, and CSA. Ajay is a Canadian representative on IEC TC8 and ACEC along with convener of TC8 HV Transmission Group, and member of NERC-CCC and NPCC -CC. Ajay is a licensed Professional Engineer in the Province of Ontario.
John P. Hughes VP, Technical Affairs	Electricity Consumers Research Council 1111 19th St. NW Washington, DC 20036	1.202.682.1390 jhughes@elcon.org	John Hughes is Vice President of Technical Affairs at the Electricity Consumers Resource Council (ELCON), the national association of large industrial consumers of electricity. John is responsible for managing ELCON's interventions before FERC, DOE, and related state regulatory bodies. John is also author of ELCON policy papers and technical documents on all facets of the electric industry. John joined ELCON in 1987 as technical director after serving as Director of Economic Research at the Niagara Mohawk Power Corporation where he was previously Associate Director of Corporate Planning. Prior to joining Niagara Mohawk in 1982, John was Chief Economist at the Massachusetts Energy Facilities Siting Council. John supervised the council's technical staff regarding the demand forecasts and supply plans of electric and natural gas utilities that operated in the state. John was also directly involved with the council's adjudication of petitions to site transmission lines, natural gas pipelines and gasification facilities, and nuclear power plants. John has been active

			with NERC since 1996, having been a member of the Commercial Practices Working Group, the Market Interface Committee, and the Compliance and Certification Committee (CCC).
Joel Mickey Director, Grid Operations	ERCOT 2705 W. Lake Drive Taylor, TX 76574	1.512.248.3925 jmickey@ercot.com	Joel Mickey is Director of Grid Operations for the Electric Reliability Council of Texas (ERCOT) Joel oversees the system operations control center, operations engineering, operations analysis, and system operations training. Joel joined ERCOT in 2000 as Manager of Market Operations with management responsibilities for wholesale market design, market analysis, demand-side resource support and testing, market clearing price validation and correction, network modeling, and market reporting. Prior to joining ERCOT, Joel worked with a computer software vendor specializing in energy utility systems for restructured markets. Joel started his career in the power industry in 1981 at Houston Lightning and Power (now Centerpoint Energy) where he worked for 15 years in various positions including underground network tester, system controller, and staff consultant. Joel has served on various committees for the North American Electric Reliability Council (NERC) including the Standards Development team for Interchange, and the Electronic Scheduling Committee. Joel currently serves as a member of the North American Energy Standards Board (NAESB) Executive Committee and on NERC's Interchange Subcommittee and on the Standards Drafting Team - Interchange. At ERCOT, he served as the co-chair of the Texas Nodal Team's market operations concept group and chaired the Nodal Transition Plan Task Force.
Jeffrey Mitchell Director, Engineering	Reliability First 320 Springside Dr. Suite 300 Akron, OH 44333	1.330.247.3043 Jeff.mitchell@rfirst.org	Jeff Mitchell is the Director of Engineering at Reliability*First* Corp. (RFC) where he oversees the reliability assessment and performance analysis activities including resource and transmission assessment reports, protection system mis-operation review, event analysis, model development, operations, and the regional standards process. Jeff joined the East Central Area Reliability Coordination Agreement (ECAR) staff in 1997 after 17 years with Ohio Edison (now FirstEnergy) and subsequently the Reliability*First* staff since its inception. Jeff facilitated the development of the Reliability*First* BES definition in 2007 and now handles the interpretation requests. Jeff is currently the chair of the NERC

			Planning Committee and was the initial chair of the Eastern Interconnection Reliability Assessment Group's (ERAG) Management Committee. He is also a licensed Professional Engineer in Ohio and Pennsylvania.
Jerome Murray Senior Electrical Engineer	Oregon Public Utility Commission 550 Capitol St. NE Suite 215 PO Box 2148 Salem, OR 97308-2148	1.503.378.6626 jerry.murray@state.or.us	Jerome Murray is a Senior Electrical Engineer with the Oregon Public Utility Commission (OPUC). Jerome joined OPUC in 1983. Previously, he was an electrical power engineering consultant. Jerome has also worked for PacifiCorp, Pacific Gas and Electric, Southern California Edison, and the Navy Civil Engineer Corps. Jerome is currently responsible for utility regulation development, industry outreach, and compliance oversight associated with OPUC's electric reliability and service quality measure programs. Additionally, Jerome actively participates as the State Government representative on the NERC Operating Committee and the WECC Operating Committee. Jerome also participates in the IEEE Distribution Reliability Working Group and is a licensed professional engineer in the states of Oregon and Washington.
Rich Salgo Director, Electric System Operations	Sierra Pacific Power PO Box 10100 Reno, NV 89520	1.775.834.5874 rsalgo@nvenergy.com	Rich Salgo is the Director of Electric System Control Operations at NV Energy, Inc., which includes the registered entities of Nevada Power Company and Sierra Pacific Power Company. In this role, Rich is responsible for the transmission, distribution, and balancing functions conducted within the NV Energy control centers, including associated operations engineering, training, and energy management system support functions. Among the duties of his present position, Rich is responsible for ensuring that policies, procedures, and processes are developed and implemented pursuant to NERC and WECC Regional Standards, as well as having responsibility for corporate initiatives in compliance with the CIP Standards. Rich holds a Bachelor's degree in Electrical Engineering, and he joined the predecessor company, Sierra Pacific Resources, in 1984. In this time, Rich has had experience in various facets of electric system design, system protection, substation and line construction, and field operations. Rich is a long-standing member of the WECC Operating Committee, participates on an advisory committee for the WECC Reliability

			Coordinator, and is a member of the WECC Unscheduled Flow Administrative Subcommittee. Rich is a licensed Professional Engineer in the state of California, and also holds a NERC Operator Certification at the RC level.
Jason Snodgrass Regulatory Compliance Mgr.	Georgia Transmission	1.770.270.7294 jason.snodgrass@gatrans.com	Jason Snodgrass is the Regulatory Compliance Manager at Georgia Transmission Corporation. Jason has been employed in this role since 2008, after 7½ years of experience as a planning engineer. Jason is primarily responsible for developing, maintaining, and training of GTC's compliance program. Additional responsibilities include policy/governance, compliance process developments, performing self-audits of applicable mandatory standards, and performing self-assessments/consultation for new and revised NERC Standards prior to the mandatory dates.
Jennifer Sterling Director, Transmission Strategy and Compliance	Exelon 2 Lincoln Center Oakbrook Terrace, IL 60181	1.630.437.2764 jennifer.sterling@exeloncorp.com	Jennifer Sterling is the Director, Transmission Strategy and Compliance for Exelon Corporation. Jennifer has been employed by Exelon and its subsidiary, Commonwealth Edison for 21 years. She has also held positions in ComEd's System Planning, Bulk Power Operations, Transmission Policy, and Regulatory & Strategic Services Departments. Jennifer is responsible for managing the Exelon NERC Reliability Standards Compliance Program across the corporation and for providing leadership for strategic and reliability initiatives for the ComEd and PECO transmission facilities. Additionally, Jennifer was a member of the NERC Violations Severity Levels Drafting Team and actively participates on Edison Electric Institute and North American Transmission Forum Committees.
Jonathan Sykes Mgr., System Protection	Pacific Gas & Electric 1919 Webster St. Room #409 Oakland, CA 94612	1.510.874.2691 jfst@pge.com	Jonathan Sykes is Manager of System Protection at Pacific Gas and Electric Company (PG&E) in California. Jonathan joined PG&E in June 2009 after 27 years at Salt River Project in Arizona where he worked as a principal engineer in System Protection and Transmission Planning. Jonathan is responsible for the oversight (application, design, and compliance) of the 40,000 protective relays at PG&E. Jonathan also serves as the Chairman

			of the NERC System Protection and Control Subcommittee and has been active in the committee for more than 5 years. Jonathan is also active on the WECC Remedial Action Reliability Subcommittee and Relay Work Group. He is also a Senior Member in IEEE and participates in the Power System Relay Committee and chairs work groups. Jonathan has authored and co-authored papers concerning reliability and advanced application.

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF A REVISED DEFINITION OF "BULK ELECTRIC SYSTEM"
IN THE NERC GLOSSARY OF TERMS USED IN RELIABILITY STANDARDS

EXHIBIT G

TECHNICAL JUSTIFICATION PAPER FOR THE

"LOCAL NETWORK EXCLUSION"

(EXCLUSION E3 OF THE BES DEFINITION)

Local Network Exclusion

Introduction

The purpose of this document is to provide the justification for the definitional exclusion of local networks (LN) from the definition of the Bulk Electric System (BES) as proposed in NERC Standards Development Project 2010-17. Presented herein are technical, logical, and practical considerations that provide such justification for exclusion of these facilities from the Bulk Electric System.

Summary of Justification

The local network exclusion proposal is shown to be justified through the following facts:

1. In accordance with Commission Orders 743 and 743a on the matter of the revision of the Definition of the Bulk Electric System, the facilities used in the local distribution of electric energy are to be excluded;
2. The exclusion for local networks, as provided in the revised definition of the BES, ensures that a candidate for local network exclusion must satisfy all of the exclusion principles thus demonstrating that the candidate facilities are not performing a transmission function;
3. The limit on connected generation within the local network is consistent with the existing threshold above which a generating plant in aggregate becomes subject to owner and operator registration in the ERO Statement of Compliance Registry Criteria;
4. The voltage cap applied to the qualifications for a local network is established at 300 kV, which is consistent with the distinction being made between Extra High Voltage and High Voltage in the NERC Board of Trustees-approved Reliability Standard on transmission planning, TPL-001-2;
5. The power flow "shifts" that would occur on the elements of a local network are but a negligible fraction of that which distributes upon the BES elements for a given power transfer and is fully eclipsed by the Load in the local network; and
6. The interaction of the local network with the BES is similar in character to that of a radial facility.

Description of Local Network

Local networks are defined in the draft BES Definition as:

A group of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the interconnected system. LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The LN is characterized by all of the following:

a) *Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating) ;*
b) *Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN; and*
c) *Not part of a Flowgate or transfer path: The LN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).*

Local networks are present to provide local electrical distribution service and are not planned, designed, nor operated to benefit or support the balance of the interconnected electrical transmission network. Their purpose is to provide local distribution service, not to provide transfer capacity for the interconnected electric transmission network. Their design and operation is such that at the point of connection with the interconnected electric transmission network, their effect on that network is similar to that of a radial facility, particularly in that flow always moves in a direction that is from the BES into the facility. Any distribution of parallel flows into the local network from the BES, as governed by the fundamentals of parallel electric circuits, is negligible, and, more importantly, is overcome by the Load served by the local network, thereby ensuring that the net actual power flow direction will always be into the local network at all interface points. The presence of a local network is not for the operability of the interconnected electric transmission network; neither will the local network's separation or retirement diminish the reliability of the interconnected electric transmission network.

Commission Determination on Exclusion of Local Distribution – Relation to Local Network

In Order 743a, the Commission made it clear that facilities that are used in the local distribution of electric energy will be excluded from the Bulk Electric System. Such clarification was provided in both paragraphs 22 and 25 of the Order. The Commission agreed with certain commenters that facilities used in the local distribution of energy should be excluded from the revised Bulk Electric System definition.

In response to this facet of the Order, in developing the BES definition, the SDT has followed this guidance. Exclusion E3 was specifically designed to capture for exclusion those high voltage non-radial facilities being used for the local distribution of energy.

The exclusion characteristics in items a, b, and c above are further explained in the next section. These exclusion principles serve to ensure that facilities excluded under the local network exclusion (E3) are not necessary for the reliable operation of the interconnected electric transmission network and are instead used in the local distribution of energy.

Exclusion Principles

Of key importance is that Exclusion E3 in the draft BES definition requires the facilities of a candidate network to meet all of the characteristics listed in the exclusion. The SDT adopted this approach to ensure that none of the characteristics typical of interconnected electric transmission networks, or necessary for the operation of the interconnected electric transmission system, would be permissible in those facilities that are qualified for Exclusion E3. In the discussion below, it is shown that these characteristics successfully prevent exclusion of facilities necessary for operating an interconnected electric transmission network, and allow only facilities that are not necessary for such operation to be excluded from the BES.

A. *First Exclusion Principle: Limits on Connected Generation*

> *Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusion I3, and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating);*

This characteristic places restrictions on the type and size of generation resources that can be connected within the candidate facility. By placing this generation restriction on the local network, it is ensured that that the candidate facility will not under any circumstance act as a host to generation that exceeds the existing aggregate generation threshold in the ERO Statement of Compliance Registry Criteria (SCRC) and that the candidate facility will not contain Blackstart Resources. The SDT submits that this characteristic minimizes the contribution and influence the local network may have over the neighboring Elements of the BES by limiting both the magnitude and the function of the connected generation. The threshold of 75 MVA was chosen in a manner to provide consistency with the criteria applied in the ERO's SCRC regarding the registration for entities owning and operating generation plants in aggregate.

B. *Second Exclusion Principle: Power Flow and Function*

> *Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN;*

This characteristic ensures that the real power flow direction at all connection points to the BES is into the candidate local network, thereby ensuring that the candidate facilities behave in a manner that is radial in character. Further, the local network is restricted as to its use; i.e., it cannot be used for "wheel" transactions, or the transfer of energy originating outside the local network for delivery through the local network. By restricting the flow direction to be exclusively into the network at its connection points to the BES and precluding the network from providing transmission wheeling service, this exclusion characteristic further ensures that the local network is providing only a distribution service, and is not contributing to, nor is necessary for, the reliable operation of the interconnected electric transmission network. Regarding the location of the connection points to the BES, Exclusion E3 specifies that local networks "emanate from multiple points of connection at 100 kV or higher…" These points of emanation, where the local network begins and the BES ends, are established on a case-by-

case basis, but will necessarily be the points, below 300 kV, at which all of the qualifying exclusion principles are satisfied. As an example, see Appendix 1 to this document, which provides, among other things, a single line diagram depicting a local network and its interface with the BES.

C. *Third Exclusion Principle: Flowgates and Transfer Paths*

> *Not part of a Flowgate or transfer path: The LN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or the Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).*

This characteristic further ensures that the candidate local network facilities do not contain nor comprise facilities of well-established flowgates and transfer paths throughout the Interconnections of North America. These transfer paths are customarily used to provide bulk power transfers within the Interconnections, and therefore, the function and purpose of any candidate facilities included in or among such paths extends beyond the distribution function. A number of interchange coordination Reliability Standards apply to these transfer paths and flowgates. The SDT feels that such facilities are necessary for the reliable operation of an interconnected electric transmission network and would not be excluded from the definition of the BES.

The Use of a 300 kV Cap is Appropriate for Local Network Exclusion

The selection of a 300 kV cap for the applicability of an exclusion for a local network was based upon recent NERC Standards Development work in Project 2006-02 "Assess Transmission Future Needs and Develop Transmission Plans." As conveyed in its work product, TPL-001-2, the Project 2006-02 SDT sets a voltage level of 300 kV to differentiate Extra High Voltage (EHV) facilities from High Voltage facilities acting as a threshold to distinguish between expected system performance criteria.[1] The Project 2010-17 SDT seeks to establish consistency in the limitations placed on the exclusion applicability for local network facilities, and has therefore adopted this 300 kV level to ensure that EHV facilities, which under the TPL-001-2 Standard are held to a higher standard of performance, are not subject to this exclusion.

There is Minimal Effect to Flow in the Local Network due to BES Power Transfer

Similar to the character of a radial facility, and in order to qualify for exclusion from the BES under Exclusion E3.b,a local network must only have power flow into the network at all connection points to the BES. As demonstrated below, while this flow at the connection points is always into the local

[1] Per footnote #3 in TPL-001-2, "Bulk Electric System (BES) level references include extra-high voltage (EHV) Facilities defined as greater than 300 kV and high voltage (HV) Facilities defined as the 300 kV and lower voltage Systems. The designation of EHV and HV is used to distinguish between stated performance criteria allowances for interruption of Firm Transmission Service and Non-Consequential Load Loss."

network, the magnitude of the flow at these connection points will exhibit very slight shifts as bulk power transactions are implemented on neighboring BES facilities. This occurs because local network facilities are electrically parallel to Elements comprising the BES, and hence, the local network will experience a small effect due to changes in power angle across the parallel network as BES dispatch and flow patterns change. However, such flow shift is shown to be minimal, and the resultant power flow at all BES interface points is dominated by the superimposed load flow serving the distribution Load connected within the local network. Again, Exclusion E3.b ensures that flow shall always be from the BES into the local network in order to qualify for exclusion.

In order to provide a realistic example of the electrical interaction between a typical local network and the BES, an electric system in the western United States was examined from a power transfer distribution factor (PTDF) perspective. In a PTDF analysis, the branch elements of an electrical network are examined on the basis of the percentage split of a given power flow as it propagates through the network. In the simplest example of two identical lines operated at the same voltage, arranged in parallel between a given sending bus and receiving bus, the total power transfer will divide equally among the two parallel line elements, and hence, each element would be found to have a 50% PTDF. In a more complicated network, the line elements will carry a portion of the total flow in a manner that is inversely proportional to their impedance; i.e., the lower the impedance of the network branch, the higher portion of the flow that will distribute along that branch.

The electric system in question is depicted in Appendix 1. The station name identifiers and the network topology (but not electrical connectivity) have been changed to respect the confidentiality of the information. In the represented system, a bulk power transfer was simulated, with a point of receipt (injection) at BES bus T9 and a point of delivery at the other end of the system at BES bus T10. With this simulated power transfer, power flow analysis tools were used to determine the distribution of this simulated transfer as it propagates across the various parallel branches of the network. As depicted in Appendix 1, the facilities that are presumed to be excluded via the local network exclusion (E3) are shown to carry negligible flow, with the largest PTDF at a mere 0.23% of the total transfer. Note that a PTDF analysis shows only the *incremental* shift in power flow and does not imply that this 0.23% actually flows in and then back out of the network. The power flow results demonstrate that the flow measured at the interface points of the BES continues to flow into the local network, and is essentially unchanged, as it is only shifted in magnitude by a mere 0.23% of the modeled transaction amount.

In addition to the PTDF analysis, another analysis of Line Outage Distribution Factors (LODF), examines the re-distribution of flow that occurs on parallel elements after a subject element is removed from service. For example, if a BES element is carrying 500 MW, and is taken out of service, LODF describes how that flow re-distributes among all parallel paths in a given network. LODF factors are measured in percent of the pre-outage flow on the outaged element. Conducting this analysis on the example network and modeling the worst case outage, which is the loss of the line element between BES buses T9 and T10, shows that the net shift in flow for the local network is 4.0% of the pre-outage flow, and the largest shift in flow on any of the individual local network elements is 2.7%. The flow direction at the interface points between the local network and the BES continues to be into the local network.

This degree of flow shift on the local network facilities is *de minimus*, and neither diminishes or improves the reliability of the parallel BES facilities. From both a PTDF and an LODF analysis perspective, the local network exhibits qualities equivalent to radial facilities in that the power flow emanates from the point of BES connection in one direction – the only difference being that in the case of the local network, in order to provide source reliability to the distribution Load, more than one connection is provided to the BES.

Appendix 1
Local Network Technical Justification
Power Transfer Distribution Factor Analysis

This appendix provides Power Transfer Distribution Factor (PTDF) and Line Outage Distribution Factor (LODF) analyses and assessments using a relevant power flow case used in actual operating studies in the Western Interconnection to assess reliable Operating Transfer Capability on a rated path in the Western Electricity Coordinating Council ("WECC"). The electrical system representation is accurate; however, the bus names and topology have been graphically rearranged to address any Critical Energy Infrastructure Information ("CEII") concerns.

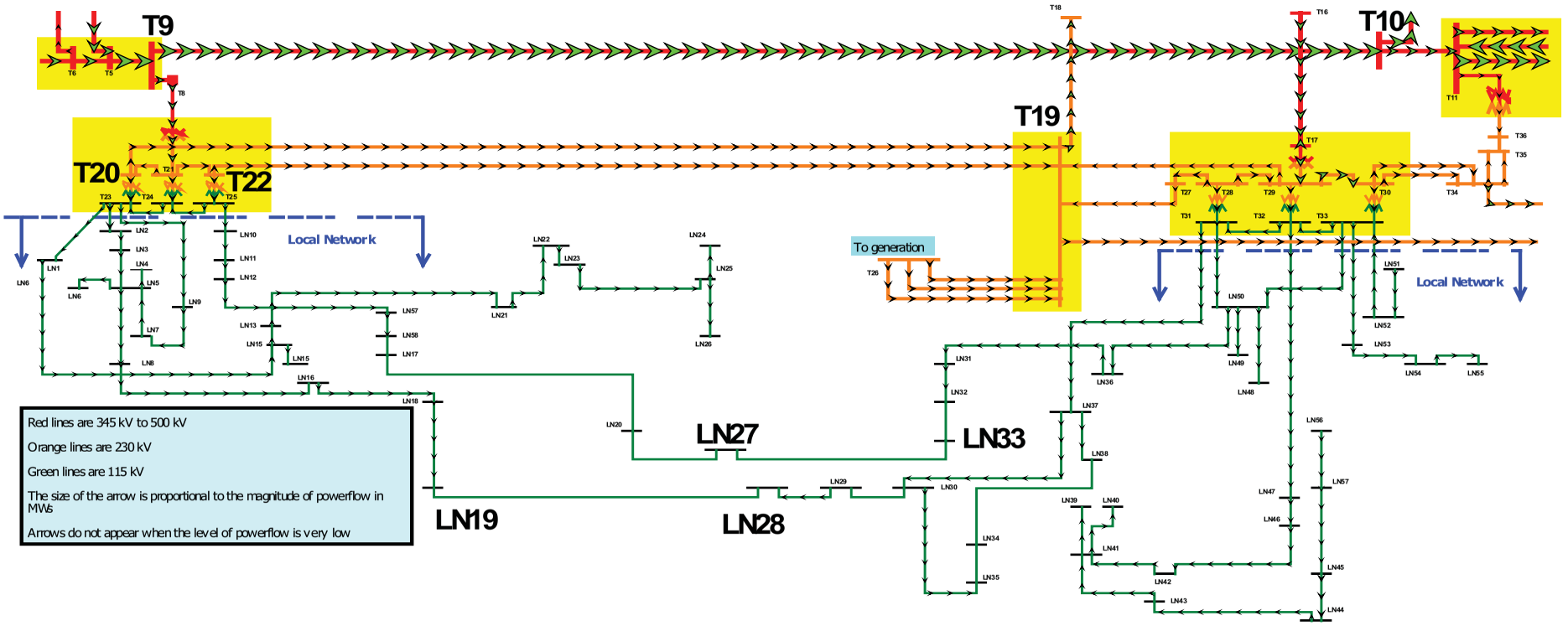
Although linear analyses, such as these, are relatively independent of actual power transfer levels, the modeled system conditions represented peak load demand and high power transfer conditions. The PTDF analyzes the injection of power from BES electrical bus T9 and delivering it to BES bus T10, which is consistent with the use of the BES transfer path. Based on the PTDF assessment, 92% of the power flow is transferred over the 500 kV line that directly connects BES buses T9 and T10. The remaining flow appears on the underlying 230 kV lines and adjacent 345 kV and 500 kV lines. The largest PTDF on any local network is 0.23 percent.

The LODF analysis considers the "worst-case" outage of the strongest (lowest impedance) transmission element, the line between BES buses T9 and T10. The LODF values that are computed represent the percentage of the pre-outage T9-T10 flow that re-distributes on each of the remaining branches. The analysis shows that the net shift in flow for the local network is 4.0% of the pre-outage flow, and the largest shift in flow on any of the individual local network elements is 2.7%. The 2.7% shift occurs on the local network branch between buses LN19 and LN28, and a 1.3% shift occurs on the branch between LN27 and LN33. The flow direction at the interface points between the local network and the BES continues to be into the local network.

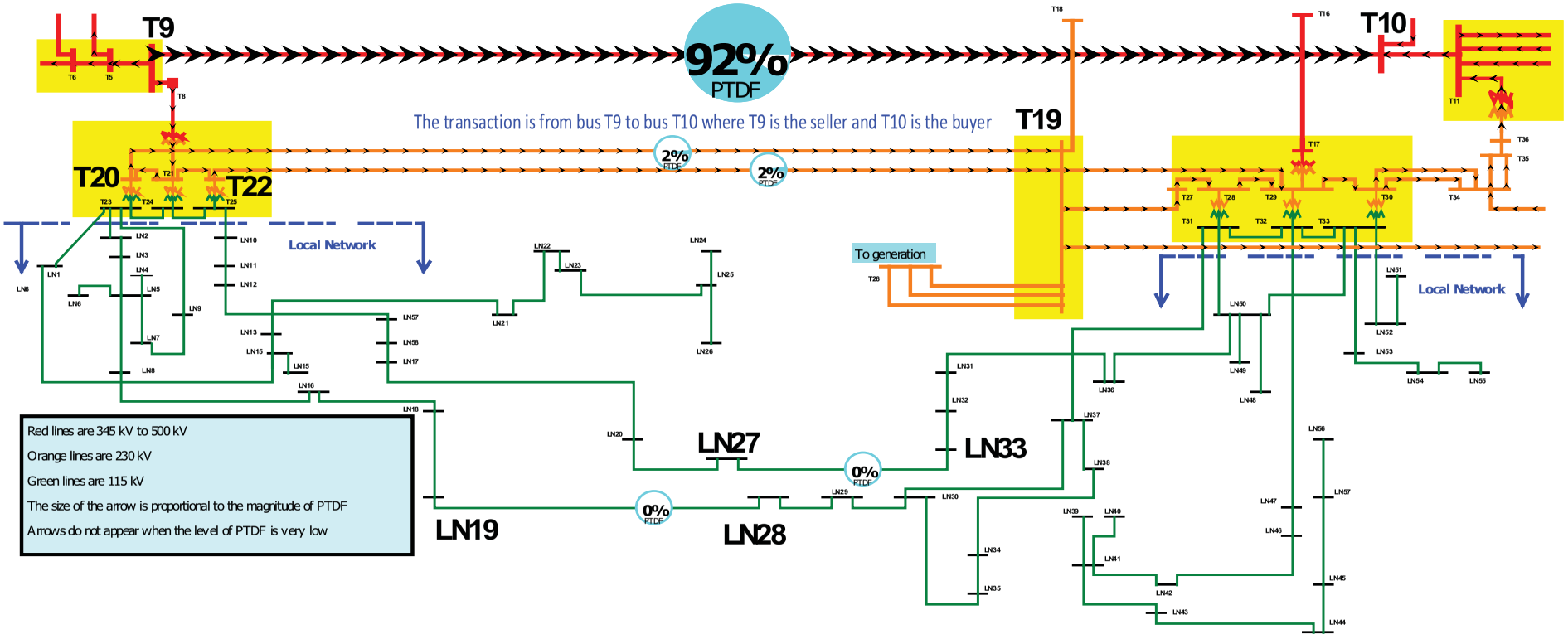
Below are three single line diagrams, which depict the 1) powerflow, 2) percentage distribution of flows for the PTDF analysis, and 3) the percent of flow distribution for the LODF analysis. In these diagrams, the local network elements are indicated by a green line color, and the local network station buses are indicated with an "LN" designation, for example, "LN23".

Following the single line diagrams are two tables: Table 1 - a tabulation of the PTDF values for the network, and Table 2 - depicting the LODF values for the T9-T10 line outage case.

The Powerflow Single Line



The Power Transfer Distribution Factors ("PTDF") Single Line



The Line Outage Distribution Factors ("LODF") Single Line identifying the revised PTDF values of the transmission line from T9 to T10 is opened

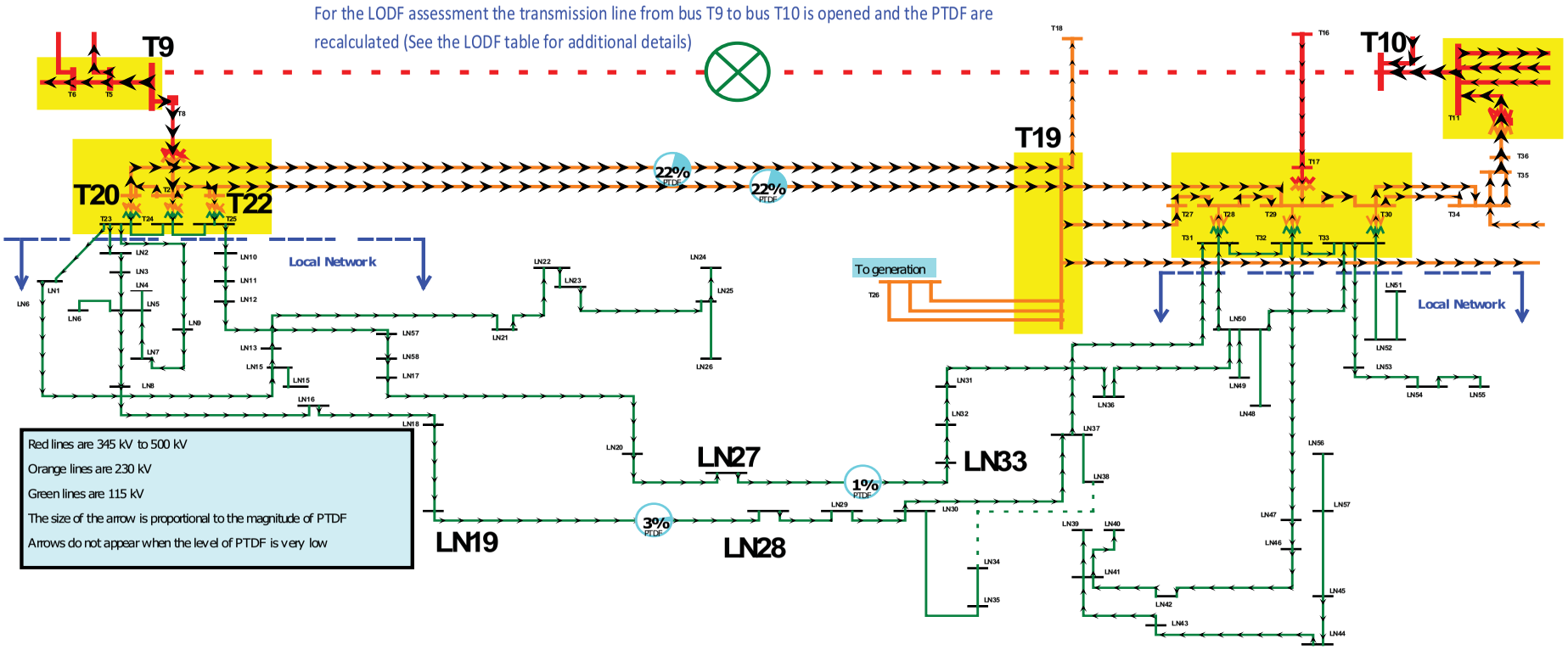


Table 1 - Power Flow Transfer Distribution Factor Results

Line PTDF Records				
From Name	To Name	% PTDF From	% PTDF To	Nom kV (Max)
T10	T9	-91.61	91.61	500
T10	T11	-5.4	5.4	500
T5	T9	-4.77	4.77	500
T11	T36	-4.13	4.13	230
T36	T35	-3.08	3.08	230
T12	T11	-2.4	2.4	500
T19	T20	-1.84	1.84	230
T19	T22	-1.81	1.81	230
T22	T21	-1.74	1.74	230
T34	T30	-1.3	1.3	230
T34	T30	-1.29	1.29	230
T41	T40	-0.57	0.57	230
T40	T39	-0.55	0.55	230
T37	T38	-0.49	0.49	230
LN16	LN8	-0.23	0.23	115
LN28	LN19	-0.23	0.23	115
LN19	LN18	-0.23	0.23	115
T30	T33	-0.11	0.11	115
LN50	LN36	-0.11	0.11	115
LN32	LN33	-0.11	0.11	115
LN31	LN32	-0.11	0.11	115
LN20	LN17	-0.11	0.11	115
LN12	LN11	-0.11	0.11	115
LN11	LN10	-0.11	0.11	115
LN3	LN2	-0.1	0.1	115
T29	T32	-0.09	0.09	115
T29	T17	-0.09	0.09	230
LN30	LN29	-0.09	0.09	115
LN9	T23	-0.08	0.08	115
LN5	LN7	-0.08	0.08	115
T28	T31	-0.07	0.07	115
T32	T31	-0.07	0.07	115
LN50	LN49	-0.07	0.07	115
LN53	T33	-0.06	0.06	115
LN55	LN54	-0.06	0.06	115
LN41	LN43	-0.06	0.06	115
T33	T32	-0.05	0.05	115
LN39	LN41	-0.05	0.05	115
T42	T39	-0.04	0.04	230
LN47	T32	-0.04	0.04	115
LN1	T23	-0.04	0.04	115
LN41	LN42	-0.04	0.04	115
LN25	LN23	-0.04	0.04	115

Line PTDF Records				
From Name	To Name	% PTDF From	% PTDF To	Nom kV (Max)
LN22	LN21	-0.04	0.04	115
LN13	LN15	-0.04	0.04	115
LN15	LN1	-0.04	0.04	115
LN45	LN57	-0.03	0.03	115
LN57	LN56	-0.03	0.03	115
LN50	LN48	-0.03	0.03	115
T1	T2	0	0	500
LN51	LN52	0	0	115
T33	LN52	0	0	115
LN4	LN5	0	0	115
LN6	LN5	0	0	115
LN38	LN37	0	0	115
LN30	LN35	0	0	115
LN35	LN34	0	0	115
LN38	LN34	0	0	115
LN24	LN27	0	0	115
LN26	LN25	0	0	115
T25	LN23	0	0	115
LN26	LN20	0	0	115
LN14	LN15	0	0	115
LN22	LN11	0	0	115
LN17	LN10	0	0	115
LN23	LN10	0	0	115
T25	T24	0.01	-0.01	115
T24	T23	0.02	-0.02	115
T6	T4	0.03	-0.03	500
T19	T26	0.03	-0.03	230
T19	T26	0.03	-0.03	230
T19	T26	0.03	-0.03	230
LN47	LN46	0.04	-0.04	115
LN46	LN42	0.04	-0.04	115
LN25	LN24	0.04	-0.04	115
LN22	LN23	0.04	-0.04	115
LN13	LN21	0.04	-0.04	115
LN53	LN54	0.06	-0.06	115
LN45	LN44	0.06	-0.06	115
LN44	LN43	0.06	-0.06	115
LN41	LN40	0.06	-0.06	115
LN9	LN7	0.08	-0.08	115
LN37	T31	0.09	-0.09	115
T16	T17	0.09	-0.09	345
LN30	LN37	0.09	-0.09	115
T20	T23	0.1	-0.1	115
LN3	LN5	0.1	-0.1	115
T24	LN2	0.1	-0.1	115

Line PTDF Records				
From Name	To Name	% PTDF From	% PTDF To	Nom kV (Max)
LN50	T31	0.11	-0.11	115
T22	T25	0.11	-0.11	115
LN57	LN58	0.11	-0.11	115
LN12	LN57	0.11	-0.11	115
LN31	LN36	0.11	-0.11	115
LN27	LN33	0.11	-0.11	115
LN20	LN27	0.11	-0.11	115
LN58	LN17	0.11	-0.11	115
T25	LN10	0.11	-0.11	115
LN50	T33	0.12	-0.12	115
T21	T24	0.12	-0.12	115
T19	T18	0.13	-0.13	230
LN5	LN8	0.23	-0.23	115
LN28	LN29	0.23	-0.23	115
LN16	LN18	0.23	-0.23	115
T2	T7	0.3	-0.3	500
T2	T7	0.34	-0.34	500
T37	T34	0.49	-0.49	230
T13	T12	0.59	-0.59	500
T14	T11	0.71	-0.71	500
T38	T39	0.78	-0.78	230
T27	T28	0.94	-0.94	230
T28	T29	1.1	-1.1	230
T4	T3	1.15	-1.15	500
T19	T29	1.21	-1.21	230
T19	T27	1.22	-1.22	230
T19	T38	1.26	-1.26	230
T1	T7	1.28	-1.28	500
T4	T1	1.28	-1.28	500
T34	T35	1.54	-1.54	230
T34	T35	1.54	-1.54	230
T21	T20	1.77	-1.77	230
T6	T2	2.34	-2.34	500
T5	T6	2.37	-2.37	500
T5	T4	2.4	-2.4	500
T29	T30	2.48	-2.48	230
T15	T11	2.97	-2.97	500
T12	T10	3	-3	500
T9	T8	3.62	-3.62	500
T8	T21	3.62	-3.62	230

Table 2 - Line Outage Distribution Factor Results (Outage of T9-T10)

Line LODF Records						
From Name	To Name	% LODF	MW From	MW To	CTG MW From	CTG MW To
T10	T9	-100	-1482.1	1483.7	0	1.6
T9	T8	-43.2	217.9	-217.8	857.5	-857.4
T8	T21	-43.2	217.8	-217.5	857.4	-857.1
T12	T10	-35.7	-937.2	937.2	-408.3	408.3
T15	T11	-35.4	1632.1	-1596.9	2156.2	-2120.9
T29	T30	-29.5	404.1	-404.1	841.8	-841.8
T5	T4	-28.6	-835.5	835.5	-411.4	411.4
T5	T6	-28.2	-873.5	873.5	-455.2	455.2
T6	T2	-27.8	-911.5	912.6	-499	500.1
T21	T20	-21	69	-69	380.8	-380.8
T34	T35	-18.3	29.2	-29.1	300.9	-300.9
T34	T35	-18.3	29.2	-29.1	300.9	-300.9
T4	T1	-15.3	-1783.5	1802.5	-1557.4	1576.4
T1	T7	-15.3	-1802.5	1802.5	-1576.4	1576.4
T19	T38	-15	107.3	-107	330.4	-330
T19	T27	-14.5	-53.1	53.2	162.3	-162.2
T19	T29	-14.4	-50.9	51	162.8	-162.7
T4	T3	-13.8	986	-985	1189.8	-1188.9
T28	T29	-13.1	155.8	-155.8	349.4	-349.4
T27	T28	-11.2	-154.7	154.7	11.3	-11.3
T38	T39	-9.2	326.8	-319.7	463.7	-456.6
T14	T11	-8.4	-1656.8	1684.2	-1532.1	1559.6
T13	T12	-7.1	-1308.7	1329.4	-1204.2	1224.8
T37	T34	-5.8	-219.8	220.1	-133.7	133.9
T2	T7	-4.1	-826.9	833.1	-766.2	772.4
T2	T7	-3.5	-714.3	719.6	-661.9	667.2
LN5	LN8	-2.7	21.8	-21.8	62.3	-62.3
LN16	LN18	-2.7	21.1	-21.1	61.6	-61.6
LN28	LN29	-2.7	-8.4	8.5	32.1	-32.1
T19	T18	-1.5	203.2	-202.5	225.6	-224.8
T22	T25	-1.4	83.1	-83	103.2	-103.1
T21	T24	-1.4	78.4	-78.3	99.1	-99
LN50	T33	-1.4	-38.6	38.7	-18.2	18.3
T25	LN10	-1.3	35.7	-35.7	54.4	-54.4
LN12	LN57	-1.3	22.3	-22.3	41	-41
LN57	LN58	-1.3	12.4	-12.4	31.1	-31.1
LN58	LN17	-1.3	0.1	-0.1	18.8	-18.8
LN20	LN27	-1.3	0.1	-0.1	18.8	-18.8
LN27	LN33	-1.3	0.1	-0.1	18.8	-18.8
LN31	LN36	-1.3	-20.3	20.3	-1.6	1.6
LN50	T31	-1.3	-36.7	36.7	-16.7	16.8
T24	LN2	-1.2	80.3	-80.2	98.3	-98.2
T20	T23	-1.2	77.4	-77.2	95.8	-95.7

LN3	LN5	-1.2	53.6	-53.5	71.6	-71.5
T16	T17	-1	449.4	-436.5	464.6	-451.7
Line LODF Records						
From Name	To Name	% LODF	MW From	MW To	CTG MW From	CTG MW To
LN9	LN7	-1	48.7	-48.6	63.3	-63.3
LN30	LN37	-1	-39.1	39.1	-24	24
LN37	T31	-1	-48.3	48.4	-33.2	33.3
LN45	LN44	-0.7	70.8	-70.8	81.3	-81.3
LN44	LN43	-0.7	67.7	-67.6	78.2	-78.1
LN53	LN54	-0.7	59.5	-59.5	69.6	-69.5
LN41	LN40	-0.7	53.2	-53.1	63.1	-63
LN46	LN42	-0.5	55.6	-55.6	63.5	-63.5
LN47	LN46	-0.5	55.8	-55.6	63.7	-63.5
LN13	LN21	-0.5	47.9	-47.9	55.7	-55.7
LN22	LN23	-0.5	24.6	-24.6	32.5	-32.5
LN25	LN24	-0.5	14.4	-14.4	22.2	-22.2
T6	T4	-0.4	38	-38	43.8	-43.8
T24	T23	-0.3	45.3	-45.3	49.4	-49.4
T19	T26	-0.3	-152.9	157.7	-148.1	153
T19	T26	-0.3	-152.9	157.7	-148.1	153
T19	T26	-0.3	-152.9	157.7	-148.1	153
T25	T24	-0.1	47.3	-47.3	48.7	-48.7
LN51	LN52	0	30.6	-30.5	30.6	-30.5
LN30	LN35	0	24.4	-24.4	24.4	-24.4
LN17	LN10	0	0	0	0	0
LN23	LN10	0	0	0	0	0
LN22	LN11	0	0	0	0	0
LN26	LN20	0	0	0	0	0
T25	LN23	0	0	0	0	0
LN24	LN27	0	0	0	0	0
LN35	LN34	0	0	0	0	0
LN38	LN34	0	0	0	0	0
T1	T2	0	0	0	0	0
LN38	LN37	0	-9.1	9.1	-9.1	9.1
LN26	LN25	0	-10.2	10.2	-10.2	10.2
LN14	LN15	0	-12.4	12.4	-12.4	12.4
T33	LN52	0	-22	22.1	-22.1	22.1
LN4	LN5	0	-22.4	22.4	-22.4	22.4
LN6	LN5	0	-33.9	33.9	-33.9	33.9
LN50	LN48	0.3	29.9	-29.9	25.4	-25.3
LN57	LN56	0.3	-17.2	17.3	-21.7	21.7
LN45	LN57	0.3	-37.6	37.6	-42	42
LN25	LN23	0.5	-24.6	24.6	-32.4	32.5
T42	T39	0.5	-28.5	30.5	-35.9	37.9
LN22	LN21	0.5	-38.1	38.1	-45.9	46
LN41	LN42	0.5	-48.9	48.9	-56.8	56.8
LN13	LN15	0.5	-51.6	51.6	-59.4	59.4
LN15	LN1	0.5	-64	64	-71.8	71.9

LN1	T23	0.5	-64	64	-71.9	71.9
LN47	T32	0.5	-66.5	66.6	-74.4	74.5
T33	T32	0.6	45.7	-45.7	36.4	-36.4
LN39	LN41	0.6	-46.7	46.8	-55.3	55.4
Line LODF Records						
From Name	To Name	% LODF	MW From	MW To	CTG MW From	CTG MW To
LN55	LN54	0.7	-50.6	50.7	-60.7	60.7
LN41	LN43	0.7	-58.7	58.8	-69.2	69.3
LN53	T33	0.7	-62.8	63	-72.9	73
T32	T31	0.8	65.9	-65.9	54.4	-54.4
T28	T31	0.9	125.9	-125.5	112.9	-112.5
LN50	LN49	0.9	61.9	-61.8	49.1	-49
T29	T32	1	136.8	-136.4	121.6	-121.1
LN30	LN29	1	-4.5	4.5	-19.7	19.7
LN5	LN7	1	-38.7	38.7	-53.4	53.4
LN9	T23	1	-58.4	58.5	-73	73.2
T29	T17	1	-436.1	436.5	-451.3	451.7
LN3	LN2	1.2	-61.9	62	-79.9	80
T30	T33	1.3	125.6	-125.3	105.9	-105.7
LN50	LN36	1.3	29.7	-29.7	11	-11
LN31	LN32	1.3	11.2	-11.2	-7.5	7.5
LN20	LN17	1.3	-0.1	0.1	-18.8	18.8
LN32	LN33	1.3	-0.1	0.1	-18.8	18.8
LN11	LN10	1.3	-35.7	35.7	-54.4	54.4
LN12	LN11	1.3	-35.6	35.7	-54.3	54.4
LN28	LN19	2.7	-2.1	2.1	-42.6	42.6
LN19	LN18	2.7	-12.6	12.6	-53.1	53.1
LN16	LN8	2.7	-21.7	21.8	-62.3	62.3
T37	T38	5.8	219.8	-219.8	133.7	-133.7
T40	T39	6.6	-221.1	222.8	-318.7	320.4
T41	T40	6.8	-308.2	309.9	-408.2	409.9
T34	T30	15.4	-138.7	138.7	-366.6	366.7
T34	T30	15.5	-139.7	139.7	-369.2	369.2
T22	T21	20.7	-70.2	70.2	-377.3	377.3
T19	T22	21.5	-90.4	90.7	-409.8	410
T19	T20	21.9	-91.6	91.9	-416.3	416.6
T12	T11	28.6	-392.2	392.2	-816.5	816.5
T36	T35	36.7	-58.2	58.2	-601.7	601.7
T11	T36	49.2	65.3	-64.8	-663.5	664
T5	T9	56.8	1709	-1701.6	866.6	-859.1
T10	T11	64.3	544.9	-544.9	-408.3	408.3

From:	Philip A. Fedora
To:	rscmembers
Subject:	FW: BES Definition and related changes to the NERC RoP filed at FERC
Date:	Thursday, January 26, 2012 1:54:08 PM
Importance:	High

Sorry – used the wrong link the first time.

From: Philip A. Fedora
Sent: Thursday, January 26, 2012 1:50 PM
To: rcc; 'rsc-members'; cc-members
Cc: jtfc; Philip Raymond
Subject: BES Definition and related changes to the NERC RoP filed at FERC
Importance: High

FYI - The NERC BES Definition FERC filing is directly accessible from the FERC e-library website via the link below:

http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20120125-5142

The corresponding NERC BES FERC RoP filing is directly accessible from the FERC e-library website via the link below:

http://elibrary.ferc.gov/idmws/File_list.asp?document_id=13990970

If you would like to receive e-mail notification when additional documents are added to the above docket(s), you can eSubscribe by docket at:

https://ferconline.ferc.gov/eSubscription.aspx

Don – please distribute to the NYSRC-EC.

Thanks,

Phil

SCHIFF HARDIN LLP
A Limited Liability Partnership

Owen E. MacBride
(312) 258-5680
Email: omacbride@schiffhardin.com

233 SOUTH WACKER DRIVE
SUITE 6600
CHICAGO, ILLINOIS 60606

Tel.: 312.258.5500
Fax: 312.258.5700

www.schiffhardin.com

January 25, 2012

VIA ELECTRONIC FILING

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: North American Electric Reliability Corporation
Docket No. RR__-___-__
Petition of the North American Electric Reliability Corporation for Approval of Revisions to its Rules of Procedure to Adopt a Bulk Electric System Exception Procedure

Dear Ms. Bose:

The North American Electric Reliability Corporation (NERC) hereby submits the "Petition of the North American Electric Reliability Corporation for Approval of Revisions to its Rules of Procedure to Adopt a Bulk Electric System Exception Procedure."

NERC's filing consists of: (1) this transmittal letter, (2) the Petition, which follows this transmittal letter, and (3) Attachments 1, 2A, 2B, 3A, 3B, 4A, 4B, 5A, 5B, 6A, 6B, 7A, 7B, 8A, 8B and 9, all of which is being transmitted in a single pdf file. The Table of Contents to the Petition lists and identify the Attachments.

Please contact the undersigned if you have any questions concerning this filing.

Respectfully submitted,

/s/ Owen E. MacBride
Owen E. MacBride

Attorney for North American Electric Reliability Corporation

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION	**)**	**Docket No. RR__-__-____**

PETITION OF THE NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION FOR APPROVAL OF REVISIONS TO ITS RULES OF PROCEDURE TO ADOPT A BULK ELECTRIC SYSTEM EXCEPTION PROCEDURE

Gerald W. Cauley President and Chief Executive Officer North American Electric Reliability Corporation 3353 Peachtree Road N.E. Suite 600, North Tower Atlanta, GA 30326-1001 (404) 446-2560 David N. Cook Senior Vice President and General Counsel Holly A. Hawkins Assistant General Counsel for Standards and Critical Infrastructure Protection Andrew Dressel, Attorney North American Electric Reliability Corporation 1325 G Street N.W., Suite 600 Washington, D.C. 20005 (202) 400-3000 (202) 644-8099 – facsimile david.cook@nerc.net holly.hawkins@nerc.net andrew.dressel@nerc.net	Owen E. MacBride Debra A. Palmer Schiff Hardin LLP 1666 K Street, N.W., Suite 300 Washington, D.C. 20036-4390 (202) 778-6400 (202) 778-6460 – facsimile omacbride@schiffhardin.com dpalmer@schiffhardin.com

January 25, 2012

TABLE OF CONTENTS

I. INTRODUCTION.....1

II. NOTICES AND COMMUNICATIONS.....6

III. PROPOSED REVISIONS TO THE RULES OF PROCEDURE.....7

A. Order Nos. 743 and 743-A.....7

B. Proposed Section 509 of the Rules of Procedure.....10

C. Proposed Appendix 5C to the Rules of Procedure.....11

1. Overview.....11

2. Section-by-Section Summary of Proposed Exception Procedure.....16

a. Section 1.0 – Introduction.....17

b. Section 2.0 – Definitions.....18

c. Section 3.0 – Basis for Approval of an Exception..... 19

d. Section 4.0 – Form, Contents, and Submission of an Exception Request.....20

e. Section 5.0 – Review, Acceptance or Rejection, and Recommendation Regarding Exception Requests.....25

f. Section 6.0 – Supplementation of an Exception Request Prior to a Recommendation.....30

g. Section 7.0 – Appeal of Rejection of an Exception Request.....30

h. Section 8.0 – Approval or Disapproval of an Exception Request.....31

i. Section 9.0 – Appeal of Approval or Disapproval of an Exception Request.....32

j. Section 10.0 – Implementation Period for Exceptions.....33

k. Section 11.0 – Termination of an Approved Exception.....34

D. Proposed Section 1703 of the Rules of Procedure..... 36

E. Proposed Revisions to Appendix 2 to the Rules of Procedure.....37

F. Proposed Revisions to Appendix 5B to the Rules of Procedure.....40

G. Proposed Revisions to Other Sections of the Rules of Procedure and to Appendices 3D, 4B, 6 and 8.....41

IV. NERC APPROVALS FOR THE PROPOSED REVISIONS.....41

V. NERC LIST OF FACILITIES THAT HAVE RECEIVED EXCEPTIONS.....48

VI. CONCLUSION.....50

List of Attachments

Attachment 1: Proposed Appendix 5C to the Rules of Procedure, *Procedure for Requesting and Receiving an Exception from the NERC Definition of Bulk Electric System*

Attachments 2A and 2B: Clean and Redlined Versions of the Revised Rules of Procedure, Sections 100-1700 (including proposed new Sections 509 and 1703)

Attachments 3A and 3B: Clean and Redlined Versions of Revised Appendix 2 of the Rules of Procedure – *Definitions Used in the Rules of Procedure*

Attachments 4A and 4B: Clean and Redlined Versions of Revised Appendix 3D of the Rules of Procedure – *Registered Ballot Body Criteria*

Attachments 5A and 5B: Clean and Redlined Versions of Revised Appendix 4B of the Rules of Procedure – *Sanction Guidelines of the North American Electric Reliability Corporation*

Attachments 6A and 6B: Clean and Redlined Versions of Revised Appendix 5B of the Rules of Procedure – *Statement of Compliance Registry Criteria*

Attachments 7A and 7B: Clean and Redlined Versions of Revised Appendix 6 of the Rules of Procedure – *System Operator Certification Program Manual*

Attachments 8A and 8B: Clean and Redlined Versions of Revised Appendix 8 of the Rules of Procedure – *NERC Blackout and Disturbance Response Procedures*

Attachment 9: "The Development Process and Basis for the RoP Team's Recommended Provisions – Including How Stakeholder Comments Were Considered and Addressed," prepared by the BES Rules of Procedure Team

I. INTRODUCTION

The North American Electric Reliability Corporation ("NERC") respectfully requests the Commission to approve, in accordance with §215(f) of the Federal Power Act ("FPA")[1] and the Commission's regulations at 18 C.F.R. §39.10, revisions to NERC's Rules of Procedure ("ROP") for the purpose of adopting a procedure for requesting and receiving exceptions from the NERC definition of Bulk Electric System ("BES Exception Procedure"), as directed by the Commission in Order No. 743.[2] NERC requests approval for the following revisions and additions to the ROP:

- Proposed new Appendix 5C to the ROP, *Procedure for Requesting and Receiving an Exception to the NERC Definition of Bulk Electric System* (**Attachment 1**)
- Proposed new Sections 509 ("Exceptions to the Definition of the Bulk Electric System") and 1703 ("Challenges to NERC Determinations of BES Exception Requests Under Section 509") of the ROP (included in **Attachments 2A** (clean) and **2B** (redlined))[3]

[1] 16 U.S.C. §824o.

[2] *Revision to Electric Reliability Organization Definition of Bulk Electric System*, 133 FERC ¶ 61,150 (2011) ("Order No. 743"); *Order on Rehearing*, 134 FERC ¶ 61,210 (2011) ("Order No. 743-A").

[3] On November 29, 2011, NERC filed with the Commission, for approval, revisions to sections 100-1600 of the ROP. *Petition for Approval of Revisions to the Rules of Procedure of the North American Electric Reliability Corporation*, Docket No. RR12-3-000 ("November 29, 2011 ROP Revisions Filing"). Further, on November 7, 2011, NERC made a compliance filing with the Commission in Docket No. RR10-11-004 in response to an October 7, 2011 Order, to amend one section of the Rules of Procedure. *Compliance Filing of the North American Electric Reliability Corporation in Response to October 7, 2011 Order*. In addition, on March 18, 2011, NERC filed proposed new sections 1701 and 1702 of the ROP with the Commission for approval, in connection with the request for approval of Reliability Standard PRC-023-2. *Petition of the North American Electric Reliability Corporation for Approval of a Protection and Control (PRC) Reliability Standard*, Docket No. RM08-13-000. As of the date of this Petition, the Commission has not acted on any of these filings. **Attachments 2A** and **2B** incorporate the revisions to the ROP filed in the November 29, 2011 ROP Revisions Filing and the November 7, 2011 compliance filing, and to ROP sections 1701-1702 filed on March 18, 2011, as though all these revisions had been approved by the Commission.

- Revisions to sections 302.2.2, 501.1.4.4, 804, 1102.2 and 1701 of the ROP to reflect the adoption of the revised BES Definition and new section 1703 and Appendix 5C of the ROP (these revisions are shown in **Attachments 2A** and **2B**).

- Revisions to Appendix 2 to the ROP, *Definitions Used in the Rules of Procedure* (**Attachments 3A** (clean) and **3B** (redlined)) [4]

- Revisions to Appendix 3D to the ROP, *Registered Ballot Body Criteria* (**Attachments 4A** (clean) and **4B** (redlined).[5]

- Revisions to Appendix 4B to the ROP, *Sanction Guidelines of the North American Electric Reliability Corporation* (**Attachments 5A** (clean) and 5**B** (redlined).[6]

- Revisions to Appendix 5B to the ROP, *Statement of Compliance Registry Criteria* (**Attachments 6A** (clean) and **6B** (redlined)) [7]

- Revisions to Appendix 6 to the ROP, *System Operator Certification Program Manual* (**Attachments 7A** (clean) and **7B** (redlined).[8]

---

[4] NERC filed proposed Appendix 2, as a new appendix to the ROP, for Commission approval in the November 29, 2011 ROP Revisions Filing. As of the date of the instant filing, the Commission has not acted on NERC's request for approval of proposed Appendix 2. **Attachments 3A** and **3B** are based on Appendix 2 as filed in the November 29, 2011 ROP Revisions filing as though it were already approved.

[5] The November 29, 2011 ROP Revisions Filing included proposed revisions to Appendix 3D. As of the date of the instant filing, the Commission has not yet acted on the November 29, 2011 ROP Revisions Filing. **Attachments 4A** and **4B** incorporate the revisions to Appendix 3D submitted for approval in the November 29, 2011 ROP Revisions Filing, as though approved.

[6] The November 29, 2011 ROP Revisions Filing included proposed revisions to Appendix 4B. As of the date of the instant filing, the Commission has not yet acted on the November 29, 2011 ROP Revisions Filing. **Attachments 5A** and **5B** incorporate the revisions to Appendix 4B submitted for approval in the November 29, 2011 ROP Revisions Filing, as though approved.

[7] The November 29, 2011 ROP Revisions Filing included proposed revisions to Appendix 5B. As of the date of the instant filing, the Commission has not yet acted on the November 29, 2011 ROP Revisions Filing. **Attachments 6A** and **6B** incorporate the revisions to Appendix 5B submitted for approval in the November 29, 2011 ROP Revisions Filing, as though approved.

[8] The November 29, 2011 ROP Revisions Filing included proposed revisions to Appendix 6. As of the date of the instant filing, the Commission has not yet acted on the November 29, 2011 ROP Revisions Filing. **Attachments 7A** and **7B** incorporate the revisions to Appendix 6 submitted for approval in the November 29, 2011 ROP Revisions Filing, as though approved.

- Revisions to Appendix 8 to the ROP, *NERC Blackout and Disturbance Response Procedures* (**Attachments 8A** (clean) and **8B** (redlined).[9]

In Order No. 743, the Commission directed NERC to develop, using its Reliability Standards development process, a revised definition of the term "Bulk Electric System" ("BES Definition");[10] and to also develop, through a stakeholder process, a process to exempt facilities from inclusion in the Bulk Electric System through application of the BES Definition.[11] The Commission directed NERC to file the revised BES Definition and the exemption procedure within one year following the effective date of the final rule adopted in Order No. 743. Order No. 743 specified the effective date of the final rule to be 60 days following the date of its publication in the *Federal Register*. The final rule was published in the *Federal Register* on November 26, 2010[12]; the date 60 days following the date of publication was January 25, 2011.

As directed in Order No. 743, NERC has developed both a revised BES Definition and a proposed BES Exception Procedure.[13] NERC is submitting the revised BES Definition to the Commission for approval in a separate petition that is being filed contemporaneously with the instant Petition. The petitions for approval of the revised BES Definition and of the BES

[9] The November 29, 2011 ROP Revisions Filing included proposed revisions to Appendix 8. As of the date of the instant filing, the Commission has not yet acted on the November 29, 2011 ROP Revisions Filing. **Attachments 8A** and **8B** incorporate the revisions to Appendix 8 submitted for approval in the November 29, 2011 ROP Revisions Filing, as though approved.

[10] Order No. 743 at PP 29-33.

[11] Order No. 743 at PP 112-13.

[12] 75 FR 72910 (2010).

[13] Proposed Sections 509 and 1703 and Appendix 5C use the term "exception" rather than the term "exemption" used in Order No. 743. Use of the term "exception" is consistent with the terminology used in section 411 of the ROP and Appendix 4D pertaining to requests for Technical Feasibility Exceptions ("TFE") from NERC Critical Infrastructure Protection Standards.

Exception Procedure are being filed within one year following January 25, 2011.

The proposed BES Exception Procedure addresses the applicable concerns raised by the Commission, in Order No. 743, with respect to the current processes for determining what facilities are part of the BES and what facilities are not.[14] The BES Exception Procedure provides for decisions to approve or disapprove Exception Requests[15] to be made by NERC, rather than by the Regional Entities, thereby eliminating the potential for inconsistency and subjectivity that the Commission was concerned was created by having decisions as to what facilities are included in or excluded from the BES made at the Regional Entity level.

This filing also includes proposed conforming revisions to sections 302.2, 501.1.4.4, 804, 1102.2 and 1701 of the ROP and to Appendices 2, 3D, 4B, 5B, 6 and 8 of the ROP which are necessary in light of the revised BES Definition and the new BES Exception Procedure provisions in section 1703 and Appendix 5C. The revisions to Appendix 2, *Definitions Used in the Rules of Procedure*, add new defined terms that are used in the revised BES Definition or in proposed Appendix 5C, modify certain other definitions to distinguish their meanings as used in Appendix 5C from their meanings as used elsewhere in the ROP, and make minor revisions to other definitions resulting from adoption of the revised BES Definition. The revision to Appendix 5B, *Statement of Compliance Registry Criteria*, replaces the existing BES Definition with the revised BES Definition in the text of Appendix 5B. The revision to section 1701 of the ROP is necessary to reference the addition of new section 1703 to section 1700. The revisions to

[14] As shown in the separate petition being filed contemporaneously for approval of the revised BES Definition, the revised BES Definition fully addresses the concerns the Commission expressed in Order No. 743 with respect to the current definition of Bulk Electric System and its application to determine what facilities are included in or excluded from the BES.

[15] Capitalized terms used in this Petition, such as "Exception Requests," that are not otherwise defined herein, are defined terms in proposed Appendix 5C, or in proposed ROP Appendix 2 which is currently pending before the Commission.

sections 302.2.2, 501.1.4.4, 804 and 1102.2 of the ROP and to Appendices 3D, 4B, 6 and 8 are necessary to reflect capitalization of certain terms that become defined terms in the ROP as the result of the revised BES Definition.

The NERC Board of Trustees voted to adopt the proposed ROP revisions, including proposed new Appendix 5C and proposed new sections 509 and 1703 of the ROP, on January 18, 2012.

Attachment 1 to this Petition is the proposed Appendix 5C to the ROP, *Procedure for Requesting and Receiving an Exception from the NERC Definition of Bulk Electric System*. **Attachments 2A** and **2B** are clean and redlined versions of the ROP, Sections 100-1700, showing proposed new Sections 509 and 1703 and the revisions to other sections as enumerated above. **Attachments 3A** and **3B** are clean and redlined versions of proposed revised Appendix 2 to the ROP, *Definitions Used in the Rules of Procedure*. **Attachments 4A** and **4B** are clean and redlined versions of proposed revised Appendix 3D to the ROP, *Registered Ballot Body Criteria*. **Attachments 5A** and **5B** are clean and redlined versions of proposed revised Appendix 4B to the ROP, *Sanction Guidelines of the North American Electric Reliability Corporation.* **Attachments 6A** and **6B** are clean and redlined versions of proposed revised Appendix 5B to the ROP, *Statement of Compliance Registry Criteria*. **Attachments 7A** and **7B** are clean and redlined versions of proposed revised Appendix 6 to the ROP, *System Operator Certification Program Manual*. **Attachments 8A** and **8B** are clean and redlined versions of proposed revised Appendix 8 to the ROP, *NERC Blackout and Disturbance Response Procedures*. **Attachment 9**, captioned "The Development Process and Basis for the RoP Team's Recommended Provisions – Including How Stakeholder Comments Were Considered and Addressed," was prepared by the stakeholder-based BES Rules of Procedure Team ("BES ROP Team") that developed a proposed

Exception Procedure on which Appendix 5C and ROP sections 509 and 1703 are based. **Attachment 9** describes the process that was followed by the BES ROP Team in developing these documents, and key issues that were identified and addressed by the Team in the course of developing its proposals.

NERC requests that the Commission approve Appendix 5C and the other proposed ROP revisions with the same effective date as the proposed effective date of the revised BES Definition, as discussed in NERC's separate petition for approval of the revised BES Definition.

NERC is also filing the proposed revisions to the ROP, including proposed new Sections 509 and 1703 and Appendix 5C, with Applicable Governmental Authorities in Canada.

II. NOTICES AND COMMUNICATIONS

Notices and communications with respect to this filing may be addressed to:

Gerald W. Cauley President and Chief Executive Officer North American Electric Reliability Corporation 3353 Peachtree Road N.E. Suite 600, North Tower Atlanta, GA 30326-1001 (404) 446-2560 David N. Cook* Senior Vice President and General Counsel Holly A. Hawkins Assistant General Counsel for Standards and Critical Infrastructure Protection Andrew Dressel, Attorney North American Electric Reliability Corporation 1325 G Street N.W., Suite 600 Washington, D.C. 20005 (202) 400-3000 (202) 644-8099 – facsimile david.cook@nerc.net holly.hawkins@nerc.net andrew.dressel@nerc.net	Owen E. MacBride* Debra A. Palmer Schiff Hardin LLP 1666 K Street, N.W., Suite 300 Washington, D.C. 20036-4390 (202) 778-6400 (202) 778-6460 – facsimile omacbride@schiffhardin.com dpalmer@schiffhardin.com *Persons to be included on the official service list for this proceeding.

III. PROPOSED REVISIONS TO THE RULES OF PROCEDURE

A. Order Nos. 743 and 743-A

In Order No. 743, the Commission directed NERC to develop a process for exempting facilities from being included in the BES by the application of the BES Definition.

> [W]e direct the ERO to develop a proposed exemption process. We believe that it is appropriate that NERC develop the process in its function as the ERO. Further, allowing the ERO to develop an appropriate exemption process should provide interested stakeholders an opportunity to participate in the development of the process, as requested by some commenters.[16]

The Commission also expressed a number of concerns that it believed needed to be addressed in the development of the exemption process.

> **P 115.** "NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid. The ERO should also determine any related changes to its Rules of Procedure that may be required to implement the exemption process, and file the proposed exemption process and rule changes with the Commission."
>
> **P 116.** ". . . [W]e no longer contemplate a process that requires Commission review of each request for exemption. However, in order to avoid an inconsistent application of the exemption process, NERC should oversee the facility-by-facility exemption process to ensure an objective and uniform application of the exemption criteria that it develops. NERC may consider delegating responsibilities for the exemption process to Regional Entities, so long as the process is clear and capable of being applied consistently, objectively and uniformly across all regions. However, consistent with out statements in Order No. 672 concerning the need for a strong ERO, NERC should maintain oversight of any Regional Entity activity. We believe ERO oversight is also vital in ensuring consistent application of any nation-wide exemption criteria that the ERO develops." (Footnote omitted.)
>
> **P 117. "**While the Commission will not require that we review each exemption on a facility-by-facility basis, we would maintain the authority to conduct audits to determine the appropriateness of a particular exemption. We contemplate that a Commission staff audit would review the application of the exemption criteria developed by NERC in NERC's or a Regional Entity's determination to approve an exemption for a particular facility. However, to facilitate such audits, the ERO

[16] Order No. 743 at P 112.

should maintain a list of exempted facilities that can be made available to the Commission upon request. NERC can decide how best to maintain the list, including determining whether or not to post it on the NERC website."

P 118. "Additionally, the ERO should consider developing criteria for revoking an exemption if a particular transmission facility no longer qualifies for such an exemption. This may be appropriate, for example, when a transmission system in the vicinity undergoes a significant change."

P 119. "**. . .** [T]he exemption process provides a means of ensuring that relatively high voltage distribution facilities are excluded from compliance with mandatory Reliability Standards. In this light, we believe that it would be beneficial for the ERO in maintaining a list of exempted facilities, to consider including a means to track and review facilities that are classified as local distribution to ensure accuracy and consistent application of the definition. Similarly, the ERO could track exemptions for radial facilities."

P 120. "In response to comments seeking a blanket exemption for industrial facilities, the Commission is not inclined to grant categorical exemptions of any kind. However, NERC should consider the parties' concerns regarding exemption categories in developing an exemption process and criteria. Entities can submit specific facilities for exemption through the NERC-developed exemption process . . . ."

P 121. "We agree with ERCOT's suggestion that the ERO should develop a parallel process for including as part of the bulk electric system 'critical' facilities, operated at less than 100 kV, that the Regional Entities determine are necessary for operating the interconnected transmission network. Currently, Regional Entities have the ability to include 'critical' facilities operated below 100 kV. We believe that it would be worthwhile for NERC to consider formalizing the criteria for inclusion of critical facilities operated below 100 kV in developing the exemption process. Additionally, we note that Order No. 716 creates a process to include critical facilities under NUC-001-1. Similarly, we note that Order No. 733 creates an additional 'add in' approach to sub-100 kV facilities that Regional Entities and planning coordinators have identified as critical to the reliability of the bulk electric system." (Footnotes omitted.)

P 150. "We disagree with commenters that definitions of 'integrated transmission elements' and 'material impact' are needed to implement this Final Rule. These terms are not defined by the present bulk electric system definition, and defining these terms is not necessary to revise the definition as directed herein. Whether specific facilities have a material impact is not dispositive with respect to whether they are needed for reliable operation. These questions are more appropriately addressed through development of an exemption process at NERC."

In Order No. 743-A, the Commission provided additional clarification with respect to the scope of the exemption process.

> **P 76.** "The Commission notes some confusion regarding 'exclusions' versus 'exemptions.' We understand that a facility that is *excluded* would not have to go through any process at NERC to determine applicability. On the other hand, where an entity applies to NERC to seek to *exempt* its facility from the bulk electric system, NERC would follow an *exemption* process. With that understanding, we clarify that, as discussed herein, we envision that the process for determining which facilities will be included under the bulk electric system will involve several steps. NERC will develop criteria for determining whether a facility that falls under the definition of bulk electric system may qualify for exclusion. If, for example, the application of the criteria clearly indicates that a facility is local distribution, the facility is excluded, and no process before the ERO is required. If application of the NERC criteria does not lead to a definitive result, the entity could apply for an exemption, invoking a factual inquiry before the ERO to determine the proper categorization of facilities." (Italics in original.)

> **P 84.** "In Order No. 743, . . . while the Commission stated that the ERO should develop an exemption process that includes 'clear, objective, transparent, and uniformly applicable criteria' for determining exemptions, the Commission otherwise left it to the ERO's discretion to develop an appropriate exemption process, which the Commission will review. Any exemption of radial facilities is not based on a statutory requirement, unlike exclusion of local distribution. However, the Commission believes that certain categories of radial facilities may lend themselves to an 'exclusion' process as described above (i.e., once identified as belonging to a certain radial category, the facilities could be excluded without further review). For example, should the revised bulk electric system definition maintain the exclusion of radial facilities serving only load from one transmission source, these types of facilities easily could be excluded without further analysis."

> **P 86.** "The Commission clarifies that Order No. 743 granted NERC discretion to make a determination regarding whether to exclude or exempt radial facilities. One consideration in this regard is whether an exclusion process will avoid NERC having to review thousands of exemptions for facilities outside the NPCC region that previously were excluded as radial."

> **P 88.** "With respect to Consumers' request for clarification regarding how much incidental generation a line could serve and continue to meet the bulk electric system radial line exclusion, this is an issue that should be raised with NERC as it develops criteria for determining what is considered radial."

> **P 98.** "Order No. 743 directed the ERO to develop an exemption process, and specifically declined to 'dictate the substance or content of the exemption process.' However, we provided guidance, stating that the process should include

> clear, objective, transparent and uniformly applicable criteria for exemption of facilities that are not necessary for operating the interconnected transmission system. Accordingly, the Commission grants EEI's, Consumers Energy's and Wisconsin Electric's requests for clarification that the discussion regarding which facilities should or should not be included in the bulk electric system definition was intended to provide guidance, not to prejudge what should be included in the exemption criteria. . . ."

As discussed in the balance of this §III, the proposed Exception Procedure appropriately addresses the Commission's directives and concerns expressed in Order Nos. 743 and 743-A with respect to the exemption procedure. In addition, in §V below, NERC acknowledges the need to maintain a list of facilities that have been granted Exceptions from the BES Definition, as indicated in Order No. 743.

B. Proposed Section 509 of the Rules of Procedure

Proposed new Section 509 of the ROP, "Exceptions to the Definition of the Bulk Electric System," identifies the availability of the procedure in Appendix 5C to request a determination that an Element that falls within the BES Definition should be excluded from the BES or that an Element that falls outside of the BES Definition should be included in the BES:

> An Element is considered to be (or not be) part of the Bulk Electric System by applying the BES Definition to the Element (including the inclusions and exclusions set forth therein). Appendix 5C sets forth the procedures by which (i) an entity may request a determination that an Element that falls within the definition of Bulk Electric System should be exempted from being considered a part of the Bulk Electric System, or (ii) an entity may request that an Element that falls outside the definition of the Bulk Electric System should be considered a part of the Bulk Electric System.

Section 509 specifies that the Exception Procedure in Appendix 5C is available with respect to (i) Elements that are considered to be part of the BES by applying the BES Definition, and (ii) Elements that are not considered to be part of the BES based on applying the BES Definition, but which the Submitting Entity believes should be excluded from or included in, respectively, the BES. The Exception Procedure is not intended to be used to resolve ambiguous

situations in which it cannot be determined by applying the BES Definition whether an Element is part of or not part of the BES.

C. Proposed Appendix 5C to the Rules of Procedure

1. Overview

Proposed Appendix 5C sets forth the detailed procedures for requesting and receiving an Exception from inclusion in or exclusion from the Bulk Electric System based on application of the BES Definition. As discussed in greater detail in §IV below, following the issuance of Order No. 743, NERC established a stakeholder-based BES ROP Team to develop a proposed Exception Procedure. The BES ROP Team developed a proposed Exception Procedure which the Team submitted to NERC. As also discussed in §IV, proposed Appendix 5C as approved by the NERC Board and submitted for approval in this filing incorporates several modifications to the BES ROP Team's proposal, both revisions recommended by NERC staff and revisions directed by the NERC Board of Trustees. However, the basic structure and concepts of the proposed Exception Procedure for which approval is requested herein are the same as in the BES ROP Team's proposal.

Taking into account the directives and concerns set forth in Order Nos. 743 and 743-A, the BES ROP Team considered several process attributes to be important in developing the Exception Procedure:

- The Exception Procedure should maintain the exemption for facilities used in the local distribution of electric energy and the exemption for radial facilities.
- The Exception Procedure, including the criteria for allowing Exceptions, should be clear, objective, transparent and uniformly applicable.
- The Exception Procedure should allow any Registered Entity to utilize the process to seek an Exception either for its own facilities or for the facilities of others with respect to which the Registered Entity has ERO-related reliability responsibilities.

- NERC should be the ultimate decision-maker for Exception Requests, in order to retain facility-by-facility oversight of the objective and uniform application of the Exception criteria.

- The Exception Procedure should include provisions for revoking a previously-granted Exception for a facility if the Exception is no longer warranted.

With respect to establishing criteria for Exceptions, the proposed Exception Procedure establishes specific steps to be followed in submitting, reviewing and deciding Exception Requests. It also specifies detailed Required Information that must be submitted with an Exception Request, or it will be rejected. In terms of technical criteria for allowing Exceptions, it was determined jointly by the NERC Standards Committee, NERC Reliability Standards Program management, the leaders of the BES Definition Standard Drafting Team ("SDT") and the BES ROP Team that the SDT would take responsibility for determining the technical criteria for Exceptions. As discussed in detail in §III.D of NERC's petition for approval of the proposed BES Definition, which is being filed contemporaneously with this Petition, the SDT determined that developing a single set of technical criteria that would be applicable to all Exception Requests was not feasible. The SDT determined, instead, that a common set of data and information that the Submitting Entity would be required to submit with each Exception Request should be developed (the "Detailed Information to Support an Exception Request"). The Detailed Information is intended to ensure that a consistent baseline of technical information is provided to the Regional Entity and NERC with all Exception Requests, in addition to the specific information and arguments submitted by the Submitting Entity in support of its Exception Request. The Submitting Entity remains responsible to present sufficient information and argument to justify the Exception Request.[17]

[17] *See* section 3.2 of proposed Appendix 5C.

Additionally, several significant issues were identified during development of the Exception Procedure (some of these were raised by stakeholder comments) that the BES ROP Team needed to address. These issues generally fell into the following categories:

- Who is eligible to initiate and/or participate in the process by which an Exception is granted? What is the role of state regulators?

- What should be the scope of the Elements for which an Exception can be requested in a single Exception Request?

- Should an entity that is unable to determine the status of an Element by applying the BES Definition be able to use the Exception Procedure to obtain a determination?

- What is the appropriate balance between allowing open access to the Exception process and ensuring the resources of NERC and the Regional Entities are spent processing and analyzing valid, permissible requests?

- What is the appropriate balance between allowing open access to the Exception process and an appropriate level of consistency, respecting the varied roles and proper exercise of discretion by each participant?

- How transparent should the Exception process be? In addition to the Submitting Entity (and Owner of the facility, if different), should any entities other than the Regional Entity, NERC, the Commission, and Applicable Governmental Authorities in Canada, be allowed access to facility-specific information filed with an Exception Request?

- What should be the status for compliance purposes of an Element during the pendency of the request?

These and other issues were resolved in the development of the BES Exception Procedure, and their resolution is reflected in proposed Appendix 5C.[18]

The Exception Procedure developed by the BES ROP Team – and, with relatively minor modifications, approved by the NERC Board and submitted in this Petition for the Commission's approval – provides, for most circumstances, a fairly simple and direct process of discrete steps:

[18] *See* **Attachment 9** for further discussion of how the BES ROP Team addressed these issues and other stakeholder concerns.

1. An entity applies the BES Definition to an Element, but nonetheless believes that the Element, contrary to its characterization based on the BES Definition, should either be included in or excluded from the BES. The entity therefore submits an Exception Request to the Regional Entity in which the Element is located.

2. The Regional Entity receives the Exception Request.

    a. The Regional Entity conducts an initial screening looking for three items to determine if the Exception Request is a valid request for processing:

        i. Is the Exception Request from an eligible submitter?

        ii. Is the Exception Request a request for an Exception from the BES Definition?

        iii. Is all the Required Information provided with the Exception Request?

        If the initial answer to each question is yes, the Exception Request is moved along in the process to a substantive review. If the answers to all questions are not yes, the submitter is given an opportunity to modify or supplement the Exception Request before the Regional Entity rejects it.

    b. The Regional Entity substantively evaluates the Exception Request and makes a recommendation to NERC as to whether it should be approved or disapproved.

3. NERC reviews the Exception Request and all information developed at the Regional Entity level, and either approves or disapproves the Exception Request.

4. The Submitting Entity either accepts the NERC decision, or appeals it to the NERC Board of Trustees Compliance Committee ("BOTCC").

Importantly, in response to the Commission's directives and concerns expressed in Order Nos. 743 and 743-A, the decision as to whether to approve or disapprove an Exception Request is made only by NERC. The Regional Entity performs a non-substantive initial screening of the Exception Request and, if the Exception Request passes the initial screening, conducts a substantive review and makes a recommendation to NERC as to whether the Exception Request should be approved or disapproved. However, the actual decision to approve or disapprove the Exception Request is made by the NERC President after considering the opinion provided by a three-person NERC review panel (as well as the Recommendation of the Regional Entity and

other information placed into the record at the Regional Entity and NERC levels). Further, if the Regional Entity rejects the Exception Request based on the initial screening but the Submitting Entity believes the Exception Request is proper and complete as submitted, the Exception Procedure allows the Submitting Entity to appeal the Rejection to NERC.

Placing the decision-making responsibility with NERC will provide for a consistent approach to and determination of Exception Requests coming from Submitting Entities in all Regions, thereby eliminating Regional Entity discretion in the determination of Exception Requests. Further, not only will NERC be able to provide consistent determinations on Exception Requests coming from Submitting Entities in different Regions but involving the same or similar facts and circumstances, but NERC, as the sole decision-maker, will be able to take into account the aggregate impact on the BES of approving or disapproving all the Exception Requests submitted. NERC's ability to provide for consistency and to assess aggregate impacts is enhanced by the provision added to Appendix 5C at the direction of the NERC Board (as described in §IV below) specifying that the final decision on all Exception Requests will be issued by the NERC President.

Additionally, the proposed Exception Procedure includes provisions for requesting and approving an Inclusion Exception, by which an Element that the BES Definition would not include in the BES can be included in the BES.[19] A request for an Inclusion Exception can be submitted by the Owner of an Element, or by a Regional Entity, Planning Authority ("PA"), Reliability Coordinator ("RC"), Transmission Operator ("TOP"), Transmission Planner ("TP") or Balancing Authority ("BA") that has the Element within its Scope of Responsibility.[20]

[19] *See* Order No. 743 at P 121.

[20] Scope of Responsibility is defined in section 2.26 of Appendix 5C as "The registered functions of a PA, RC, TOP, TP or BA and the geographical or electric region in which the PA, RC, TOP,

Finally, the Exception Procedure also includes provisions for monitoring that an Exception that has been granted continues to be warranted, and for revoking an Exception that is no longer warranted.[21]

In Order No. 743-A, the Commission noted that NERC would need to determine whether local distribution facilities and radial facilities would be "excluded" from the BES, or "exempted" through the exemption process.[22] The proposed BES Definition expressly excludes both "facilities used in the local distribution of electric energy," and radial systems as described in Exclusion E1 of the BES Definition, from the Bulk Electric System.[23] Therefore, it was not necessary for the BES Exception Procedure to contain detailed criteria or procedures to exempt local distribution facilities or radial facilities from inclusion in the Bulk Electric System.

In summary, the proposed Exception Procedure establishes a process that (1) balances the need for effective and efficient administration with due process and clarity of expectations; (2) promotes consistency in determinations and eliminates Regional discretion by having all decisions on Exception Requests made at NERC; (3) provides for involvement of persons with applicable technical expertise in making decisions on Exception Requests; and (4) should alleviate concerns about a "one-size-fits-all" approach.

2. Section-by-Section Summary of Proposed Exception Procedure

The following subsections provide a section-by-section summary of the Exception

---

TP or BA operates to perform its registered functions, or with respect to a Regional Entity, its Regional Entity Region."

[21] *See* Order No. 743 at P 118.

[22] Order No. 743-A at PP 76, 84, 86 and 88.

[23] *See* the discussion in §III.C of NERC's contemporaneously-filed petition for approval of the revised BES Definition.

Procedure in proposed Appendix 5C.

a. Section 1.0 – Introduction

Section 1.1, Purpose, states the purpose of Appendix 5C:

> The NERC definition of the Bulk Electric System uses specific terms and thresholds that, in most cases, should appropriately identify Elements and groups of Elements that are appropriately classified as part of the Bulk Electric System. Conversely, the BES Definition should, in most cases, exclude Elements that are not part of the Bulk Electric System. In certain cases, however, the BES Definition may classify certain Elements as part of the Bulk Electric System that are not necessary for the Reliable Operation of the interconnected bulk-power transmission system or the BES Definition may classify certain Elements as non-Bulk Electric System that are necessary for the Reliable Operation of the interconnected bulk-power transmission system.
>
> This Appendix . . . provides the procedure by which an entity may request and receive an Exception which will have the effect of either including within the BES an Element or Elements that would otherwise be excluded by application of the BES Definition or excluding from the BES an Element or Elements that would otherwise be included by application of the BES Definition.

Section 1.1 also states the status of an Element until the time that an Exception from the BES Definition has been requested and granted:

> An entity must request and obtain an Exclusion Exception pursuant to an Exception Request under this Exception Procedure before any Element that is included in the BES by application of the BES Definition shall be excluded from the BES. Likewise, an entity must request and obtain an Inclusion Exception pursuant to an Exception Request under this Exception Procedure before any Element that is excluded from the BES by application of the BES Definition shall be included in the BES.
>
> During the pendency of an Exception Request, the status of an Element(s) that is the subject of an Exception Request shall remain as it is determined based on application of the BES Definition. This status will continue until all appeals to all Applicable Governmental Authorities are completed.

Section 1.1 further provides that an entity planning the connection of a new Element for which it believes an Exception would be appropriate may request an Exception prior to commercial operation of the Element.

Finally, section 1.1 details who is entitled to file an Exception Request. The right to file an Exception Request is not limited to the Owner of the Element that is the subject of the Exception Request. Rather, the Regional Entity or a Registered Entity performing reliability functions that would have the Element within its Scope of Responsibility may submit an Exception Request with respect to the Element:

> The Owner of the Element to which the Exception Request applies or, with respect to an Element owned by another Registered Entity, any Regional Entity, Planning Authority ("PA"), Reliability Coordinator ("RC"), Transmission Operator ("TOP"), Transmission Planner ("TP") or Balancing Authority ("BA") that has (or will have upon inclusion of the Elements in the BES) the Elements covered by an Exception Request within its Scope of Responsibility may submit an Exception Request for the Element as provided in this Exception Procedure.

Section 1.2, Authority, includes a statement relating to adoption of the Exception Procedure or a comparable procedure by Applicable Governmental Authorities in Canada and Mexico: "This Exception Procedure or an equivalent procedure is to be implemented in Canada and Mexico consistent with their respective laws and agreements."

Section 1.3 states obligations of Canadian and Mexican Entities and Cross-Border Regional Entities with regard to seeking Exceptions from Applicable Governmental Authorities consistent with their respective laws and agreements.[24] This section states that a Canadian Entity or Mexican Entity "shall not be required to subject itself to United States federal or state laws not otherwise applicable to the entity in order to utilize this Exception Procedure or an equivalent procedure."

b. Section 2.0 – Definitions

Section 2.0 sets forth the definitions of defined terms that are frequently used in

[24] A Canadian Entity is defined in section 2.5 of Appendix 5C as "a Registered Entity that is organized under Canadian federal or provincial law;" and a Mexican Entity is defined in section 2.18 as "a Registered Entity that is organized under Mexican law."

Appendix 5C. The text of section 2.0 assumes that proposed Appendix 2, *Definitions Used in the Rules of Procedure*, of the ROP is approved by the Commission and in effect prior to Appendix 5C becoming effective. Therefore, section 2.0 of Appendix 5C states:[25]

> For purposes of this Appendix, capitalized terms shall have the definitions set forth in Appendix 2 to the Rules of Procedure. For ease of reference, the definitions of the following terms that are used in this Appendix are also set forth below.

This text is consistent with the modified text in a number of existing ROP Appendices (*e.g.*, Appendices 4C and 4D) as submitted in the November 29, 2011 ROP Revisions Filing. If proposed Appendix 5C is approved and becomes effective prior to the effective date of proposed Appendix 2, then the above-quoted text should be replaced by the following text, until Appendix 2 is approved and becomes effective:

> For purposes of this Appendix, the following terms shall be defined as set forth in this section 2.0. Capitalized terms used in this Appendix that are not defined in this section 2.0 shall have the meanings as defined in, as applicable, (i) the NERC *Glossary of Terms Used in Reliability Standards*, or (ii) section 1.0 of the NERC *Uniform Compliance Monitoring and Enforcement Program*, Appendix 4C to the NERC *Rules of Procedure*, or (iii) page 20 of the Organization Registration and Certification Manual, or (iv) section 1501 of the NERC *Rules of Procedure*.

A number of the defined terms and their definitions in section 2.0 are taken from existing Appendix 4D, including Canadian Entity, Classified National Security Information, Eligible Reviewer, FOIA, NRC Safeguards Information, and Protected FOIA Information.

c. Section 3.0 – Basis for Approval of an Exception

Section 3.1, Grounds for an Exception, identifies the two types of Exception Requests and their grounds – Exclusion Exceptions and Inclusion Exceptions. An Exclusion Exception may be requested and obtained "on the grounds that the Element(s) for which the Exception

[25] As noted above, Appendix 2 was filed for approval in the November 29, 2011 ROP Revisions Filing and is pending before the Commission as of the date of this Petition.

Request is filed is included within the BES based on application of the BES Definition but is not necessary for the Reliable Operation of the interconnected bulk-power transmission system as evidenced by Required Information provided pursuant to **Detailed Information to Support an Exception Request (**Section III.B of the Exception Request Form)." An Inclusion Exception may be requested and obtained "on the grounds that the Element(s) for which the Exception Request is filed is not included within the BES based on application of the BES Definition but is necessary for the Reliable Operation of the interconnected bulk-power transmission system as evidenced by Required Information provided pursuant to **Detailed Information to Support an Exception Request** (Section III.B of the Exception Request Form)."

Section 3.2, Burden, specifies that the burden to provide a sufficient basis for Approval of an Exception Request is on the Submitting Entity. This provision is consistent with the placement of the burden to justify a Technical Feasibility Exception as set forth in section 3.3 of existing Appendix 4D, the TFE Procedure. This is an important provision because it establishes that where an Element is *included* in the BES by application of the BES Definition, the entity submitting an Exception Request must prove that the Element should not be included in the BES, or else the Element will remain in the BES; and where an Element is *not included* in the BES by application of the BES Definition, the entity submitting the Exception Request must prove that the Element should be included in the BES, or else the Element will continues to be excluded from the BES. Section 3.2 also specifies that all evidence provided as part of an Exception Request or response thereto will be considered in determining whether the Exception Request shall be approved or disapproved.

d. Section 4.0 – Form, Contents, and Submission of an Exception Request

Section 4.1, Eligible Submitting Entities, details what entities may submit Exception

Requests:

- The Owner of an Element may submit an Exception Request for either an Inclusion Exception or an Exclusion Exception regarding that Element.

- A Regional Entity, PA, RC, TOP, TP, or BA that has (or will have upon inclusion in the BES) the Elements covered by an Exception Request within its Scope of Responsibility may submit an Exception Request for the inclusion in the BES of an Element or Elements owned by a Registered Entity, provided that before doing so, (i) the Submitting Entity conferred with the Owner about the reasons for an Exception, and (ii) could not reach agreement regarding the submission of such an Exception Request. (If the Owner agrees with submitting an Exception Request, the Owner should be the Submitting Entity.)

- A Regional Entity may submit an Exception Request for the inclusion in the BES of an Element or Elements owned by an Owner that is not a Registered Entity.

- An Owner or a Regional Entity may submit an Exception Request for the exclusion from the BES of an Element.

Section 4.2, Separate Submissions for Each Exception Request, specifies as general rules that (i) a separate Exception Request shall be submitted for each Element or set of connected Elements for which the Submitting Entity seeks an Exception, and (ii) a single Exception Request may not be submitted for separate Elements within the geographic boundaries of more than one Regional Entity. Additionally, where the Submitting Entity seeks Exceptions for multiple, similar Elements (all within the boundaries of a single Regional Entity) on the same basis, the Exception Requests for all the Elements may be included in one Exception Request with all the Elements or sets of connected Elements separately identified. Finally, section 4.2 specifies a procedure by which multiple Submitting Entities may jointly file Exception Requests for similar Elements on the same basis; in this situation, one of the Submitting Entities will be designated as the Lead Entity and will submit the Exception Request Form with all Required Information to support the Exception Request.

Section 4.3, Withdrawal of an Exception Request, specifies that a Submitting Entity may withdraw an Exception Request at any time prior to Approval or Disapproval of the Exception Request by NERC.

Section 4.4, Form and Format of Exception Request, specifies that the Exception Request shall consist of three sections. (The required contents of the three sections are enumerated in sections 4.5.1, 4.5.2 and 4.5.3, respectively.) This section also requires that if the Submitting Entity is not the Owner of the Element, the Submitting Entity shall provide a copy of the Exception Request to the Owner (or to the operator(s) of the Element if the Owner is unknown) when the Exception Request is submitted to the Regional Entity.

Section 4.5, Required Information to be Included in the Exception Request, details the Required Information that is to be included in each section of the Exception Request. Section 4.5.1 details the Section I Required Information, section 4.5.2 details the Section II Required Information, and section 4.5.3 describes the Section III Required Information. Each of sections 4.5.1, 4.5.2 and 4.5.3 specifies that failure to provide all of the Required Information for Section I, Section II or Section III, respectively, may result in Rejection of the Exception Request as incomplete.

Section 4.5.1 specifies the Required Information to be included in Section I of the Exception Request. The Section I Required Information is identifying information concerning the Submitting Entity (and Owner, if different), the Exception Request and the Element(s).

Section 4.5.2 specifies the Required Information to be included in Section II of the Exception Request. The Section II Required Information includes (among other things):

- Identification and location of the Element(s) for which the Exception is being requested.

- A statement of the basis on which the Submitting Entity contends the Exception Request should be approved, and if the Submitting Entity is not the Owner, a statement of the basis of the Submitting Entity's reason for submitting the Exception Request.

- A statement, signed and dated by an authorized representative of the Submitting Entity's senior management, stating that the representative has read the Exception Request on behalf of the Submitting Entity and that the Submitting Entity believes Approval of the Exception Request is warranted.

The Section II Required Information will not be publicly posted or disclosed to third parties except for persons involved in reviewing the Exception Request.

Sections 4.5.1 and 4.5.2 each specifies that at the same time the Submitting Entity submits the Exception Request Form to the Regional Entity, the Submitting Entity shall submit a copy of Section I and Section II to each PA, RC, TOP, TP and BA that has (or will have upon inclusion of the Elements in the BES) the Elements covered by the Exception Request within its Scope of Responsibility.

Section 4.5.3 specifies that Section III of the Exception Request shall contain the Detailed Information to Support an Exception Request as specified on the Exception Request Form. The Detailed Information to Support an Exception Request was developed by the SDT for the BES Definition through the NERC Reliability Standard development process.[26] The development and contents of the Detailed Information to Support an Exception Request are described in §III.D of NERC's Petition for approval of the revised BES Definition, which is being filed contemporaneously with this Petition.

[26] Because the Detailed Information to Support an Exception Request was developed and adopted through the Reliability Standard development process, it can only be modified through the Reliability Standard development process, and not through the procedure for revising the ROP.

Section 4.5.3 states that the Submitting Entity may designate all or part of the Section III Required Information as Confidential Information. It sets forth specific provisions for the handling of and access to any Classified National Security Information, NRC Safeguards Information and/or Protected FOIA Information that is submitted in support of the Exception Request.

Section 4.5.4 provides for information to be submitted by entities in addition to the Submitting Entity:

- If the Owner is different than the Submitting Entity, the Owner may file a response to supplement, correct or disagree with all or any part of the Exception Request.

- Any PA, RC, TOP, TP, and BA that has (or will have upon inclusion of the Element(s) in the BES) the Elements covered by an Exception Request within its Scope of Responsibility may also provide input to the Regional Entity regarding the request.

Section 4.5.4 also sets forth procedures by which the Owner (if different than the Submitting Entity) or a PA, RC, TOP, TP or BA, in order to enable it to evaluate the Exception Request, may request and obtain the Section III Required Information from the Regional Entity. Section 4.5.4 includes provisions to protect, in such a transaction, any Confidential Information included in the Section III Required Information.

Section 4.6, Access to Confidential Information, Classified National Security Information, NRC Safeguards Information, and Protected FOIA Information Included in Required Information, sets forth provisions by which the Regional Entity can obtain access to any Confidential Information, Classified National Security Information, NRC Safeguards Information, and Protected FOIA Information included in the Exception Request from the Submitting Entity or Owner, while protecting the confidentiality of the information.

e. Section 5.0 – Review, Acceptance or Rejection, and Recommendation Regarding Exception Requests

Section 5.0 specifies that the Regional Entity's evaluation of an Exception Request will consist of two stages:

- an initial screening to determine whether to accept or reject the Exception Request, and
- a substantive review to determine the Regional Entity's recommendation to NERC as to whether or not the Exception Request should be approved.

The details of the procedures for the Regional Entity's initial screening and substantive review of the Exception Request are set forth in sections 5.1, 5.2 and 5.3. Sections 5.1.3(a) and 5.2.2 set forth the time periods for completion of the initial screening and substantive review. However, section 5.0 also allows the Regional Entity the ability to establish an alternative time period objective and work plan:

> If the Regional Entity determines at any time that for a specified period of time, the Regional Entity will be unable to complete initial screenings of Exception Requests within the time provided by section 5.1.3(a) and/or substantive reviews of Exception Requests within the time provided in section 5.2.2, the Regional Entity, based on consultation with NERC, shall establish an alternative time period objective and work plan for completing initial screenings and substantive reviews of Exception Requests during the specified period of time. The alternative time period and work plan shall be publicized by posting on the Regional Entity's website.[27]

Section 5.0 also sets forth exceptions to the procedures for the initial screening and substantive review of an Exception Request where the Regional Entity is the Submitting Entity:

- There will be no initial screening, and no Acceptance or Rejection, of the Exception Request.
- The Regional Entity will begin substantive review of the Exception Request (and of any responses received from the Owner and other applicable entities) within sixty

[27] This provision is comparable to sections 5.1.3(b) of Appendix 4D, the TFE Procedure.

days after submitting the Exception Request to the Owner and other applicable entities, and shall complete the substantive review within six months.

- Before the Regional Entity issues a Recommendation to NERC to approve or disapprove the Exception Request in whole or in part, the Technical Review Panel shall review the proposed Recommendation and issue an opinion on it, with copies provided to the Owner and to NERC.

Section 5.1, Initial Screening of Exception Request for Acceptance or Rejection, sets forth the detailed procedures relating to the Regional Entity's initial screening of an Exception Request. Section 5.1.3 specifies that the Regional Entity is to complete the initial screening within 60 days after receiving the Exception Request or, if the Submitting Entity is not the Owner, within 30 days after receiving the Owner's response, unless (i) the Regional Entity has established an alternative time period objective and work plan (as described above), or (ii) the Regional Entity issues a notice to the Submitting Entity (and to the Owner, if different), prior to the deadline date, stating a revised deadline date.

The initial screening shall review (i) whether the Exception Request is from an eligible (in accordance with section 4.1) Submitting Entity, and (ii) whether all Required Information has been provided; the Exception Request may be rejected for failure to meet either criterion. (Sections 5.1.4 and 5.1.5.) However, the Regional Entity may not reject the Exception Request because it is missing Required Information, unless (1) it first contacts the Submitting Entity to request that the missing Required Information be provided, and (2) the Submitting Entity fails to submit the missing Required Information within 30 days or such additional period of time that the Regional Entity allows based on the circumstances. If the Submitting Entity submits supplemental Required Information in response to the Regional Entity's request, the time for the Regional Entity to complete the initial screening is extended by 15 days from the receipt of the supplemental Required Information.

Section 5.1.6 specifies that the Regional Entity may either accept the Exception Request in its entirety, reject it in its entirety, or if the Exception Request is for more than one Element, may accept it with respect to a subset of the Elements and reject it with respect to the remainder of the Elements. Section 5.1.5(b) specifies that if the Regional Entity rejects the Exception Request, its notice must explain the reason for the Rejection. Section 5.1.6 also specifies that the Submitting Entity may, within 30 days after receipt of the Rejection, appeal to NERC to reverse the Rejection and to direct the Regional Entity to proceed with a substantive review of the Exception Request.

Section 5.2, Substantive Review of Exception Request for Approval or Disapproval, sets forth the detailed procedures for the Regional Entity's substantive review of the Exception Request. Section 5.2.1 specifies that in conducting its substantive review, the Regional Entity:

- may request access to and review the Required Information, including any Confidential Information, Classified National Security Information, NRC Safeguards Information, and Protected FOIA Information;
- may conduct one or more physical inspections of the relevant Element(s) and its (their) context and surrounding Elements and Facilities;
- may request additional information from the Submitting Entity, Owner, or applicable PAs, RCs, BAs, TOPs and TPs; and
- may engage in further discussions concerning possible revisions to the Exception Request.

Section 5.2.2 specifies that at the outset of its substantive review of the Exception Request, the Regional Entity shall develop a milestone schedule pursuant to which it plans to conduct the substantive review, and shall send a copy of the milestone schedule to the Submitting Entity and the Owner (if different) for information. Section 5.2.2 further provides that the Regional Entity shall complete the substantive review and issue a notice with its Recommendation within six months following Acceptance of the Exception Request or within an

alternative time period established pursuant to section 5.0. However, the Regional Entity may extend the period for substantive review by issuing a notice stating the revised date by which it will issue its Recommendation.

Section 5.2.3 specifies that upon completion of its substantive review of the Exception Request, the Regional Entity shall issue a Recommendation to NERC (with a copy to the Submitting Entity and to the Owner if different) as to whether the Exception Request should be approved or disapproved (in whole or in part), and stating the basis for the Recommendation. The Regional Entity shall also transmit to NERC the Exception Request Form and all other information considered by the Regional Entity in arriving at its Recommendation.

Section 5.2.4 provides that the Regional Entity shall not recommend Disapproval of an Exception Request, in whole or in part, without first submitting the Exception Request to a Technical Review Panel and receiving its opinion, in accordance with section 5.3 (summarized below).

Section 5.2.5 states that NERC shall develop, and post on its web site, a reporting program and schedule pursuant to which Regional Entities will be required to submit to NERC periodic reports on the numbers, status and timing of their initial screenings and substantive reviews of Exception Requests. While NERC considered establishing specific reporting requirements, including specific content, in Appendix 5C, it was determined that (i) it would be premature to do so prior to the Commission's approval of the BES Exception Procedure, and (ii) in any event, flexibility should be maintained to change the reporting requirements and content, once developed, by not hard-wiring these requirements in Appendix 5C.[28] These reports may

[28] Candidate data items for the reporting requirements could include he number of new Exception Requests received during the quarter; the number of Exception Requests for which initial screening was completed during the quarter; the number of Exception Requests for which

also be posted on the Regional Entity and NERC websites, and would provide a basis for the development of periodic reports that NERC could submit to the Commission. Submission and posting of periodic status reports will enable NERC to maintain oversight, and stakeholders to have visibility, of the Regional Entities' success or lack thereof in processing Exception Requests within the time periods specified in Appendix 5C.

Section 5.3, Technical Review Panel, contains the provisions relating to the Regional Entity Technical Review Panels. Each Regional Entity shall have a Technical Review Panel comprised of not less than three individuals appointed by the Regional Entity senior executive. Any panel members who are industry subject matter experts or Regional Entity members shall comply with section 403.7 of the ROP (pertaining to confidentiality and to lack of conflicts of interest and financial interest in the matter), shall not have participated in the Regional Entity's review of the Exception Request that they are to evaluate, and shall have the required technical background to evaluate Exception Requests. Section 5.3 requires that if the Regional Entity intends to issue a Recommendation of Disapproval, in whole or in part, it must first submit its proposed determination to the Technical Review Panel and receive the Panel's opinion. If the Regional Entity decides to recommend Disapproval of the Exception Request, a copy of the Technical Review Panel's opinion is to be provided to the Submitting Entity (and to the Owner, if different). The Regional Entity is not bound by the Technical Review Panel's opinion, but the

---

substantive review was completed during the quarter; the number of Exceptions Requests in the process of initial screening; the number of Exception Requests for which the original deadline date as specified in section 5.1.3 has not been reached; the number of Exception Requests for which the deadline date for the initial screening has been extended pursuant to section 5.1.3; the number of Exception Requests undergoing substantive review, the number of Exception Requests undergoing substantive review that are within the six month review period pursuant to section 5.2.2; and the number of Exception Requests undergoing substantive review for which the six month review period has been extended pursuant to section 5.2.2. However, no determination has been made as to the content requirements for the periodic reports.

Panel's opinion will be part of the record associated with the Exception Request and shall be provided to NERC.

f. Section 6.0 – Supplementation of an Exception Request Prior to a Recommendation

Section 6.0 specifies that a Submitting Entity or Owner, at any time prior to the Regional Entity issuing its Recommendation, may supplement the Exception Request, either at the Regional Entity's request or at the Submitting Entity's or Owner's own initiative, for the purpose of providing additional or revised Required Information. The Submitting Entity or Owner shall submit a written explanation of what Required Information is being added or revised and the purpose of the supplementation. Section 6.0 provides that supplementing a pending Exception Request may, in the Regional Entity's discretion, reset the time period for the Regional Entity's initial screening or substantive review.

g. Section 7.0 – Appeal of Rejection of an Exception Request

Section 7.0 sets forth procedures by which a Submitting Entity may appeal to NERC the Regional Entity's Rejection of an Exception Request. The submission to NERC must demonstrate that the Submitting Entity is eligible (in accordance with section 4.1) to submit the Exception Request and that all Required Information has been provided. If NERC determines that the Submitting Entity is eligible to submit the Exception Request, that all Required Information has been provided, and that the Exception Request should proceed to substantive review, NERC shall issue a decision directing the Regional Entity to proceed to a substantive review of the Exception Request. NERC's decision to direct, or not to direct, the Regional Entity to proceed to substantive review, is to be issued within 45 days after receiving the Submitting Entity's submission, with copies to the Submitting Entity (and Owner if different).

h. Section 8.0 – Approval or Disapproval of an Exception Request

Section 8.0 sets forth the process by which NERC will review an Exception Request, following receipt of the Regional Entity's Recommendation. The Submitting Entity or Owner will have 30 days following the date of the Regional Entity's recommendation to NERC to submit a comment in support of or opposition to the Recommendation. The Exception Request will be reviewed by a team of at least three persons, appointed by the NERC President, with the required technical background to evaluate Exception Requests. The members of the review team must have no financial, contractual, employment or other interest in the Submitting Entity or Owner that would present a conflict of interest and must be free of any conflicts of interest in accordance with NERC policies.[29] NERC may ask the Regional Entity and the Submitting Entity and Owner (if different) to appear at a NERC office, or to participate in a teleconference or webinar, to discuss questions concerning the Exception Request.[30]

The NERC team's review shall be completed within 90 days after NERC receives the Regional Entity's Recommendation, at the conclusion of which the team will issue a written proposed decision to approve or disapprove the Exception Request. If the Exception Request

[29] At the present time, NERC anticipates that its review teams would be drawn from staff resources, supplemented by contractors as necessary, particularly where needed to provide specific relevant subject matter expertise. However, situations may also arise in which NERC may need to call on industry subject matter experts to participate as members of review teams.

[30] In addition to the Regional Entity's Recommendation, the materials available to the NERC review team (and to the NERC President, see below) will include the Exception Request itself (including the Detailed Information to Support an Exception Request), any opinion from the Regional Entity Technical Review Panel, and any information submitted at the Regional Entity level by a PA, RC, BA, TOP or TP concerning the Exception Request. Although it is presumed that a PA, RC, BA, TOP or TP will present a comprehensive statement of its comments and concerns, if any, at the Regional Entity review stage, NERC would have the ability to ask the PA, RC, BA, TOP or TP if it needs to supplement the information, comments or concerns that were submitted to the Regional Entity, in order to provide the NERC review team and the NERC President with the most complete information on which to base their respective decisions.

concerns more than one Element, the review team's proposed decision may approve a portion and disapprove a portion of the Exception Request. The written proposed decision shall state the basis for the decision. If the review team's proposed decision is not unanimous, the dissenting team member may, if he or she wishes to do so, issue a minority report stating the dissenting member's reasons for disagreement with the proposed decision.

Within 30 days after the date of the NERC review team's proposed decision, the NERC President will issue a final written decision on the Exception Request on behalf of NERC. The NERC President's decision may adopt the review panel's proposed decision or modify the proposed decision, and may reach a different conclusion than the proposed decision as to whether the Exception Request is approved or disapproved. The decision issued by the NERC President shall be the decision of NERC with respect to the Approval or Disapproval of the Exception Request.

Section 8.0 also specifies that NERC shall provide to the Submitting Entity and to the Owner, if different, copies of any documents considered by the NERC review team in reaching its proposed decision, and any additional documents considered by the NERC President in reaching the final decision, that were not originally provided by, or have not previously been provided to, the Submitting Entity or Owner. Finally, Section 8.0 provides that NERC shall retain the documentation used to substantiate the decision related to an Exception Request for the longer of seven years or as long as the Exception is in effect, unless a different retention period is otherwise identified.

i. Section 9.0 – Appeal of Approval or Disapproval of an Exception Request

Section 9.0 specifies that a Submitting Entity or Owner aggrieved by NERC's Approval or Disapproval of an Exception Request or termination of an Exception (pursuant to section 11.0,

described below) may, within 30 days following the date of the NERC decision, challenge the determination pursuant to ROP section 1703 (described in §III.D below). If neither the Submitting Entity nor the Owner challenges NERC's decision within the 30 day period with respect to any Element to which the Exception Request or the Exception applies, the determination becomes effective with respect to that Element on the thirty-first day following the date of the NERC decision.

j. Section 10.0 – Implementation Period for Exceptions

Section 10.1, Inclusion Exceptions, specifies that for an Element for which an Inclusion Exception is approved, the Owner must submit to the Regional Entity a proposed implementation plan detailing the schedule for the Owner to achieve compliance with any Reliability Standards that are applicable to the newly included Element. The Owner and the Regional Entity shall confer to agree upon the implementation schedule. If they are unable to agree on a schedule, the Regional Entity shall notify the NERC director of compliance operations of the disagreement and provide statements of the Regional Entity's and the Owner's positions, and NERC shall specify a reasonable implementation schedule.

Section 10.2 pertains to establishing the compliance implementation plan for an Element for which an Exclusion Exception has been denied.

-- Subsection (a) specifies that in the case of a newly-constructed or installed Element which is included in the BES by application of the BES Definition but for which an Exception Request for an Exclusion Exception was submitted at least 12 months before commercial operation of the Element, but either is still pending or has been rejected or disapproved at the time of commercial operation, the Owner shall submit an implementation plan to the Regional Entity detailing the schedule for the Owner to

achieve compliance with any Reliability Standards applicable to the newly constructed or installed Element.

-- Subsection (b) specifies that in the case of an Element that was not included in the BES under the previously effective BES Definition but is included in the BES based on application of the revised BES Definition, and for which an Exception Request for an Exclusion Exception was submitted within 12 months after the revised BES Definition became effective but either is still pending or has been rejected or disapproved at the end of the applicable BES Definition implementation plan time period,[31] the Owner shall submit a proposed implementation plan to the Regional Entity detailing the schedule for the Owner to achieve compliance with any Reliability Standards applicable to the newly included Element.

Under both subsections, the Owner and the Regional Entity shall confer to agree upon the implementation schedule. If they are unable to agree on a schedule, the Regional Entity shall notify the NERC director of compliance operations of the disagreement and provide statements of the Regional Entity's and the Owner's positions, and NERC shall specify a reasonable implementation schedule.

k. Section 11.0 – Termination of an Approved Exception

Section 11.1 specifies that an Exception Request typically will be approved without a specified date of termination but will be subject to review to verify continuing justification for the Exception. Section 11.2 requires that a Submitting Entity must notify the Regional Entity and NERC within 90 days after learning of any change of condition which would affect the basis stated by NERC in its decision approving the Exception Request. NERC will review the

[31] The proposed implementation period for the revised BES Definition is addressed in §III.E of NERC's contemporaneously-filed petition for approval of the revised BES Definition.

notification and determine whether to direct the Regional Entity to perform a substantive review pursuant to section 5.2 to verify continuing justification for the Exception and to issue a Recommendation to NERC on whether the Exception should be continued or terminated.

Section 11.3 requires a Submitting Entity that has received an Exception to certify periodically to the Regional Entity that the basis for the Exception remains valid, and in connection with each certification, shall provide any changes to the Section I Required Information or Section II Required Information. (Section 11.6 requires that upon request by the Regional Entity, the Submitting Entity or Owner (if different) shall, within 30 days, provide the most recent versions of any Section III Required Information requested.) The certification is to consider the effect on the basis for the Exception of changes such as load growth and topological changes and the effects on system limits and impacts as a result of contingencies listed in Table 1 of each applicable TPL Reliability Standard. The certifications must be provided every 36 months for as long as the Exception remains in effect. The first certification is due on the first day of the first quarter 36 months after the date on which the Exception Request was approved. If the certification is not provided, the Exception is subject to termination 90 days after the date the certification was due.

Additionally, section 11.4 specifies that if the Regional Entity obtains information through means other than those described in sections 11.2 (notification from the Submitting Entity) or 11.3 (periodic certifications submitted by the Submitting Entity) indicating an Exception may no longer be warranted, the Regional Entity shall provide the information to NERC. NERC will determine whether to direct the Regional Entity to perform a substantive review pursuant to section 5.2 to verify continuing justification for the Exception and to issue a Recommendation to NERC on whether the Exception should be continued or terminated. This

process will also provide NERC the ability to direct the Regional Entity to conduct a substantive review of the Exception, if NERC obtains information indicating the Exception may no longer be warranted.

Section 11.5 specifies that if the Regional Entity recommends that an Exception be terminated, NERC shall take the following actions:

- issue a written notice to the Submitting Entity (and the Owner, if different) that the exception is under review for possible termination;
- allow the Submitting Entity and/or Owner 30 days to submit comments or information to NERC to show that the Exception continues to be justified and should remain in effect; and
- cause the Regional Entity's Recommendation to be reviewed by a NERC review panel for purposes of issuing a proposed decision, followed by a final decision by the NEC President, in accordance with section 8.0.

If the conclusion of the NERC review is that the Exception should be terminated, NERC shall send a written notice to the Submitting Entity and/or Owner stating that the Exception is terminated and the reasons for the termination. When an Element will be included in the BES as a result of the termination of an Exclusion Exception, an implementation plan detailing the schedule for complying with any Reliability Standards applicable to the newly-included Element will be developed in accordance with section 10.1 as if it were being included by an Inclusion Exception.

D. Proposed Section 1703 of the Rules of Procedure

Proposed ROP section 1703 (included in **Attachments 2A** and **2B**) provides a procedure for a Submitting Entity or Owner to challenge the NERC decision to approve or disapprove an Exception Request pursuant to Appendix 5C. The Submitting Entity (or Owner, if different) must file the challenge within 30 days of the date of the NERC decision, by submitting it to the NERC director of compliance operations, with copies to the Regional Entity and to the

Submitting Entity or Owner (if different). The Regional Entity, and the Submitting Entity or Owner if different, may file a response within 30 days after the date the challenge is filed with NERC. The challenge will be decided by the NERC BOTCC. The BOTCC must issue its decision within 90 days after the submission of the challenge, unless the BOTCC issues a notice extending the deadline for its decision to a stated date later than the 90-day deadline, and stating the reason for the extension. The BOTCC decision will be the final NERC decision on the Exception Request.

Section 1703.4 states that the Submitting Entity, or Owner if different, may appeal the final NERC decision to, or seek review of the final NERC decision by, the Applicable Governmental Authority(ies), in accordance with the legal authority and rules and procedures of the Applicable Governmental Authority(ies). An appeal to an Applicable Governmental Authority must be filed within 30 days following the date of the BOTCC's decision or within such other time period as is provided for in the legal authority, rules or procedures of the Applicable Governmental Authority.

E. Proposed Revisions to Appendix 2 to the Rules of Procedure

In the November 29, 2011 ROP Revisions Filing, which is still pending before the Commission as of the date of this Petition, NERC submitted for approval (among other revisions to the ROP) proposed new Appendix 2, *Definitions Used in the Rules of Procedure*. Appendix 2 is intended to collect, in one appendix to the ROP, all defined terms used anywhere in the ROP and appendices.

Proposed Appendix 5C includes a number of new defined terms that are not included in proposed Appendix 2 as filed with the Commission in the November 29, 2011 ROP Revisions Filing (including, of course, the revised definition of Bulk Electric System). In addition, it is

necessary to slightly modify several other definitions in proposed Appendix 2, which are already used elsewhere in the ROP, to make them consistent with definitions in proposed Appendix 5C. Accordingly, NERC is submitting for approval, as part of this filing, proposed revisions to Appendix 2 as originally filed in the November 29, 2011 ROP Revisions Filing. **Attachment 3A** is a clean version of Appendix 2 incorporating the additional and revised definitions that are being added due to Appendix 5C, and **Attachment 3B** is a redlined version of Appendix 5C, as originally submitted in the November 29, 2011 ROP Revisions Filing, showing the additional and revised definitions that are being added due to Appendix 5C.[32]

Following is a list of the new and revised definitions in Appendix 2:

Acceptance of the Exception Request or Acceptance (new defined term from Appendix 5C)

Approval of the Exception Request or Approval (new defined term from Appendix 5C)

Balancing Authority (minor revision to reflect inclusion of new defined terms in the BES through adoption of the revised BES Definition)

Balancing Authority Area (minor revision to reflect inclusion of new defined terms in the BES through adoption of the revised BES Definition)

BES Definition (new defined term from Appendix 5C)

Blackstart Resource (minor revision to reflect inclusion of new defined terms in the BES through adoption of the revised BES Definition)

Bulk Electric System or BES (revised definition from NERC Glossary)

Canadian Entity (revised definition to distinguish the meanings of this term as used in Appendix 4D and Appendix 5C, respectively)

Disapproval of the Exception Request or Disapproval (new defined term from Appendix 5C)

[32] NERC is making the assumption that the November 29, 2011 ROP Revisions Filing will be acted upon by the Commission before the instant Petition is acted on.

Distribution Factor (defined term from the NERC Glossary being added to the defined terms in the ROP as a result of adoption of the revised BES Definition)

Exception (new defined term from Appendix 5C)

Exception Procedure (new defined term from Appendix 5C)

Exception Request (new defined term from Appendix 5C)

Exception Request Form (new defined term from Appendix 5C)

Flowgate (defined term from the NERC Glossary being added to the defined terms in the ROP due to its use in the revised BES Definition)

Inclusion Exception (new defined term from Appendix 5C)

Interchange Distribution Calculator (defined term from the NERC Glossary being added to the defined terms in the ROP as a result of adoption of the revised BES Definition)

Lead Entity (new defined term from Appendix 5C)

Load (defined term from the NERC Glossary being added to the defined terms in the ROP due to its use in the revised BES Definition)

Mexican Entity (new defined term from Appendix 5C)

Owner (new defined term from Appendix 5C)

Reactive Power (defined term from the NERC Glossary being added to the defined terms in the ROP due to its use in the revised BES Definition)

Real Power (defined term from the NERC Glossary being added to the defined terms in the ROP due to its use in the revised BES Definition)

Recommendation (new defined term from Appendix 5C)

Rejection of the Exception Request or Rejection (new defined term from Appendix 5C)

Required Information (revised definition to distinguish the meanings of this term as used in Appendix 4D and Appendix 5D, respectively)

Scope of Responsibility (new defined term from Appendix 5C)

Section I Required Information (new defined term from Appendix 5C)

Section II Required Information (new defined term from Appendix 5C)

Section III Required Information (new defined term from Appendix 5C)

Sink Balancing Authority (minor revision to reflect inclusion of new defined terms in the BES through adoption of the revised BES Definition)

Special Protection System (minor revision to reflect inclusion of new defined terms in the BES through adoption of the revised BES Definition)

Submitting Entity (revised definition to distinguish the meanings of this term as used in Appendix 5C and in section 1500 of the ROP, respectively)

Technical Review Panel (new defined term from Appendix 5C)

F. Proposed Revisions to Appendix 5B to the Rules of Procedure

Appendix 5B of the ROP, *Statement of Compliance Registry Criteria*, includes within its text the current definition of Bulk Electric System. Accordingly, and assuming the revised definition of Bulk Electric System is approved by the Commission, Appendix 5B needs to be revised to include the revised BES Definition. In addition, several other terms in Appendix 5B will now be capitalized because they become defined terms due to adoption of the revised BES Definition.

Attachment 6A to this Petition is a clean version of Appendix 5B, as filed with the Commission for approval in the November 29, 2011 ROP Revisions Filing, with the existing definition of Bulk Electric System replaced by the revised BES Definition. **Attachment 6B** is a redlined version of Appendix 5B, as filed in the November 29, 2011 ROP Revisions Filing, showing, in legislative style, the deletion of the current definition of Bulk Electric System and the insertion of the revised BES Definition, as well as the other capitalization revisions described above.[33]

[33] In **Attachments 6A** and **6B**, the proposed revisions to Appendix 5B for which approval has been sought in the November 29, 2011 ROP Revisions Filing, which is still pending before the Commission as of the date of this Petition, are assumed to have been accepted and therefore are incorporated in the existing text.

G. Proposed Revisions to Other Sections of the Rules of Procedure and to Appendices 3D, 4B, 6 and 8

NERC also requests approval of minor revisions to sections 302.2.2, 501.1.4.4, 804, 1102.2 and 1701 of the ROP and Appendices 3D, 4B, 6 and 8. The revisions to section 1701 are necessary to reflect the addition of new section 1703 to section 1700 of the ROP. The revisions to the other sections of the ROP and to Appendices 3D, 4B, 6 and 8 are all necessary to capitalize (consistent with the capitalization convention adopted in the November 29, 2011 ROP Revisions Filing) terms that become defined terms as the result of adoption of the revised BES Definition and several defined terms from the NERC Glossary that are used within the revised BES Definition. The revisions to these ROP sections and Appendices are shown in the redlined versions in **Attachments 2B, 4B, 5B, 7B** and **8B**, respectively.[34]

IV. NERC APPROVALS FOR THE PROPOSED REVISION

Following the issuance of Order No. 743 on November 28, 2010, a SDT was formed charged with the responsibility to develop a revised BES Definition, technical criteria for Exception Requests, and an implementation plan (Standards Project 2010-17*)*; and the BES ROP Team was formed to develop a proposed BES Exception Procedure to be added to the NERC ROP. The BES ROP Team members were selected, from stakeholder names that were submitted for participation on the Standards Project 2010-17 SDT, to provide a good mixture of technical, policy and industry view. The Team included Canadian representatives.[35]

During the course of the BES ROP Team's work, interested stakeholders were provided multiple opportunities to participate in the development of a BES Exception Procedure, through

[34] Each of these Attachments was prepared assuming that the proposed revisions submitted to the Commission in the November 29, 2011 ROP Revisions Filing will be approved.

[35] The BES ROP Team roster is available at: http://www.nerc.com/docs/standards/dt/BESROP_ROSTER_08312011.pdf.

open meetings of the Team as well as through extensive use of e-mail, web postings, and informational and question-and-answer sessions held jointly with the BES Definition SDT. An extensive stakeholder e-mail list (the same list used for the BES Definition SDT's work) was compiled and used to distribute status information about the Team's work as well as draft documents. The use of a common e-mail list kept the BES Definition SDT and the BES ROP Team aware of each other's work. As an additional source of information for stakeholders, a BES ROP Team web page was created and hyperlinked to the "Standards Under Development" page on the NERC web site. Further, the NERC Member Representatives Committee was briefed on the BES ROP Team's progress on several occasions during 2011; two joint (with the SDT) NERC webinars with questions and answers were presented; and there was one joint presentation at a NERC Standards workshop.

Through two separate postings and comment periods, stakeholders were provided the opportunity to provide feedback on draft amendments to the ROP for the BES Exception Procedure. A 30-day posting for comment was held from May 10, 2011 through June 10, 2011, in conjunction with the first posting of the draft revised BES Definition. Seventy sets of comments were received on this draft posting, including comments from more than 176 different people from approximately 131 organizations representing all ten Registered Ballot Body Segments. A special electronic comment form was utilized to facilitate the submission and review of stakeholder comments.

After considering the comments received in the first posting, the BES ROP Team made substantial revisions to the proposed ROP amendments. A second posting for a 45-day comment period was conducted from September 13, 2011 through October 27, 2011, in conjunction with the second posting and initial ballot of the revised BES Definition. There were 72 sets of

comments received on the second posting, including comments from more than 134 different people from approximately 86 organizations representing nine of the ten Segments. An electronic comment form was again used which included specific questions that stakeholders were asked to respond to, as well as providing the ability to comment generally on the proposed text.[36]

After reviewing the second set of comments, the BES ROP Team made additional revisions to the draft ROP provisions, and submitted the Team's proposed versions of Appendix 5C and ROP sections 509 and 1703 to NERC.

A more detailed discussion of the development process followed by the BES ROP Team and how the Team considered and addressed a number of issues it identified, including issues raised in stakeholder comments, in arriving at its final proposed ROP provisions, is provided in **Attachment 9**, which was prepared by the BES ROP Team.

The provisions proposed by the BES ROP Team were reviewed and discussed by NERC Reliability Standards, Compliance Operations, Reliability Assessment and Performance Analysis, and Legal staffs to identify any revisions to the Team's documents that NERC staff should recommend to the Board. Although generally accepting the structure and process embodied in the ROP provisions proposed by the BES ROP Team, NERC staff did make a number of specific revisions to the Team's proposed documents for the versions that were submitted to the NERC Board for approval. A number of these revisions were non-substantive revisions for purposes of internal consistency within Appendix 5C and/or for consistency

[36] The NERC Bylaws (Article XI, section 2) only require that one, 45-day comment period be provided for proposed additions or revisions to the ROP, before the additions or revisions are submitted to the Board for approval. By providing for two postings and stakeholder comment periods, the BES ROP Team exceeded the requirements of the Bylaws.

(including format consistency) with other ROP provisions. Substantive revisions that were made to proposed Appendix 5C include the following items:

- Sections 5.0 item (iii), 5.1.5 and 5.3 – The Team's proposal included a requirement for a review by the Regional Entity Technical Review Panel if the Regional Entity proposes to reject an Exception Request. This provision has been deleted. In deleting this provision, NERC staff considered both this specific provision and the overall amount of process and resource requirements that Appendix 5C and ROP section 1703 would require of the Regional Entities and NERC, as well as the time potentially required to complete the overall Exception Request process, and concluded that the amount of process steps, resources and time required needed to be reduced. NERC Staff also noted that sections 5.1.5(b) and 7.0 give the Submitting Entity the right to appeal a Rejection of an Exception Request by the Regional Entity to NERC, thereby providing an opportunity for review of the Rejection decision.

- Section 5.1.3. The time periods for the Regional Entity to complete initial screening of Exception Requests, described in the Team's proposal as "typical," were changed to deadlines, with a provision added whereby the Regional Entity can extend the deadline to a new date by issuing a notice.[37]

- Section 5.0 item (ii) and 5.2.2. The Team's version included a requirement for the Regional Entity to confer with the Submitting Entity (and Owner, if different) to establish milestones for the Regional Entity to complete its substantive review of the Exception Request within six months. This requirement for such consultations has been deleted. The necessity to engage in such conferences and negotiations in connection with every substantive review of an Exception Request was viewed as an excessive time and resource requirement for the Regional Entities. However, in its place, a provision was added in section 5.2.2 requiring the Regional Entity, at the outset of its substantive review, to develop a milestone schedule pursuant to which it plans to conduct the substantive review, and to send a copy of the milestone schedule to the Submitting Entity and the Owner (if different) for information.

- A new section 5.2.5 was added stating that NERC shall develop, and post on its web site, a reporting program and schedule pursuant to which Regional Entities will be required to submit to NERC periodic reports on the numbers, status and timing of their initial screenings and substantive reviews of Exception Requests.

[37] In addition, section 5.0 allows a Regional Entity to establish an alternative time period objective and work plan for completing initial screenings and substantive reviews of Exception Requests, for a period of time, if the Regional Entity determines it will be unable to complete these activities within the time periods specified in section 5.0.

- Section 8.0. The Team's proposed version included a requirement that if the decision of the three-person NERC team reviewing an Exception Request is not unanimous, its decision must note that fact and state the basis on which the minority disagreed. This provision has been eliminated and replaced with a provision that the dissenting team member may, if he or she wishes, submit a minority report stating the dissenting member's reasons for disagreement with the decision. NERC staff did not see a need to require a statement of the minority position if the dissenting member did not feel sufficiently strongly to provide one.

- Section 8.0. The minimum time period for NERC to retain documentation of the NERC decision was increased from six years (in the Team's proposal) to seven years, to be more consistent with other NERC document retention policies.

- Section 8.0. A provision in the Team's version that "The Submitting Entity and/or Owner if different shall be given access to this record upon request, subject to applicable confidentiality provisions" was deleted. Entities should be responsible to maintain their own copies of the record of the Exception Request process; further, responding to requests for documents from the record (including ensuring that confidentiality requirements are maintained when access or copies are provided) would be an unnecessary resource requirement for NERC. However, this provision was replaced with a requirement that NERC shall provide to the Submitting Entity and to the Owner (if different), copies of any documents considered by the NERC review team in reaching its proposed decision, and any additional documents considered by the NERC President in reaching the final decision, that were not originally provided by, or have not previously been provided to, the Submitting Entity or Owner. (The references to the review team's "proposed decision" and to the NERC President's "final decision" were added as the result of the additional changes made to Section 8.0 at the direction of the NERC Board, as discussed below.)

- Sections 10.1, 10.2(a) and 10.2(b). In the Team's version, the three cited sections each provided that if the Regional Entity and the Owner are unable to agree on an implementation plan for compliance with Reliability Standards applicable to an Element that is included in the BES due to Approval or Disapproval of an Exception Request, "the Regional Entity Board or a Board-appointed committee shall specify a reasonable implementation schedule." NERC staff concluded that designating Regional Entity boards to make these determinations was inappropriate for a number of reasons, including lack of expertise and the fact that some Regional Entity boards meet infrequently so that the determination of the implementation plan schedule could be unduly delayed. These provisions were deleted and replaced with provisions specifying that if the Regional Entity and the Owner are unable to agree on an implementation plan, the matter shall be brought to NERC and NERC will determine an appropriate implementation schedule.

- Section 11.3. The frequency with which the Submitting Entity must certify that the basis for the Exception remains valid was changed from 24 months (in the Team's version) to 36 months. NERC staff noted that (i) the underlying system conditions

and configurations on which the Exception was based are not likely to change frequently, (ii) Regional Entity resources will be required to track the certification due dates and process and review the certifications, and (iii) section 11.2 imposes a separate requirement on Submitting Entities to notify the Regional Entity and NERC within 90 days after learning of any change in condition which would affect the basis stated in the NERC decision approving the Exception Request.

Substantive revisions that NERC staff made to the BES ROP Team's proposed ROP section 1703 (providing the procedures for a challenge of the NERC decision on an Exception Request to the NERC Board) are the following items:

- The Team's proposed version of ROP section 1703 provided for two levels of review: review by a separate standing technical panel appointed by the NERC Board, followed by review (if requested by the appellant) by the NERC BOTCC. NERC Staff concluded that providing for two levels of review at the appeal stage, including review by another panel of technical experts, was unnecessary in light of the review steps in the process leading up to the "initial" NERC decision on the Exception Request, which already will have included review by two separate panels of technical experts. Therefore, section 1703 was revised to eliminate review by the standing panel of experts, and instead to provide for only one step in the challenge process, *i.e.*, consideration of the challenge by the BOTCC.

- The Team's version also provided that the BOTCC, when asked to review the decision of the standing panel, could simply allow the 90-day period for BOTCC review to expire with no action, thereby making the standing panel's decision the final NERC decision. However, because the review by the standing panel was eliminated, section 1703 was also revised to specify that the BOTCC must render a decision on each challenge. A provision was also added to allow the BOTCC to extend its decision deadline date beyond 90 days by issuing a notice to the parties stating the extended deadline date. This "extension" provision gives the BOTCC flexibility in scheduling and to ensure it has sufficient time to consider the challenge.

During the course of consideration of the BES ROP Team's proposed Exception Procedure, there was also consideration of whether provisions should be added to Appendix 5C to provide for coordination among Regional Entities concerning Exception Requests. Section 4.1 of proposed Appendix 5C specifies that:

> With respect to an Element that crosses a boundary between Regional Entities, (1) the Submitting Entity will submit the Exception Request to both (or all) Regional Entities, which will cooperate to process the Exception Request pursuant to section 5.1 below, or (2) the Regional Entities must jointly submit an

Exception Request to NERC (neither Regional Entity shall be allowed to submit such Exception Request unilaterally).

However, consideration was also given to whether to include procedures by which neighboring Regional Entities in an Interconnection to the Region in which the Element is located would be sent notification of, and could submit comments on, an Exception Request concerning how the Exception Request could impact reliability in the neighboring Region, even where the Element(s) that are the subject of the Exception Request are located solely within a single Region. It was the near-unanimous conclusion of the Regional Entities and NERC that such additional procedures were not needed and would, in fact, create additional prescriptive administrative requirements that could burden efficient implementation of the Exception Procedure. Rather, the Regional Entities can work cooperatively together to keep each other apprised of Exception Requests that could, if granted, have impacts on the Reliable Operation of the interconnected bulk-power transmission system in a neighboring Region within the Interconnection, and seek input from the neighboring Regional Entity where appropriate. Additionally, NERC, in its role under the Exception Procedure as the entity deciding whether Exception Requests should be approved or disapproved, can consider and evaluate the potential impacts of an Exception Request on the Reliable Operation of the interconnected bulk-power transmission system in neighboring Regional Entities.

The NERC Board accepted the revisions to the Exception Procedure recommended by NERC staff and directed that two additional revisions be made to the BES ROP Team's proposed version of Appendix 5C. Both of the revisions directed by the Board have been implemented in section 8.0.

- The Board determined that the three-person NERC review team should not make the decision on behalf of NERC to approve or disapprove the Exception Request, but rather that the decision should be made by the NERC President. Accordingly, section

8.0 was revised to specify that the review team is to issue a proposed decision within 90 days after the Regional Entity's Recommendation is received, and that within 30 days thereafter, the NERC President will issue a final decision to approve or disapprove the Exception Request, which shall be the NERC decision.

- The Board directed that a provision be added to specify that the NERC review team members shall be free of any conflicts of interest with respect to the Submitting Entity or Owner. Based on this direction, the following sentence was added in section 8.0: "The members of the review team shall have no financial, contractual, employment or other interest in the Submitting Entity or Owner that would present a conflict of interest and shall be free of any conflicts of interest in accordance with NERC policies."

On January 18, 2012, the NERC Board approved proposed Appendix 5C, as modified by NERC staff and subject to revisions as directed by the Board (as described above), proposed ROP section 509, and proposed ROP section 1703 (also as modified by NERC staff). The Board also approved the proposed revisions to ROP sections 302.2.2, 501.1.4.4, 804, 1102.2 and 1701 and to Appendices 2, 3D, 4B, 5B, 6 and 8 that are submitted with this Petition.

V. NERC LIST OF FACILITIES THAT HAVE RECEIVED EXCEPTIONS

In Order No. 743, the Commission indicated that NERC should maintain a list of facilities that are granted exemptions from the BES Definition pursuant to the exemption process that NERC was directed to develop:

> While the Commission will not require that we review each exemption on a facility-by-facility basis, we would maintain the authority to conduct audits to determine the appropriateness of a particular exemption. We contemplate that a Commission staff audit would review the application of the exemption criteria developed by NERC in NERC's or a Regional Entity's determination to approve an exemption for a particular facility. However, to facilitate such audits, the ERO should maintain a list of exempted facilities that can be made available to the Commission on request. NERC can decide how best to maintain the list, including determining whether or not to post it on the NERC website.[38]
>
> **. . .** [T]he exemption process provides a means of ensuring that relatively high voltage distribution facilities are excluded from compliance with mandatory Reliability Standards. In this light, we believe that it would be beneficial for the

[38] Order No. 743 at P 117.

> ERO in maintaining a list of exempted facilities, to consider including a means to track and review facilities that are classified as local distribution to ensure accuracy and consistent application of the definition. Similarly, the ERO could track exemptions for radial facilities.[39]

The proposed BES Exemption Procedure and the other new ROP provisions submitted in this Petition do not include provisions for NERC to maintain a list of facilities that have received Exceptions, as this is an internal administrative matter for NERC to implement that does not need to be embedded in the ROP. However, NERC recognizes the Commission's statement that NERC should maintain such a list, and plans to do so. NERC will develop a specific internal plan and procedures for maintaining a list of facilities for which Exceptions have been granted, in order to be prepared to initiate the list when the BES Definition and the BES Exception Procedure go into effect and Exception Requests begin to be received and processed. NERC has not yet determined specifically how the list will be organized and structured, nor whether or under what conditions the list will be made available on the NERC web site or otherwise made available to any entities other than the Commission (and other Applicable Governmental Authorities) and the Regional Entities. One overriding issue will be the extent of Confidential Information (including Critical Energy Infrastructure Information) that will be included in Exception Requests and in decisions on Exception Requests, and how to make the list of facilities with Exceptions available (if at all) to other stakeholders while continuing to protect Confidential Information.

In addition to the list that NERC will maintain, it will be necessary for Regional Entities to maintain lists of facilities within their Regions for which Exceptions have been granted, in order to monitor compliance with the requirement to submit periodic certifications pursuant to section 11.3 of Appendix 5C.

[39] Order No. 743 at P 119.

VI. CONCLUSION

NERC respectfully requests that the Commission approve (1) proposed new Appendix 5C to the NERC Rules of Procedure, *Procedure for Requesting and Receiving Exceptions from the NERC Definition of the Bulk Electric System*, (2) proposed new Sections 509 and 1703 of the ROP, and (3) the proposed revisions to sections 302.2.2, 501.1.4.4, 804, 1102.2 and 1701 of the ROP and to Appendices 2, 3D, 4B, 5A, 6 and 8 submitted with and described in this Petition, and that the Commission find this filing and the proposed new provisions of the ROP to constitute full compliance with the Commission's directives in Order Nos. 743 and 743-A concerning development of a procedure for exemptions from application of the BES Definition. NERC requests that the Commission approve the proposed ROP revisions with the same effective date as the proposed effective date of the revised BES Definition.

Respectfully submitted,

Gerald W. Cauley President and Chief Executive Officer North American Electric Reliability Corporation 3353 Peachtree Road N.E. Suite 600, North Tower Atlanta, GA 30326-1001 (404) 446-2560 David N. Cook Senior Vice President and General Counsel Holly A. Hawkins Assistant General Counsel for Standards and Critical Infrastructure Protection Andrew Dressel, Attorney North American Electric Reliability Corporation 1325 G Street N.W., Suite 600 Washington, D.C. 20005 (202) 400-3000 (202) 644-8099 – facsimile david.cook@nerc.net holly.hawkins@nerc.net andrew.dressel@nerc.net	/s/Owen E. MacBride Owen E. MacBride Debra A. Palmer Schiff Hardin LLP 1666 K Street, N.W., Suite 300 Washington, D.C. 20036-4390 (202) 778-6400 (202) 778-6460 – facsimile omacbride@schiffhardin.com dpalmer@schiffhardin.com

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF REVISIONS TO ITS RULES OF PROCEDURE
TO ADOPT A BULK ELECTRIC SYSTEM EXCEPTION PROCEDURE

ATTACHMENT 1

PROPOSED APPENDIX 5C TO THE RULES OF PROCEDURE,

PROCEDURE FOR REQUESTING AND RECEIVING AN EXCEPTION

FROM THE NERC DEFINITION OF BULK ELECTRIC SYSTEM

Proposed Version 1-25-2012

PROCEDURE FOR REQUESTING AND RECEIVING

AN EXCEPTION FROM THE APPLICATION

OF THE

NERC DEFINITION OF BULK ELECTRIC SYSTEM

Table of Contents

1.0 INTRODUCTION 1
1.1. Purpose 1
1.2. Authority 2
1.3 Canadian and Mexican Entities and Cross-Border Regional Entities 2
2.0. DEFINITIONS 2
3.0. BASIS FOR APPROVAL OF AN EXCEPTION 5
3.1. Grounds for an Exception 5
3.2. Burden 5
4.0. FORM, CONTENTS, AND SUBMISSION OF AN EXCEPTION REQUEST 5
4.1. Eligible Submitters of an Exception Request 5
4.2. Separate Submissions for Each Exception Request 6
4.3. Withdrawal of an Exception Request 7
4.5. Required Information to be Included in the Exception Request 7
4.6 Access to Confidential Information, Classified National Security Information, NRC Safeguards Information, and Protected FOIA Information Included in Required Information 9
5.0 REVIEW, ACCEPTANCE OR REJECTION, AND RECOMMENDATION REGARDING EXCEPTION REQUESTS 10
5.1. Initial Screening of Exception Request for Acceptance or Rejection 11
5.2 Substantive Review of Exception Request for Approval or Disapproval 133
5.3 Technical Review Panel 144
6.0 SUPPLEMENTATION OF AN EXCEPTION REQUEST PRIOR TO A RECOMMENDATION 14
7.0 APPEAL OF REJECTION OF AN EXCEPTION REQUEST 14
8.0 APPROVAL OR DISAPPROVAL OF AN EXCEPTION REQUEST 15
9.0 CHALLENGES TO APPROVAL OR DISAPPROVAL OF EXCEPTION REQUESTS ... 166
10.0 IMPLEMENTATION PERIOD FOR EXCEPTIONS 16
10.1 Inclusion Exceptions 16
10.2 Denials of Exception Requests for Exclusion 16
11.0 TERMINATION OF AN APPROVED EXCEPTION 177

1.0 INTRODUCTION

1.1. Purpose

The NERC definition of the Bulk Electric System uses specific terms and thresholds that, in most cases, should appropriately identify Elements and groups of Elements that are appropriately classified as part of the Bulk Electric System. Conversely, the BES Definition should, in most cases, exclude Elements that are not part of the Bulk Electric System. In certain cases, however, the BES Definition may classify certain Elements as part of the Bulk Electric System that are not necessary for the Reliable Operation of the interconnected bulk-power transmission system or the BES Definition may classify certain Elements as non-Bulk Electric System that are necessary for the Reliable Operation of the interconnected bulk-power transmission system.

This Appendix to the Rules of Procedure of the North American Electric Reliability Corporation provides the procedure by which an entity may request and receive an Exception which will have the effect of either including within the BES an Element or Elements that would otherwise be excluded by application of the BES Definition or excluding from the BES an Element or Elements that would otherwise be included by application of the BES Definition. This Appendix is intended to implement authorization granted by FERC to allow such Exceptions from the BES Definition.[1]

An entity must request and obtain an Exclusion Exception pursuant to an Exception Request under this Exception Procedure before any Element that is included in the BES by application of the BES Definition shall be excluded from the BES. Likewise, an entity must request and obtain an Inclusion Exception pursuant to an Exception Request under this Exception Procedure before any Element that is excluded from the BES by application of the BES Definition shall be included in the BES.

During the pendency of an Exception Request, the status of an Element(s) that is the subject of an Exception Request shall remain as it is determined based on application of the BES Definition. This status will continue until all appeals to all Applicable Governmental Authorities are completed. An entity that is planning a connection of a new Element for which it believes an Exception would be appropriate may request an Exception prior to commercial operation of the Element.

The Owner of the Element to which the Exception Request applies or, with respect to an Element owned by another Registered Entity, any Regional Entity, Planning Authority ("PA"), Reliability Coordinator ("RC"), Transmission Operator ("TOP"), Transmission Planner ("TP") or Balancing Authority ("BA") that has (or will have upon inclusion of the Elements in the BES) the Elements covered by an Exception Request within its Scope of Responsibility may submit an Exception Request for the Element as provided in this Exception Procedure.

[1] *Revision to Electric Reliability Organization Definition of Bulk Electric System*, 133 FERC ¶ 61,150 ("Order No. 743") (2010), *Order on Reh'g, Revision to Electric Reliability Organization Definition of Bulk Electric System*, 134 FERC ¶61,210 ("Order No. 743-A") (2011).

1.2. Authority

This Appendix is a NERC Rule of Procedure and an Electric Reliability Organization Rule. This Appendix has been approved by (i) the NERC Board of Trustees and (ii) FERC. Any future revisions to this Appendix must be adopted in accordance with Article XI, section 2 of the NERC *Bylaws* and Section 1400 of the NERC *Rules of Procedure*, including approval by the NERC Board of Trustees and by FERC, in order to become effective. This Exception Procedure or an equivalent procedure is to be implemented in Canada and Mexico consistent with their respective laws and agreements.

1.3 Canadian and Mexican Entities and Cross-Border Regional Entities

A Registered Entity that is a Canadian Entity or a Mexican Entity seeking an Exception will be expected to work with the Regional Entity, NERC, and Applicable Governmental Authorities in Canada or Mexico, as appropriate, consistent with their respective laws and agreements, and without being obligated to authorize the disclosure of information prohibited by applicable federal, state or provincial law from disclosure to FERC or other governmental authorities in the U.S., in order to implement this Exception Procedure or an equivalent procedure. A Canadian Entity or a Mexican Entity shall not be required to subject itself to United States federal or state laws not otherwise applicable to the entity in order to utilize this Exception Procedure or an equivalent procedure.

2.0. DEFINITIONS

For purposes of this Appendix, capitalized terms shall have the definitions set forth in Appendix 2 to the Rules of Procedure. For ease of reference, the definitions of the following terms that are used in this Appendix are also set forth below.

2.1 Acceptance of the Exception Request (or Acceptance): The determination that an eligible Exception Request (i.e., an Exception Request permitted by section 4.1) contains all the Required Information so that it can undergo substantive review.

2.2 Approval of the Exception Request (or Approval): The determination by NERC that an Exception Request meets the criteria to receive the requested Exception.

2.3 BES: Bulk Electric System.

2.4 BES Definition: The NERC definition of the Bulk Electric System as set forth in the NERC *Glossary of Terms Used in Reliability Standards.*

2.5 Canadian Entity: A Registered Entity that is organized under Canadian federal or provincial law.

2.6 Classified National Security Information: Required Information that has been determined to be protected from unauthorized disclosure pursuant to Executive Order No. 12958,

as amended, and/or the regulations of the NRC at 10 C.F.R. §95.35; or pursuant to any comparable provision of Canadian or Mexican federal or provincial law.

2.7 Disapproval of the Exception Request (or Disapproval): The determination by NERC that an Exception Request does not meet the criteria to receive the requested Exception.

2.8 Eligible Reviewer: A person who has the required security clearances or other qualifications, or who otherwise meets the applicable criteria, to have access to Confidential Information, Classified National Security Information, NRC Safeguards Information or Protected FOIA Information, as applicable to the particular information to be reviewed.

2.9 Exception: Either an Inclusion Exception or an Exclusion Exception.

2.10 Exception Procedure: The procedure set forth in this Appendix.

2.11 Exception Request: A request made by a Submitting Entity in accordance with this Appendix for an Exception.

2.12 Exception Request Form: The form adopted by each Regional Entity, in accordance with a template provided by NERC, for use by Submitting Entities in submitting Exception Requests; provided, that the Exception Request Form must include Section III.B as adopted by NERC.

2.13 Exclusion Exception: A determination that an Element that falls within the BES Definition should be excluded from the BES.

2.14 FERC: The United States Federal Energy Regulatory Commission.

2.15 FOIA: The U.S. Freedom of Information Act, 5 U.S.C. §552.

2.16 Inclusion Exception: A determination that an Element that falls outside the BES Definition should be included in the BES.

2.17 Lead Entity: The entity that submits Exception Request information that is common to a group of Submitting Entities that are submitting Exception Requests jointly.

2.18 Mexican Entity: A Registered Entity that is organized under Mexican law.

2.19 NRC: The United States Nuclear Regulatory Commission.

2.20 NRC Safeguards Information: Required Information that is subject to restrictions on disclosure pursuant to 42 U.S.C. §2167 and the regulations of the NRC at 10 C.F.R. §73.21-73.23; or pursuant to comparable provisions of Canadian or Mexican federal or provincial law.

2.21 Owner: The owner(s) of an Element or Elements that is or may be determined to be part of the BES as a result of either the application of the BES Definition or an Exception, or another entity, such as an operator, authorized to act on behalf of the owner of the Element or Elements in the context of an Exception Request.

2.22 Protected FOIA Information: Required Information, held by a governmental entity, that is subject to an exemption from disclosure under FOIA [5 U.S.C. §552(e)], under any similar state or local statutory provision, or under any comparable provision of Canadian or Mexican federal or provincial law, which would be lost were the Required Information to be placed into the public domain.

2.23 Recommendation: The report to NERC containing the evaluation prepared in accordance with section 5.2 concerning whether or to what extent an Exception Request should be approved.

2.24 Rejection of the Exception Request (or Rejection): The determination that an Exception Request is not an eligible Exception Request (i.e., an Exception Request permitted by section 4.1) or does not contain all the Required Information in accordance with section 4.5 in order to be reviewed for substance.

2.25 Required Information: Information required to be provided in an Exception Request, as specified in section 4.0.

2.26 Scope of Responsibility: The registered functions of a PA, RC, TOP, TP or BA and the geographical or electric region in which the PA, RC, TOP, TP or BA operates to perform its registered functions, or with respect to a Regional Entity, its Regional Entity Region.

2.27 Section I Required Information: Required Information that is to be provided in Section I of a Submitting Entity's Exception Request.

2.28 Section II Required Information: Required Information that is to be provided in Section II of a Submitting Entity's Exception Request.

2.29 Section III Required Information: Required Information that is to be provided in Section III of a Submitting Entity's Exception Request.

2.30 Submitting Entity: The entity that submits an Exception Request in accordance with section 4.0.

2.31 Technical Review Panel: A panel established pursuant to section 5.3 of this Appendix.

3.0. BASIS FOR APPROVAL OF AN EXCEPTION

3.1. Grounds for an Exception

(a) Exclusion Exception

An entity may request and obtain Approval from NERC for an Exclusion Exception on the grounds that the Element(s) for which the Exception Request is filed is included within the BES based on application of the BES Definition but is not necessary for the Reliable Operation of the interconnected bulk-power transmission system as evidenced by Required Information provided pursuant to **Detailed Information to Support an Exception Request (**Section III.B of the Exception Request Form).

(b) Inclusion Exception

An entity may request and obtain Approval from NERC for an Inclusion Exception on the grounds that the Element(s) for which the Exception Request is filed is not included within the BES based on application of the BES Definition but is necessary for the Reliable Operation of the interconnected bulk-power transmission system as evidenced by Required Information provided pursuant to **Detailed Information to Support an Exception Request (**Section III.B of the Exception Request Form).

3.2. Burden

The burden to provide a sufficient basis for Approval of an Exception Request in accordance with the provisions of this Exception Procedure is on the Submitting Entity. It is the responsibility of the Regional Entity, subject to oversight by NERC as provided in this Exception Procedure, to evaluate the request and make a Recommendation to NERC regarding its Approval. All evidence provided as part of an Exception Request or response will be considered in determining whether an Exception Request shall be approved or disapproved.

4.0. FORM, CONTENTS, AND SUBMISSION OF AN EXCEPTION REQUEST

4.1. Eligible Submitting Entities

The Owner of an Element may submit an Exception Request for either an Inclusion Exception or an Exclusion Exception regarding that Element. A Regional Entity, PA, RC, TOP, TP, or BA that has (or will have upon inclusion in the BES) the Elements covered by an Exception Request within its Scope of Responsibility may submit an Exception Request for the inclusion in the BES of an Element or Elements owned by a Registered Entity, provided that before doing so, (i) the Submitting Entity conferred with the Owner about the reasons for an Exception, and (ii) could not reach agreement regarding the submission of such an Exception Request. (If the Owner agrees with submitting an Exception Request, the Owner should be the Submitting Entity.) Only a Regional Entity may submit an Exception Request for the inclusion in the BES of an Element or Elements owned by an Owner that is not a Registered Entity. Only an

Owner or a Regional Entity may submit an Exception Request for the exclusion from the BES of an Element.

When a Regional Entity requests an Exception, the Regional Entity shall be the Submitting Entity and shall prepare and submit copies of its Exception Request (or portions thereof) to all applicable entities in accordance to this section 4.0.

With respect to an Element that crosses a boundary between Regional Entities, (1) the Submitting Entity will submit the Exception Request to both (or all) Regional Entities, which will cooperate to process the Exception Request pursuant to section 5.1 below, or (2) the Regional Entities must jointly submit an Exception Request to NERC (neither Regional Entity shall be allowed to submit such Exception Request unilaterally).

4.2. Separate Submissions for Each Exception Request

A separate Exception Request shall be submitted for each Element or set of connected Elements for which the Submitting Entity seeks an Exception. The scope of an Exception Request shall cover the terminal connections of the Element or set of Elements as identified in the Exception Request. Where the Submitting Entity seeks Exceptions from the BES Definition for multiple, similar Elements (either at the same location or at different locations within the geographic boundaries of a Regional Entity) on the same basis, the Exception Requests for all such Elements may be included in one Exception Request with all such Elements or sets of connected Elements separately identified. A single Exception Request may not be submitted for separate Elements within the geographic boundaries of more than one Regional Entity.

Multiple Submitting Entities may jointly file Exception Requests for similar Elements for which they are requesting Exceptions on the same basis. In such a situation, the Submitting Entities will submit a package comprised of a complete Exception Request Form for a Lead Entity, and an Exception Request Form for each other Submitting Entity that (1) provides the Submitting Entity's differing individual information to the extent such is required (e.g., contact information, identification, and location of Element(s), etc.), and (2) otherwise references the pertinent portions of the complete Exception Request Form filed by the Lead Entity (e.g., status under application of the BES Definition, basis for an Exception under section 3.1, etc.). For any Exception Request filed by multiple Submitting Entities as provided in this section, the Lead Entity shall be considered the "Submitting Entity" for purposes of the Regional Entity's and NERC's notices and actions in accordance with the remainder of this Exception Procedure. However, any Owner nonetheless may take any action otherwise appropriate for a Submitting Entity (e.g., respond to a Recommendation, submit an appeal, etc.).

4.3. Withdrawal of an Exception Request

A Submitting Entity may withdraw an Exception Request at any time prior to NERC Approval or Disapproval of the Exception Request.

4.4. Form and Format of Exception Request

An Exception Request shall consist of three sections, all of which must be submitted to the applicable Regional Entity. If the Submitting Entity is not the Owner [i.e., is a Regional Entity, PA, RC, TOP, TP, or BA that has (or will have upon inclusion of the Element in the BES) the Elements covered by an Exception Request within its Scope of Responsibility], it shall at the same time provide a copy of the Exception Request to the Owner (or if the Owner is unknown, to the operator of the Element(s)) to which the Exception Request applies.

4.5. Required Information to be Included in the Exception Request

4.5.1. Section I of an Exception Request shall contain the Required Information specified in this section 4.5.1. At the same time the Submitting Entity submits the Exception Request Form to the Regional Entity, the Submitting Entity shall submit a copy of Section I to each PA, RC, TOP, TP, and BA that has (or will have upon inclusion in the BES) the Elements covered by an Exception Request within its Scope of Responsibility. Failure to provide all Section I Required Information may result in Rejection of the Exception Request as incomplete.

1. Name and address of Submitting Entity.

2. Submitting Entity NERC Compliance Registry ID (if yet assigned).

3. Name of the Owner, if different than the Submitting Entity,

4. Owner's NERC Compliance Registry ID (if yet assigned).

5. Exception Request submittal date.

6. Whether the Exception Request is an original Exception Request or an amended Exception Request; and if it is an amended Exception Request, the identification number(s) of the original Exception Request and any previous amendments.

7. Whether the Exception Request is being submitted in conjunction with Exception Requests by other Submitting Entities. If so, the names of the other Submitting Entities.

8. Whether the Submitting Entity is filing a similar Exception Request(s) with one or more other Regional Entities, and if yes, the name(s) of the other Regional Entity(ies).

9. The type(s) of Element(s) for which the Exception is being requested.

10. Status, based on application of the BES Definition, of the Element(s) for which the Exception is being requested.

4.5.2. Section II of an Exception Request shall contain the Required Information specified in this section 4.5.2. At the same time the Submitting Entity submits the Exception Request Form to the Regional Entity, the Submitting Entity shall submit a copy of Section II to each PA, RC, TOP, TP, and BA that has (or will have upon inclusion of the Element(s) in the BES) the Elements covered by an Exception Request within its Scope of Responsibility. Failure to provide all Section II Required Information may result in Rejection of the Exception Request as incomplete.

Section II Required Information will not be publicly posted or disclosed to third parties except for persons involved in reviewing the Exception Request.

1. Identification and location(s) of Element(s) for which the Exception is being requested.

2. Name, title, phone number, facsimile number, and E-mail address of the Submitting Entity's technical contact person for the Exception Request.

3. Certification by the Submitting Entity (if other than Owner) that it conferred with the Owner regarding the reason for the requested Exception, but could not reach agreement regarding the submission of an Exception Request.

4. To the extent known by the Submitting Entity, name, mailing address, phone number, facsimile number, and E-mail address of the Owner's technical contact person for the Exception Request, if the Owner is different from the Submitting Entity.

5. Identification of PA, RC, TOP, TP, and BA that has (or will have upon inclusion in the BES) the Elements covered by the Exception Request within its Scope of Responsibility, and certification by the Submitting Entity that it has sent copies of Sections I and II to each such entity.

6. A statement of the basis on which the Submitting Entity contends the Exception Request should be approved, and if the Submitting Entity is not the Owner, a statement of the basis of the Submitting Entity's reason for submitting the Exception Request.

7. A statement, signed and dated by an authorized representative of the Submitting Entity's senior management stating that the representative has read the Exception Request on behalf of the Submitting Entity and that the Submitting Entity believes Approval of the Exception Request is warranted.

4.5.3 Section III of an Exception Request shall contain the **Detailed Information to Support an Exception Request** as specified on the Exception Request Form. Failure to include all Section III Required Information may result in Rejection of the Exception Request. The Submitting Entity may designate all or part of the Section III Required Information as Confidential Information.

1. If the Exception Request is supported, in whole or in part, by Classified National Security Information, NRC Safeguards Information, and/or Protected FOIA Information, Section III shall include a statement identifying which of these categories each such item of information falls into and explaining why each such item of information is Classified National Security Information, NRC Safeguards Information, and/or Protected FOIA Information.

2. If the Submitting Entity is prohibited by law from disclosing any Classified National Security Information, NRC Safeguards Information and/or Protected FOIA Information to any person who is not an Eligible Reviewer (such as, for example, the restriction on access to Classified National Security Information specified in section 4.1 of Executive Order No. 12958, as amended), Section III shall identify the Classified National Security Information, NRC Safeguards Information and/or Protected FOIA Information that is subject to such restrictions on disclosure and shall identify the criteria which a person must meet in order to be an Eligible Reviewer of the Classified National Security Information, NRC Safeguards Information and/or Protected FOIA Information.

4.5.4 The Owner of the Element(s) to which the Exception Request applies, if different than the Submitting Entity, may file a response to supplement, correct or disagree with all or any part of an Exception Request. Any PA, RC, TOP, TP, and BA that has (or will have upon inclusion of the Element(s) in the BES) the Elements covered by an Exception Request within its Scope of Responsibility may also provide input to the Regional Entity regarding the Exception Request. If in order to evaluate an Exception Request, the Owner, PA, RC, TOP, TP or BA wishes to obtain any Required Information in Section III of the Exception Request, the Owner, PA, RC, TOP, TP or BA may submit to the Regional Entity that received the Exception Request a request stating its reason for wanting to review such information, and the Regional Entity may provide such information to the Owner, PA, RC, TOP, TP or BA if the Regional Entity believes such review may assist the Regional Entity's review; if any of such Section III Required Information has been designated Confidential Information, prior to being provided the Confidential Information, the Owner, PA, RC, TOP, TP or BA shall execute a confidentiality agreement in a form established by the Regional Entity. Any response provided pursuant to this section 4.5.4 must be submitted to the Regional Entity with copies to the Submitting Entity and the Owner, if different from the Submitting Entity, within forty-five (45) days after the date the Exception Request Form was submitted to the Regional Entity.

4.6 Access to Confidential Information, Classified National Security Information, NRC Safeguards Information, and Protected FOIA Information Included in Required Information

4.6.1. Upon reasonable advance notice from a Regional Entity, and subject to section 4.6.2, a Submitting Entity or Owner must provide the Regional Entity (a) with access to Confidential Information, Classified National Security Information, NRC Safeguards Information, and Protected FOIA Information included in the Exception Request, and (b) with

access for purposes of making a physical review and inspection of the Element or Elements for which an Exception Request has been submitted.

4.6.2. If the Submitting Entity or Owner is prohibited by law from disclosing any Confidential Information, Classified National Security Information, NRC Safeguards Information, or Protected FOIA Information to any person who is not an Eligible Reviewer (such as, for example, the restriction on access to Classified National Security Information specified in section 4.1 of Executive Order No. 12958, as amended), then such Confidential Information, Classified National Security Information, NRC Safeguards Information, or Protected FOIA Information shall only be reviewed by a representative or representatives of the Regional Entity which may include contractors, who are Eligible Reviewers.

4.6.3. The Regional Entity, as applicable, will work cooperatively with the Submitting Entity and/or Owner to provide necessary levels of protection for information identified in Section 1500 of the NERC Rules of Procedure and to access Protected FOIA Information in a way that does not waive or extinguish the exemption of the Protected FOIA Information from disclosure. If the Regional Entity shares any Confidential Information with a third party it shall do so subject to restrictions in applicable law under appropriate confidentiality agreements.

5.0 REVIEW, ACCEPTANCE OR REJECTION, AND RECOMMENDATION REGARDING EXCEPTION REQUESTS

The Regional Entity's evaluation of the Exception Request will consist of two stages:

(a) During the first stage, the Regional Entity shall conduct an initial screening to determine whether to accept or reject the Exception Request; and

(b) During the second stage, the Regional Entity shall conduct a substantive review to determine its Recommendation to NERC as to whether or not the Exception Request should be approved.

If the Regional Entity determines at any time that for a specified period of time, the Regional Entity will be unable to complete initial screenings of Exception Requests within the time provided by section 5.1.3(a) and/or substantive reviews of Exception Requests within the time provided in section 5.2.2, the Regional Entity, based on consultation with NERC, shall establish an alternative time period objective and work plan for completing initial screenings and substantive reviews of Exception Requests during the specified period of time. The alternative time period and work plan shall be publicized by posting on the Regional Entity's website.

When a Regional Entity is the Submitting Entity of an Exception Request, it nonetheless shall process such Request in accordance with this section 5.0, with the following exceptions:

i. There will be no initial screening, Acceptance, or Rejection, and therefore sections 5.1.3 through 5.1.6 will not apply;

ii. No later than sixty (60) days after the submission of the Exception Request to the Owner and other applicable entities, the Regional Entity shall commence its substantive review of the Exception Request (and of any responses received from the Owner and other applicable entities) in accordance with section 5.2 and shall complete such substantive review within six (6) months; and

iii. Before the Regional Entity issues a Recommendation to NERC to approve or disapprove the Exception Request in whole or in part, the Technical Review Panel shall review the proposed determination and issue an opinion with copies provided to the Owner and to NERC, in accordance with section 5.3.

5.1. Initial Screening of Exception Request for Acceptance or Rejection

5.1.1. Upon receipt of an Exception Request, the Regional Entity will assign a unique identifier to the Exception Request, and will review the Exception Request to determine that the Exception Request is from an eligible (in accordance with section 4.1) Submitting Entity for an Exception from the application of the BES Definition and that all Required Information has been provided. If the Exception Request indicates that the Submitting Entity has submitted a similar Exception Request to one or more other Regional Entities, the Regional Entities shall coordinate their actions undertaken pursuant to this section 5.0. If the Exception Request is for an Element that crosses boundaries between or among Regional Entities, the Regional Entities shall cooperatively determine a lead Regional Entity to assess the request in a single process yielding a single Recommendation to NERC.

5.1.2. The unique identifier assigned to the Exception Request will be in the form of XXXX-YYYY-NERCID-ExceptionZZZZZ, where "XXXX" is the year in which the Exception Request is received by the Regional Entity (*e.g.*, "2012"); "YYYY" is the acronym for the Regional Entity within whose geographic boundaries the relevant Element or Elements are located[2]; NERCID is the Submitting Entity's NERC Compliance Registry ID (or an abbreviation of its name if an ID is not yet assigned); and "ZZZZZ" is the sequential number of the Exception Requests received by the Regional Entity in that year. If the Exception Request is amended or resubmitted, "-AZ" will be added to the end of the identifier, where "Z" is the number of the amendment to the Exception Request. If the Exception Request is for an Element that crosses boundaries between or among Regional Entities, the YYYY identifier shall be that of the lead Regional Entity assessing the request.

5.1.3. The Regional Entity will complete its initial screening of the Exception Request Form and any Owner's response submitted pursuant to section 4.5.4 no later than either sixty (60) days after receiving the Exception Request or, if the Submitting Entity is not the Owner, thirty (30) days after receiving any Owner's response, whichever is later, unless (i) the

[2] The acronyms to be used are: FRCC (Florida Reliability Coordinating Council); MRO (Midwest Reliability Organization); NPCC (Northeast Power Coordinating Council); RFC (Reliability*First* Corporation); SERC (SERC Reliability Corporation); SPP (Southwest Power Pool Regional Entity); TRE (Texas Reliability Entity); and WECC (Western Electricity Coordinating Council), and NERC in cases where the Exception Request is submitted to NERC.

Regional Entity has established an alternative time period objective and work plan for completing initial screenings pursuant to this section 5.0 that provides for a different time period(s) for completing initial screenings, or (ii) the Regional Entity issues a notice to the Submitting Entity, and to the Owner if different, prior to the deadline date for completing the initial screening, stating that the Regional Entity will not be able to complete the initial screening by the deadline date and stating a revised deadline date.

5.1.4. If, based on its initial screening, the Regional Entity determines the Exception Request is from an eligible (in accordance with section 4.1) Submitting Entity for an Exception from the BES Definition, and that all Required Information has been provided, the Regional Entity shall accept the Exception Request as complete and send a notice of such Acceptance to the Submitting Entity, with a copy to the Owner, if different than the Submitting Entity, and to NERC.

5.1.5. (a) If the Regional Entity determines, based on its review of the Exception Request, that the Exception Request (i) is not from an eligible (in accordance with section 4.1) Submitting Entity for an Exception from application of the BES Definition, and/or (ii) does not contain all Required Information, the Regional Entity shall reject the Exception Request as incomplete and send a notice of such Rejection to the Submitting Entity, with a copy to the Owner, if different than the Submitting Entity, and to NERC. To the extent feasible, if an Exception Request Form is missing Required Information, the Regional Entity shall not reject the Exception Request until (1) it has contacted the Submitting Entity to request that the Exception Request Form be supplemented with the missing Required Information, and (2) the Submitting Entity has failed to submit such Required Information within thirty (30) days or such additional period of time as the Regional Entity may allow at its discretion based on the circumstances. Under appropriate confidentiality/security agreements, the Regional Entity shall facilitate the access to data and information from other entities required by the Submitting Entity to accurately supply the **Detailed Information to Support an Exception Request** (e.g., interconnection base case power flow studies) and/or by the Owner to accurately respond. When a Submitting Entity submits supplemental Required Information in response to a request under this section 5.1.5(a), the time for the Regional Entity to perform its initial screening will be extended for fifteen (15) days after receipt of the supplemental Required Information.

(b) If the Regional Entity rejects the Exception Request in accordance with section 5.1.5 (a), the Regional Entity's notice shall explain the reason for the Rejection. The Submitting Entity may, within thirty (30) days after receipt of the Rejection, appeal to NERC in accordance with section 7.0 of this Exception Procedure to reverse the Rejection and to direct the Regional Entity to proceed with a substantive review of the Exception Request.

5.1.6. The Regional Entity may either accept the Exception Request in its entirety, reject the Exception Request in its entirety, or if the Exception Request is for more than one Element, may accept it with respect to a subset of the Elements and reject it with respect to the remainder based on the similarity of the evidence presented for the Exception Request.

5.2 Substantive Review of Exception Request for Approval or Disapproval

5.2.1 After Acceptance of an Exception Request, the Regional Entity shall conduct a substantive review of all evidence provided as part of an Exception Request or response to evaluate whether or to what extent the Exception Request should be approved. As part of its substantive review, depending on the circumstances of the Exception Request, the Regional Entity may request access to and review the Required Information, including any Confidential Information, Classified National Security Information, NRC Safeguards Information, and Protected FOIA Information that is necessary to support the Exception Request; may conduct one or more physical inspections of the relevant Element(s) and its (their) context and surrounding Elements and Facilities; may request additional information from the Submitting Entity, Owner, or applicable PAs, RCs, BAs, TOPs and TPs; and may engage in further discussions concerning possible revisions to the Exception Request.

5.2.2. At the outset of its substantive review of the Exception Request, the Regional Entity shall develop a milestone schedule pursuant to which it plans to conduct the substantive review, and shall send a copy of the milestone schedule to the Submitting Entity and the Owner, if different, for information. The Regional Entity shall complete the substantive review of the Exception Request within six months after Acceptance of the Exception Request or within an alternative time period under section 5.0, at the conclusion of which the Regional Entity shall issue a notice (in accordance with section 5.2.3) stating its Recommendation that the Exception Request be approved or disapproved. The Regional Entity may extend the period of substantive review for individual Exception Requests; the revised date by which the Regional Entity will issue its Recommendation concerning the Exception Request shall be stated in a notice issued by the Regional Entity.

5.2.3. Upon completion of its substantive review of the Exception Request, the Regional Entity shall issue a Recommendation to NERC, with a copy to the Submitting Entity and to the Owner if different than the Submitting Entity, including the Regional Entity's evaluation of whether and to what extent the Exception Request qualifies to be approved in its entirety or be disapproved in its entirety, or if the Exception Request is for more than one Element, to be approved with respect to a subset of the Elements and disapproved with respect to the remainder of the Elements. The Recommendation shall set forth the basis on which the Regional Entity arrived at its Recommendation. With the Recommendation, the Regional Entity will also send NERC copies of the Exception Request Form and all other information considered by the Regional Entity in arriving at its Recommendation.

5.2.4 The Regional Entity shall not recommend Disapproval of the Exception Request in whole or in part without first submitting the Exception Request for review to a Technical Review Panel and receiving its opinion, in accordance with section 5.3.

5.2.5 NERC shall develop, and post on its web site, a reporting program and schedule pursuant to which Regional Entities will be required to submit to NERC periodic reports on the numbers, status and timing of their initial screenings and substantive reviews of Exception Requests.

5.3 Technical Review Panel

Each Regional Entity shall establish provisions for a Technical Review Panel consisting of not less than three (3) individuals appointed by the Regional Entity senior executive (CEO, President, General Manager, etc.). Panel members shall comply with Subsection 7 of Section 403 of the NERC Rules of Procedure, shall not have participated in the review of the Exception Request, and shall have the required technical background to evaluate Exception Requests. When the Regional Entity intends pursuant to section 5.2.2 to issue a Recommendation of Disapproval, in whole or in part, the Technical Review Panel must first review the Regional Entity's proposed determinations and provide an opinion, a copy of which shall be provided to the Submitting Entity (and Owner if different) in the event the Regional Entity decides to disapprove the Exception Request. The Regional Entity will not be bound by the opinion of the Technical Review Panel, but such evaluation shall become part of the record associated with the Exception Request and shall be provided to NERC.

6.0 SUPPLEMENTATION OF AN EXCEPTION REQUEST PRIOR TO A RECOMMENDATION

A Submitting Entity or Owner at any time prior to the Regional Entity issuing its Recommendation may supplement a pending Exception Request that is under review by a Regional Entity, either at the request of the Regional Entity or at the Submitting Entity's or Owner's own initiative, for the purpose of providing additional or revised Required Information. The Submitting Entity or Owner shall submit a written explanation of what Required Information is being added or revised and the purpose of the supplementation. Supplementing a pending Exception Request may, in the Regional Entity's discretion, reset the time period for the Regional Entity's initial screening or substantive review, as applicable, of the Exception Request.

7.0 APPEAL OF REJECTION OF AN EXCEPTION REQUEST

The Submitting Entity may submit to the NERC Director of Compliance Operations, with a copy to the Regional Entity and Owner if different, information that demonstrates that the insufficiencies in an Exception Request Form identified in the notice of Rejection by the Regional Entity pursuant to section 5.1.5 are incorrect or otherwise do not warrant Rejection of the Exception Request, and that the Exception Request should be accepted and proceed to substantive review. A Submitting Entity's submission to NERC under this section 7.0 shall be in writing, shall provide the Exception Request which received the Rejection (using the identifier assigned to the Exception Request pursuant to section 5.1.2), and shall set forth a description of the errors that the Submitting Entity believes are in the notice of Rejection. The Submitting Entity's submission must demonstrate that it is eligible (in accordance with section 4.1) to submit the Exception Request and that all Required Information for the Exception Request has been provided. NERC will review the Submitting Entity's submission and the reports submitted by the Regional Entity or Regional Entities pursuant to section 5.1.5 with respect to the Exception Request, and if NERC determines that the Submitting Entity is eligible (in accordance with section 4.1) to submit the Exception Request, that all Required Information has been provided, and that the Exception Request should proceed to substantive review, NERC shall,

within forty-five (45) days after receiving the submission, issue a decision directing the Regional Entity to proceed to a substantive review of the Exception Request in accordance with section 5.2. NERC will send a written notice to the Submitting Entity, the Owner if different, and the Regional Entity stating that NERC either directs the Regional Entity to proceed to a substantive review or that NERC does not direct such a review.

8.0 APPROVAL OR DISAPPROVAL OF AN EXCEPTION REQUEST

Following the date of the Regional Entity's Recommendation to NERC, a Submitting Entity or Owner, will have thirty (30) days to submit a comment in support of or opposition to the Recommendation. The NERC President shall appoint a team of no less than (3) three persons with the required technical background to evaluate Exception Requests to review the Recommendation and accompanying materials provided by the Regional Entity pursuant to section 5.2.3, the Technical Review Panel opinion (if any), and any comment submitted by the Submitting Entity or Owner. The members of the review team shall have no financial, contractual, employment or other interest in the Submitting Entity or Owner that would present a conflict of interest and shall be free of any conflicts of interest in accordance with NERC policies. This review shall be completed within ninety (90) days after NERC receives the Recommendation. NERC may choose to ask the Regional Entity, Submitting Entity and Owner, if different than the Submitting Entity, to appear at a NERC office for interviews or discussion regarding any questions. In lieu of appearing in person at a NERC office, appearances may be, upon the mutual agreement of NERC, the Regional Entity, the Submitting Entity and/or Owner, conducted by a conference call, teleconferencing, or webinar. By the end of the ninety-day review period, the team shall issue a proposed decision either to approve or to disapprove the Exception Request. If the Exception Request concerns more than one Element, the review team's proposed decision may approve the Exception Request in its entirety, disapprove the Exception Request in its entirety, or approve some portion of the Exception Request and disapprove the remaining portion. The proposed decision shall be in writing, shall be based on the team's independent consideration of the full record, and state the basis for the decision. If the proposed decision of the team was not unanimous, the dissenting team member may, if he or she wishes to do so, issue a minority report stating the dissenting member's reasons for disagreement with the proposed decision. Within thirty (30) days after the date of the review team's proposed decision, the NERC President shall issue a final written decision on the Exception Request on behalf of NERC. The final decision may adopt the proposed decision or modify the proposed decision, and may reach a different conclusion than the proposed decision as to whether the Exception Request is approved or disapproved. The final decision issued by the NERC President shall be the decision of NERC with respect to Approval or Disapproval of the Exception Request.

NERC shall provide to the Submitting Entity and to the Owner, if different, copies of any documents considered by the NERC review team in reaching its proposed decision, and any additional documents considered by the NERC President in reaching the final decision, that were not originally provided by, or have not previously been provided to, the Submitting Entity or Owner.

Documentation used to substantiate the decision related to an Exception Request shall be retained by NERC for a minimum of seven (7) years or as long as the Exception is in effect, whichever is longer, unless a different retention period is otherwise identified

9.0 CHALLENGES TO APPROVAL OR DISAPPROVAL OF EXCEPTION REQUESTS

A Submitting Entity or Owner aggrieved by NERC's Approval or Disapproval of an Exception Request or termination of an Exception may, within thirty (30) days following the date of NERC's decision, challenge such determination pursuant to Section 1703 of the NERC Rules of Procedure. If neither a Submitting Entity nor Owner challenges, within such period, NERC's determination with respect to any Element to which the Exception Request or the Exception applies, such determination shall become effective with respect to such Element on the thirty-first day following the date of the NERC decision.

10.0 IMPLEMENTATION PERIOD FOR EXCEPTIONS

10.1 Inclusion Exceptions

In the case of an Element not included in the BES by application of the BES Definition but for which an Inclusion Exception is approved, the Owner shall submit a proposed implementation plan to the Regional Entity detailing the schedule for complying with any Reliability Standards applicable to the newly included Element. The Regional Entity and Owner shall confer to agree upon such schedule. If the Regional Entity and Owner are unable to agree on the implementation plan, the Regional Entity shall notify the NERC Director of Compliance Operations of the disagreement, and shall provide statements of the Regional Entity's and the Owner's positions, and NERC shall specify a reasonable implementation schedule.

10.2 Denials of Exception Requests for Exclusion

(a) In the case of a newly-constructed or installed Element which is included in the BES by application of the BES Definition but for which an Exception Request for an Exclusion Exception was submitted at least twelve (12) months before commercial operation of the Element, but which Exception Request either is still pending or has been rejected or disapproved at the time of commercial operation, the Owner shall submit a proposed implementation plan to the Regional Entity detailing the schedule for complying with any Reliability Standards applicable to the newly constructed or installed Element. The Regional Entity and Owner shall confer to agree upon such schedule. If the Regional Entity and Owner are unable to agree on the implementation plan, the Regional Entity shall notify the NERC Director of Compliance Operations of the disagreement, and shall provide statements of the Regional Entity's and the Owner's positions, and NERC shall specify a reasonable implementation schedule.

(b) In the case of an Element which is included in the BES based on application of the current BES Definition but was not included in the BES under the BES Definition in effect immediately prior to the current BES Definition, and for which an Exception Request for an Exclusion Exception was submitted no more than twelve (12) months after the current BES

Definition became effective, but which Exception Request either is still pending or has been rejected or disapproved at the end of any applicable BES Definition implementation plan time period, the Owner shall submit a proposed implementation plan to the Regional Entity detailing the schedule for complying with any Reliability Standards applicable to the newly included Element. The Regional Entity and Owner shall confer to agree upon such schedule. If the Regional Entity and Owner are unable to agree on the implementation plan, the Regional Entity shall notify the NERC Director of Compliance Operations of the disagreement, and shall provide statements of the Regional Entity's and the Owner's positions, and NERC shall specify a reasonable implementation schedule.

11.0 TERMINATION OF AN APPROVED EXCEPTION

11.1 An Exception Request typically will be approved without a specified date of termination but will be subject to review to verify continuing justification for the Exception.

11.2 Submitting Entity(ies) shall notify the appropriate Regional Entity, with a copy to NERC, within ninety (90) days after learning of any change of condition which would affect the basis stated by NERC in its decision pursuant to section 8.0 approving the Exception Request. NERC shall review such notification and determine whether to direct the Regional Entity to perform a substantive review (pursuant to section 5.2) to verify continuing justification for the Exception and to issue a Recommendation to NERC.

11.3 Submitting Entity(ies) shall certify[3] periodically to the appropriate Regional Entity that the basis for an Element being included or excluded in the BES through the Exception remains valid and in connection with each certification, shall provide the Regional Entity with any changes to Section I Required Information or Section II Required Information. The certification shall be due on the first day of the first quarter thirty-six (36) months after the date on which the Exception Request was approved and every thirty-six (36) months thereafter, as long as the Exception remains in effect. If such certification is not provided, the Exception is subject to termination ninety (90) days after the date the certification was due, and the Regional Entity shall send the Submitting Entity and NERC written notice of such termination.

11.4 If the Regional Entity obtains information through means other than those described in sections 11.2 and 11.3 that indicates an Exception may no longer be warranted, the Regional Entity shall provide such information to NERC. NERC shall review the information and determine whether to direct the Regional Entity to perform a substantive review (pursuant to section 5.2) to verify continuing justification for the Exception and to issue a Recommendation to NERC.

11.5 If the Regional Entity's Recommendation following a substantive review pursuant to section 11.2 or 11.4 is that the Exception shall be terminated, NERC shall (i) issue a written notice to the Submitting Entity and Owner, if different, that the Exception is under review for possible termination, (ii) allow the Submitting Entity and/or Owner, as applicable, thirty (30)

[3] The certification shall consider the effect on the basis for the Exception of changes such as Load growth and topological changes, as well as the effect on system limits and impacts as a result of the contingencies listed in Table 1 of each applicable NERC TPL Reliability Standard.

days from the date of the notice to submit comments or information to NERC to show that the Exception continues to be justified and should remain in effect, and (iii) cause the Recommendation to be reviewed in accordance with section 8.0 of this Appendix. If the conclusion of the review is that the Exception should be terminated, NERC shall send a written notice to the Submitting Entity and Owner, if different, stating that the Exception is terminated and the reasons for the termination. When an Element will be included in the BES as a result of the termination of an Exclusion Exception under this section, an implementation plan detailing the schedule for complying with any Reliability Standards applicable to the newly included Element will be developed in accordance with section 10.1 as if it were an Inclusion Exception.

11.6 Upon request by the Regional Entity, the Submitting Entity(ies) and/or Owner if different shall provide within thirty (30) days the most recent versions of any Section III Required Information so requested.

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF REVISIONS TO ITS RULES OF PROCEDURE
TO ADOPT A BULK ELECTRIC SYSTEM EXCEPTION PROCEDURE

ATTACHMENT 2A

REVISED RULES OF PROCEDURE, SECTIONS 100-1700

(INCLUDING PROPOSED NEW SECTIONS 509 AND 1703)

CLEAN VERSION

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Proposed Revisions 1-9-2012
[Incorporates proposed revisions filed with FERC on March 18, November 7 and November 29, 2011]

Rules of Procedure

Effective: January 10, 2012

Rules of Procedure Section 400 is subject to further revisions to comply with directives in a FERC Order issued October 7, 2011 (137 FERC ¶ 61,028).

TABLE OF CONTENTS TABLE OF CONTENTS

SECTION 100 — APPLICABILITY OF RULES OF PROCEDURE 1

SECTION 200 — DEFINITIONS OF TERMS 2

SECTION 300 — RELIABILITY STANDARDS DEVELOPMENT 3

301. General 3
302. Essential Attributes for Technically Excellent Reliability Standards 3
303. Relationship between Reliability Standards and Competition 5
304. Essential Principles for the Development of Reliability Standards 6
305. Registered Ballot Body 6
306. Standards Committee 8
307. Standards Process Manager 9
308. Steps in the Development of Reliability Standards 9
309. Filing of Reliability Standards for Approval by Applicable Governmental Authorities 9
310. Annual Reliability Standards Development Plan 11
311. Regional Entity Standards Development Procedures 11
312. Regional Reliability Standards 13
313. Other Regional Criteria, Guides, Procedures, Agreements, Etc. 16
314. Conflicts with Statutes, Regulations, and Orders 17
315. Revisions to NERC Reliability Standards Development Procedure 17
316. Accreditation 17
317. Five-Year Review of Standards 18
318. Coordination with the North American Energy Standards Board 18
319. Archived Standards Information 18
320. Alternate Method for Adopting Violation Risk Factors 18
321. Special Rule to Address Certain Regulatory Directives 18

SECTION 400 — COMPLIANCE ENFORCEMENT 22

401. Scope of the NERC Compliance Enforcement Program 22
402. NERC Oversight of the Regional Entity Compliance Enforcement Programs 25
403. Required Attributes of Regional Entity Compliance Enforcement Programs 29
404. NERC Monitoring of Compliance for Regional Entities or Bulk Power Owners, Operator, or Users 35
405. Monitoring of Reliability Standards and Other Requirements Applicable to NERC 36
406. Independent Audits of the NERC Compliance Monitoring and Enforcement Program 36
407. Penalties, Sanctions, and Remedial Actions 37
408. Review of NERC Decisions 37
409. Appeals from Final Decisions of Regional Entities 39
410. Hold Harmless 40
411. Requests for Technical Feasibility Exceptions to NERC Critical Infrastructure Protection Reliability Standards 40

SECTION 500 — ORGANIZATION REGISTRATION AND CERTIFICATION 41

501. Scope of the Organization Registration and Organization Certification Programs 41
502. Organization Registration and Organization Certification Program Requirements 44
503. Regional Entity Implementation of Organization Registration and Organization Certification Program Requirements 46
504. Appeals 47
505. Program Maintenance 48

506. Independent Audit of NERC Organization Registration and Organization Certification Program 48
507. Provisions Relating to Joint Registration Organizations (JRO) 48
508. Provisions Relating to Coordinated Functional Registration (CFR) Entities 49
509. Exceptions to the Definition of the Bulk Electric System 51

SECTION 600 — PERSONNEL CERTIFICATION 52

601. Scope of Personnel Certification 52
602. Structure of ERO Personnel Certification Program 52
603. Candidate Testing Mechanisms 53
604. Public Information About the Personnel Certification Program 54
605. Responsibilities to Applicants for Certification or Recertification 54
606. Responsibilities to the Public and to Employers of Certified Practitioners 55

SECTION 700 — RELIABILITY READINESS EVALUATION AND IMPROVEMENT AND FORMATION OF SECTOR FORUMS 56

701 Confidentiality Requirements for Readiness Evaluations and Evaluation Team Members 56
702. Formation of Sector Forum 56

SECTION 800 — RELIABILITY ASSESSMENT AND PERFORMANCE ANALYSIS 57

801. Objectives of the Reliability Assessment and Performance Analysis Program 57
802. Scope of the Reliability Assessment Program 57
803. Reliability Assessment Reports 58
804. Reliability Assessment Data and Information Requirements 59
805. Reliability Assessment Process 60
806. Scope of the Reliability Performance and Analysis Program 62
807. Analysis of Major Events 62
808. Analysis of Off-Normal Events, Potential System Vulnerabilities, and System Performance 63
809. Reliability Benchmarking 63
810. Information Exchange and Issuance of NERC Advisories, Recommendations and Essential Actions 64
811. Equipment Performance Data 65

SECTION 900 — TRAINING AND EDUCATION 66

901. Scope of the Training and Education Program 66
902. Continuing Education Program 66

SECTION 1000 — SITUATION AWARENESS AND INFRASTRUCTURE SECURITY 68

1001. Situation Awareness 68
1002. Reliability Support Services 68
1003. Infrastructure Security Program 68

SECTION 1100 — ANNUAL NERC BUSINESS PLANS AND BUDGETS 71

1101. Scope of Business Plans and Budgets 71
1102. NERC Funding and Cost Allocation 71
1103. NERC Budget Development 71
1104. Submittal of Regional Entity Budgets to NERC 72
1105. Submittal of NERC and Regional Entity Budgets to Governmental Authorities for Approval 72
1106. NERC and Regional Entity Billing and Collections 73
1107. Penalty Applications 74
1108. Special Assessments 75

SECTION 1200 — REGIONAL DELEGATION AGREEMENTS 76

1201. Pro Forma Regional Delegation Agreement 76
1202. Regional Entity Essential Requirements 76
1203. Negotiation of Regional Delegation Agreements 76
1204. Conformance to Rules and Terms of Regional Delegation Agreements 76
1205. Sub-delegation 76
1206. Nonconformance to Rules or Terms of Regional Delegation Agreement 76
1207. Regional Entity Audits 77
1208. Process for Considering Registered Entity Requests to Transfer to Another Regional Entity Audits 77

SECTION 1300 — COMMITTEES 80

1301. Establishing Standing Committees 80
1302. Committee Membership 80
1303. Procedures for Appointing Committee Members 80
1304. Procedures for Conduct of Committee Business 80
1305. Committee Subgroups 81

SECTION 1400 — AMENDMENTS TO THE NERC RULES OF PROCEDURE 82

1401. Proposals for Amendment or Repeal of Rules of Procedure 82
1402. Approval of Amendment or Repeal of Rules of Procedure 82
1403. Alternative Procedure for Violation Risk Factors 82

SECTION 1500 — CONFIDENTIAL INFORMATION 83

1501. Definitions 83
1502. Protection of Confidential Information 83
1503. Requests for Information 84
1504. Employees, Contractors and Agents 86
1505. Provision of Information to FERC and Other Governmental Authorities 86
1506. Permitted Disclosures 86
1507. Remedies for Improper Disclosure 86

SECTION 1600 — REQUESTS FOR DATA OR INFORMATION 88

1601. Scope of a NERC or Regional Entity Request for Data or Information 88
1602. Procedure for Authorizing a NERC Request for Data or Information 88
1603. Owners, Operators, and Users to Comply 89
1604. Requests by Regional Entity for Data or Information 89
1605. Confidentiality 90
1606. Expedited Procedures for Requesting Time-Sensitive Data or Information 90

SECTION 1700 — CHALLENGES TO DETERMINATIONS 92

1701. Scope of Authority 92
1702 Challenges to Determinations by Planning Coordinators Under Reliability Standard PRC-023 92
1703 Challenges to NERC Determinations of BES Exception Requests under Section 509 94

SECTION 100 — APPLICABILITY OF RULES OF PROCEDURE

NERC and NERC Members shall comply with these Rules of Procedure. Each Regional Entity shall comply with these Rules of Procedure as applicable to functions delegated to the Regional Entity by NERC or as required by an Applicable Governmental Authority or as otherwise provided.

Each Bulk Power System owner, operator, and user shall comply with all Rules of Procedure of NERC that are made applicable to such entities by approval pursuant to applicable legislation or regulation, or pursuant to agreement.

Any entity that is unable to comply or that is not in compliance with a NERC Rule of Procedure shall immediately notify NERC in writing, stating the Rule of Procedure of concern and the reason for not being able to comply with the Rule of Procedure.

NERC shall evaluate each case and inform the entity of the results of the evaluation. If NERC determines that a Rule of Procedure has been violated, or cannot practically be complied with, NERC shall notify the Applicable Governmental Authorities and take such other actions as NERC deems appropriate to address the situation.

NERC shall comply with each approved Reliability Standard that identifies NERC or the Electric Reliability Organization as a responsible entity. Regional Entities shall comply with each approved Reliability Standard that identifies Regional Entities as responsible entities. A violation by NERC or a Regional Entity of such a Reliability Standard shall constitute a violation of these Rules of Procedure.

SECTION 200 — DEFINITIONS OF TERMS

Definitions of terms used in the NERC Rules of Procedure are set forth in **Appendix 2**, *Definitions Used in the Rules of Procedure*.

SECTION 300 — RELIABILITY STANDARDS DEVELOPMENT

301. General

NERC shall develop and maintain Reliability Standards that apply to Bulk Power System owners, operators, and users and that enable NERC and Regional Entities to measure the reliability performance of Bulk Power System owners, operators, and users; and to hold them accountable for Reliable Operation of the Bulk Power Systems. The Reliability Standards shall be technically excellent, timely, just, reasonable, not unduly discriminatory or preferential, in the public interest, and consistent with other applicable standards of governmental authorities.

302. Essential Attributes for Technically Excellent Reliability Standards

1. **Applicability** — Each Reliability Standard shall clearly identify the functional classes of entities responsible for complying with the Reliability Standard, with any specific additions or exceptions noted. Such functional classes[1] include: Reliability Coordinators, Balancing Authorities, Transmission Operators, Transmission Owners, Generator Operators, Generator Owners, Interchange Authorities, Transmission Service Providers, market operators, Planning Authorities, Transmission Planners, Resource Planners, Load-Serving Entities, Purchasing-Selling Entities, and Distribution Providers. Each Reliability Standard shall also identify the geographic applicability of the Reliability Standard, such as the entire North American Bulk Power System, an Interconnection, or within a Region. A Reliability Standard may also identify any limitations on the applicability of the Reliability Standard based on electric Facility characteristics.

2. **Reliability Objectives** — Each Reliability Standard shall have a clear statement of purpose that shall describe how the Reliability Standard contributes to the reliability of the Bulk Power System. The following general objectives for the Bulk Power System provide a foundation for determining the specific objective(s) of each Reliability Standard:

    2.1 **Reliability Planning and Operating Performance**— Bulk Power Systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions.

    2.2 **Frequency and Voltage Performance**— The frequency and voltage of Bulk Power Systems shall be controlled within defined limits through the balancing of Real and Reactive Power supply and demand.

[1] These functional classes of entities are derived from NERC's Reliability Functional Model. When a Reliability Standard identifies a class of entities to which it applies, that class must be defined in the Glossary of Terms Used in NERC Reliability Standards.

2.3 **Reliability Information** — Information necessary for the planning and operation of reliable Bulk Power Systems shall be made available to those entities responsible for planning and operating Bulk Power Systems.

2.4 **Emergency Preparation** — Plans for emergency operation and system restoration of Bulk Power Systems shall be developed, coordinated, maintained, and implemented.

2.5 **Communications and Control** — Facilities for communication, monitoring, and control shall be provided, used, and maintained for the reliability of Bulk Power Systems.

2.6 **Personnel** — Personnel responsible for planning and operating Bulk Power Systems shall be trained and qualified, and shall have the responsibility and authority to implement actions.

2.7 **Wide-Area View** — The reliability of the Bulk Power Systems shall be assessed, monitored, and maintained on a Wide-Area basis.

2.8 **Security** —Bulk Power Systems shall be protected from malicious physical or cyber attacks.

3. **Performance Requirement or Outcome**— Each Reliability Standard shall state one or more performance Requirements, which if achieved by the applicable entities, will provide for a reliable Bulk Power System, consistent with good utility practices and the public interest. Each Requirement is not a "lowest common denominator" compromise, but instead achieves an objective that is the best approach for Bulk Power System reliability, taking account of the costs and benefits of implementing the proposal.

4. **Measurability** — Each performance Requirement shall be stated so as to be objectively measurable by a third party with knowledge or expertise in the area addressed by that Requirement. Each performance Requirement shall have one or more associated measures used to objectively evaluate compliance with the Requirement. If performance can be practically measured quantitatively, metrics shall be provided to determine satisfactory performance.

5. **Technical Basis in Engineering and Operations**— Each Reliability Standard shall be based upon sound engineering and operating judgment, analysis, or experience, as determined by expert practitioners in that particular field.

6. **Completeness** — Reliability Standards shall be complete and self-contained. The Reliability Standards shall not depend on external information to determine the required level of performance.

7. **Consequences for Noncompliance** — In combination with guidelines for Penalties and sanctions, as well as other ERO and Regional Entity compliance documents, the consequences of violating a Reliability Standard are clearly presented to the entities responsible for complying with the Reliability Standards.

8. **Clear Language** — Each Reliability Standard shall be stated using clear and unambiguous language. Responsible entities, using reasonable judgment and in keeping with good utility practices, are able to arrive at a consistent interpretation of the required performance.

9. **Practicality** — Each Reliability Standard shall establish Requirements that can be practically implemented by the assigned responsible entities within the specified effective date and thereafter.

10. **Consistent Terminology** — To the extent possible, Reliability Standards shall use a set of standard terms and definitions that are approved through the NERC Reliability Standards development process.

303. Relationship between Reliability Standards and Competition

To ensure Reliability Standards are developed with due consideration of impacts on competition, to ensure Reliability Standards are not unduly discriminatory or preferential, and recognizing that reliability is an essential requirement of a robust North American economy, each Reliability Standard shall meet all of these market-related objectives:

1. **Competition** — A Reliability Standard shall not give any market participant an unfair competitive advantage.

2. **Market Structures** — A Reliability Standard shall neither mandate nor prohibit any specific market structure.

3. **Market Solutions** — A Reliability Standard shall not preclude market solutions to achieving compliance with that Reliability Standard.

4. **Commercially Sensitive Information** — A Reliability Standard shall not require the public disclosure of commercially sensitive information or other Confidential Information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with Reliability Standards.

5. **Adequacy** — NERC shall not set Reliability Standards defining an adequate amount of, or requiring expansion of, Bulk Power System resources or delivery capability.

304. Essential Principles for the Development of Reliability Standards

NERC shall develop Reliability Standards in accordance with the NERC *Standard Processes Manual*, which is incorporated into these Rules of Procedure as **Appendix 3A**. Appeals in connection with the development of a Reliability Standard shall also be conducted in accordance with the NERC *Standard Processes Manual*. Any amendments or revisions to the *Standard Processes Manual* shall be consistent with the following essential principles:

1. **Openness** — Participation shall be open to all Persons who are directly and materially affected by the reliability of the North American Bulk Power System. There shall be no undue financial barriers to participation. Participation shall not be conditional upon membership in NERC or any other organization, and shall not be unreasonably restricted on the basis of technical qualifications or other such requirements.

2. **Transparency** — The process shall be transparent to the public.

3. **Consensus-building** —The process shall build and document consensus for each Reliability Standard, both with regard to the need and justification for the Reliability Standard and the content of the Reliability Standard.

4. **Fair Balance of Interests** — The process shall fairly balance interests of all stakeholders and shall not be dominated by any single interest category.

5. **Due Process** — Development of Reliability Standards shall provide reasonable notice and opportunity for any Person with a direct and material interest to express views on a proposed Reliability Standard and the basis for those views, and to have that position considered in the development of the Reliability Standards.

6. **Timeliness** — Development of Reliability Standards shall be timely and responsive to new and changing priorities for reliability of the Bulk Power System.

305. Registered Ballot Body

NERC Reliability Standards shall be approved by a Registered Ballot Body prior to submittal to the Board and then to Applicable Governmental Authorities for their approval, where authorized by applicable legislation or agreement. This Section 305 sets forth the rules pertaining to the composition of, and eligibility to participate in, the Registered Ballot Body.

1. **Eligibility to Vote on Reliability Standards** — Any person or entity may join the Registered Ballot Body to vote on Reliability Standards, whether or not such person or entity is a Member of NERC.

2. **Inclusive Participation** — The Segment qualification guidelines are inclusive; i.e., any entity with a legitimate interest in the reliability of the Bulk Power System that can meet any one of the eligibility criteria for a Segment is entitled to belong to and vote in each Segment for which it qualifies, subject to limitations defined in Sections 305.3 and 305.5.

3. **General Criteria for Registered Ballot Body Membership** — The general criteria for membership in the Segments are:

    3.1 **Multiple Segments** — A corporation or other organization with integrated operations or with affiliates that qualifies to belong to more than one Segment (e.g., Transmission Owners and Load-Serving Entities) may join once in each Segment for which it qualifies, provided that each Segment constitutes a separate membership and the organization is represented in each Segment by a different representative. Affiliated entities are collectively limited to one membership in each Segment for which they are qualified.

    3.2 **Withdrawing from a Segment or Changing Segments** — After its initial registration in a Segment, each registered participant may elect to withdraw from a Segment or apply to change Segments at any time.

    3.3 **Review of Segment Criteria** — The Board shall review the qualification guidelines and rules for joining Segments at least every three years to ensure that the process continues to be fair, open, balanced, and inclusive. Public input will be solicited in the review of these guidelines.

4. **Proxies for Voting on Reliability Standards** — Any registered participant may designate an agent or proxy to vote on its behalf. There are no limits on how many proxies an agent may hold. However, for the proxy to be valid, NERC must have in its possession written documentation signed by the representative of the registered participant that the voting right by proxy has been transferred from the registered participant to the agent.

5. **Segments** — The specific criteria for membership in each Registered Ballot Body Segment are defined in the *Standard Processes Manual* in **Appendix 3A.**

6. **Review of Segment Entries** — NERC shall review all applications for joining the Registered Ballot Body, and shall make a determination of whether the applicant's self-selection of a Segment satisfies at least one of the guidelines to belong to that Segment. The entity shall then become eligible to participate as a voting member of that Segment. The Standards Committee shall resolve disputes

regarding eligibility for membership in a Segment, with the applicant having the right of appeal to the Board.

306. Standards Committee

The Standards Committee shall provide oversight of the Reliability Standards development process to ensure stakeholder interests are fairly represented. The Standards Committee shall not under any circumstance change the substance of a draft or approved Reliability Standard.

1. **Membership** — The Standards Committee is a representative committee comprising representatives of two members of each of the Segments in the Registered Ballot Body.

2. **Elections** — Standards Committee members are elected for staggered (one per Segment per year) two-year terms by the respective Segments in accordance with the *Procedure for the Election of Members of the NERC Standards Committee*, which is incorporated into these Rules of Procedure as **Appendix 3B**. Segments may use their own election procedure if such a procedure is ratified by two-thirds of the members of a Segment and approved by the Board.

3. **Canadian Representation**

   3.1 **Provision for Sufficient Canadian Representation —** If any regular election of Standards Committee members does not result in at least two Canadian members on the Standards Committee, the Canadian nominees who were not elected but who received the next highest percentage of votes within their respective Segment(s) will be designated as additional members of the Standards Committee, as needed to achieve a total of two Canadian members.

   3.2 **Terms of Specially Designated Canadian Members** — Each specially designated Canadian member of the Standards Committee shall have a term ending with the next annual election.

   3.3 **Segment Preference** — If any Segment has an unfilled representative position on the Standards Committee following the annual election, the first preference is to assign each specially designated Canadian representative to a Segment with an unfilled representative position for which his or her organization qualifies.

   3.4 **Rights of Specially Designated Canadian Members** — Any specially designated Canadian members of the Standards Committee shall have the same rights and obligations as all other members of the Standards Committee.

4. **Open Meetings** — All meetings of the Standards Committee shall be open and publicly noticed on the NERC website.

307. Standards Process Manager

NERC shall assign a standards process manager to administer the development of Reliability Standards. The standards process manager shall be responsible for ensuring that the development and revision of Reliability Standards are in accordance with the NERC *Standard Processes Manual*. The standards process manager shall work to achieve the highest degree of integrity and consistency of quality and completeness of the Reliability Standards. The standards process manager shall coordinate with any Regional Entities that develop Regional Reliability Standards to ensure those Regional Reliability Standards are effectively integrated with the NERC Reliability Standards.

308. Steps in the Development of Reliability Standards

1. **Procedure** — NERC shall develop Reliability Standards through the process set forth in the NERC *Standard Processes Manual* (**Appendix 3A**). The procedure includes a provision for approval of urgent action Reliability Standards that can be completed within 60 days and emergency actions that may be further expedited.

2. **Board Approval** — Reliability Standards or revisions to Reliability Standards approved by the ballot pool in accordance with the *Standard Processes Manual* shall be submitted for approval by the Board. No Reliability Standard or revision to a Reliability Standard shall be effective unless approved by the Board.

3. **Governmental Approval** — After receiving Board approval, a Reliability Standard or revision to a Reliability Standard shall be submitted to all Applicable Governmental Authorities in accordance with Section 309. No Reliability Standard or revision to a Reliability Standard shall be effective within a geographic area over which an Applicable Governmental Authority has jurisdiction unless approved by such Applicable Governmental Authority or is otherwise made effective pursuant to the laws applicable to such Applicable Governmental Authority.

309. Filing of Reliability Standards for Approval by Applicable Governmental Authorities

1. **Filing of Reliability Standards for Approval** — Where authorized by applicable legislation or agreement, NERC shall file with the Applicable Governmental Authorities each Reliability Standard, modification to a Reliability Standard, or withdrawal of a Reliability Standard that is approved by the Board. Each filing shall be in the format required by the Applicable Governmental Authority and

shall include: a concise statement of the basis and purpose of the Reliability Standard; the text of the Reliability Standard; the implementation plan for the Reliability Standard; a demonstration that the Reliability Standard meets the essential attributes of Reliability Standards as stated in Section 302; the drafting team roster; the ballot pool and final ballot results; and a discussion of public comments received during the development of the Reliability Standard and the consideration of those comments.

2. **Remanded Reliability Standards and Directives to Develop Standards** — If an Applicable Governmental Authority remands a Reliability Standard to NERC or directs NERC to develop a Reliability Standard, NERC shall within five (5) business days notify all other Applicable Governmental Authorities, and shall within thirty (30) calendar days report to all Applicable Governmental Authorities a plan and timetable for modification or development of the Reliability Standard. Reliability Standards that are remanded or directed by an Applicable Governmental Authority shall be modified or developed using the *Standard Processes Manual*. NERC shall, during the development of a modification for the remanded Reliability Standard or directed Reliability Standard, consult with other Applicable Governmental Authorities to coordinate any impacts of the proposed Reliability Standards in those other jurisdictions. The expedited action procedure may be applied if necessary to meet a timetable for action required by the Applicable Governmental Authorities, respecting to the extent possible the provisions in the Reliability Standards development process for reasonable notice and opportunity for public comment, due process, openness, and a balance of interest in developing Reliability Standards. If the Board of Trustees determines that the process did not result in a Reliability Standard that addresses a specific matter that is identified in a directive issued by an Applicable Governmental Authority, then Rule 321 of these Rules of Procedure shall apply.

3. **Directives to Develop Reliability Standards under Extraordinary Circumstances** — An Applicable Governmental Authority may, on its own initiative, determine that extraordinary circumstances exist requiring expedited development of a Reliability Standard. In such a case, the Applicable Governmental Authority may direct the development of a Reliability Standard within a certain deadline. NERC staff shall prepare the Standards Authorization Request and seek a stakeholder sponsor for the request. If NERC is unable to find a sponsor for the proposed Reliability Standard, NERC will be designated as the requestor. The proposed Reliability Standard will then proceed through the Reliability Standards development process, using the expedited action procedures described in the *Standard Processes Manual* as necessary to meet the specified deadline. The timeline will be developed to respect, to the extent possible, the provisions in the Reliability Standards development process for reasonable notice and opportunity for public comment, due process, openness, and a balance of interests in developing Reliability Standards. If the Board of Trustees determines that the process did not result in a Reliability Standard that addresses a specific matter that is identified in a directive issued by an Applicable Governmental

Authority, then Rule 321 of these Rules of Procedure shall apply, with appropriate modification of the timeline.

3.1 Consistent with all Reliability Standards developed under the expedited action process, each of the three possible follow-up actions as documented in the *Standard Processes Manual* are to be completed through the Reliability Standards development process and are subject to approval by the Applicable Governmental Authorities in the U.S. and Canada.

310. Annual Reliability Standards Development Plan

NERC shall develop and provide an annual Reliability Standards Development Plan for development of Reliability Standards to the Applicable Governmental Authorities. NERC shall consider the comments and priorities of the Applicable Governmental Authorities in developing and updating the annual Reliability Standards Development Plan. Each annual Reliability Standards Development Plan shall include a progress report comparing results achieved to the prior year's Reliability Standards Development Plan.

311. Regional Entity Standards Development Procedures

1. **NERC Approval of Regional Entity Reliability Standards Development Procedure** — To enable a Regional Entity to develop Regional Reliability Standards that are to be recognized and made part of NERC Reliability Standards, a Regional Entity may request NERC to approve a Regional Reliability Standards development procedure.

2. **Public Notice and Comment on Regional Reliability Standards Development Procedure** — Upon receipt of such a request, NERC shall publicly notice and request comment on the proposed Regional Reliability Standards development procedure, allowing a minimum of 45 days for comment. The Regional Entity shall have an opportunity to resolve any objections identified in the comments and may choose to withdraw the request, revise the Regional Reliability Standards development procedure and request another posting for comment, or submit the Regional Reliability Standards development procedure, along with its consideration of any objections received, for approval by NERC.

3. **Evaluation of Regional Reliability Standards Development Procedure** — NERC shall evaluate whether a Regional Reliability Standards development procedure meets the criteria listed below and shall consider stakeholder comments, any unresolved stakeholder objections, and the consideration of comments provided by the Regional Entity, in making that determination. If NERC determines the Regional Reliability Standards development procedure meets these requirements, the Regional Reliability Standards development procedure shall be submitted to the Board for approval. The Board shall consider the recommended action, stakeholder comments, any unresolved stakeholder

comments, and the Regional Entity consideration of comments in determining whether to approve the Regional Reliability Standards development procedure.

3.1 **Evaluation Criteria** — The Regional Reliability Standards development procedure shall be:

3.1.1 **Open** — The Regional Reliability Standards development procedure shall provide that any person or entity who is directly and materially affected by the reliability of the Bulk Power Systems within the Regional Entity shall be able to participate in the development and approval of Reliability Standards. There shall be no undue financial barriers to participation. Participation shall not be conditional upon membership in the Regional Entity, a Regional Entity or any organization, and shall not be unreasonably restricted on the basis of technical qualifications or other such requirements.

3.1.2 **Inclusive** — The Regional Reliability Standards development procedure shall provide that any Person with a direct and material interest has a right to participate by expressing an opinion and its basis, having that position considered, and appealing through an established appeals process if adversely affected.

3.1.3 **Balanced** — The Regional Reliability Standards development procedure shall have a balance of interests and shall not permit any two interest categories to control the vote on a matter or any single interest category to defeat a matter.

3.1.4 **Due Process** — The Regional Reliability Standards development procedure shall provide for reasonable notice and opportunity for public comment. At a minimum, the Regional Reliability Standards development procedure shall include public notice of the intent to develop a Regional Reliability Standard, a public comment period on the proposed Regional Reliability Standard, due consideration of those public comments, and a ballot of interested stakeholders.

3.1.5 **Transparent** — All actions material to the development of Regional Reliability Standards shall be transparent. All Regional Reliability Standards development meetings shall be open and publicly noticed on the Regional Entity's website.

3.1.6 **Accreditation of Regional Standards Development Procedure** — A Regional Entity's Regional Reliability Standards development procedure that is accredited by the American National Standards Institute or the Standards Council of Canada

shall be deemed to meet the criteria listed in this Section 311.3.1, although such accreditation is not a prerequisite for approval by NERC.

3.1.7 **Use of NERC Procedure** — A Regional Entity may adopt the NERC *Standard Processes Manual* as the Regional Reliability Standards development procedure, in which case the Regional Entity's Regional Reliability Standards development procedure shall be deemed to meet the criteria listed in this Section 311.3.1.

4. **Revisions of Regional Reliability Standards Development Procedures** — Any revision to a Regional Reliability Standards development procedure shall be subject to the same approval requirements set forth in Sections 311.1 through 311.3.

5. **Duration of Regional Reliability Standards Development Procedures** — The Regional Reliability Standards development procedure shall remain in effect until such time as it is replaced with a new version approved by NERC or it is withdrawn by the Regional Entity. The Regional Entity may, at its discretion, withdraw its Regional Reliability Standards development procedure at any time.

312. Regional Reliability Standards

1. **Basis for Regional Reliability Standards** — Regional Entities may propose Regional Reliability Standards that set more stringent reliability requirements than the NERC Reliability Standard or cover matters not covered by an existing NERC Reliability Standard. Such Regional Reliability Standards shall in all cases be approved by NERC and made part of the NERC Reliability Standards and shall be enforceable in accordance with the delegation agreement between NERC and the Regional Entity or other instrument granting authority over enforcement to the Regional Entity. No entities other than NERC and the Regional Entity shall be permitted to develop Regional Reliability Standards that are enforceable under statutory authority delegated to NERC and the Regional Entity.

2. **Regional Reliability Standards That are Directed by a NERC Reliability Standard** — Although it is the intent of NERC to promote uniform Reliability Standards across North America, in some cases it may not be feasible to achieve a reliability objective with a Reliability Standard that is uniformly applicable across North America. In such cases, NERC may direct Regional Entities to develop Regional Reliability Standards necessary to implement a NERC Reliability Standard. Such Regional Reliability Standards that are developed pursuant to a direction by NERC shall be made part of the NERC Reliability Standards.

3. **Procedure for Developing an Interconnection-wide Regional Standard** — A Regional Entity organized on an Interconnection-wide basis may propose a

Regional Reliability Standard for approval as a NERC Reliability Standard to be made mandatory for all applicable Bulk Power System owners, operators, and users within that Interconnection.

3.1 **Presumption of Validity** — An Interconnection-wide Regional Reliability Standard that is determined by NERC to be just, reasonable, and not unduly discriminatory or preferential, and in the public interest, and consistent with such other applicable standards of governmental authorities, shall be adopted as a NERC Reliability Standard. NERC shall rebuttably presume that a Regional Reliability Standard developed, in accordance with a Regional Reliability Standards development process approved by NERC, by a Regional Entity organized on an Interconnection-wide basis, is just, reasonable, and not unduly discriminatory or preferential, and in the public interest, and consistent with such other applicable standards of governmental authorities.

3.2 **Notice and Comment Procedure for Interconnection-wide Regional Reliability Standard** — NERC shall publicly notice and request comment on the proposed Interconnection-wide Regional Reliability Standard, allowing a minimum of 45 days for comment. NERC may publicly notice and post for comment the proposed Regional Reliability Standard concurrent with similar steps in the Regional Entity's Regional Reliability Standards development process. The Regional Entity shall have an opportunity to resolve any objections identified in the comments and may choose to comment on or withdraw the request, revise the proposed Regional Reliability Standard and request another posting for comment, or submit the proposed Regional Reliability Standard along with its consideration of any objections received, for approval by NERC.

3.3 **Approval of Interconnection-wide Regional Reliability Standard by NERC** — NERC shall evaluate and recommend whether a proposed Interconnection-wide Regional Reliability Standard has been developed in accordance with all applicable procedural requirements and whether the Regional Entity has considered and resolved stakeholder objections that could serve as a basis for rebutting the presumption of validity of the Regional Reliability Standard. The Regional Entity, having been notified of the results of the evaluation and recommendation concerning NERC proposed Regional Reliability Standard, shall have the option of presenting the proposed Regional Reliability Standard to the Board for approval as a NERC Reliability Standard. The Board shall consider the Regional Entity's request, NERC's recommendation for action on the Regional Reliability Standard, any unresolved stakeholder comments, and the Regional Entity's consideration of comments, in determining whether to approve the Regional Reliability Standard as a NERC Reliability Standard.

3.4 **Applicable Governmental Authority Approval** — An Interconnection-wide Regional Reliability Standard that has been approved by the Board shall be filed with the Applicable Governmental Authorities for approval, where authorized by applicable legislation or agreement, and shall become effective when approved by such Applicable Governmental Authorities or on a date set by the Applicable Governmental Authorities.

3.5 **Enforcement of Interconnection-wide Regional Reliability Standard** — An Interconnection-wide Regional Reliability Standard that has been approved by the Board and by the Applicable Governmental Authorities or is otherwise made effective within Canada as mandatory within a particular Region shall be applicable and enforced as a NERC Reliability Standard within the Region.

4. **Procedure for Developing Non-Interconnection-Wide Regional Reliability Standards** — Regional Entities that are not organized on an Interconnection-wide basis may propose Regional Reliability Standards to apply within their respective Regions. Such Regional Reliability Standards may be developed through the NERC Reliability Standards development procedure, or alternatively, through a Regional Reliability Standards development procedure that has been approved by NERC.

4.1 **No Presumption of Validity** — Regional Reliability Standards that are not proposed to be applied on an Interconnection-wide basis are not presumed to be valid but may be demonstrated by the proponent to be valid.

4.2 **Notice and Comment Procedure for Non-Interconnection-wide Regional Reliability Standards** — NERC shall publicly notice and request comment on the proposed Regional Reliability Standard, allowing a minimum of 45 days for comment. NERC may publicly notice and post for comment the proposed Regional Reliability Standard concurrent with similar steps in the Regional Entity's Regional Reliability Standards development process. The Regional Entity shall have an opportunity to comment on or resolve any objections identified in the comments and may choose to withdraw the request, revise the proposed Regional Reliability Standard and request another posting for comment, or submit the proposed Regional Reliability Standard along with its consideration of any objections received, for approval by NERC.

4.3 **NERC Approval of Non-Interconnection-wide Regional Reliability Standards** — NERC shall evaluate and recommend whether a proposed non-Interconnection-wide Regional Reliability Standard has been developed in accordance with all applicable procedural requirements and whether the Regional Entity has considered and resolved stakeholder objections. The Regional Entity, having been notified of the results of the

evaluation and recommendation concerning proposed Regional Reliability Standard, shall have the option of presenting the proposed Regional Reliability Standard to the Board for approval as a NERC Reliability Standard. The Board shall consider the Regional Entity's request, the recommendation for action on the Regional Reliability Standard, any unresolved stakeholder comments, and the Regional Entity's consideration of comments, in determining whether to approve the Regional Reliability Standard as a NERC Reliability Standard.

4.4 **Applicable Governmental Authority Approval** — A non-Interconnection-wide Regional Reliability Standard that has been approved by the Board shall be filed with the Applicable Governmental Authorities for approval, where authorized by applicable legislation or agreement, and shall become effective when approved by such Applicable Governmental Authorities or on a date set by the Applicable Governmental Authorities.

4.5 **Enforcement of Non-Interconnection-wide Regional Reliability Standards** — A non-Interconnection-wide Regional Reliability Standard that has been approved by the Board and by the Applicable Governmental Authorities or is otherwise made effective within Canada as mandatory within a particular Region shall be applicable and enforced as a NERC Reliability Standard within the Region.

5. **Appeals** — A Regional Entity shall have the right to appeal NERC's decision not to approve a proposed Regional Reliability Standard or Variance to the Commission or other Applicable Governmental Authority.

313. Other Regional Criteria, Guides, Procedures, Agreements, Etc.

1. **Regional Criteria** — Regional Entities may develop Regional Criteria that are necessary to implement, to augment, or to comply with Reliability Standards, but which are not Reliability Standards. Regional Criteria may also address issues not within the scope of Reliability Standards, such as resource adequacy. Regional Criteria may include specific acceptable operating or planning parameters, guides, agreements, protocols or other documents used to enhance the reliability of the Bulk Power System in the Region. These documents typically provide benefits by promoting more consistent implementation of the NERC Reliability Standards within the Region. These documents are not NERC Reliability Standards, Regional Reliability Standards, or regional Variances, and therefore are not enforceable under authority delegated by NERC pursuant to delegation agreements and do not require NERC approval.

2. **Catalog of Regional Criteria** — NERC shall maintain a current catalog of Regional Criteria. Regional Entities shall provide a catalog listing of Regional

Criteria to NERC and shall notify NERC of changes to the listing. Regional Entities shall provide any listed document to NERC upon written request.

314. Conflicts with Statutes, Regulations, and Orders

Notice of Potential Conflict — If a Bulk Power System owner, operator, or user determines that a NERC or Regional Reliability Standard may conflict with a function, rule, order, tariff, rate schedule, legislative requirement or agreement that has been accepted, approved, or ordered by a governmental authority affecting that entity, the entity shall expeditiously notify the governmental authority, NERC, and the relevant Regional Entity of the conflict.

1. **Determination of Conflict —** NERC, upon request of the governmental authority, may advise the governmental authority regarding the conflict and propose a resolution of the conflict, including revision of the Reliability Standard if appropriate.

2. **Regulatory Precedence** — Unless otherwise ordered by a governmental authority, the affected Bulk Power System owner, operator, or user shall continue to follow the function, rule, order, tariff, rate schedule, legislative requirement, or agreement accepted, approved, or ordered by the governmental authority until the governmental authority finds that a conflict exists and orders a remedy and such remedy is affected.

315. Revisions to NERC Reliability Standards Development Procedure

Any person or entity may submit a written request to modify NERC *Standard Processes Manual*. Consideration of the request and development of the revision shall follow the process defined in the NERC *Standard Processes Manual*. Upon approval by the Board, the revision shall be submitted to the Applicable Governmental Authorities for approval. Changes shall become effective only upon approval by the Applicable Governmental Authorities or on a date designated by the Applicable Governmental Authorities or as otherwise applicable in a particular jurisdiction.

316. Accreditation

NERC shall seek continuing accreditation of the NERC Reliability Standards development process by the American National Standards Institute and the Standards Council of Canada.

317. Five-Year Review of Reliability Standards

NERC shall complete a review of each NERC Reliability Standard at least once every five years from the effective date of the Reliability Standard or the latest revision to the Reliability Standard, whichever is later. The review process shall be conducted in accordance with the NERC *Standard Processes Manual*. The standards process manager shall be responsible for administration of the five-year review of Reliability Standards. As a result of this review, the NERC Reliability Standard shall be reaffirmed, revised, or withdrawn. If the review indicates a need to revise or withdraw the Reliability Standard, a request for revision or withdrawal shall be prepared, submitted and addressed in accordance with the NERC *Standard Processes Manual*.

318. Coordination with the North American Energy Standards Board

NERC shall, through a memorandum of understanding, maintain a close working relationship with the North American Energy Standards Board and ISO/RTO Council to ensure effective coordination of wholesale electric business practice standards and market protocols with the NERC Reliability Standards.

319. Archived Standards Information

NERC shall maintain a historical record of Reliability Standards information that is no longer maintained on-line. For example, Reliability Standards that expired or were replaced may be removed from the on-line system. Archived information shall be retained indefinitely as practical, but in no case less than five years or one complete Reliability Standards review cycle from the date on which the Reliability Standard was no longer in effect. Archived records of Reliability Standards information shall be available electronically within 30 days following the receipt by the standards process manager of a written request.

320. Alternate Method for Adopting Violation Risk Factors

In the event the Reliability Standards development process fails to produce Violation Risk Factors for a particular Reliability Standard in a timely manner, the Board of Trustees may adopt Violation Risk Factors for that Reliability Standard using the procedures set out in Section 1400 of these Rules of Procedure.

321. Special Rule to Address Certain Regulatory Directives

In circumstances where this Rule 321 applies, the Board of Trustees shall have the authority to take one or more of the actions set out below. The Board of Trustees shall have the authority to choose which one or more of the actions are appropriate to the circumstances and need not take these actions in sequential steps.

1. The Standards Committee shall have the responsibility to ensure that standards drafting teams address specific matters that are identified in directives issued by Applicable Governmental Authorities. If the Board of Trustees is presented with a proposed Reliability Standard that fails to address such directives, the Board of Trustees has the authority to remand, with instructions (including establishing a timetable for action), the proposed Reliability Standard to the Standards Committee.

2. Upon a written finding by the Board of Trustees that a ballot pool has failed to approve a proposed Reliability Standard that contains a provision to address a specific matter identified in a directive issued by an Applicable Governmental Authority, the Board of Trustees has the authority to remand the proposed Reliability Standard to the Standards Committee, with instructions to (i) convene a public technical conference to discuss the issues surrounding the regulatory directive, including whether or not the proposed Reliability Standard is just, reasonable, not unduly discriminatory or preferential, in the public interest, helpful to reliability, practical, technically sound, technically feasible, and cost-justified; (ii) working with NERC staff, prepare a memorandum discussing the issues, an analysis of the alternatives considered and other appropriate matters; and (iii) re-ballot the proposed Reliability Standard one additional time, with such adjustments in the schedule as are necessary to meet the deadline contained in paragraph 2.1 of this Rule.

   2.1 Such a re-ballot shall be completed within forty-five (45) days of the remand. The Standards Committee memorandum shall be included in the materials made available to the ballot pool in connection with the re-ballot.

   2.2 In any such re-ballot, negative votes without comments related to the proposal shall be counted for purposes of establishing a quorum, but only affirmative votes and negative votes with comments related to the proposal shall be counted for purposes of determining the number of votes cast and whether the proposed Reliability Standard has been approved.

3. If the re-balloted proposed Reliability Standard achieves at least an affirmative two-thirds majority vote of the weighted Segment votes cast, with a quorum established, then the proposed Reliability Standard shall be deemed approved by the ballot pool and shall be considered by the Board of Trustees for approval.

4. If the re-balloted proposed Reliability Standard fails to achieve at least an affirmative two-thirds majority vote of the weighted Segment votes cast, but does achieve at least a sixty percent affirmative majority of the weighted Segment votes cast, with a quorum established, then the Board of Trustees has the authority to consider the proposed Reliability Standard for approval under the following procedures:

   4.1 The Board of Trustees shall issue notice of its intent to consider the proposed Reliability Standard and shall solicit written public comment

particularly focused on the technical aspects of the provisions of the proposed Reliability Standard that address the specific matter identified in the regulatory directive, including whether or not the proposed Reliability Standard is just, reasonable, not unduly discriminatory or preferential, in the public interest, helpful to reliability, practical, technically sound, technically feasible, and cost-justified.

4.2 The Board of Trustees may, in its discretion, convene a public technical conference to receive additional input on the matter.

4.3 After considering the developmental record, the comments received during balloting and the additional input received under paragraphs 4.1 and 4.2 of this Rule, the Board of Trustees has authority to act on the proposed Reliability Standard.

4.3.1 If the Board of Trustees finds that the proposed Reliability Standard is just, reasonable, not unduly discriminatory or preferential, and in the public interest, considering (among other things) whether it is helpful to reliability, practical, technically sound, technically feasible, and cost-justified, then it has authority to approve the proposed Reliability Standard and direct that it be filed with Applicable Governmental Authorities with a request that it be made effective.

4.3.2 If the Board of Trustees is unable to find that the proposed Reliability Standard is just, reasonable, not unduly discriminatory or preferential, and in the public interest, considering (among other things) whether it is helpful to reliability, practical, technically sound, technically feasible, and cost-justified, then it has authority to treat the proposed Reliability Standard as a draft Reliability Standard and direct that the draft Reliability Standard and complete developmental record, including the additional input received under paragraphs 4.1 and 4.2 of this Rule, be filed with the Applicable Governmental Authorities as a compliance filing in response to the order giving rise to the regulatory directive, along with a recommendation that the Reliability Standard not be made effective and an explanation of the basis for the recommendation.

A5. Upon a written finding by the Board of Trustees that standard drafting team has failed to develop, or a ballot pool has failed to approve, a proposed Reliability Standard that contains a provision to address a specific matter identified in a directive issued by an Applicable Governmental Authority, the Board of Trustees has the authority to direct the Standards Committee (with the assistance of stakeholders and NERC staff) to prepare a draft Reliability Standard that addresses the regulatory directive, taking account of the entire developmental record pertaining to the matter. If the Standards Committee fails to prepare such

draft Reliability Standard, the Board of Trustees may direct NERC management to prepare such draft Reliability Standard.

5.1 The Board of Trustees may, in its discretion, convene a public technical conference to receive input on the matter. The draft Reliability Standard shall be posted for a 45-day public comment period.

5.2 If, after considering the entire developmental record (including the comments received under paragraph 5.1 of this Rule), the Board of Trustees finds that the draft Reliability Standard, with such modifications as the Board of Trustees determines are appropriate in light of the comments received, is just, reasonable, not unduly discriminatory or preferential, and in the public interest, considering (among other things) whether it is practical, technically sound, technically feasible, cost-justified and serves the best interests of reliability of the Bulk Power System, then the Board of Trustees has the authority to approve the draft Reliability Standard and direct that the proposed Reliability Standard be filed with Applicable Governmental Authorities with a request that the proposed Reliability Standard be made effective.

5.3 If, after considering the entire developmental record (including the comments received under paragraph 5.1 of this Rule), the Board of Trustees is unable to find that the draft Reliability Standard, even with modifications, is just, reasonable, not unduly discriminatory or preferential, and in the public interest, considering (among other things) whether it is practical, technically sound, technically feasible, cost-justified and serves the best interests of reliability of the Bulk Power System, then the Board of Trustees has the authority to direct that the draft Reliability Standard and complete developmental record be filed as a compliance filing in response to the regulatory directive with the Applicable Governmental Authority issuing the regulatory directive, with a recommendation that the draft Reliability Standard not be made effective.

5.4 The filing of the Reliability Standard under either paragraph 5.2 or paragraph 5.3 of this Rule shall include an explanation of the basis for the decision by the Board of Trustees.

5.5 A Reliability Standard approved under paragraph 5 of this Rule shall not be eligible for submission as an American National Standard.

6. NERC shall on or before March 31st of each year file a report with Applicable Governmental Authorities on the status and timetable for addressing each outstanding directive to address a specific matter received from an Applicable Governmental Authority.

SECTION 400 — COMPLIANCE ENFORCEMENT

401. Scope of the NERC Compliance Monitoring and Enforcement Program

1. **Components of the NERC Compliance Monitoring and Enforcement Program** — NERC shall develop and implement a NERC Compliance Monitoring and Enforcement Program to promote the reliability of the Bulk Power System by enforcing compliance with approved Reliability Standards in those regions of North American in which NERC and/or a Regional Entity (pursuant to a delegation agreement with NERC that has been approved by the Applicable Governmental Authority) has been given enforcement authority. There are four distinct parts of the NERC Compliance Monitoring and Enforcement Program: (1) NERC's oversight of the Regional Entity Compliance Monitoring and Enforcement Programs (Section 402), (2) the definition of the required Regional Entity Compliance Monitoring and Enforcement Program attributes (Section 403), (3) NERC's monitoring of Regional Entity compliance with Reliability Standards (Section 404), and (4) the monitoring of compliance with Reliability Standards that are applicable to NERC (Sections 405–406).

2. **Who Must Comply** — Where required by applicable legislation, regulation, rule or agreement, all Bulk Power System owners, operators, and users, Regional Entities, and NERC, are required to comply with all approved NERC Reliability Standards at all times. Regional Reliability Standards and Variances approved by NERC and the Applicable Governmental Authority shall be considered NERC Reliability Standards and shall apply to all Bulk Power System owners, operators, or users responsible for meeting those Reliability Standards within the Regional Entity boundaries, whether or not the Bulk Power System owner, operator, or user is a member of the Regional Entity.

3. **Data Access** — All Bulk Power System owners, operators, and users shall provide to NERC and the applicable Regional Entity such information as is necessary to monitor compliance with the Reliability Standards. NERC and the applicable Regional Entity will define the data retention and reporting requirements in the Reliability Standards and compliance reporting procedures.

4. **Role of Regional Entities in the Compliance Monitoring and Enforcement Program** — Each Regional Entity that has been delegated authority through a delegation agreement or other legal instrument approved by the Applicable Governmental Authority shall, in accordance with the terms of the approved delegation agreement, administer a Regional Entity Compliance Monitoring and Enforcement program to meet the NERC Compliance Monitoring and Enforcement Program goals and the requirements in this Section 400.

5. **Program Continuity** — NERC will ensure continuity of compliance monitoring and enforcement within the geographic boundaries of a Regional Entity in the event that NERC does not have a delegation agreement, or the Regional Entity withdraws from the agreement or does not operate its Compliance Monitoring and Enforcement Program in accordance with the delegation agreement or other applicable requirements.

5.1 Should NERC not have a delegation agreement with a Regional Entity covering a geographic area, or a Regional Entity withdraws from an existing delegation agreement or the delegation agreement is otherwise terminated, NERC will directly administer the Compliance Monitoring and Enforcement Program applicable to owners, operators and users of the Bulk Power System within that geographic area.

1. This monitoring and enforcement will be accomplished by NERC and Compliance Staff from another approved Regional Entity.

2. If an existing delegation agreement with a Regional Entity is terminating, the Regional Entity shall promptly provide to NERC all relevant compliance information regarding Registered Entities, contacts, prior compliance information and actions, Mitigation Plans, and remedial actions for the period in which the Regional Entity was responsible for administering the Compliance Monitoring and Enforcement Program.

3. NERC will levy and collect all Penalties directly and will utilize any Penalty monies collected to offset the expenses of administering the Compliance Monitoring and Enforcement Program for the geographic area.

5.2 Should a Regional Entity seek to withdraw from its delegation agreement, NERC will seek agreement from another Regional Entity to amend its delegation agreement with NERC to extend that Regional Entity's boundaries for compliance monitoring and enforcement. In the event no Regional Entity is willing to accept this responsibility, NERC will administer the Compliance Monitoring and Enforcement Program within the geographical boundaries of the Regional Entity seeking to withdraw from the delegation agreement, in accordance with Section 401.5.1.

6. **Actively Monitored Requirements** — NERC, with input from the Regional entities, stakeholders, and regulators, shall annually select a subset of the NERC Reliability Standards and Requirements to be actively monitored and audited in the annual NERC Compliance Monitoring and Enforcement Program Implementation Plan. Compliance is required with all NERC Reliability Standards whether or not they are included in the subset of Reliability Standards and Requirements designated to be actively monitored and audited in the annual NERC Compliance Monitoring and Enforcement Program Implementation Plan.

7. **Penalties, Sanctions, and Remedial Actions** — NERC and Regional Entities will apply Penalties, sanctions, and remedial actions that bear a reasonable relation to the seriousness of a violation and take into consideration timely remedial efforts as defined in the NERC *Sanction Guidelines*, which is incorporated into these rules as **Appendix 4B**.

8. **Multiple Enforcement Actions** – A Registered Entity shall not be subject to an enforcement action by NERC and a Regional Entity for the same violation.

9. **Records** — NERC shall maintain a record of each compliance submission, including Self-Reported, Possible, Alleged, and Confirmed Violations of approved Reliability Standards; associated Penalties, sanctions, remedial actions and settlements; and the status of mitigation actions.

10. **Confidential Information** — NERC will treat all Possible and Alleged Violations of Reliability Standards and matters related to a Compliance Monitoring and Enforcement Program process, including the status of any Compliance Investigation or other Compliance Monitoring and Enforcement Program process, as confidential in accordance with Section 1500.

    The types of information that will be considered confidential and will not (subject to statutory and regulatory requirements) be disclosed in any public information reported by NERC are identified in Section 1500. Information that would jeopardize Bulk Power System reliability, including information relating to a Cyber Security Incident, will be identified and protected from public disclosure as Critical Energy Infrastructure Information in accordance with Section 1500.

    The Regional Entity and NERC shall give Bulk Power System owners, operators, and users a reasonable opportunity to demonstrate that information concerning a violation is confidential before such report is disclosed to the public.

11. **Public Posting** — When the affected Bulk Power System owner, operator, or user either agrees with a Possible or Alleged Violation(s) of a Reliability Standard(s) or a report of a Compliance Audit or Compliance Investigation, or enters into a settlement agreement concerning a Possible or Alleged Violation(s), or the time for submitting an appeal is passed, or all appeals processes are complete, NERC shall, subject to the confidentiality requirements of these Rules of Procedure, publicly post each Confirmed Violation, Penalty or sanction, settlement agreement, and final Compliance Audit or Compliance Investigation report, on its website.

    11.1 Each Bulk Power System owner, operator, or user may provide NERC with a statement to accompany the Confirmed Violation or report to be posted publicly. The statement must be on company letterhead and include a signature, as well as the name and title of the person submitting the information.

    11.2 In accordance with Section 1500, information deemed by a Bulk Power System owner, operator, or user, Regional Entity, or NERC as Critical Energy Infrastructure Information (*NERC Security Guidelines for the Electricity Sector — Protecting Potentially Sensitive Information* may be used as a guide) or other Confidential Information shall be redacted in accordance with Section 1500 and not be released publicly.

    11.3 Subject to redaction of Critical Energy Infrastructure Information or other Confidential Information, for each Confirmed Violation or settlement relating to a Possible Violation or an Alleged Violation, the public posting

shall include the name of any relevant entity, the nature, time period, and circumstances of such Possible, Alleged or Confirmed Violation, any Mitigation Plan to be implemented by the Registered Entity in connection with the Confirmed Violation or settlement, and sufficient facts to assist owners, operators and users of the Bulk Power System to evaluate whether they have engaged in or are engaging in similar activities.

12. **Violation Information Review** — NERC Compliance Staff shall periodically review and analyze all reports of Possible, Alleged and Confirmed Violations to identify trends and other pertinent reliability issues.

402. NERC Oversight of the Regional Entity Compliance Monitoring and Enforcement Programs

1. **NERC Monitoring Program** — NERC shall have a program to monitor the Compliance Monitoring and Enforcement Program of each Regional Entity that has been delegated authority. The objective of this monitoring program shall be to ensure that the Regional Entity carries out its Compliance Monitoring and Enforcement Program in accordance with these Rules of Procedure and the terms of the delegation agreement, and to ensure consistency and fairness of the Regional Entity's Compliance Monitoring and Enforcement Program. Oversight and monitoring by NERC shall be accomplished through an annual Compliance Monitoring and Enforcement Program review, program audits, and regular evaluations of Regional Entity Compliance Monitoring and Enforcement Program performance as described below.

   1.1 **NERC Review of Annual Regional Entity Compliance Monitoring and Enforcement Program Implementation Plans** — NERC shall require each Regional Entity to submit for review and approval an annual Regional Entity Compliance Monitoring and Enforcement Program Implementation Plan. NERC shall review each annual Regional Entity Compliance Monitoring and Enforcement Program Implementation Plan and shall accept the plan if it meets NERC requirements and the requirements of the delegation agreement.

   1.2 **Regional Entity Compliance Monitoring and Enforcement Program Evaluation** — NERC shall annually evaluate the goals, tools, and procedures of each Regional Entity Compliance Monitoring and Enforcement Program to determine the effectiveness of each Regional Entity Compliance Monitoring and Enforcement Program, using criteria developed by the NERC Compliance and Certification Committee.

   1.3 **Regional Entity Compliance Monitoring and Enforcement Program Audit** — At least once every five years, NERC shall conduct an audit to evaluate how each Regional Entity Compliance Monitoring and Enforcement Program implements the NERC Compliance Monitoring and Enforcement Program. The evaluation shall be based on these Rules of Procedure, including Appendix 4C, the delegation agreement, directives in effect pursuant to the delegation agreement, approved annual Regional

Entity Compliance Monitoring and Enforcement Program Implementation Plans, required Compliance Monitoring and Enforcement Program attributes, and the NERC Compliance Monitoring and Enforcement Program procedures. These evaluations shall be provided to the Applicable Governmental Authorities to demonstrate the effectiveness of each Regional Entity. In addition, audits of Cross-Border Regional Entities shall cover applicable requirements imposed on the Regional Entity by statute, regulation, or order of, or agreement with, provincial governmental and/or regulatory authorities for which NERC has auditing responsibilities over the Regional Entity's compliance with such requirements within Canada or Mexico. Participation of a representative of an Applicable Governmental Authority shall be subject to the limitations of sections 3.1.6 and 8.0 of Appendix 4C of these Rules of Procedure regarding disclosures of non-public compliance information related to other jurisdictions. NERC shall maintain an audit procedure containing the requirements, steps, and timelines to conduct an audit of each Regional Entity Compliance Monitoring and Enforcement Program. The current procedure is contained in the NERC Audit of Regional Entity Compliance Programs, which is incorporated into these rules as **Appendix 4A**.

1.3.1. NERC shall establish a program to audit bulk power system owners, operators, and users operating within a regional entity to verify the findings of previous compliance audits conducted by the regional entity to evaluate how well the regional entity compliance enforcement program is meeting its delegated authority and responsibility.

1.4 Applicable Governmental Authorities will be allowed to participate as an observer in any audit conducted by NERC of a Regional Entity's Compliance Monitoring and Enforcement Program. A representative of the Regional Entity being audited will be allowed to participate in the audit as an observer.

2. **Consistency Among Regional Compliance Monitoring and Enforcement Programs** — To provide for a consistent Compliance Monitoring and Enforcement Program for all Bulk Power System owners, operators, and users required to comply with approved Reliability Standards, NERC shall maintain a single, uniform Compliance Monitoring and Enforcement Program, which is incorporated into these rules of procedure as **Appendix 4C**. Any differences in Regional Entity Compliance Monitoring and Enforcement Program methods, including determination of violations and Penalty assessment, shall be justified on a case-by-case basis and fully documented in each Regional Entity delegation agreement.

2.1 NERC shall ensure that each of the Regional Entity Compliance Monitoring and Enforcement Programs meets these Rules of Procedure, including **Appendix 4C**, and follows the terms of the delegation

agreement and the approved annual Regional Entity Compliance Monitoring and Enforcement Program Implementation Plan.

2.2 NERC shall maintain a single, uniform Compliance Monitoring and Enforcement Program in **Appendix 4C** containing the procedures to ensure the consistency and fairness of the processes used to determine Regional Entity Compliance Monitoring and Enforcement Program findings of compliance and noncompliance, and the application of Penalties and sanctions.

2.3 NERC shall periodically conduct Regional Entity compliance manager forums. These forums shall use the results of Regional Entity Compliance Monitoring and Enforcement Program audits and findings of NERC Compliance Staff to identify and refine Regional Entity Compliance Monitoring and Enforcement Program differences into a set of best practices over time.

3. **Information Collection and Reporting** — NERC and the Regional Entities shall implement data management procedures that address data reporting requirements, data integrity, data retention, data security, and data confidentiality.

4. **Violation Disclosure** — NERC shall disclose all Confirmed Violations and maintain as confidential Possible Violations and Alleged Violations, according to the reporting and disclosure process in **Appendix 4C**.

5. **Authority to Determine Noncompliance, Levy Penalties and Sanctions, and Issue Remedial Action Directives** — NERC and Regional Entity Compliance Staff shall have the authority and responsibility to make initial determinations of compliance or noncompliance, and where authorized by the Applicable Governmental Authorities or where otherwise authorized, to determine Penalties and sanctions for noncompliance with a Reliability Standard, and issue Remedial Action Directives. Regional Entity boards or a compliance panel reporting directly to the Regional Entity board will be vested with the authority for the overall Regional Entity Compliance Monitoring and Enforcement Program and have the authority to impose Penalties and sanctions on behalf of NERC, where authorized by applicable legislation or agreement. Remedial Action Directives may be issued by NERC or a Regional Entity that is aware of a Bulk Power System owner, operator, or user that is about to engage in an act or practice that would result in noncompliance with a Reliability Standard, where such Remedial Action Directive is immediately necessary to protect the reliability of the Bulk Power System from an imminent threat. If, after receiving such a Remedial Action Directive, the Bulk Power System owner, operator, or user does not take appropriate action to avert a violation of a Reliability Standard, NERC may petition the Applicable Governmental Authority to issue a compliance order.

6. **Due Process** — NERC shall establish and maintain a fair, independent, and nondiscriminatory appeals process. The appeals process is set forth in Sections

408-410. The process shall allow Bulk Power System owners, operators, and users to appeal the Regional Entity's findings of noncompliance and to appeal Penalties, sanctions, and Remedial Action Directives that are levied by the Regional Entity. Appeals beyond the NERC process will be heard by the Applicable Governmental Authority.

The appeals process will also allow for appeals to NERC of any findings of noncompliance issued by NERC to a Regional Entity for Reliability Standards and Requirements where the Regional Entity is monitored for compliance to a Reliability Standard. No monetary Penalties will be levied in these matters; however sanctions, remedial actions, and directives to comply may be applied by NERC.

7. **Conflict Disclosure** — NERC shall disclose to the appropriate governmental authorities any potential conflicts between a market rule and the enforcement of a Regional Reliability Standard.

8. **Confidentiality** — To maintain the integrity of the NERC Compliance Monitoring and Enforcement Program, NERC and Regional Entity staff, Compliance Audit team members, and committee members shall maintain the confidentiality of information obtained and shared during compliance monitoring and enforcement processes including Compliance Investigations, Compliance Audits, Spot Checks, drafting of reports, appeals, and closed meetings.

   8.1 NERC and the Regional Entity shall have in place appropriate codes of conduct and confidentiality agreements for staff and other Compliance Monitoring and Enforcement Program participants.

   8.2 Individuals not bound by NERC or Regional Entity codes of conduct who serve on compliance-related committees or Compliance Audit teams shall sign a NERC confidentiality agreement prior to participating on the committee or Compliance Audit team.

   8.3 Information deemed by a Bulk Power System owner, operator, or user, Regional Entity, or NERC as Critical Energy Infrastructure Information shall not be distributed outside of a committee or team, nor released publicly. Other information subject to confidentiality is identified in Section 1500.

   8.4 In the event that a staff, committee, or Compliance Audit team member violates any of the confidentiality rules set forth above, the staff, committee, or Compliance Audit team member and any member organization with which the individual is associated may be subject to appropriate action by the Regional Entity or NERC, including prohibiting participation in future Compliance Monitoring and Enforcement Program activities.

9. **Auditor Training** — NERC shall develop and provide training in auditing skills to all people who participate in NERC and Regional Entity Compliance Audits. Training for NERC and Regional Entity personnel and others who serve as Compliance Audit team leaders shall be more comprehensive than training given to industry subject matter experts and Regional Entity members. Training for Regional Entity members may be delegated to the Regional Entity.

403. Required Attributes of Regional Entity Compliance Monitoring and Enforcement Programs

Each Regional Entity Compliance Monitoring and Enforcement Program shall promote excellence in the enforcement of Reliability Standards. To accomplish this goal, each Regional Entity Compliance Monitoring and Enforcement Program shall (i) conform to and comply with the NERC uniform Compliance Monitoring and Enforcement Program, **Appendix 4C** to these Rules of Procedure, except to the extent of any deviations that are stated in the Regional Entity's delegation agreement, and (ii) meet all of the attributes set forth in this Section 403.

Program Structure

1. **Independence** — Each Regional Entity's governance of its Compliance Monitoring and Enforcement Program shall exhibit independence, meaning the Compliance Monitoring and Enforcement Program shall be organized so that its compliance monitoring and enforcement activities are carried out separately from other activities of the Regional Entity. The Compliance Monitoring and Enforcement Program shall not be unduly influenced by the Bulk Power System owners, operators, and users being monitored or other Regional Entity activities that are required to meet the Reliability Standards. Regional Entities must include rules providing that no two industry sectors may control any decision and no single segment may veto any matter related to compliance.

2. **Exercising Authority** — Each Regional Entity Compliance Monitoring and Enforcement Program shall exercise the responsibility and authority in carrying out the delegated functions of the NERC Compliance Monitoring and Enforcement Program in accordance with delegation agreements and **Appendix 4C**. These functions include but are not limited to: data gathering, data reporting, Compliance Investigations, Compliance Audit activities, evaluating compliance and noncompliance, imposing Penalties and sanctions, and approving and tracking mitigation actions.

3. **Delegation of Authority** — To maintain independence, fairness, and consistency in the NERC Compliance Monitoring and Enforcement Program, a Regional Entity shall not sub-delegate its Compliance Monitoring and Enforcement Program duties to entities or persons other than the Regional Entity Compliance Staff, unless (i) required by statute or regulation in the applicable jurisdiction, or (ii) by agreement with express approval of NERC and of FERC or other Applicable Governmental Authority, to another Regional Entity.

4. **Hearings of Contested Findings or Sanctions —** The Regional Entity board or compliance panel reporting directly to the Regional Entity board (with appropriate

recusal procedures) will be vested with the authority for conducting compliance hearings in which any Bulk Power System owner, operator, or user provided a Notice of Alleged Violation may present facts and other information to contest a Notice of Alleged Violation or any proposed Penalty, sanction, any Remedial Action Directive, or any Mitigation Plan component. Compliance hearings shall be conducted in accordance with the Hearing Procedures set forth in Attachment 2 to **Appendix 4C**. If a stakeholder body serves as the Hearing Body, no two industry sectors may control any decision and no single segment may veto any matter related to compliance after recusals.

Program Resources

5. **Regional Entity Compliance Staff** — Each Regional Entity shall have sufficient resources to meet delegated compliance monitoring and enforcement responsibilities, including the necessary professional staff to manage and implement the Regional Entity Compliance Monitoring and Enforcement Program.

6. **Regional Entity Compliance Staff Independence** — The Regional Entity Compliance Staff shall be capable of and required to make all determinations of compliance and noncompliance and determine Penalties, sanctions, and remedial actions.

    6.1 Regional Entity Compliance Staff shall not have a conflict of interest, real or perceived, in the outcome of compliance monitoring and enforcement processes, reports, or sanctions. The Regional Entity shall have in effect a conflict of interest policy.

    6.2 Regional Entity Compliance Staff shall have the authority and responsibility to carry out compliance monitoring and enforcement processes (with the input of industry subject matter experts), make determinations of compliance or noncompliance, and levy Penalties and sanctions without interference or undue influence from Regional Entity members and their representative or other industry entities.

    6.3 Regional Entity Compliance Staff may call upon independent technical subject matter experts who have no conflict of interest in the outcome of the compliance monitoring and enforcement process to provide technical advice or recommendations in the determination of compliance or noncompliance.

    6.4 Regional Entity Compliance Staff shall abide by the confidentiality requirements contained in Section 1500 and **Appendix 4C** of these Rules of Procedure, the NERC delegation agreement and other confidentiality agreements required by the NERC Compliance Monitoring and Enforcement Program.

    6.5 Contracting with independent consultants or others working for the Regional Entity Compliance Monitoring and Enforcement Program shall be permitted provided the individual has not received compensation from a Bulk Power System owner, operator, or user being monitored for a

period of at least the preceding six months and owns no financial interest in any Bulk Power System owner, operator, or user being monitored for compliance to the Reliability Standard, regardless of where the Bulk Power System owner, operator, or user operates. Any such individuals for the purpose of these Rules of Procedure shall be considered as augmenting Regional Entity Compliance Staff.

7. Use of Industry Subject Matter Experts and Regional Entity Members — Industry experts and Regional Entity members may be called upon to provide their technical expertise in Compliance Monitoring and Enforcement Program activities.

7.1 The Regional Entity shall have procedures defining the allowable involvement of industry subject matter experts and Regional Entity members. The procedures shall address applicable antitrust laws and conflicts of interest.

7.2 Industry subject matter experts and Regional Entity members shall have no conflict of interest or financial interests in the outcome of their activities.

7.3 Regional Entity members and industry subject matter experts, as part of teams or Regional Entity committees, may provide input to the Regional Entity Compliance Staff so long as the authority and responsibility for (i) evaluating and determining compliance or noncompliance and (ii) levying Penalties, sanctions, or remedial actions shall not be delegated to any person or entity other than the Compliance Staff of the Regional Entity. Industry subject matter experts, Regional Entity members, or Regional Entity committees shall not make determinations of noncompliance or levy Penalties, sanctions, or remedial actions. Any committee involved shall be organized so that no two industry sectors may control any decision and no single segment may veto any matter related to compliance.

7.4 Industry subject matter experts and Regional Entity members shall sign a confidentiality agreement appropriate for the activity being performed.

7.5 All industry subject matter experts and Regional Entity members participating in Compliance Audits and Compliance Investigations shall successfully complete auditor training provided by NERC or the Regional Entity prior to performing these activities

Program Design

8. **Regional Entity Compliance Monitoring and Enforcement Program Content** — All approved Reliability Standards shall be included in the Regional Entity Compliance Monitoring and Enforcement Program for all Bulk Power System owners, operators, and users within the defined boundaries of the Regional Entity.

Compliance to approved Regional Reliability Standards is applicable only within the Region of the Regional Entity that submitted those particular Regional Reliability Standards for approval. NERC will identify the minimum set of Reliability Standards and Requirements to be actively monitored by the Regional Entity in a given year.

9. **Antitrust Provisions** — Each Regional Entity's Compliance Monitoring and Enforcement Program shall be structured and administered to abide by U.S. antitrust law and Canadian competition law.

10. **Information Submittal** — All Bulk Power System owners, operators, and users within the Regional Entity responsible for complying with Reliability Standards shall submit timely and accurate information when requested by the Regional Entity or NERC. NERC and the Regional Entities shall preserve any mark of confidentiality on information submitted pursuant to Section 1502.1.

    10.1 Each Regional Entity has the authority to collect the necessary information to determine compliance and shall develop processes for gathering data from the Bulk Power System owners, operators, and users the Regional Entity monitors.

    10.2 The Regional Entity or NERC has the authority to request information from Bulk Power System owners, operators, and users pursuant to Section 401.3 or this Section 403.10 without invoking a specific compliance monitoring and enforcement process in **Appendix 4C**, for purposes of determining whether to pursue one such process in a particular case and/or validating in the enforcement phase of a matter the conclusions reached through the compliance monitoring and enforcement process(es).

    10.3 When required or requested, the Regional Entities shall report information to NERC promptly and in accordance with **Appendix 4C** and other NERC procedures.

    10.4 Regional Entities shall notify NERC of all Possible, Alleged and Confirmed Violations of NERC Reliability Standards by Registered Entities over which the Regional Entity has compliance monitoring and enforcement authority, in accordance with **Appendix 4C**.

    10.5 A Bulk Power System owner, operator, or user found in noncompliance with a Reliability Standard shall submit a Mitigation Plan with a timeline addressing how the noncompliance will be corrected. The Regional Entity Compliance Staff shall review and approve the Mitigation Plan in accordance with **Appendix 4C**.

    10.6 An officer of a Bulk Power System owner, operator, or user shall certify as accurate all compliance data Self-Reported to the Regional Entity Compliance Monitoring and Enforcement Program.

10.7 Regional Entities shall develop and implement procedures to verify the compliance information submitted by Bulk Power System owners, operators, and users.

11. **Compliance Audits of Bulk Power System Owners, Operators, and Users** — Each Regional Entity will maintain and implement a program of proactive Compliance Audits of Bulk Power System owners, operators, and users responsible for complying with Reliability Standards, in accordance with **Appendix 4C**. A Compliance Audit is a process in which a detailed review of the activities of a Bulk Power System owner, operator, or user is performed to determine if that Bulk Power System owner, operator, or user is complying with approved Reliability Standards.

11.1 For an entity registered as a Balancing Authority, Reliability Coordinator, or Transmission Operator, the Compliance Audit will be performed at least once every three years. For other Bulk Power System owners, operators, and users on the NERC Compliance Registry, Compliance Audits shall be performed on a schedule established by NERC.

11.2 Compliance Audits of Balancing Authorities, Reliability Coordinators, and Transmission Operators will include a component at the audited entity's site. For other Bulk Power System owners, operators, and users on the NERC Compliance Registry, the Compliance Audit may be either an on-site Compliance Audit or based on review of documents, as determined to be necessary and appropriate by NERC or Regional Entity Compliance Staff.

11.3 Compliance Audits must include a detailed review of the activities of the Bulk Power System owner, operator, or user to determine if the Bulk Power System owner, operator, or user is complying with all approved Reliability Standards identified for audit by NERC. The Compliance Audit shall include a review of supporting documentation and evidence used by the Bulk Power System owner, operator or user to demonstrate compliance for an appropriate period prior to the Compliance Audit.

12. **Confidentiality of Compliance Monitoring and Enforcement Processes** — All compliance monitoring and enforcement processes, and information obtained from such processes, are to be non-public and treated as confidential in accordance with Section 1500 and **Appendix 4C** of these Rules of Procedure, unless NERC, the Regional Entity or FERC or another Applicable Governmental Authority with jurisdiction determines a need to conduct a Compliance Monitoring and Enforcement Program process on a public basis, provided, that NERC and the Regional Entities shall publish (i) schedules of Compliance Audits scheduled in each year, (ii) a public report of each Compliance Audit, and (iii) Notices of Penalty and settlement agreements. Advance authorization from the Applicable Governmental Authority is required to make public any compliance monitoring and enforcement process or any information relating to a compliance

monitoring and enforcement process, or to permit interventions when determining whether to impose a Penalty. This prohibition on making public any compliance monitoring and enforcement process does not prohibit NERC or a Regional Entity from publicly disclosing (i) the initiation of or results from an analysis of a significant system event under Section 807 or of off-normal events or system performance under Section 808, or (ii) information of general applicability and usefulness to owners, operators, and users of the Bulk Power System concerning reliability and compliance matters, so long as specific allegations or conclusions regarding Possible or Alleged Violations of Reliability Standards are not included in such disclosures.

13. **Critical Energy Infrastructure Information** — Information that would jeopardize Bulk Power System reliability, including information relating to a Cyber Security Incident will be identified and protected from public disclosure as Critical Energy Infrastructure Information. In accordance with Section 1500, information deemed by a Bulk Power System owner, operator, or user, Regional Entity, or NERC as Critical Energy Infrastructure Information shall be redacted according to NERC procedures and shall not be released publicly.

14. **Penalties, Sanctions, and Remedial Action Directives** — Each Regional Entity will apply all Penalties, sanctions, and Remedial Action Directives in accordance with the approved *Sanction Guidelines*, **Appendix 4B** to these Rules of Procedure. Any changes to the *Sanction Guidelines* to be used by any Regional Entity must be approved by NERC and submitted to the Applicable Governmental Authority for approval. All Confirmed Violations, Penalties, and sanctions will be provided to NERC for review and filing with Applicable Governmental Authorities as a Notice of Penalty, in accordance with **Appendix 4C**.

15. **Regional Entity Hearing Process** — Each Regional Entity Compliance Monitoring and Enforcement Program shall establish and maintain a fair, independent, and nondiscriminatory process for hearing contested violations and any Penalties or sanctions levied, in conformance with Attachment 2 to **Appendix 4C** to these Rules of Procedure and any deviations therefrom that are set forth in the Regional Entity's delegation agreement. The hearing process shall allow Bulk Power System owners, operators, and users to contest findings of compliance violations, any Penalties and sanctions that are proposed to be levied, proposed Remedial Action Directives, and components of proposed Mitigation Plans. The Regional Entity hearing process shall be conducted before the Regional Entity board or a balanced committee established by and reporting to the Regional Entity board as the final adjudicator, provided, that Canadian provincial regulators may act as the final adjudicator in their respective jurisdictions. The Regional Entity hearing process shall (i) include provisions for recusal of any members of the Hearing Body with a potential conflict of interest, real or perceived, from all compliance matters considered by the Hearing Body for which the potential conflict of interest exists and (ii) provide that no two industry sectors may control any decision and no single segment may veto any matter brought before the Hearing Body after recusals.

Each Regional Entity will notify NERC of all hearings and NERC may observe any of the proceedings. Each Regional Entity will notify NERC of the outcome of all hearings.

If a Bulk Power System owner, operator, or user has completed the Regional Entity hearing process and desires to appeal the outcome of the hearing, the Bulk Power System owner, operator, or user shall appeal to NERC in accordance with Section 409 of these Rules of Procedure, except that a determination of violation or Penalty that has been directly adjudicated by an Applicable Governmental Authority shall be appealed with that Applicable Governmental Authority.

16. **Annual Regional Entity Compliance Monitoring and Enforcement Program Implementation Plan** — Each Regional Entity shall annually develop and submit to NERC for approval a Regional Entity Compliance Monitoring and Enforcement Implementation Plan in accordance with **Appendix 4C** that identifies the Reliability Standards and Requirements to be actively monitored (both those required by NERC and any additional Reliability Standards the Regional Entity proposes to monitor), and how each NERC and Regional Entity identified Reliability Standard will be monitored, evaluated, reported, sanctioned, and appealed. These Regional Implementation Plans will be submitted to NERC on the schedule established by NERC, generally on or about November 1 of the preceding year. In conjunction with the annual Regional Implementation Plan, each Regional Entity must report to NERC regarding how it carried out its delegated compliance monitoring and enforcement authority in the previous year, the effectiveness of the Compliance Monitoring and Enforcement Program, and changes expected to correct any deficiencies identified. Each Regional Entity will provide its annual report on the schedule established by NERC, generally on or about February 15 of the following year.

404. NERC Monitoring of Compliance for Regional Entities or Bulk Power Owners, Operator, or Users

NERC shall monitor Regional Entity compliance with NERC Reliability Standards and, if no there is no delegation agreement in effect with a Regional Entity for the geographic area, shall monitor Bulk Power System owners, operators, and users for compliance with NERC Reliability Standards. Industry subject matter experts may be used as appropriate in Compliance Investigations, Compliance Audits, and other Compliance Monitoring and Enforcement Program activities, subject to confidentiality, antitrust, and conflict of interest provisions.

1. **NERC Obligations** — NERC Compliance Staff shall monitor the compliance of the Regional Entity with the Reliability Standards for which the Regional Entities are responsible, in accordance with **Appendix 4C**. NERC shall actively monitor in its annual Compliance Enforcement and Monitoring Program selected Reliability Standards that apply to the Regional Entities. NERC shall evaluate compliance and noncompliance with all of the Reliability Standards that apply to the Regional Entities and shall impose sanctions, Penalties, or Remedial Action

Directives when there is a finding of noncompliance. NERC shall post all violations of Reliability Standards that apply to the Regional Entities as described in the reporting and disclosure process in **Appendix 4C**.

In addition, NERC will directly monitor Bulk Power System owners, operators, and users for compliance with NERC Reliability Standards in any geographic area for which there is not a delegation agreement in effect with a Regional Entity, in accordance with **Appendix 4C**. In such cases, NERC will serve as the Compliance Enforcement Authority described in **Appendix 4C**. Compliance matters contested by Bulk Power System owners, operators, and users in such an event will be heard by the NERC Compliance and Certification Committee.

2. **Compliance Audit of the Regional Entity** — NERC shall perform a Compliance Audit of each Regional Entity responsible for complying with Reliability Standards at least once every three years. NERC shall make an evaluation of compliance based on the information obtained through the Compliance Audit. After due process is complete, the final Compliance Audit report shall be made public in accordance with the reporting and disclosure process in **Appendix 4C**.

3. **Appeals Process** —Any Regional Entity or Bulk Power System owner, operator or user found by NERC, as opposed to a Regional Entity, to be in noncompliance with a Reliability Standard may appeal the findings of noncompliance with Reliability Standards and any sanctions or Remedial Action Directives that are issued by, or Mitigation Plan components imposed by, NERC, pursuant to the processes described in Sections 408 through 410.

405. Monitoring of Reliability Standards and Other Requirements Applicable to NERC

The NERC Compliance and Certification Committee shall establish and implement a process to monitor NERC's compliance with the Reliability Standards that apply to NERC. The process shall use independent monitors with no conflict of interest, real or perceived, in the outcomes of the process. All violations shall be made public according to the reporting and disclosure process in **Appendix 4C**. The Compliance and Certification Committee will also establish a procedure for monitoring NERC's compliance with its Rules of Procedure for the Standards Development, Compliance Monitoring and Enforcement, and Organization Registration and Certification Programs. Such procedures shall not be used to circumvent the appeals processes established for those programs.

406. Independent Audits of the NERC Compliance Monitoring and Enforcement Program

NERC shall provide for an independent audit of its Compliance Monitoring and Enforcement Program at least once every three years, or more frequently as determined by the Board. The audit shall be conducted by independent expert auditors as selected by the Board. The independent audit shall meet the following minimum requirements and any other requirements established by the NERC Board.

1. **Effectiveness** — The audit shall evaluate the success and effectiveness of the NERC Compliance Monitoring and Enforcement Program in achieving its mission.

2. **Relationship** — The audit shall evaluate the relationship between NERC and the Regional Entity Compliance Monitoring and Enforcement Programs and the effectiveness of the programs in ensuring reliability.

3. **Final Report Posting** — The final report shall be posted by NERC for public viewing in accordance with **Appendix 4C**.

4. **Response to Recommendations** — If the audit report includes recommendations to improve the NERC Compliance Monitoring and Enforcement Program, the administrators of the NERC Compliance Monitoring and Enforcement Program shall provide a written response and plan to the Board within 30 days of the release of the final audit report.

407. Penalties, Sanctions, and Remedial Actions

1. **NERC Review of Regional Entity Penalties and Sanctions —** NERC shall review all Penalties, sanctions, and remedial actions imposed by each Regional Entity for violations of Reliability Standards to determine if the Regional Entity's determination is supported by a sufficient record compiled by the Regional Entity, is consistent with the *Sanction Guidelines* incorporated into these Rules of Procedure as **Appendix 4B** and with other directives, guidance and directions issued by NERC pursuant to the delegation agreement, and is consistent with Penalties, sanctions and remedial actions imposed by the Regional Entity and by other Regional Entities for violations involving the same or similar facts and circumstances.

2. **Developing Penalties and Sanctions** — The Regional Entity Compliance Staff shall use the *Sanction Guidelines*, which are incorporated into these Rules of Procedure as **Appendix 4B**, to develop an appropriate Penalty, sanction, or remedial action for a violation, and shall notify NERC of the Penalty or sanction.

3. **Effective Date of Penalty** — Where authorized by applicable legislation or agreement, no Penalty imposed for a violation of a Reliability Standard shall take effect until the thirty-first day after NERC files, with the Applicable Governmental Authority, a "Notice of Penalty" and the record of the proceedings in which the violation and Penalty were determined, or such other date as ordered by the Applicable Governmental Authority.

408. Review of NERC Decisions

1. **Scope of Review** — A Registered Entity or a Regional Entity wishing to challenge a finding of noncompliance and the imposition of a Penalty for a compliance measure directly administered by NERC, or a Regional Entity wishing to challenge a Regional Entity Compliance Monitoring and Enforcement Program audit finding, may do so by filing a notice of the challenge with NERC's

Director of Compliance no later than 21 days after issuance of the notice of finding of violation or audit finding. Appeals by Registered Entities of decisions of Regional Entity Hearing Bodies shall be pursuant to Section 409 .

2. **Contents of Notice** — The notice of challenge shall include the full text of the decision that is being challenged, a concise statement of the error or errors contained in the decision, a clear statement of the relief being sought, and argument in sufficient detail to justify such relief.

3. **Response by NERC Compliance Monitoring and Enforcement Program** — Within 21 days after receiving a copy of the notice of challenge, the NERC Director of Compliance may file with the Hearing Panel a response to the issues raised in the notice, with a copy to the Regional Entity.

4. **Hearing by Compliance and Certification Committee** — The NERC Compliance and Certification Committee shall provide representatives of the Regional Entity or Registered Entity, and the NERC Compliance Monitoring and Enforcement Program an opportunity to be heard and shall decide the matter based upon the filings and presentations made, with a written explanation of its decision.

5. **Appeal** — The Regional Entity, or Registered Entity may appeal the decision of the Compliance and Certification Committee by filing a notice of appeal with NERC's Director of Compliance no later than 21 days after issuance of the written decision by the Compliance and Certification Committee. The notice of appeal shall include the full text of the written decision of the Compliance and Certification Committee that is being appealed, a concise statement of the error or errors contained in the decision, a clear statement of the relief being sought, and argument in sufficient detail to justify such relief. No factual material shall be presented in the appeal that was not presented to the Compliance and Certification Committee.

6. **Response by NERC Compliance Monitoring and Enforcement Program** — Within 21 days after receiving a copy of the notice of appeal, the NERC Compliance Monitoring and Enforcement Program staff may file its response to the issues raised in the notice of appeal, with a copy to the entity filing the notice.

7. **Reply** — The entity filing the appeal may file a reply within 7 days.

8. **Decision** — The Compliance Committee of the NERC Board of Trustees shall decide the appeal, in writing, based upon the notice of appeal, the record, the response, and any reply. At its discretion, the Compliance Committee may invite representatives of the Regional Entity or Registered Entity, and the NERC Compliance Monitoring and Enforcement Program to appear before the Compliance Committee. Decisions of the Compliance Committee shall be final, except for further appeal to the Applicable Governmental Authority.

9. **Impartiality** — No member of the Compliance and Certification Committee or the Board of Trustees Compliance Committee having an actual or perceived conflict of interest in the matter may participate in any aspect of the challenge or appeal except as a party or witness.

10. **Expenses** — Each party in the challenge and appeals processes shall pay its own expenses for each step in the process.

11. **Non-Public Proceedings —** All challenges and appeals shall be closed to the public to protect Confidential Information.

409. Appeals from Final Decisions of Regional Entities

1. **Time for Appeal** — An owner, operator or user of the Bulk Power System wishing to appeal from a final decision of a Regional Entity that finds a violation of a Reliability Standard or imposes a Penalty for violation of a Reliability Standard shall file its notice of appeal with NERC's Director of Compliance, with a copy to the Regional Entity, no later than 21 days after issuance of the final decision of the Regional Entity Hearing Body. The same appeal procedures will apply regardless of whether the matter first arose in a Compliance Investigation, Compliance Audit or Self-Report, other compliance monitoring and enforcement process, or in a reliability readiness evaluation.

2. **Contents** — The notice of appeal shall include the full text of the final decision of the Regional Entity Hearing Body that is being appealed, a concise statement of the error or errors contained in the final decision, a clear statement of the relief being sought, and argument in sufficient detail to justify such relief. No factual material shall be presented in the appeal that was not first presented during the compliance hearing before the Regional Entity Hearing Body.

3. **Response by Regional Entity** — Within 21 days after receiving a copy of the notice of appeal, the Regional Entity shall file the entire record of the matter with NERC's Director of Compliance, with a copy to the Registered Entity filing the notice, together with its response to the issues raised in the notice of appeal.

4. **Reply** — The Registered Entity filing the appeal may file a reply to the Regional Entity within 7 days.

5. **Decision** — The Compliance Committee of the NERC Board of Trustees shall decide the appeal, in writing, based upon the notice of appeal, the record of the matter from the Regional Entity, the response, and any reply filed with NERC. At its discretion, the Compliance Committee may invite representatives of the Registered Entity making the appeal and the Regional Entity to appear before the Committee. Decisions of the Compliance Committee shall be final, except for further appeal to the Applicable Governmental Authority.

6. **Expenses** — Each party in the appeals process shall pay its own expenses for each step in the process.

7. **Non-Public Proceedings** — All appeals shall be closed to the public to protect Confidential Information.

410. Hold Harmless

A condition of invoking the challenge or appeals processes under Section 408 or 409 is that the entity requesting the challenge or appeal agrees that neither NERC (defined to include its Members, Board of Trustees, committees, subcommittees, staff and industry subject matter experts), any person assisting in the challenge or appeals processes, nor any company employing a person assisting in the challenge or appeals processes, shall be liable, and they shall be held harmless against the consequences of or any action or inaction or of any agreement reached in resolution of the dispute or any failure to reach agreement as a result of the challenge or appeals proceeding. This "hold harmless" clause does not extend to matters constituting gross negligence, intentional misconduct, or a breach of confidentiality.

411. Requests for Technical Feasibility Exceptions to NERC Critical Infrastructure Protection Reliability Standards

A Registered Entity that is subject to an Applicable Requirement of a NERC Critical Infrastructure Protection Standard for which Technical Feasibility Exceptions are permitted, may request a Technical Feasibility Exception to the Requirement, and the request will be reviewed, approved or disapproved, and if approved, implemented, in accordance with the NERC *Procedure for Requesting and Receiving Technical Feasibility Exceptions to NERC Critical Infrastructure Protection Standard*, Appendix 4D to these Rules of Procedure.

SECTION 500 — ORGANIZATION REGISTRATION AND CERTIFICATION

501. Scope of the Organization Registration and Organization Certification Programs

The purpose of the Organization Registration Program is to clearly identify those entities that are responsible for compliance with the FERC approved Reliability Standards. Organizations that are registered are included on the NERC Compliance Registry (NCR) and are responsible for knowing the content of and for complying with all applicable Reliability Standards. Registered Entities are not and do not become Members of NERC or a Regional Entity, by virtue of being listed on the NCR. Membership in NERC is governed by Article II of NERC's Bylaws; membership in a Regional Entity or regional reliability organization is governed by that entity's bylaws or rules.

The purpose of the Organization Certification Program is to ensure that the new entity (i.e., applicant to be an RC, BA, or TOP that is not already performing the function for which it is applying to be certified as) has the tools, processes, training, and procedures to demonstrate their ability to meet the Requirements/sub-Requirements of all of the Reliability Standards applicable to the function(s) for which it is applying thereby demonstrating the ability to become certified and then operational.

Organization Registration and Organization Certification may be delegated to Regional Entities in accordance with the procedures in this Section 500; the NERC *Organization Registration and Organization Certification Manual*, which is incorporated into these Rules of Procedure as **Appendix 5A**; and, approved Regional Entity delegation agreements or other applicable agreements.

1. **NERC Compliance Registry** — NERC shall establish and maintain the NCR of the Bulk Power System owners, operators, and users that are subject to approved Reliability Standards.

   1.1 (a) The NCR shall set forth the identity and functions performed for each organization responsible for meeting Requirements/sub-Requirements of the Reliability Standards. Bulk Power System owners, operators, and users (i) shall provide to NERC and the applicable Regional Entity information necessary to complete the Registration, and (ii) shall provide NERC and the applicable Regional Entity with timely updates to information concerning the Registered Entity's ownership, operations, contact information, and other information that may affect the Registered Entity's Registration status or other information recorded in the Compliance Registry.

   (b) A generation or transmission cooperative, a joint-action agency or another organization may register as a Joint Registration Organization (JRO), in lieu of each of the JRO's members or related entities being registered individually for one or more functions. Refer to Section 507.

(c) Multiple entities may each register using a Coordinated Functional Registration (CFR) for one or more Reliability Standard(s) and/or for one or more Requirements/sub-Requirements within particular Reliability Standard(s) applicable to a specific function pursuant to a written agreement for the division of compliance responsibility. Refer to Section 508.

1.2 In the development of the NCR, NERC and the Regional Entities shall determine which organizations should be placed on the NCR based on the criteria provided in the NERC *Statement of Compliance Registry Criteria* which is incorporated into these Rules of Procedure as **Appendix 5B**.

1.3 NERC and the Regional Entities shall use the following rules for establishing and maintaining the NCR based on the Registration criteria as set forth in **Appendix 5B** *Statement of Compliance Registry Criteria*:

1.3.1 NERC shall notify each organization that it is on the NCR. The Registered Entity is responsible for compliance with all the Reliability Standards applicable to the functions for which it is registered from the time it receives the Registration notification from NERC.

1.3.2 Any organization receiving such a notice may challenge its placement on the NCR according to the process in **Appendix 5A** *Organization Registration and Organization Certification Manual*, Section V.

1.3.3 The Compliance Committee of the Board of Trustees shall promptly issue a written decision on the challenge, including the reasons for the decision.

1.3.4 The decision of the Compliance Committee of the Board of Trustees shall be final unless, within 21 days of the date of the Compliance Committee of the Board of Trustees decision, the organization appeals the decision to the Applicable Governmental Authority.

1.3.5 Each Registered Entity identified on the NCR shall notify its corresponding Regional Entity(s) of any corrections, revisions, deletions, changes in ownership, corporate structure, or similar matters that affect the Registered Entity's responsibilities with respect to the Reliability Standards. Failure to notify will not relieve the Registered Entity from any responsibility to comply with the Reliability Standards or shield it from any Penalties or sanctions associated with failing to comply with the Reliability Standards applicable to its associated Registration.

1.4 For all geographical or electrical areas of the Bulk Power System, the Registration process shall ensure that (1) no areas are lacking any entities to perform the duties and tasks identified in and required by the Reliability Standards to the fullest extent practical, and (2) there is no unnecessary duplication of such coverage or of required oversight of such coverage. In particular the process shall:

1.4.1 Ensure that all areas are under the oversight of one and only one Reliability Coordinator.

1.4.2 Ensure that all Balancing Authorities and Transmission Operator entities[2] are under the responsibility of one and only one Reliability Coordinator.

1.4.3 Ensure that all transmission Facilities of the Bulk Power System are the responsibility and under the control of one and only one Transmission Planner, Planning Authority, and Transmission Operator.

1.4.4 Ensure that all Loads and generators are under the responsibility and control of one and only one Balancing Authority.

1.5 NERC shall maintain the NCR of organizations responsible for meeting the Requirements/sub-Requirements of the Reliability Standards currently in effect on its website and shall update the NCR monthly.

2. **Entity Certification** — NERC shall provide for Certification of all entities with primary reliability responsibilities requiring Certification. This includes those entities that satisfy the criteria established in the NERC provisional Certification process. The NERC programs shall:

2.1 Evaluate and certify the competency of entities performing reliability functions. The entities presently expected to be certified include Reliability Coordinators, Transmission Operators, and Balancing Authorities.

2.2 Evaluate and certify each applicant's ability to meet the requirements for Certification.

2.3 Maintain process documentation.

2.4 Maintain records of currently certified entities.

[2] Some organizations perform the listed functions (e.g., Balancing Authority, Transmission Operator) over areas that transcend the Footprints of more than one Reliability Coordinator. Such organizations will have multiple Registrations, with each such Registration corresponding to that portion of the organization's overall area that is within the Footprint of a particular Reliability Coordinator.

2.5 Issue a Certification document to the applicant that successfully demonstrates its competency to perform the evaluated functions.

3. **Delegation and Oversight**

3.1 NERC may delegate responsibilities for Organization Registration and Organization Certification to Regional Entities in accordance with requirements established by NERC. Delegation will be via the delegation agreement between NERC and the Regional Entity or other applicable agreement. The Regional Entity shall administer Organization Registration and Organization Certification Programs in accordance with such delegations to meet NERC's programs goals and requirements subject to NERC oversight.

3.2 NERC shall develop and maintain a plan to ensure the continuity of Organization Registration and Organization Certification within the geographic or electrical boundaries of a Regional Entity in the event that no entity is functioning as a Regional Entity for that Region, or the Regional Entity withdraws as a Regional Entity, or does not operate its Organization Registration and Organization Certification Programs in accordance with delegation agreements.

3.3 NERC shall develop and maintain a program to monitor and oversee the NERC Organization Registration and Organization Certification Programs activities that are delegated to each Regional Entity through a delegation agreement or other applicable agreement.

3.3.1 This program shall monitor whether the Regional Entity carries out those delegated activities in accordance with NERC requirements, and whether there is consistency, fairness of administration, and comparability.

3.3.2 Monitoring and oversight shall be accomplished through direct participation in the Organization Registration and Organization Certification Programs with periodic reviews of documents and records of both programs.

502. Organization Registration and Organization Certification Program Requirements

1. NERC shall maintain the Organization Registration and Organization Certification Programs.

1.1 The roles and authority of Regional Entities in the programs are delegated from NERC pursuant to the Rules of Procedure through regional delegation agreements or other applicable agreements.

1.2 Processes for the programs shall be administered by NERC and the Regional Entities. Materials that each Regional Entity uses are subject to review and approval by NERC.

1.3 The appeals process for the Organization Registration and Organization Certification Programs are identified in **Appendix 5A** *Organization Registration and Organization Certification Manual*, Sections V and VI, respectively.

1.4 The Certification Team membership is identified in **Appendix 5A** *Organization Registration and Organization Certification Manual*, Section IV.8.d.

2. To ensure consistency and fairness of the Organization Registration and Organization Certification Programs, NERC shall develop procedures to be used by all Regional Entities and NERC in accordance with the following criteria:

2.1 NERC and the Regional Entities shall have data management processes and procedures that provide for confidentiality, integrity, and retention of data and information collected.

2.2 Documentation used to substantiate the conclusions of the Regional Entity/ NERC related to Registration and/or Certification must be retained by the Regional Entity for (6) six years, unless a different retention period is otherwise identified, for the purposes of future audits of these programs.

2.3 To maintain the integrity of the NERC Organization Registration and Organization Certification Programs, NERC, Regional Entities, Certification Team members, program audit team members (Section 506), and committee members shall maintain the confidentiality of information provided by an applicant or entities.

2.2.1 NERC and the Regional Entities shall have appropriate codes of conduct and confidentiality agreements for staff, Certification Team, Certification related committees, and Certification program audit team members.

2.2.2 NERC, Regional Entities, Certification Team members, program audit team members and committee members shall maintain the confidentiality of any Registration or Certification-related discussions or documents designated as confidential (see Section 1500 for types of Confidential Information).

2.2.3 NERC, Regional Entities, Certification Team members, program audit team members and committee members shall treat as confidential the individual comments expressed during evaluations, program audits and report-drafting sessions.

2.2.4 Copies of notes, draft reports, and other interim documents developed or used during an entity Certification evaluation or program audit shall be destroyed after the public posting of a final, uncontested report.

2.2.5 Information deemed by an applicant, entity, a Regional Entity, or NERC as confidential, including Critical Energy Infrastructure Information, shall not be released publicly or distributed outside of a committee or team.

2.2.6 In the event that an individual violates any of the confidentiality rules set forth above, that individual and any member organization with which the individual is associated will be subject to immediate dismissal from the audit team and may be prohibited from future participation in Compliance Monitoring and Enforcement Program activities by the Regional Entity or NERC.

2.2.7 NERC shall develop and provide training in auditing skills to all individuals prior to their participation in Certification evaluations. Training for Certification Team leaders shall be more comprehensive than the training given to industry subject matter experts and Regional Entity members. Training for Regional Entity members may be delegated to the Regional Entity.

2.4 An applicant that is determined to be competent to perform a function after completing all Certification requirements shall be deemed certified by NERC to perform that function for which it has demonstrated full competency.

2.4.1 All NERC certified entities shall be included on the NCR.

503. Regional Entity Implementation of Organization Registration and Organization Certification Program Requirements

1. **Delegation** — Recognizing the Regional Entity's knowledge of and experience with their members, NERC may delegate responsibility for Organization Registration and Organization Certification to the Regional Entity through a delegation agreement.

2. **Registration** — The following Organization Registration activities shall be managed by the Regional Entity per the NERC *Organization Registration and Organization Certification Manual*, which is incorporated into the Rules of Procedure as Appendix 5A *Organization Registration and Organization Certification Manual*:

2.1 Regional Entities shall verify that all Reliability Coordinators, Balancing Authorities, and Transmission Operators meet the Registration requirements of Section 501(1.4).

3. **Certification —** The following Organization Certification activities shall be managed by the Regional Entity in accordance with an approved delegation agreement or another applicable agreement:

   3.1 An entity seeking Certification to perform one of the functions requiring Certification shall contact the Regional Entity for the Region(s) in which it plans to operate to apply for Certification.

   3.2 An entity seeking Certification and other affected entities shall provide all information and data requested by NERC or the Regional Entity to conduct the Certification process.

   3.3 Regional Entities shall notify NERC of all Certification applicants.

   3.4 NERC and/or the Regional Entity shall evaluate the competency of entities requiring Certification to meet the NERC Certification requirements.

   3.5 NERC or the Regional Entity shall establish Certification procedures to include evaluation processes, schedules and deadlines, expectations of the applicants and all entities participating in the evaluation and Certification processes, and requirements for Certification Team members.

      3.5.1 The NERC / Regional Entity Certification procedures will include provisions for on-site visits to the applicant's facilities to review the data collected through questionnaires, interviewing the operations and management personnel, inspecting the facilities and equipment (including requesting a demonstration of all tools identified in the Certification process), reviewing all necessary documents and data (including all agreements, processes, and procedures identified in the Certification process), reviewing Certification documents and projected system operator work schedules, and reviewing any additional documentation needed to support the completed questionnaire or inquiries arising during the site visit.

      3.5.2 The NERC/ Regional Entity Certification procedures will provide for preparation of a written report by the Certification Team, detailing any deficiencies that must be resolved prior to granting Certification, along with any other recommendations for consideration by the applicant, the Regional Entity, or NERC.

504. Appeals

1. NERC shall maintain an appeals process to resolve any disputes related to Registration or Certification activities per the *Organization Registration and Organization Certification Manual,* which is incorporated in these Rules of Procedure as Appendix 5A.

2. The Regional Entity Certification appeals process shall culminate with the Regional Entity board or a committee established by and reporting to the Regional Entity board as the final adjudicator, provided that where applicable, Canadian provincial governmental authorities may act as the final adjudicator in their jurisdictions. NERC shall be notified of all appeals and may observe any proceedings **(Appendix 5A** *Organization Registration and Organization Certification Manual*).

505. Program Maintenance

NERC shall maintain its program materials, including such manuals or other documents as it deems necessary, of the governing policies and procedures of the Organization Registration and Organization Certification Programs.

506. Independent Audit of NERC Organization Registration and Organization Certification Program

1. NERC, through the Compliance and Certification Committee, shall provide for an independent audit of its Organization Registration and Organization Certification Programs at least once every three years, or more frequently, as determined by the Board. The audit shall be conducted by independent expert auditors as selected by the Board.

2. The audit shall evaluate the success, effectiveness and consistency of the NERC Organization Registration and Organization Certification Programs.

3. The final report shall be posted by NERC for public viewing.

4. If the audit report includes recommendations to improve the program, the administrators of the program shall provide a written response to the Board within 30 days of the final report, detailing the disposition of each and every recommendation, including an explanation of the reasons for rejecting a recommendation and an implementation plan for the recommendations accepted.

507. Provisions Relating to Joint Registration Organizations (JRO)

1. In addition to registering as the entity responsible for all functions that it performs itself, an entity may register as a JRO on behalf of one or more of its members or related entities for one or more functions for which such members or related entities would otherwise be required to register and, thereby, accept on behalf of such members or related entities all compliance responsibility for that function or those functions including all reporting requirements. Any entity seeking to register as a JRO must submit a written agreement with its members or related entities for all Requirements/sub-Requirements for the function(s) for which the entity is registering for and takes responsibility for, which would otherwise be the responsibility of one or more of its members or related entities. Neither NERC nor

the Regional Entity shall be parties to any such agreement, nor shall NERC or the Regional Entity have responsibility for reviewing or approving any such agreement, other than to verify that the agreement provides for an allocation or assignment of responsibilities consistent with the JRO Registration.

2. The JRO Registration data must include the same Registration information as a normal compliance Registration entry. The JRO is responsible for providing all of the information and data, including submitting reports, as needed by the Regional Entity for performing assessments of compliance.

3. The Regional Entity shall notify NERC of each JRO that the Regional Entity accepts. The notification will identify the point of contact and the functions(s) being registered for on behalf of its members or related entities.

4. For purposes of Compliance Audits, the Regional Entity shall keep a list of all JROs. This document shall contain a list of each JRO's members or related entities and the function(s) for which the JRO is registered for that member(s) or related entity(s). It is the responsibility of the JRO to provide the Regional Entity with this information as well as the applicable JRO agreement(s).

5. The Regional Entity may request clarification of any list submitted to it that identifies the members of the JRO and may request such additional information as the Regional Entity deems appropriate.

6. The Regional Entity's acceptance of a JRO shall be a representation by the Regional Entity to NERC that the Regional Entity has concluded the JRO will meet the Registration requirements of Section 501(1.4).

7. NERC shall maintain, and post on its website, a JRO registry listing all JRO Registrations that have been reviewed and accepted by the Regional Entity. The posting shall identify the JRO entity taking compliance responsibilities for itself and its members.

8. The JRO shall inform the Regional Entity of any changes to an existing JRO. The Regional Entity shall promptly notify NERC of each such revision.

9. Nothing in Section 507 shall preclude a member of a JRO, a related entity, or any other entity from registering on its own behalf and undertaking full compliance responsibility including reporting Requirements for the Reliability Standards applicable to the function(s) for which the member or other entity is registering. A JRO member or related entity that registers as responsible for any Reliability Standard or Requirement/sub-Requirement of a Reliability Standard shall inform the JRO of its Registration.

508. Provisions Relating to Coordinated Functional Registration (CFR) Entities

1. In addition to registering as an entity responsible for all functions that it performs itself, multiple entities may each register using a CFR for one or more Reliability

Standard(s) and/or for one or more Requirements/sub-Requirements within particular Reliability Standard(s) applicable to a specific function. The CFR submission must include a written agreement that governs itself and clearly specifies the entities' respective compliance responsibilities. The Registration of the CFR is the complete Registration for each entity. Additionally, each entity shall take full compliance responsibility for those Reliability Standards and/or Requirements/sub-Requirements it has registered for in the CFR. Neither NERC nor the Regional Entity shall be parties to any such agreement, nor shall NERC or the Regional Entity have responsibility for reviewing or approving any such agreement, other than to verify that the agreement provides for an allocation or assignment of responsibilities consistent with the CFR.

2. Each CFR or each individual entity within a CFR must identify a point of contact that is responsible for providing information and data, including submitting reports as needed by the Regional Entity related to the CFR Registration.

3. The Regional Entity shall notify NERC of each CFR that the Regional Entity accepts.

4. NERC or the Regional Entity may request clarification of any list submitted to it that identifies the compliance responsibilities of the CFR and may request such additional information as NERC or the Regional Entity deems appropriate.

5. The Regional Entity's acceptance of that CFR shall be a representation by the Regional Entity to NERC that the Regional Entity has concluded the CFR will meet the Registration requirements of Section 501(1.4).

6. NERC shall maintain, and post on its website, a CFR registry listing all CFR Registrations that have been accepted by NERC or by a Regional Entity. The posting shall clearly list all the Reliability Standards or Requirements/sub-Requirements thereof for which each entity of the CFR is responsible for under the CFR.

7. The point of contact shall inform the Regional Entity of any changes to an existing CFR. The Regional Entity shall promptly notify NERC of each such revision.

8. In the event of a violation of a Reliability Standard or of a Requirement/sub-Requirement of a Reliability Standard for which an entity of a CFR is registered, that entity shall be identified in the Notice of Alleged Violation and shall be assessed the sanction or Penalty in accordance with the NERC Sanctions Guidelines. In the event a Regional Entity is not able to determine which entity(ies) is responsible for a particular Reliability Standard, or Requirements/sub-Requirements thereof that has been violated, the Regional Entity shall investigate the noncompliance in accordance with the NERC Rules of Procedure Section 400, *Compliance Enforcement*, to determine the entity(ies) to which the Regional Entity shall to issue the sanction or Penalty for the violation.

9. Nothing in Section 508 shall preclude an entity registered in a CFR, or any other entity from registering on its own behalf and undertaking full compliance responsibility including reporting Requirements for the Reliability Standards applicable to the function(s) for which the entity is registering. An entity registered in a CFR that registers as responsible for any Reliability Standard or Requirement/sub-Requirement of a Reliability Standard shall inform the point of contact of its Registration.

509. Exceptions to the Definition of the Bulk Electric System

An Element is considered to be (or not be) part of the Bulk Electric System by applying the BES Definition to the Element (including the inclusions and exclusions set forth therein). Appendix 5C sets forth the procedures by which (i) an entity may request a determination that an Element that falls within the definition of the Bulk Electric System should be exempted from being considered a part of the Bulk Electric System, or (ii) an entity may request that an Element that falls outside of the definition of the Bulk Electric System should be considered part of the Bulk Electric System.

SECTION 600 — PERSONNEL CERTIFICATION

601. Scope of Personnel Certification

Maintaining the reliability of the Bulk Electric System through implementation of the Reliability Standards requires skilled, trained and qualified system operators. The System Operator Certification Program provides the mechanism to ensure system operators are provided the education and training necessary to obtain the essential knowledge and skills and are therefore qualified to operate the Bulk Electric System. NERC, as the ERO, will ensure skilled, trained, and qualified system operators through the System Operator Certification Program.

NERC shall develop and maintain a personnel Certification program to evaluate individuals and to issue Credentials to individuals who demonstrate the required level of competence. A current version of such a program is the *System Operator Certification Program Manual*, which is incorporated into these Rules of Procedure as **Appendix 6**.

602. Structure of ERO Personnel Certification Program

1. The NERC personnel Certification program shall be international in scope.

2. The personnel Certification program shall have a governing body that (1) is able to independently exercise decision-making for all matters pertaining to Certification, (2) includes individuals from the discipline being certified and whose composition addresses the needs of the users of the program (e.g., employers, regulators, etc.), and (3) has representation for each specialty or level within a discipline.

3. NERC shall maintain a nominating process for membership in the governing body. Nominations shall be open to all interested parties and self-nominations shall be accepted. The NERC Board of Trustees shall appoint members to the governing body from among those nominated. The members of the governing body shall serve at the pleasure of the Board.

4. The personnel Certification program governing body shall have control over the matters related to the personnel Certification and re-Certification programs listed below, without being subject to approval by any other body.

    4.1 Policies and procedures, including eligibility requirements and application processing.

    4.2 Requirements for personnel Certification, maintaining Certification, and re-Certification.

    4.3 Examination content, development, and administration.

    4.4 Examination cut score.

    4.5 Grievance and disciplinary processes.

4.6 Governing body and subgroup(s)' meeting rules including agenda, frequency, and related procedures.

4.7 Subgroup(s) appointments and work assignments.

4.8 Publications about personnel Certification and re-Certification.

4.9 Setting fees for application, and all other services provided as a part of the personnel Certification and re-Certification activities.

4.10 Program funding, spending, and budget authority. Financial matters related to the operation of the program shall be segregated from other NERC activities.

5. The personnel Certification program shall utilize written procedures for the selection of members of the governing body that prohibit the governing body from selecting a majority of its successors.

6. The personnel Certification program shall be separate from the accreditation and education functions of NERC in related disciplines.

7. No member of the personnel Certification program governing body or staff member working with the personnel Certification program governing body shall have or exercise any authority or responsibility for compliance matters related to Reliability Standards concerning personnel Certification.

603. Candidate Testing Mechanisms

1. The personnel Certification program shall utilize reliable testing mechanisms to evaluate individual competence in a manner that is objective, fair to all candidates, job-related, and based on the knowledge and skill needed to function in the discipline.

2. The personnel Certification program shall implement a formal policy of periodic review of the testing mechanisms to ensure ongoing relevance of the mechanisms to knowledge and skill needed in the discipline.

3. The personnel Certification program shall utilize policies and procedures to ensure that all test administration and development materials are secure and demonstrate that these policies and procedures are consistently implemented.

4. The personnel Certification program shall establish pass/fail levels that protect the public with a method that is based on competence and generally accepted in the psychometric community as being fair and reasonable.

5. The personnel Certification program shall conduct ongoing studies to substantiate the reliability and validity of the testing mechanisms.

6. The personnel Certification program shall utilize policies and procedures that govern how long examination records are kept in their original format.

7. The personnel Certification program shall demonstrate that different forms of the testing mechanisms assess equivalent content and that candidates are not penalized for taking forms of varying difficulty.

604. Public Information About the Personnel Certification Program

1. The personnel Certification program shall provide for publishing and availability of general descriptive material on the procedures used in examination construction and validation; all eligibility requirements and determination; fees; and examination administration documents, including: reporting of results, re-Certification requirements, and disciplinary and grievance procedures.

2. The personnel Certification program shall publish and make available a comprehensive summary or outline of the information, knowledge, or functions covered by the examination.

3. The personnel Certification program shall publish and make available at least annually a summary of Certification activities for the program, including at least the following information: number of examinations delivered, the number passed, the number failed, and the number certified.

605. Responsibilities to Applicants for Certification or Re-Certification

The personnel Certification program:

1. Shall not discriminate among applicants as to age, gender, race, religion, national origin, disability, or marital status and shall include a statement of non-discrimination in announcements of the program.

2. Shall comply with all requirements of applicable federal and state/provincial laws with respect to all Certification and re-Certification activities, and shall require compliance of all contractors and/or providers of services.

3. Shall make available to all applicants copies of formalized procedures for application for, and attainment of, personnel Certification and re-Certification and shall uniformly follow and enforce such procedures for all applicants.

4. Shall implement a formal policy for the periodic review of eligibility criteria and application procedures to ensure that they are fair and equitable.

5. Shall provide competently proctored examination sites.

6. Shall uniformly report examination results to applicants in a timely manner.

7. Shall give applicants failing the examination information on general content areas of deficiency.

8. Shall implement policies and procedures providing due process for applicants questioning eligibility determination, examination results, and Certification status, and shall publish this information. A current version of such a procedure is the NERC *System Operator Certification Dispute Resolution Process*, which is incorporated into these Rules of Procedure as part of **Appendix 6**.

9. Shall develop and maintain a program manual containing the processes and procedures for applicants for Certification and re-Certification.

606. Responsibilities to the Public and to Employers of Certified Practitioners

The personnel Certification program:

1. Shall demonstrate that the testing mechanisms adequately measure the knowledge and skill required for entry, maintenance, and/or advancement in the profession for each position to be certified.

2. Shall award Certification and re-Certification only after the skill and knowledge of the individual have been evaluated and determined to be acceptable.

3. Shall periodically publish or maintain, in an electronic format, a current list of those persons certified in the programs and have polices and procedures that delineate what information about a Credential holder may be made public and under what circumstances.

4. Shall have formal policies and procedures for discipline of a Credential holder, including the revocation of the certificate, for conduct deemed harmful to the public or inappropriate to the discipline (e.g., incompetence, unethical behavior, physical or mental impairment affecting performance). These procedures shall incorporate due process. The current procedure is the *NERC Certified System Operator Credential Disciplinary Action Procedure*, which is incorporated into these Rules of Procedure as part of **Appendix 6**.

5. Shall demonstrate that any title or Credential awarded accurately reflects or applies to the practitioner's daily occupational or professional duties and is not confusing to employers, consumers, regulators, related professions, and/or other interested parties.

SECTION 700 — RELIABILITY READINESS EVALUATION AND IMPROVEMENT AND FORMATION OF SECTOR FORUMS

701. Confidentiality Requirements for Readiness Evaluations and Evaluation Team Members

1. All information made available or created during the course of any reliability readiness evaluation including, but not limited to, data, Documents, observations and notes, shall be maintained as confidential by all evaluation team members, in accordance with the requirements of Section 1500.

2. Evaluation team members are obligated to destroy all confidential evaluation notes following the posting of the final report of the reliability readiness evaluation.

3. NERC will retain reliability readiness evaluation-related documentation, notes, and materials for a period of time as defined by NERC.

4. These confidentiality requirements shall survive the termination of the NERC Reliability Readiness Evaluation and Improvement Program.

702. Formation of Sector Forum

1. NERC will form a sector forum at the request of any five members of NERC that share a common interest in the safety and reliability of the Bulk Power System. The members of sector forum may invite such others of the members of NERC to join the sector forum as the sector forum deems appropriate.

2. The request to form a sector forum must include a proposed charter for the sector forum. The Board must approve the charter.

3. NERC will provide notification of the formation of a sector forum to its membership roster. Notices and agendas of meetings shall be posted on NERC's website.

4. A sector forum may make recommendations to any of the NERC committees and may submit a Standards Authorization Request to the NERC *Reliability Standards Development Procedure*.

SECTION 800 — RELIABILITY ASSESSMENT AND PERFORMANCE ANALYSIS

801. Objectives of the Reliability Assessment and Performance Analysis Program

The objectives of the NERC Reliability Assessment and Performance Analysis Program are to: (1) conduct, and report the results of, an independent assessment of the overall reliability and adequacy of the interconnected North American Bulk Power Systems, both as existing and as planned; (2) analyze off-normal events on the Bulk Power System; (3) identify the root causes of events that may be precursors of potentially more serious events; (4) assess past reliability performance for lessons learned; (5) disseminate findings and lessons learned to the electric industry to improve reliability performance; and (6) develop reliability performance benchmarks. The final reliability assessment reports shall be approved by the Board for publication to the electric industry and the general public.

802. Scope of the Reliability Assessment Program

1. The scope of the Reliability Assessment Program shall include:

   1.1 Review, assess, and report on the overall electric generation and transmission reliability (adequacy and operating reliability) of the interconnected Bulk Power Systems, both existing and as planned.

   1.2 Assess and report on the key issues, risks, and uncertainties that affect or have the potential to affect the reliability of existing and future electric supply and transmission.

   1.3 Review, analyze, and report on Regional Entity self-assessments of electric supply and bulk power transmission reliability, including reliability issues of specific regional concern.

   1.4 Identify, analyze, and project trends in electric customer demand, supply, and transmission and their impacts on Bulk Power System reliability.

   1.5 Investigate, assess, and report on the potential impacts of new and evolving electricity market practices, new or proposed regulatory procedures, and new or proposed legislation (e.g. environmental requirements) on the adequacy and operating reliability of the Bulk Power Systems.

2. The Reliability Assessment Program shall be performed in a manner consistent with the Reliability Standards of NERC including but not limited to those that specify reliability assessment Requirements.

803. Reliability Assessment Reports

The number and type of periodic assessments that are to be conducted shall be at the discretion of NERC. The results of the reliability assessments shall be documented in three reports: the long-term and the annual seasonal (summer) and the annual seasonal (winter) assessment reports. NERC shall also conduct special reliability assessments from time to time as circumstances warrant. The reliability assessment reports shall be reviewed and approved for publication by the Board. The three regular reports are described below.

1. **Long-Term Reliability Assessment Report** — The annual long-term report shall cover a ten-year planning horizon. The planning horizon of the long-term reliability assessment report shall be subject to change at the discretion of NERC. Detailed generation and transmission adequacy assessments shall be conducted for the first five years of the review period. For the second five years of the review period, the assessment shall focus on the identification, analysis, and projection of trends in peak demand, electric supply, and transmission adequacy, as well as other industry trends and developments that may impact future electric system reliability. Reliability issues of concern and their potential impacts shall be presented along with any mitigation plans or alternatives. The long-term reliability assessment reports will generally be published in the fall (September) of each year. NERC will also publish electricity supply and demand data associated with the long-term reliability assessment report.

2. **Summer Assessment Report** — The annual summer seasonal assessment report typically shall cover the four-month (June–September) summer period. It shall provide an overall perspective on the adequacy of the generation resources and the transmission systems necessary to meet projected summer peak demands. It shall also identify reliability issues of interest and regional and subregional areas of concern in meeting projected customer demands and may include possible mitigation alternatives. The report will generally be published in mid-May for the upcoming summer period.

3. **Winter Assessment Report** — The annual winter seasonal assessment report shall cover the three-month (December–February) winter period. The report shall provide an overall perspective on the adequacy of the generation resources and the transmission systems necessary to meet projected winter peak demands. Similar to the summer assessment, the winter assessment shall identify reliability issues of interest and regional and subregional areas of concern in meeting projected customer demands and may also include possible mitigation alternatives. The winter assessment report will generally be published in mid-November for the upcoming winter period.

4. **Special Reliability Assessment Reports** — In addition to the long-term and seasonal reliability assessment reports, NERC shall also conduct special reliability assessments on a regional, interregional, and Interconnection basis as conditions warrant, or as requested by the Board or governmental authorities. The teams of reliability and technical experts also may initiate special assessments of key

reliability issues and their impacts on the reliability of a regions, subregions, or Interconnection (or a portion thereof). Such special reliability assessments may include, among other things, operational reliability assessments, evaluations of emergency response preparedness, adequacy of fuel supply, hydro conditions, reliability impacts of new or proposed environmental rules and regulations, and reliability impacts of new or proposed legislation that affects or has the potential to affect the reliability of the interconnected Bulk Power Systems in North America.

804. Reliability Assessment Data and Information Requirements

To carry out the reviews and assessments of the overall reliability of the interconnected Bulk Power Systems, the Regional Entities and other entities shall provide sufficient data and other information requested by NERC in support of the annual long-term and seasonal assessments and any special reliability assessments.

Some of the data provided for these reviews and assessment may be considered confidential from a competitive marketing perspective, a Critical Energy Infrastructure Information perspective, or for other purposes. Such data shall be treated in accordance with the provisions of Section 1500 – Confidential Information.

While the major sources of data and information for this program are the Regional Entities, a team of reliability and technical experts is responsible for developing and formulating its own independent conclusions about the near-term and long-term reliability of the Bulk Power Systems.

In connection with the reliability assessment reports, requests shall be submitted to each of the Regional Entities for required reliability assessment data and other information, and for each Regional Entity's self-assessment report. The timing of the requests will be governed by the schedule for the preparation of the assessment reports.

The Regional Entity self-assessments are to be conducted in compliance with NERC Reliability Standards and the respective regional planning criteria. The team(s) of reliability and technical experts shall also conduct interviews with the Regional Entities as needed. The summary of the Regional Entity self-assessments that are to be included in the assessment reports shall follow the general outline identified in NERC's request. This outline may change from time to time as key reliability issues change.

In general, the Regional Entity reliability self-assessments shall address, among other areas, the following topics: demand and Net Energy for Load; assessment of projected resource adequacy; any transmission constraints that may impact bulk transmission adequacy and plans to alleviate those constraints; any unusual operating conditions that could impact reliability for the assessment period; fuel supply adequacy; the deliverability of generation (both internal and external) to Load; and any other reliability issues in the Region and their potential impacts on the reliability of the Bulk Power Systems.

805. Reliability Assessment Process

Based on their expertise, the review of the collected data, the review of the Regional Entity self-assessment reports, and interviews with the Regional Entities, as appropriate, the teams of reliability and technical experts shall perform an independent review and assessment of the generation and transmission adequacy of each Region's existing and planned Bulk Power System. The results of the review teams shall form the basis of NERC's long-term and seasonal reliability assessment reports. The review and assessment process is briefly summarized below.

1. **Resource Adequacy Assessment** — The teams shall evaluate the regional demand and resource capacity data for completeness in the context of the overall resource capacity needs of the Region. The team shall independently evaluate the ability of the Regional Entity members to serve their obligations given the demand growth projections, the amount of existing and planned capacity, including committed and uncommitted capacity, contracted capacity, or capacity outside of the Region. If the Region relies on capacity from outside of the Region to meet its resource objectives, the ability to deliver that capacity shall be factored into the assessment. The demand and resource capacity information shall be compared to the resource adequacy requirements of the Regional Entity for the year(s) or season(s) being assessed. The assessment shall determine if the resource information submitted represents a reasonable and attainable plan for the Regional Entity and its members. For cases of inadequate capacity or reserve margin, the Regional Entity will be requested to analyze and explain any resource capacity inadequacies and its plans to mitigate the reliability impact of the potential inadequacies. The analysis may be expanded to include surrounding areas. If the expanded analysis indicates further inadequacies, then an interregional problem may exist and will be explored with the applicable Regions. The results of these analyses shall be described in the assessment report.

2. **Transmission Adequacy and Operating Reliability Assessment** — The teams shall evaluate transmission system information that relates to the adequacy and operating reliability of the regional transmission system. That information shall include: regional planning study reports, interregional planning study reports, and/or regional operational study reports. If additional information is required, another data request shall be sent to the Regional Entity. The assessment shall provide a judgment on the ability of the regional transmission system to operate reliably under the expected range of operating conditions over the assessment period as required by NERC Reliability Standards. If sub-areas of the regional system are especially critical to the Reliable Operation of the regional bulk transmission system, these Facilities or sub-areas shall be reviewed and addressed in the assessment. Any areas of concern related to the adequacy or operating reliability of the system shall be identified and reported in the assessment.

3. **Seasonal Operating Reliability Assessment** — The team(s) shall evaluate the overall operating reliability of the regional bulk transmission systems. In areas with potential resource adequacy or system operating reliability problems, operational readiness of the affected Regional Entities for the upcoming season

shall be reviewed and analyzed. The assessment may consider unusual but possible operating scenarios and how the system is expected to perform. Operating reliability shall take into account a wide range of activities, all of which should reinforce the Regional Entity's ability to deal with the situations that might occur during the upcoming season. Typical activities in the assessment may include: facility modifications and additions, new or modified operating procedures, emergency procedures enhancement, and planning and operating studies. The teams shall report the overall seasonal operating reliability of the regional transmission systems in the annual summer and winter assessment reports.

4. **Reporting of Reliability Assessment Results** — The teams of reliability and technical experts shall provide an independent assessment of the reliability of the Regional Entities and the North American interconnected Bulk Power System for the period of the assessment. While the Regional Entities are relied upon to provide the information to perform such assessments, the review team is not required to accept the conclusions provided by the Regional Entities. Instead, the review team is expected, based on their expertise, to reach their own independent conclusions about the status of the adequacy of the generation and bulk power transmission systems of North America.

   The review team also shall strive to achieve consensus in their assessments. The assessments that are made are based on the best information available at the time. However, since judgment is applied to this information, legitimate differences of opinion can develop. Despite these differences, the review team shall work to achieve consensus on their findings.

   In addition to providing long-term and seasonal assessments in connection with the Reliability Assessment Program, the review team of experts shall also be responsible for recommending new and revised Reliability Standards related to the reliability assessments and the reliability of the Bulk Power Systems. These proposals for new or revised Reliability Standards shall be entered into NERC's Reliability Standards development process.

   Upon completion of the assessment, the team shall share the results with the Regional Entities. The Regional Entities shall be given the opportunity to review and comment on the conclusions in the assessment and to provide additional information as appropriate. The reliability assessments and their conclusions are the responsibility of NERC's technical review team and NERC.

   The preparation and approval of NERC's reliability assessment reports shall follow a prescribed schedule including review, comment, and possible approval by appropriate NERC committees. The long-term and seasonal (summer and winter) reliability assessment reports shall be further reviewed for approval by the Board for publication to the electric industry.

806. Scope of the Reliability Performance and Analysis Program

The components of the program will include analysis of large-scale outages, disturbances, and near misses to determine root causes and lessons learned; identification and continuous monitoring of performance indices to detect emerging trends and signs of a decline in reliability performance; and communications of performance results, trends, recommendations, and initiatives to those responsible to take actions; followed with confirmation of actions to correct any deficiencies identified. Within NERC, the reliability performance program will provide performance results to the Reliability Standards Development and Compliance Monitoring and Enforcement Programs to make the necessary adjustments to preserve reliability based on a risk-based approach.

807. Analysis of Major Events

Responding to major blackouts and other system disturbances or emergencies can be divided into four phases: situational assessment and communications; situation tracking and communications; data collection, investigation, analysis, and reporting; and follow-up on recommendations.

a. NERC's role following a blackout or other major Bulk Power System disturbance or emergency is to provide leadership, coordination, technical expertise, and assistance to the industry in responding to the event. Working closely with the Regional Entities and Reliability Coordinators, NERC will coordinate and facilitate efforts among industry participants, and with state, federal, and provincial governments in the United States and Canada to support the industry's response.

b. When responding to any event where physical or cyber security is suspected as a cause or contributing factor to an event, NERC will immediately notify appropriate government agencies and coordinate its activities with them.

c. Each user, owner, and operator of the Bulk Power System shall provide NERC and the applicable Regional Entities with such information as is necessary to enable NERC and the applicable Regional Entities to carry out their responsibilities under this section.

d. During the conduct of some NERC analyses, assistance may be needed from government agencies. This assistance could include: authority to require data reporting from affected or involved parties; communications with other agencies of government; investigations related to possible criminal or terrorist involvement in the event; resources for initial data gathering immediately after the event; authority to call meetings of affected or involved parties; and technical and analytical resources for studies.

e. NERC shall work with other participants to establish a clear delineation of roles, responsibilities, and coordination requirements among industry and government for the investigation and reporting of findings, conclusions, and recommendations related to major blackouts, disturbances, or other emergencies affecting the Bulk Power System with the objective of avoiding, to the extent possible, multiple

investigations of the same event. If the event is confined to a single Regional Entity, NERC representatives will participate as members of the Regional Entity analysis team.

f. NERC and applicable entity(s) shall apply the NERC *Blackout and Disturbance Response Procedures*, which are incorporated into these Rules of Procedure as **Appendix 8**. These procedures provide a framework to guide NERC's response to events that may have multiregional, national, or international implications. Experienced industry leadership shall be applied to tailor the response to the specific circumstances of the event. In accordance with that procedure, the NERC president will determine whether the event warrants analysis at the NERC-level. A Regional Entity may request that NERC elevate any analysis to a NERC level.

g. NERC will screen and analyze the findings and recommendations from the analysis, and those with generic applicability will be disseminated to the industry in accordance with Section 810.

808. Analysis of Off-Normal Events, Potential System Vulnerabilities, and System Performance

1. NERC and Regional Entities shall analyze system and equipment performance events that do not rise to the level of a major blackout, disturbance, or system emergency, as described in Section 807. NERC and Regional Entities shall also analyze potential vulnerabilities in the Bulk Power System brought to their attention by government agencies. The purpose of these analyses is to identify the root causes of events that may be precursors of potentially more serious events or that have the potential to cause more serious events, to assess past reliability performance for lessons learned, and to develop reliability performance benchmarks and trends.

2. NERC and Regional Entities will screen and analyze events and potential vulnerabilities for significance, and information from those with generic applicability will be disseminated to the industry in accordance with Section 810.

3. Each user, owner, and operator, of the Bulk Power System shall provide NERC and the applicable Regional Entities with such information as is necessary to enable NERC and the applicable Regional Entities to carry out their responsibilities under this section.

809. Reliability Benchmarking

NERC shall identify and track key reliability indicators as a means of benchmarking reliability performance and measuring reliability improvements. This program will include assessing available metrics, developing guidelines for acceptable metrics, maintaining a performance metrics "dashboard" on the NERC website, and developing appropriate reliability performance benchmarks.

810. Information Exchange and Issuance of NERC Advisories, Recommendations and Essential Actions

1. Members of NERC and Bulk Power System owners, operators, and users shall provide NERC with detailed and timely operating experience information and data.

2. In the normal course of operations, NERC disseminates the results of its events analysis findings, lessons learned and other analysis and information gathering to the industry. These findings, lessons learned and other information will be used to guide the Reliability Assessment Program.

3. When NERC determines it is necessary to place the industry or segments of the industry on formal notice of its findings, analyses, and recommendations, NERC will provide such notification in the form of specific operations or equipment Advisories, Recommendations or Essential Actions:

3.1 Level 1 (Advisories) – purely informational, intended to advise certain segments of the owners, operators and users of the Bulk Power System of findings and lessons learned;

3.2 Level 2 (Recommendations) – specific actions that NERC is recommending be considered on a particular topic by certain segments of owners, operators, and users of the Bulk Power System according to each entity's facts and circumstances;

3.3 Level 3 (Essential Actions) – specific actions that NERC has determined are essential for certain segments of owners, operators, or users of the Bulk Power System to take to ensure the reliability of the Bulk Power System. Such Essential Actions require NERC Board approval before issuance.

4. The Bulk Power System owners, operators, and users to which Level 2 (Recommendations) and Level 3 (Essential Actions) notifications apply are to evaluate and take appropriate action on such issuances by NERC. Such Bulk Power System owners, operators, and users shall also provide reports of actions taken and timely updates on progress towards resolving the issues raised in the Recommendations and Essential Actions in accordance with the reporting date(s) specified by NERC.

5. NERC will advise the Commission and other Applicable Governmental Authorities of its intent to issue all Level 1 (Advisories), Level 2 (Recommendations), and Level 3 (Essential Actions) at least five (5) business days prior to issuance, unless extraordinary circumstances exist that warrant issuance less than five (5) business days after such advice. NERC will file a report with the Commission and other Applicable Governmental Authorities no later than thirty (30) days following the date by which NERC has requested the Bulk Power System owners, operators, and users to which a Level 2

(Recommendation) or Level 3 (Essential Action) issuance applies to provide reports of actions taken in response to the notification. NERC's report to the Commission and other Applicable Governmental Authorities will describe the actions taken by the relevant owners, operators, and users of the Bulk Power System and the success of such actions taken in correcting any vulnerability or deficiency that was the subject of the notification, with appropriate protection for Confidential Information or Critical Energy Infrastructure Information.

811. Equipment Performance Data

Through its Generating Availability Data System (GADS), NERC shall collect operating information about the performance of electric generating equipment; provide assistance to those researching information on power plant outages stored in its database; and support equipment reliability as well as availability analyses and other decision-making processes developed by GADS subscribers. GADS data is also used in conducting assessments of generation resource adequacy.

SECTION 900 — TRAINING AND EDUCATION

901. Scope of the Training and Education Program

Maintaining the reliability of the Bulk Electric System through implementation of the Reliability Standards requires informed and trained personnel. The training and education program will provide the education and training necessary for Bulk Power System personnel and regulators to obtain the essential knowledge necessary to understand and operate the Bulk Electric System.

NERC shall develop and maintain training and education programs for the purpose of establishing training requirements, developing materials, and developing training activities. The target audience of the training and education programs shall be Bulk Power System operating personnel including system operations personnel, operations support personnel (engineering and information technology), supervisors and managers, training personnel, and other personnel directly responsible for complying with NERC Reliability Standards who, through their actions or inactions, may impact the real-time, or day-ahead reliability of the Bulk Power System.

NERC shall also develop and provide appropriate training and education for industry participants and regulators affected by new or changed Reliability Standards or compliance Requirements.

To accomplish those objectives:

1. NERC shall periodically conduct job task analyses for targeted Bulk Power System personnel to ensure that the training program content is properly aligned to the job tasks performed by those personnel.

2. NERC shall develop and maintain personnel training program curriculum requirements based on valid job-task analysis.

3. NERC shall periodically conduct performance surveys to determine the effectiveness of the training program and identify areas for further training development and improvement.

4. NERC shall develop training and education materials and activities to assist Bulk Power System entities implementing new or revised Reliability Standard Requirements or other NERC-related changes.

5. NERC shall develop and provide training to people who participate in NERC and Regional Entity evaluations, audits, and investigations for the Compliance Monitoring and Enforcement Program, Organization Certification Program, and the continuing education program.

902. Continuing Education Program

NERC shall develop and maintain a continuing education program to foster the improvement of training and to promote quality in the training programs used by and

implemented by Bulk Power System entities. The program shall approve or accredit those activities and entities meeting NERC continuing education requirements.

1. NERC shall develop and implement continuing education program requirements that promote excellence in training programs and advance improved performance for Bulk Power System personnel identified in Section 901.

2. NERC shall develop and maintain a process to approve or accredit continuing education Providers and activities seeking approval or accreditation and meeting NERC-approved continuing education requirements.

3. NERC shall perform periodic audits on continuing education Providers and training activities to ensure that the approved or accredited Providers and training activities satisfy NERC continuing education requirements.

4. NERC shall develop and maintain an appeals process for disputed application reviews, interpretations of guidelines and standards, probation or suspension of NERC-approved Provider status, or Continuing Education Hour disputes.

SECTION 1000 — SITUATION AWARENESS AND INFRASTRUCTURE SECURITY

1001. Situation Awareness

NERC shall through the use of Reliability Coordinators and available tools, monitor present conditions on the Bulk Power System and provide leadership coordination, technical expertise, and assistance to the industry in responding to events as necessary. To accomplish these goals, NERC will:

1. Maintain real-time situation awareness of conditions on the Bulk Power System;

2. Notify the industry of significant Bulk Power System events that have occurred in one area, and which have the potential to impact reliability in other areas;

3. Maintain and strengthen high-level communication, coordination, and cooperation with governments and government agencies regarding real-time conditions; and

4. Enable the Reliable Operation of interconnected Bulk Power Systems by facilitating information exchange and coordination among reliability service organizations.

1002. Reliability Support Services

NERC will provide tools and other support services for the benefit of Reliability Coordinators and other system operators, including the Area Control Error (ACE) and Frequency Monitoring System, NERC Hotline, Real-time Flows, System Data Exchange (SDX), Reliability Coordinator Information System (RCIS), Transmission Services Information Network (TSIN), Interchange Distribution Calculator (IDC), Interregional Security Network (ISN), and Central Repository for Security Events (CRC). To accomplish this goal, NERC will:

1. Maintain the reliability and effectiveness of all mission-critical operating reliability support systems and services;

2. Continue to support maintenance of a transmission provider curtailment report on the CRC site in response to Federal Energy Regulatory Commission Order 605;

3. Investigate and analyze the use of high-speed real-time system measurements, including phasors, in predicting the behavior and performance of the Eastern Interconnection; and

4. Facilitate real-time voice and data exchange services among Reliability Coordinators (e.g., Hotline, Interregional Security Network, NERCnet, System Data Exchange, etc.).

1003. Infrastructure Security Program

NERC shall coordinate electric industry activities to promote Critical Infrastructure protection of the Bulk Power System in North America by taking a leadership role in

Critical Infrastructure protection of the electricity sector so as to reduce vulnerability and improve mitigation and protection of the electricity sector's Critical Infrastructure. To accomplish these goals, NERC shall perform the following functions.

1. Electric Sector Information Sharing and Analysis Center (ESISAC)

    1.1 NERC shall serve as the electricity sector's sector coordinator and operate its Information Sharing and Analysis Center to gather information and communicate security-related threats and incidents within the sector, with United States and Canadian government agencies, and with other Critical Infrastructure sectors.

    1.2 NERC shall improve the capability of the ESISAC to analyze security threats and incident information and provide situational assessments for the electricity sector and governments.

    1.3 NERC shall work closely with the United States Department of Homeland Security, Department of Energy, Natural Resources Canada, and Public Safety and Emergency Preparedness Canada.

    1.4 NERC shall strengthen and expand these functions and working relationships with the electricity sector, other Critical Infrastructure industries, governments, and government agencies throughout North America to ensure the protection of the infrastructure of the Bulk Power System.

    1.5 NERC shall fill the role of the Electricity Sector Coordinating Council and coordinate with the Government Coordinating Council.

    1.6 NERC shall coordinate with other Critical Infrastructure sectors through active participation with the other Sector Coordinating Councils, the other ISACs, and the National Infrastructure Advisory Committee.

    1.7 NERC shall encourage and participate in coordinated Critical Infrastructure protection exercises, including interdependencies with other Critical Infrastructure sectors.

2. Security Planning

    2.1 NERC shall take a risk management approach to Critical Infrastructure protection, considering probability and severity, and recognizing that mitigation and recovery can be practical alternatives to prevention.

    2.2 NERC shall keep abreast of the changing threat environment through collaboration with government agencies.

    2.3 NERC shall develop criteria to identify critical physical assets and Critical Cyber Assets, assess security threats, identify risk assessment

methodologies, and assess effectiveness of physical and cyber protection measures.

2.4 NERC shall enhance and maintain the Bulk Power System critical spare transformer program, encourage increased participation by asset owners, and continue to assess the need to expand this program to include other critical Bulk Power System equipment.

2.5 NERC shall support implementation of the Critical Infrastructure Protection Standards through education and outreach.

2.6 NERC shall review and improve existing security guidelines, develop new security guidelines to meet the needs of the electricity sector, and consider whether any guidelines should be developed into Reliability Standards.

2.7 NERC shall conduct education and outreach initiatives to increase awareness and respond to the needs of the electricity sector.

2.8 NERC shall strengthen relationships with federal, state, and provincial government agencies on Critical Infrastructure protection matters.

2.9 NERC shall maintain and improve mechanisms for the sharing of sensitive or classified information with federal, state, and provincial government agencies on Critical Infrastructure protection matters; work with DOE and DHS to implement the National Infrastructure Protection Plan, as applicable to the electricity sector; and coordinate this work with PSEPC.

2.10 NERC shall improve methods to better assess the impact of a possible physical attack on the Bulk Power System and means to deter, mitigate, and respond following an attack.

2.11 NERC shall assess the results of vulnerability assessments and enhance the security of system control and data acquisition (SCADA) and process control systems by developing methods to detect an emerging cyber attack and the means to mitigate impacts on the Bulk Power Systems.

2.12 NERC shall work with the National SCADA Test Bed and the Process Control Systems Forum to accelerate the development of technology that will enhance the security, safety, and reliability of process control and SCADA systems.

SECTION 1100 — ANNUAL NERC BUSINESS PLANS AND BUDGETS

1101. Scope of Business Plans and Budgets

The Board shall determine the content of the budgets to be submitted to the Applicable Governmental Authorities with consultation from the members of the Member Representatives Committee, Regional Entities, and others in accordance with the Bylaws. The Board shall identify any activities outside the scope of NERC's statutory reliability functions, if any, and the appropriate funding mechanisms for those activities.

1102. NERC Funding and Cost Allocation

1. In order that NERC's costs shall be fairly allocated among Interconnections and among Regional Entities, the NERC funding mechanism for all statutory functions shall be based on Net Energy for Load (NEL).

2. NERC's costs shall be allocated so that all Load (or, in the case of costs for an Interconnection or Regional Entity, all Load within that Interconnection or Regional Entity) bears an equitable share of such costs based on NEL.

3. Costs shall be equitably allocated between countries or Regional Entities thereof for which NERC has been designated or recognized as the Electric Reliability Organization.

4. Costs incurred to accomplish the statutory functions for one Interconnection, Regional Entity, or group of entities will be directly assigned to that Interconnection, Regional Entity, or group of entities provided that such costs are allocated equitably to end-users based on Net Energy for Load.

1103. NERC Budget Development

1. The NERC annual budget process shall be scheduled and conducted for each calendar year so as to allow a sufficient amount of time for NERC to receive Member inputs, develop the budget, and receive Board and, where authorized by applicable legislation or agreement, Applicable Governmental Authority approval of the NERC budget for the following fiscal year, including timely submission of the proposed budget to FERC for approval in accordance with FERC regulations.

2. The NERC budget submittal to Applicable Governmental Authorities shall include provisions for all ERO functions, all Regional Entity delegated functions as specified in delegation agreements and reasonable reserves and contingencies.

3. The NERC annual budget submittal to Applicable Governmental Authorities shall include description and explanation of NERC's proposed ERO program activities for the year; budget component justification based on statutory or other authorities; explanation of how each budgeted activity lends itself to the accomplishment of the statutory or other authorities; sufficiency of resources

provided for in the budget to carry out the ERO program responsibilities; explanation of the calculations and budget estimates; identification and explanation of changes in budget components from the previous year's budget; information on staffing and organization charts; and such other information as is required by FERC and other Applicable Governmental Authorities having authority to approve the proposed budget.

4. NERC shall develop, in consultation with the Regional Entities, a reasonable and consistent system of accounts, to allow a meaningful comparison of actual results at the NERC and Regional Entity level by the Applicable Governmental Authorities.

1104. Submittal of Regional Entity Budgets to NERC

1. Each Regional Entity shall submit its proposed annual budget for carrying out its delegated authority functions as well as all other activities and funding to NERC in accordance with a schedule developed by NERC and the Regional Entities, which shall provide for the Regional Entity to submit its final budget that has been approved by its board of directors or other governing body no later than July 1 of the prior year, in order to provide sufficient time for NERC's review and comment on the proposed budget and approval of the Regional Entity budget by the NERC Board of Trustees in time for the NERC and Regional Entity budgets to be submitted to FERC and other Applicable Governmental Authorities for approval in accordance with their regulations. The Regional Entity's budget shall include supporting materials in accordance with the budget and reporting format developed by NERC and the Regional Entities, including the Regional Entity's complete business plan and organization chart, explaining the proposed collection of all dues, fees, and charges and the proposed expenditure of funds collected in sufficient detail to justify the requested funding collection and budget expenditures.

2. NERC shall review and approve each Regional Entity's budget for meeting the requirements of its delegated authority. Concurrent with approving the NERC budget, NERC shall review and approve, or reject, each Regional Entity budget for filing.

3. NERC shall also have the right to review from time to time, in reasonable intervals but no less frequently than every three years, the financial books and records of each Regional Entity having delegated authority in order to ensure that the documentation fairly represents in all material aspects appropriate funding of delegated functions.

1105. Submittal of NERC and Regional Entity Budgets to Governmental Authorities for Approval

1. NERC shall file for approval by the Applicable Governmental Authorities at least 130 days in advance of the start of each fiscal year. The filing shall include: (1) the complete NERC and Regional Entity budgets including the business plans and organizational charts approved by the Board, (2) NERC's annual funding requirement (including Regional Entity costs for delegated functions), and (3) the

mechanism for assessing charges to recover that annual funding requirement, together with supporting materials in sufficient detail to support the requested funding requirement.

2. NERC shall seek approval from each Applicable Governmental Authority requiring such approval for the funding requirements necessary to perform ERO activities within their jurisdictions.

1106. NERC and Regional Entity Billing and Collections

1. NERC shall request the Regional Entities to identify all Load-Serving Entities[3] within each Regional Entity and the NEL assigned to each Load-Serving Entity, and the Regional Entities shall supply the requested information. The assignment of a funding requirement to an entity shall not be the basis for determining that the entity must be registered in the Compliance Registry.

2. NERC shall accumulate the NEL by Load-Serving Entities for each Applicable Governmental Authority and submit the proportional share of NERC funding requirements to each Applicable Governmental Authority for approval together with supporting materials in sufficient detail to support the requested funding requirement.

3. NEL reported by Balancing Authorities within a Region shall be used to rationalize and validate amounts allocated for collection through Regional Entity processes.

4. The billing and collection processes shall provide:

   4.1 A clear validation of billing and application of payments.

   4.2 A minimum of data requests to those being billed.

   4.3 Adequate controls to ensure integrity in the billing determinants including identification of entities responsible for funding NERC's activities.

   4.4 Consistent billing and collection terms.

5. NERC will bill and collect all budget requirements approved by Applicable Governmental Authorities (including the funds required to support those functions assigned to the Regional Entities through the delegation agreements) directly from the Load-Serving Entities or their designees or as directed by particular Applicable Governmental Authorities, except where the Regional Entity is required to collect the budget requirements for NERC, in which case the Regional Entity will collect directly from the Load-Serving Entities or as otherwise

[3] A Regional Entity may allocate funding obligations using an alternative method approved by NERC and by FERC and other Applicable Governmental Authorities, as provided for in the regional delegation agreement.

provided by agreement and submit funds to NERC. Alternatively, a load-serving entity may pay its allocated ERO costs through a Regional Entity managed collection mechanism.

6. NERC shall set a minimum threshold limit on the billing of small LSEs to minimize the administrative burden of collection.

7. NERC shall pursue any non-payments and shall request assistance from Applicable Governmental Authorities as necessary to secure collection.

8. In the case where a Regional Entity performs the collection for ERO, the Regional Entity will not be responsible for non-payment in the event that a user, owner or operator of the Bulk Power System does not pay its share of dues, fees and charges in a timely manner, provided that such a Regional Entity shall use reasonably diligent efforts to collect dues, fees, and other charges from all entities obligated to pay them. However, any revenues not paid shall be recovered from others within the same Region to avoid cross-subsidization between Regions.

9. Both NERC and the Regional Entities also may bill members or others for functions and services not within statutory requirements or otherwise authorized by the Applicable Governmental Authorities. Costs and revenues associated with these functions and services shall be separately identified and not commingled with billings associated with the funding of NERC or of the Regional Entities for delegated activities.

1107. Penalty Applications

1. Where NERC or a Regional Entity initiates a compliance monitoring and enforcement process that leads to imposition of a Penalty, the entity that initiated the process shall receive any Penalty monies imposed and collected as a result of that process, unless a different disposition of the Penalty monies is provided for in the delegation agreement, or in a contract or a disposition of the violation that is approved by NERC and FERC.

2. All funds from financial Penalties assessed in the United States received by the entity initiating the compliance monitoring and enforcement process shall be applied as a general offset to the entity's budget requirements for the subsequent fiscal year, if received by July 1, or for the second subsequent fiscal year, if received on or after July 1. Funds from financial Penalties shall not be directly applied to any program maintained by the entity conducting the compliance monitoring and enforcement process. Funds from financial Penalties assessed against a Canadian entity shall be applied as specified by legislation or agreement.

3. In the event that a compliance monitoring and enforcement process is conducted jointly by NERC and a Regional Entity, the Regional Entity shall receive the Penalty monies and offset the Regional Entity's budget requirements for the subsequent fiscal year.

4. Exceptions or alternatives to the foregoing provisions will be allowed if approved by NERC and by FERC or any other Applicable Governmental Authority.

1108. Special Assessments

On a demonstration of unforeseen and extraordinary circumstances requiring additional funds prior to the next funding cycle, NERC shall file with the Applicable Governmental Authorities, where authorized by applicable legislation or agreement, for authorization for an amended or supplemental budget for NERC or a Regional Entity and, if necessary under the amended or supplemental budget, to collect a special or additional assessment for statutory functions of NERC or the Regional Entity. Such filing shall include supporting materials to justify the requested funding, including any departure from the approved funding formula or method.

SECTION 1200 — REGIONAL DELEGATION AGREEMENTS

1201. Pro Forma Regional Delegation Agreement

NERC shall develop and maintain a pro forma Regional Entity delegation agreement, which shall serve as the basis for negotiation of consistent agreements for the delegation of ERO functions to Regional Entities.

1202. Regional Entity Essential Requirements

NERC shall establish the essential requirements for an entity to become qualified and maintain good standing as a Regional Entity.

1203. Negotiation of Regional Delegation Agreements

NERC shall, for all areas of North America that have provided NERC with the appropriate authority, negotiate regional delegation agreements for the purpose of ensuring all areas of the North American Bulk Power Systems are within a Regional Entity Region. In the event NERC is unable to reach agreement with Regional Entities for all areas, NERC shall provide alternative means and resources for implementing NERC functions within those areas. No delegation agreement shall take effect until it has been approved by the Applicable Governmental Authority.

1204. Conformance to Rules and Terms of Regional Delegation Agreements

NERC and each Regional Entity shall comply with all applicable ERO Rules of Procedure and the obligations stated in the regional delegation agreement.

1205. Sub-delegation

The Regional Entity shall not sub-delegate any responsibilities and authorities delegated to it by its regional delegation agreement with NERC except with the approval of NERC and FERC and other Applicable Governmental Authorities. Responsibilities and authorities may only be sub-delegated to another Regional Entity. Regional Entities may share resources with one another so long as such arrangements do not result in cross-subsidization or in any sub-delegation of authorities.

1206. Nonconformance to Rules or Terms of Regional Delegation Agreement

If a Regional Entity is unable to comply or is not in compliance with an ERO Rule of Procedure or the terms of the regional delegation agreement, the Regional Entity shall immediately notify NERC in writing, describing the area of nonconformance and the reason for not being able to conform to the Rule of Procedure. NERC shall evaluate each case and inform the affected Regional Entity of the results of the evaluation. If NERC determines that a Rule of Procedure or term of the regional delegation agreement has been violated by a Regional Entity or cannot practically be implemented by a Regional Entity, NERC shall notify the Applicable Governmental Authorities and take any actions necessary to address the situation.

1207. Regional Entity Audits

Approximately every five years and more frequently if necessary for cause, NERC shall audit each Regional Entity to verify that the Regional Entity continues to comply with NERC Rules of Procedure and the obligations of NERC delegation agreement. Audits of Regional Entities shall be conducted, to the extent practical, based on professional auditing standards recognized in the U.S., including Generally Accepted Auditing Standards, Generally Accepted Government Auditing Standards, and standards sanctioned by the Institute of Internal Auditors, and if applicable to the coverage of the audit, may be based on Canadian or other international standards. The audits required by this Section 1207 shall not duplicate the audits of Regional Entity Compliance Monitoring and Enforcement Programs provided for in **Appendix 4A**, Audit of Regional Compliance Programs, to these Rules of Procedure.

1208. Process for Considering Registered Entity Requests to Transfer to Another Regional Entity

1. A Registered Entity that is registered in the Region of one Regional Entity and believes its registration should be transferred to a different Regional Entity may submit a written request to both Regional Entities requesting that they process the proposed transfer in accordance with this section. The Registered Entity's written request shall set forth the reasons the Registered Entity believes justify the proposed transfer and shall describe any impacts of the proposed transfer on other Bulk Power System owners, operators, and users.

2. After receiving the Registered Entity's written request, the two Regional Entities shall consult with each other as to whether they agree or disagree that the requested transfer is appropriate. The Regional Entities may also consult with affected Reliability Coordinators, Balancing Authorities and Transmission Operators as appropriate. Each Regional Entity shall post the request on its website for public comment period of 21 days. In evaluating the proposed transfer, the Regional Entities shall consider the location of the Registered Entity's Bulk Power System facilities in relation to the geographic and electrical boundaries of the respective Regions; the impacts of the proposed transfer on other Bulk Power System owners, operators; and users, the impacts of the proposed transfer on the current and future staffing, resources, budgets and assessments to other Load-Serving Entities of each Regional Entity, including the sufficiency of the proposed transferee Regional Entity's staffing and resources to perform compliance monitoring and enforcement activities with respect to the Registered Entity; the Registered Entity's compliance history with its current Regional Entity; and the manner in which pending compliance monitoring and enforcement matters concerning the Registered Entity would be transitioned from the current Regional Entity to the transferee Regional Entity; along with any other reasons for the proposed transfer stated by the Registered Entity and any other reasons either Regional Entity considers relevant. The Regional Entities may

request that the Registered Entity provide additional data and information concerning the proposed transfer for the Regional Entities' use in their evaluation. The Registered Entity's current Regional Entity shall notify the Registered Entity in writing as to whether (i) the two Regional Entities agree that the requested transfer is appropriate, (ii) the two Regional Entities agree that the requested transfer is not appropriate and should not be processed further, or (iii) the two Regional Entities disagree as to whether the proposed transfer is appropriate.

3. If the two Regional Entities agree that the requested transfer is appropriate, they shall submit a joint written request to NERC requesting that the proposed transfer be approved and that the delegation agreement between NERC and each of the Regional Entities be amended accordingly. The Regional Entities' joint written submission to NERC shall describe the reasons for the proposed transfer; the location of the Registered Entity's Bulk Power System Facilities in relation to the geographic and electrical boundaries of the respective Regions; the impacts of the proposed transfer on other Bulk Power System owners, operators, and users; the impacts of the proposed transfer on the current and future staffing, resources, budgets and assessments of each Regional Entity, including the sufficiency of the proposed transferee Regional Entity's staffing and resources to perform compliance monitoring and enforcement activities with respect to the Registered Entity; the Registered Entity's compliance history with its current Regional Entity; and the manner in which pending compliance monitoring and enforcement matters concerning the Registered Entity will be transitioned from the current Regional Entity to the transferee Regional Entity. The NERC Board of Trustees shall consider the proposed transfer based on the submissions of the Regional Entities and any other information the Board considers relevant, and shall approve or disapprove the proposed transfer and the related delegation agreement amendments. The NERC Board may request that the Regional Entities provide additional information, or obtain additional information from the Registered Entity, for the use of the NERC Board in making its decision. If the NERC Board approves the proposed transfer, NERC shall file the related delegation agreements with FERC for approval.

4. If the two Regional Entities do not agree with each other that the proposed transfer is appropriate, the Regional Entity supporting the proposed transfer shall, if requested by the Registered Entity, submit a written request to NERC to approve the transfer and the related delegation agreement amendments. The Regional Entity's written request shall include the information specified in Section 1208.3. The Regional Entity that does not believe the proposed transfer is appropriate will be allowed to submit a written statement to NERC explaining why the Regional Entity believes the transfer is not appropriate and should not be approved. The NERC Board of Trustees shall consider the proposed transfer based on the submissions of the Regional Entities and any other information the Board considers relevant, and shall approve or disapprove the proposed transfer and the related delegation agreement amendments. The NERC Board may request that the Regional Entities provide additional information, or obtain additional

information from the Registered Entity, for the use of the NERC Board in making its decision. If the NERC Board approves the proposed transfer, NERC shall file the related delegation agreements with FERC for approval.

5. Prior to action by the NERC Board of Trustees on a proposed transfer of registration under Section 1208.3 or 1208.4, NERC shall post information concerning the proposed transfer, including the submissions from the Regional Entities, on its website for at least twenty-one (21) days for the purpose of receiving public comment.

6. If the NERC Board of Trustees disapproves a proposed transfer presented to it pursuant to either Section 1208.3 or 1208.4, the Regional Entity or Regional Entities that believe the transfer is appropriate may, if requested to do so by the Registered Entity, file a petition with FERC pursuant to 18 C.F.R. section 39.8(f) and (g) requesting that FERC order amendments to the delegation agreements of the two Regional Entities to effectuate the proposed transfer.

7. No transfer of a Registered Entity from one Regional Entity to another Regional Entity shall be effective (i) unless approved by FERC, and (ii) any earlier than the first day of January of the second calendar year following approval by FERC, unless an earlier effective date is agreed to by both Regional Entities and NERC and approved by FERC.

SECTION 1300 — COMMITTEES

1301. Establishing Standing Committees

The Board may from time to time create standing committees. In doing so, the Board shall approve the charter of each committee and assign specific authority to each committee necessary to conduct business within that charter. Each standing committee shall work within its Board-approved charter and shall be accountable to the Board for performance of its Board-assigned responsibilities. A NERC standing committee may not delegate its assigned work to a member forum, but, in its deliberations, may request the opinions of and consider the recommendations of a member forum.

1302. Committee Membership

Each committee shall have a defined membership composition that is explained in its charter. Committee membership may be unique to each committee, and can provide for balanced decision-making by providing for representatives from each Sector or, where Sector representation will not bring together the necessary diversity of opinions, technical knowledge and experience in a particular subject area, by bringing together a wide diversity of opinions from industry experts with outstanding technical knowledge and experience in a particular subject area. Committee membership shall also provide the opportunity for an equitable number of members from the United States and Canada, based approximately on proportionate Net Energy for Load. All committees and other subgroups (except for those organized on other than a Sector basis because Sector representation will not bring together the necessary diversity of opinions, technical knowledge and experience in a particular subject area) must ensure that no two stakeholder Sectors are able to control the vote on any matter, and no single Sector is able to defeat a matter. With regard to committees and subgroups pertaining to development of, interpretation of, or compliance with Reliability Standards, NERC shall provide a reasonable opportunity for membership from Sectors desiring to participate. Committees and subgroups organized on other than a Sector basis shall be reported to the NERC Board and the Member Representatives Committee, along with the reasons for constituting the committee or subgroup in the manner chosen. In such cases and subject to reasonable restrictions necessary to accomplish the mission of such committee or subgroup, NERC shall provide a reasonable opportunity for additional participation, as members or official observers, for Sectors not represented on the committee or subgroup.

1303. Procedures for Appointing Committee Members

Committee members shall be nominated and selected in a manner that is open, inclusive, and fair. Unless otherwise stated in these Rules of Procedure or approved by the Board, all committee member appointments shall be approved by the board, and committee officers shall be appointed by the Chairman of the Board.

1304. Procedures for Conduct of Committee Business

1. Notice to the public of the dates, places, and times of meetings of all committees, and all nonconfidential material provided to committee members, shall be posted

on NERC's website at approximately the same time that notice is given to committee members. Meetings of all standing committees shall be open to the public, subject to reasonable limitations due to the availability and size of meeting facilities; provided that the meeting may be held in or adjourn to closed session to discuss matters of a confidential nature, including but not limited to personnel matters, compliance enforcement matters, litigation, or commercially sensitive or Critical Energy Infrastructure Information of any entity.

2. NERC shall maintain a set of procedures, approved by the Board, to guide the conduct of business by standing committees.

1305. Committee Subgroups

Standing committees may appoint subgroups using the same principles as in Section 1302.

SECTION 1400 — AMENDMENTS TO THE NERC RULES OF PROCEDURE

1401. Proposals for Amendment or Repeal of Rules of Procedure

In accordance with the Bylaws of NERC, requests to amend or repeal the Rules of Procedure may be submitted by (1) any ten Members of NERC, which number shall include Members from at least three membership Sectors, (2) the Member Representatives Committee, (3) a standing committee of NERC to whose function and purpose the Rule of Procedure pertains, or (4) an officer of the ERO.

1402. Approval of Amendment or Repeal of Rules of Procedure

Amendment to or repeal of Rules of Procedure shall be approved by the Board after public notice and opportunity for comment in accordance with the Bylaws of NERC. In approving changes to the Rules of Procedure, the Board shall consider the inputs of the Member Representatives Committee, other ERO committees affected by the particular changes to the Rules of Procedure, and other stakeholders as appropriate. After Board approval, the amendment or repeal shall be submitted to the Applicable Governmental Authorities for approval, where authorized by legislation or agreement. No amendment to or repeal of the Rules of Procedure shall be effective until it has been approved by the Applicable Governmental Authorities.

1403. Alternative Procedure for Violation Risk Factors

In the event the Reliability Standards development process fails to produce Violation Risk Factors for a particular Reliability Standard in a timely manner, the Board of Trustees may adopt Violation Risk Factors for that standard after notice and opportunity for comment. In adopting Violation Risk Factors, the Board shall consider the inputs of the Member Representatives Committee and affected stakeholders.

SECTION 1500 — CONFIDENTIAL INFORMATION

1501. Definitions

1. **Confidential Information** means (i) Confidential Business and Market Information; (ii) Critical Energy Infrastructure Information; (iii) personnel information that identifies or could be used to identify a specific individual, or reveals personnel, financial, medical, or other personal information; (iv) work papers, including any records produced for or created in the course of an evaluation or audit; (v) investigative files, including any records produced for or created in the course of an investigation; or (vi) Cyber Security Incident Information; provided, that public information developed or acquired by an entity shall be excluded from this definition.

2. **Confidential Business and Market Information** means any information that pertains to the interests of any entity, that was developed or acquired by that entity, and that is proprietary or competitively sensitive.

3. **Critical Energy Infrastructure Information** means specific engineering, vulnerability, or detailed design information about proposed or existing Critical Infrastructure that (i) relates details about the production, generation, transportation, transmission, or distribution of energy; (ii) could be useful to a person in planning an attack on Critical Infrastructure; and (iii) does not simply give the location of the Critical Infrastructure.

4. **Critical Infrastructure** means existing and proposed systems and assets, whether physical or virtual, the incapacity or destruction of which would negatively affect security, economic security, public health or safety, or any combination of those matters.

5. **Cyber Security Incident Information** means any information related to, describing, or which could be used to plan or cause a Cyber Security Incident.

1502. Protection of Confidential Information

1. **Identification of Confidential Information** — An owner, operator, or user of the Bulk Power System and any other party (the "Submitting Entity") shall mark as confidential any information that it submits to NERC or a Regional Entity (the "Receiving Entity") that it reasonably believes contains Confidential Information as defined by these Rules of Procedure, indicating the category or categories defined in Section 1501 in which the information falls. If the information is subject to a prohibition on public disclosure in the Commission-approved rules of a regional transmission organization or independent system operator or a similar prohibition in applicable federal, state, or provincial laws, the Submitting Entity shall so indicate and provide supporting references and details.

2. **Confidentiality** — Except as provided herein, a Receiving Entity shall keep in confidence and not copy, disclose, or distribute any Confidential Information or

any part thereof without the permission of the Submitting Entity, except as otherwise legally required.

3. **Information no longer Confidential –** If a Submitting Entity concludes that information for which it had sought confidential treatment no longer qualifies for that treatment, the Submitting Entity shall promptly so notify NERC or the relevant Regional Entity.

1503. Requests for Information

1. **Limitation** — A Receiving Entity shall make information available only to one with a demonstrated need for access to the information from the Receiving Entity.

2. **Form of Request** — A person with such a need may request access to information by using the following procedure:

   2.1 The request must be in writing and clearly marked "Request for Information."

   2.2 The request must identify the individual or entity that will use the information, explain the requester's need for access to the information, explain how the requester will use the information in furtherance of that need, and state whether the information is publicly available or available from another source or through another means. If the requester seeks access to information that is subject to a prohibition on public disclosure in the Commission-approved rules of a regional transmission organization or independent system operator or a similar prohibition in applicable federal, state, or provincial laws, the requester shall describe how it qualifies to receive such information.

   2.3 The request must stipulate that, if the requester does not seek public disclosure, the requester will maintain as confidential any information received for which a Submitting Party has made a claim of confidentiality in accordance with NERC's rules. As a condition to gaining access to such information, a requester shall execute a non-disclosure agreement in a form approved by NERC's Board of Trustees.

3. **Notice and Opportunity for Comment** — Prior to any decision to disclose information marked as confidential, the Receiving Entity shall provide written notice to the Submitting Entity and an opportunity for the Submitting Entity to either waive objection to disclosure or provide comments as to why the Confidential Information should not be disclosed. Failure to provide such comments or otherwise respond is not deemed waiver of the claim of confidentiality.

4. **Determination by ERO or Regional Entity** — Based on the information provided by the requester under Rule 1503.2, any comments provided by the Submitting Entity, and any other relevant available information, the chief

executive officer or his or her designee of the Receiving Entity shall determine whether to disclose such information.

5. **Appeal** — A person whose request for information is denied in whole or part may appeal that determination to the President of NERC (or the President's designee) within 30 days of the determination. Appeals filed pursuant to this Section must be in writing, addressed to the President of NERC (or the President's designee), and clearly marked "Appeal of Information Request Denial."

   NERC will provide written notice of such appeal to the Submitting Entity and an opportunity for the Submitting Entity to either waive objection to disclosure or provide comments as to why the Confidential Information should not be disclosed; provided that any such comments must be received within 30 days of the notice and any failure to provide such comments or otherwise respond is not deemed a waiver of the claim of confidentiality.

   The President of NERC (or the President's designee) will make a determination with respect to any appeal within 30 days. In unusual circumstances, this time limit may be extended by the President of NERC (or the President's designee), who will send written notice to the requester setting forth the reasons for the extension and the date on which a determination on the appeal is expected.

6. **Disclosure of Information** — In the event the Receiving Entity, after following the procedures herein, determines to disclose information designated as Confidential Information, it shall provide the Submitting Entity no fewer than 21 days' written notice prior to releasing the Confidential Information in order to enable such Submitting Entity to (a) seek an appropriate protective order or other remedy, (b) consult with the Receiving Entity with respect to taking steps to resist or narrow the scope of such request or legal process, or (c) waive compliance, in whole or in part, with the terms of this Section. Should a Receiving Entity be required to disclose Confidential Information, or should the Submitting Entity waive objection to disclosure, the Receiving Entity shall furnish only that portion of the Confidential Information which the Receiving Entity's counsel advises is legally required.

7. Posting of Determinations on Requests for Disclosure of Confidential Information — Upon making its determination on a request for disclosure of Confidential Information, NERC or the Regional Entity, as applicable, shall (i) notify the requester that the request for disclosure is granted or denied, (ii) publicly post any determination to deny the request to disclose Confidential Information, including in such posting an explanation of the reasons for the denial (but without in such explanation disclosing the Confidential Information), and (iii) publicly post any determination that information claimed by the Submitting Entity to be Confidential Information is not Confidential Information (but without in such posting disclosing any information that has been determined to be Confidential Information).

1504. Employees, Contractors and Agents

A Receiving Entity shall ensure that its officers, trustees, directors, employees, subcontractors and subcontractors' employees, and agents to whom Confidential Information is exposed are under obligations of confidentiality that are at least as restrictive as those contained herein.

1505. Provision of Information to FERC and Other Governmental Authorities

1. **Request** — A request from FERC for reliability information with respect to owners, operators, and users of the Bulk Power System within the United States is authorized by Section 215 of the Federal Power Act. Other Applicable Governmental Authorities may have similar authorizing legislation that grants a right of access to such information. Unless otherwise directed by FERC or its staff or the other Applicable Governmental Authority requesting the information, upon receiving such a request, a Receiving Entity shall provide contemporaneous notice to the applicable Submitting Entity. In its response to such a request, a Receiving Entity shall preserve any mark of confidentiality and shall notify FERC or other Applicable Governmental Authorities that the Submitting Entity has marked the information as confidential.

2. **Continued Confidentiality** — Each Receiving Entity shall continue to treat as confidential all Confidential Information that it has submitted to NERC or to FERC or another Applicable Governmental Authority, until such time as FERC or the other Applicable Governmental Authority authorizes disclosure of such information.

1506. Permitted Disclosures

1. **Confirmed Violations** — Nothing in this Section 1500 shall prohibit the disclosure of a violation at the point when the matter is filed with an Applicable Governmental Authority as a Notice of Penalty, the "violator" admits to the violation, or the alleged violator and NERC or the Regional Entity reach a settlement regarding the violation.

2. **Compliance Information** — NERC and the Regional Entities are authorized to exchange Confidential Information related to evaluations, Compliance Audits, and Compliance Investigations in furtherance of the Compliance Monitoring and Enforcement Program, on condition they continue to maintain the confidentiality of such information.

1507. Remedies for Improper Disclosure

Any person engaged in NERC or Regional Entity activity under Section 215 of the Federal Power Act or the equivalent laws of other Applicable Governmental Authorities who improperly discloses information determined to be confidential may lose access to Confidential Information on a temporary or permanent basis and may be subject to adverse personnel action, including suspension or termination. Nothing in Section 1500

precludes an entity whose information was improperly disclosed from seeking a remedy in an appropriate court.

SECTION 1600 — REQUESTS FOR DATA OR INFORMATION

1601. Scope of a NERC or Regional Entity Request for Data or Information

Within the United States, NERC and Regional Entities may request data or information that is necessary to meet their obligations under Section 215 of the Federal Power Act, as authorized by Section 39.2(d) of the Commission's regulations, 18 C.F.R. § 39.2(d). In other jurisdictions NERC and Regional Entities may request comparable data or information, using such authority as may exist pursuant to these Rules of Procedure and as may be granted by Applicable Governmental Authorities in those other jurisdictions. The provisions of Section 1600 shall not apply to Requirements contained in any Reliability Standard to provide data or information; the Requirements in the Reliability Standards govern. The provisions of Section 1600 shall also not apply to data or information requested in connection with a compliance or enforcement action under Section 215 of the Federal Power Act, Section 400 of these Rules of Procedure, or any procedures adopted pursuant to those authorities, in which case the Rules of Procedure applicable to the production of data or information for compliance and enforcement actions shall apply.

1602. Procedure for Authorizing a NERC Request for Data or Information

1. NERC shall provide a proposed request for data or information or a proposed modification to a previously-authorized request, including the information specified in Section 1602.2.1 or 1602.2.2 as applicable, to the Commission's Office of Electric Reliability at least twenty-one (21) days prior to initially posting the request or modification for public comment. Submission of the proposed request or modification to the Office of Electric Reliability is for the information of the Commission. NERC is not required to receive any approval from the Commission prior to posting the proposed request or modification for public comment in accordance with Section 1602.2 or issuing the request or modification to Reporting Entities following approval by the Board of Trustees.

2. NERC shall post a proposed request for data or information or a proposed modification to a previously authorized request for data or information for a forty-five (45) day public comment period.

    2.1. A proposed request for data or information shall contain, at a minimum, the following information: (i) a description of the data or information to be requested, how the data or information will be used, and how the availability of the data or information is necessary for NERC to meet its obligations under applicable laws and agreements; (ii) a description of how the data or information will be collected and validated; (iii) a description of the entities (by functional class and jurisdiction) that will be required to provide the data or information ("Reporting Entities"); (iv) the schedule or due date for the data or information; (v) a description of any restrictions on disseminating the data or information (e.g., "Confidential Information," "Critical Energy Infrastructure Information,"

"aggregating" or "identity masking"); and (vi) an estimate of the relative burden imposed on the Reporting Entities to accommodate the data or information request.

2.2. A proposed modification to a previously authorized request for data or information shall explain (i) the nature of the modifications; (ii) an estimate of the burden imposed on the Reporting Entities to accommodate the modified data or information request, and (iii) any other items from Section 1602.2.1 that require updating as a result of the modifications.

3. After the close of the comment period, NERC shall make such revisions to the proposed request for data or information as are appropriate in light of the comments. NERC shall submit the proposed request for data or information, as revised, along with the comments received, NERC's evaluation of the comments and recommendations, to the Board of Trustees.

4. In acting on the proposed request for data or information, the Board of Trustees may authorize NERC to issue it, modify it, or remand it for further consideration.

5. NERC may make minor changes to an authorized request for data or information without Board approval. However, if a Reporting Entity objects to NERC in writing to such changes within 21 days of issuance of the modified request, such changes shall require Board approval before they are implemented.

6. Authorization of a request for data or information shall be final unless, within thirty (30) days of the decision by the Board of Trustees, an affected party appeals the authorization under this Section 1600 to the Applicable Governmental Authority.

1603. Owners, Operators, and Users to Comply

Owners, operators, and users of the Bulk Power System registered on the NERC Compliance Registry shall comply with authorized requests for data and information. In the event a Reporting Entity within the United States fails to comply with an authorized request for data or information under Section 1600, NERC may request the Commission to exercise its enforcement authority to require the Reporting Entity to comply with the request for data or information and for other appropriate enforcement action by the Commission. NERC will make any request for the Commission to enforce a request for data or information through a non-public submission to the Commission's enforcement staff.

1604. Requests by Regional Entity for Data or Information

1. A Regional Entity may request that NERC seek authorization for a request for data or information to be applicable within the Region of the Regional Entity, either as a freestanding request or as part of a proposed NERC request for data or information. Any such request must be consistent with this Section 1600.

2. A Regional Entity may also develop its own procedures for requesting data or information, but any such procedures must include at least the same procedural elements as are included in this Section 1600. Any such Regional Entity procedures or changes to such procedures shall be submitted to NERC for approval. Upon approving such procedures or changes thereto, NERC shall file the proposed procedures or proposed changes for approval by the Commission and any other Applicable Governmental Authorities applicable to the Regional Entity. The Regional Entity procedures or changes to such procedures shall not be effective in a jurisdiction until approved by, and in accordance with any revisions directed by, the Commission or other Applicable Governmental Authority.

1605. Confidentiality

If the approved data or information request includes a statement under Section 1602.1.1(v) that the requested data or information will be held confidential or treated as Critical Energy Infrastructure Information, then the applicable provisions of Section 1500 will apply without further action by a Submitting Entity. A Submitting Entity may designate any other data or information as Confidential Information pursuant to the provisions of Section 1500, and NERC or the Regional Entity shall treat that data or information in accordance with Section 1500. NERC or a Regional Entity may utilize additional protective procedures for handling particular requests for data or information as may be necessary under the circumstances.

1606. Expedited Procedures for Requesting Time-Sensitive Data or Information

1. In the event NERC or a Regional Entity must obtain data or information by a date or within a time period that does not permit adherence to the time periods specified in Section 1602, the procedures specified in Section 1606 may be used to obtain the data or information. Without limiting the circumstances in which the procedures in Section 1606 may be used, such circumstances include situations in which it is necessary to obtain the data or information (in order to evaluate a threat to the reliability or security of the Bulk Power System, or to comply with a directive in an order issued by the Commission or by another Applicable Governmental Authority) within a shorter time period than possible under Section 1602. The procedures specified in Section 1606 may only be used if authorized by the NERC Board of Trustees prior to activation of such procedures.

2. Prior to posting a proposed request for data or information, or a modification to a previously-authorized request, for public comment under Section 1606, NERC shall provide the proposed request or modification, including the information specified in paragraph 1602.2.1 or 1602.2.2 as applicable, to the Commission's Office of Electric Reliability. The submission to the Commission's Office of Electric Reliability shall also include an explanation of why it is necessary to use the expedited procedures of Section 1606 to obtain the data or information. The submission shall be made to the Commission's Office of Electric Reliability as far in advance, up to twenty-one (21) days, of the posting of the proposed request or modification for public comments as is

reasonably possible under the circumstances, but in no event less than two (2) days in advance of the public posting of the proposed request or modification.

3. NERC shall post the proposed request for data or information or proposed modification to a previously-authorized request for data or information for a public comment period that is reasonable in duration given the circumstances, but in no event shorter than five (5) days. The proposed request for data or information or proposed modification to a previously-authorized request for data or information shall include the information specified in Section 1602.2.1 or 1602.2.2, as applicable, and shall also include an explanation of why it is necessary to use the expedited procedures of Section 1606 to obtain the data or information.

4. The provisions of Sections 1602.3, 1602.4, 1602.5 and 1602.6 shall be applicable to a request for data or information or modification to a previously-authorized request for data or information developed and issued pursuant to Section 1606, except that (a) if NERC makes minor changes to an authorized request for data or information without Board approval, such changes shall require Board approval if a Reporting Entity objects to NERC in writing to such changes within five (5) days of issuance of the modified request; and (b) authorization of the request for data or information shall be final unless an affected party appeals the authorization of the request by the Board of Trustees to the Applicable Governmental Authority within five (5) days following the decision of the Board of Trustees authorizing the request, which decision shall be promptly posted on NERC's website.

SECTION 1700 — CHALLENGES TO DETERMINATIONS

1701. Scope of Authority

Section 1702 sets forth the procedures to be followed for Registered Entities to challenge determinations made by Planning Coordinators under Reliability Standard PRC-023. Section 1703 sets forth the procedures to be followed when a Submitting Entity or Owner wishes to challenge a determination by NERC to approve or to disapprove an Exception Request or to terminate an Exception under Section 509.

1702. Challenges to Determinations by Planning Coordinators Under Reliability Standard PRC-023

1. This Section 1702 establishes the procedures to be followed when a Registered Entity wishes to challenge a determination by a Planning Coordinator of the sub-200 kV circuits in its Planning Coordinator area for which Transmission Owners, Generator Owners, and Distribution Providers (defined as "Registered Entities" for purposes of this Section 1702) must comply with the requirements of Reliability Standard PRC-023.

2. Planning Coordinator Procedures

    2.1 Each Planning Coordinator shall establish a procedure for a Registered Entity to submit a written request for an explanation of a determination made by the Planning Coordinator under PRC-023.

    2.2 A Registered Entity shall follow the procedure established by the Planning Coordinator for submitting the request for explanation and must submit any such request within 60 days of receiving the determination under PRC-023 from the Planning Coordinator.

    2.3 Within 30 days of receiving a written request from a Registered Entity, the Planning Coordinator shall provide the Registered Entity with a written explanation of the basis for its determination under PRC-023, unless the Planning Coordinator provided a written explanation of the basis for its determination when it initially informed the Registered Entity of its determination.

3. A Registered Entity may challenge the determination of the Planning Coordinator by filing with the appropriate Regional Entity, with a copy to the Planning Coordinator, within 60 days of receiving the written explanation from the Planning Coordinator. The challenge shall include the following: (a) an explanation of the technical reasons for its disagreement with the Planning Coordinator's determination, along with any supporting documentation, and (b) a copy of the Planning Coordinator's written explanation. Within 30 days of receipt of a challenge, the Planning Coordinator may file a response to the Regional Entity, with a copy to the Registered Entity.

4. The filing of a challenge in good faith shall toll the time period for compliance with PRC-023 with respect to the subject facility until such time as the challenge is withdrawn, settled or resolved.

5. The Regional Entity shall issue its written decision setting forth the basis of its determination within 90 days after it receives the challenge and send copies of the decision to the Registered Entity and the Planning Coordinator. The Regional Entity may convene a meeting of the involved entities and may request additional information. The Regional Entity shall affirm the determination of the Planning Coordinator if it is supported by substantial evidence.

6. A Planning Coordinator or Registered Entity affected by the decision of the Regional Entity may, within 30 days of the decision, file an appeal with NERC, with copies to the Regional Entity and the Planning Coordinator or Registered Entity. The appeal shall state the basis of the objection to the decision of the Regional Entity and shall include the Regional Entity decision, the written explanation of the Planning Coordinator's determination under PRC-023, and the documents and reasoning filed by the Registered Entity with the Regional Entity in support of its objection. The Regional Entity, Planning Coordinator or Registered Entity may file a response to the appeal within 30 days of the appeal.

7. The NERC Board of Trustees shall appoint a panel to decide appeals from Region Entity decisions under Section 1702.5. The panel, which may contain alternates, shall consist of at least three appointees, one of whom must be a member of the NERC staff, who are knowledgeable about PRC-023 and transmission planning and do not have a direct financial or business interest in the outcome of the appeal. The panel shall decide the appeal within 90 days of receiving the appeal from the decision of the Regional Entity and shall affirm the determination of the Planning Coordinator if it is supported by substantial evidence.

8. The Planning Coordinator or Registered Entity affected by the decision of the panel may request that the NERC Board of Trustees review the decision by filing its request for review and a statement of reasons with NERC's Chief Reliability Officer within 30 days of the panel decision. The Board of Trustees may, in its discretion, decline to review the decision of the panel, in which case the decision of the panel shall be the final NERC decision. Within 90 days of the request for review under this Section 1702.8, the NERC Board of Trustees may either (a) issue a decision on the merits, which shall be the final NERC decision, or (b) issue a notice declining to review the decision of the panel, in which case the decision of the panel shall be the final NERC decision. If no written decision or notice declining review is issued within 90 calendar days, the appeal shall be deemed to have been denied by the NERC Board of Trustees and this will have the same effect as a notice declining review.

9. The Registered Entity or Planning may appeal the final NERC decision to the applicable governmental authority within 30 days of receipt of the Board of

Trustees' final decision or notice declining review, or expiration of the 90-day review period without any action by NERC.

10. The Planning Coordinator and Registered Entity are encouraged, but not required, to meet to resolve any dispute, including use of mutually agreed to alternative dispute resolution procedures, at any time during the course of the matter. In the event resolution occurs after the filing of a challenge, the Registered Entity and Planning Coordinator shall jointly provide to the applicable Regional Entity a written acknowledgement of withdrawal of the challenge or appeal, including a statement that all outstanding issues have been resolved.

1703. Challenges to NERC Determinations of BES Exception Requests Under Section 509

1. This Section 1703 establishes the procedures to be followed when a Submitting Entity or Owner wishes to challenge a determination by NERC to approve or to disapprove an Exception Request or to terminate an Exception under Section 509.

2. A Submitting Entity (or Owner if different) aggrieved by the decision of NERC to approve or disapprove an Exception Request or to terminate an Exception with respect to any Element may, within 30 days following the date of the decision, file a written challenge to the decision with the NERC director of compliance operations, with copies to the Regional Entity and the Submitting Entity or Owner if different. The written challenge shall state the basis of the objection to the decision of NERC. The Regional Entity and the Submitting Entity or Owner if different may file a response to the challenge within 30 days following the date the challenge is filed with NERC.

3. The challenge shall be decided by the Board of Trustees Compliance Committee. Within 90 days of the date of submission of the challenge, the Board of Trustees Compliance Committee shall issue its decision on the challenge. The decision of the Board of Trustees Compliance Committee shall be the final NERC decision; provided, that the Board of Trustees Compliance Committee may extend the deadline date for its decision to a date more than 90 days following submission of the challenge, by issuing a notice to the Submitting Entity, the Owner (if different) and the Regional Entity stating the revised deadline date and the reason for the extension.

4. The Submitting Entity, or Owner if different, may appeal the final NERC decision to, or seek review of the final NERC decision by, the Applicable Governmental Authority(ies), in accordance with the legal authority and rules and procedures of the Applicable Governmental Authority(ies). Any such appeal shall be filed within thirty (30) days following the date of the decision of the Board of Trustees Compliance Committee, or within such other time period as is provided for in the legal authority, rules or procedures of the Applicable Governmental Authority.

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF REVISIONS TO ITS RULES OF PROCEDURE
TO ADOPT A BULK ELECTRIC SYSTEM EXCEPTION PROCEDURE

ATTACHMENT 2B

REVISED RULES OF PROCEDURE, SECTIONS 100-1700

(INCLUDING PROPOSED NEW SECTIONS 509 AND 1703)

REDLINED VERSION

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Proposed Revisions 1-9-2012
[Incorporates proposed revisions filed with FERC on March 18, November 7 and November 29, 2011]

Rules of Procedure

Effective: January 10, 2012

Rules of Procedure Section 400 is subject to further revisions to comply with directives in a FERC Order issued October 7, 2011 (137 FERC ¶ 61,028).

TABLE OF CONTENTS TABLE OF CONTENTS

SECTION 100 — APPLICABILITY OF RULES OF PROCEDURE 1

SECTION 200 — DEFINITIONS OF TERMS 2

SECTION 300 — RELIABILITY STANDARDS DEVELOPMENT 3

301. General 3
302. Essential Attributes for Technically Excellent Reliability Standards 3
303. Relationship between Reliability Standards and Competition 5
304. Essential Principles for the Development of Reliability Standards 6
305. Registered Ballot Body 6
306. Standards Committee 8
307. Standards Process Manager 9
308. Steps in the Development of Reliability Standards 9
309. Filing of Reliability Standards for Approval by Applicable Governmental Authorities 9
310. Annual Reliability Standards Development Plan 11
311. Regional Entity Standards Development Procedures 11
312. Regional Reliability Standards 13
313. Other Regional Criteria, Guides, Procedures, Agreements, Etc. 16
314. Conflicts with Statutes, Regulations, and Orders 17
315. Revisions to NERC Reliability Standards Development Procedure 17
316. Accreditation 17
317. Five-Year Review of Standards 18
318. Coordination with the North American Energy Standards Board 18
319. Archived Standards Information 18
320. Alternate Method for Adopting Violation Risk Factors 18
321. Special Rule to Address Certain Regulatory Directives 18

SECTION 400 — COMPLIANCE ENFORCEMENT 22

401. Scope of the NERC Compliance Enforcement Program 22
402. NERC Oversight of the Regional Entity Compliance Enforcement Programs 25
403. Required Attributes of Regional Entity Compliance Enforcement Programs 29
404. NERC Monitoring of Compliance for Regional Entities or Bulk Power Owners, Operator, or Users 35
405. Monitoring of Reliability Standards and Other Requirements Applicable to NERC 36
406. Independent Audits of the NERC Compliance Monitoring and Enforcement Program 36
407. Penalties, Sanctions, and Remedial Actions 37
408. Review of NERC Decisions 37
409. Appeals from Final Decisions of Regional Entities 39
410. Hold Harmless 40
411. Requests for Technical Feasibility Exceptions to NERC Critical Infrastructure Protection Reliability Standards 40

SECTION 500 — ORGANIZATION REGISTRATION AND CERTIFICATION 41

501. Scope of the Organization Registration and Organization Certification Programs 41
502. Organization Registration and Organization Certification Program Requirements 44
503. Regional Entity Implementation of Organization Registration and Organization Certification Program Requirements 46
504. Appeals 47
505. Program Maintenance 48

506. Independent Audit of NERC Organization Registration and Organization Certification Program 48
507. Provisions Relating to Joint Registration Organizations (JRO) 48
508. Provisions Relating to Coordinated Functional Registration (CFR) Entities 49
509. Exceptions to the Definition of the Bulk Electric System 51

SECTION 600 — PERSONNEL CERTIFICATION 52

601. Scope of Personnel Certification 52
602. Structure of ERO Personnel Certification Program 52
603. Candidate Testing Mechanisms 53
604. Public Information About the Personnel Certification Program 54
605. Responsibilities to Applicants for Certification or Recertification 54
606. Responsibilities to the Public and to Employers of Certified Practitioners 55

SECTION 700 — RELIABILITY READINESS EVALUATION AND IMPROVEMENT AND FORMATION OF SECTOR FORUMS 56

701 Confidentiality Requirements for Readiness Evaluations and Evaluation Team Members 56
702. Formation of Sector Forum 56

SECTION 800 — RELIABILITY ASSESSMENT AND PERFORMANCE ANALYSIS 57

801. Objectives of the Reliability Assessment and Performance Analysis Program 57
802. Scope of the Reliability Assessment Program 57
803. Reliability Assessment Reports 58
804. Reliability Assessment Data and Information Requirements 59
805. Reliability Assessment Process 60
806. Scope of the Reliability Performance and Analysis Program 62
807. Analysis of Major Events 62
808. Analysis of Off-Normal Events, Potential System Vulnerabilities, and System Performance 63
809. Reliability Benchmarking 63
810. Information Exchange and Issuance of NERC Advisories, Recommendations and Essential Actions 64
811. Equipment Performance Data 65

SECTION 900 — TRAINING AND EDUCATION 66

901. Scope of the Training and Education Program 66
902. Continuing Education Program 66

SECTION 1000 — SITUATION AWARENESS AND INFRASTRUCTURE SECURITY 68

1001. Situation Awareness 68
1002. Reliability Support Services 68
1003. Infrastructure Security Program 68

SECTION 1100 — ANNUAL NERC BUSINESS PLANS AND BUDGETS 71

1101. Scope of Business Plans and Budgets 71
1102. NERC Funding and Cost Allocation 71
1103. NERC Budget Development 71
1104. Submittal of Regional Entity Budgets to NERC 72
1105. Submittal of NERC and Regional Entity Budgets to Governmental Authorities for Approval 72
1106. NERC and Regional Entity Billing and Collections 73
1107. Penalty Applications 74
1108. Special Assessments 75

SECTION 1200 — REGIONAL DELEGATION AGREEMENTS 76

1201. Pro Forma Regional Delegation Agreement 76
1202. Regional Entity Essential Requirements 76
1203. Negotiation of Regional Delegation Agreements 76
1204. Conformance to Rules and Terms of Regional Delegation Agreements 76
1205. Sub-delegation 76
1206. Nonconformance to Rules or Terms of Regional Delegation Agreement 76
1207. Regional Entity Audits 77
1208. Process for Considering Registered Entity Requests to Transfer to Another Regional Entity Audits 77

SECTION 1300 — COMMITTEES 80

1301. Establishing Standing Committees 80
1302. Committee Membership 80
1303. Procedures for Appointing Committee Members 80
1304. Procedures for Conduct of Committee Business 80
1305. Committee Subgroups 81

SECTION 1400 — AMENDMENTS TO THE NERC RULES OF PROCEDURE 82

1401. Proposals for Amendment or Repeal of Rules of Procedure 82
1402. Approval of Amendment or Repeal of Rules of Procedure 82
1403. Alternative Procedure for Violation Risk Factors 82

SECTION 1500 — CONFIDENTIAL INFORMATION 83

1501. Definitions 83
1502. Protection of Confidential Information 83
1503. Requests for Information 84
1504. Employees, Contractors and Agents 86
1505. Provision of Information to FERC and Other Governmental Authorities 86
1506. Permitted Disclosures 86
1507. Remedies for Improper Disclosure 86

SECTION 1600 — REQUESTS FOR DATA OR INFORMATION 88

1601. Scope of a NERC or Regional Entity Request for Data or Information 88
1602. Procedure for Authorizing a NERC Request for Data or Information 88
1603. Owners, Operators, and Users to Comply 89
1604. Requests by Regional Entity for Data or Information 89
1605. Confidentiality 90
1606. Expedited Procedures for Requesting Time-Sensitive Data or Information 90

SECTION 1700 — CHALLENGES TO DETERMINATIONS 92

1701. Scope of Authority 92
1702 Challenges to Determinations by Planning Coordinators Under Reliability Standard PRC-023 92
1703 Challenges to NERC Determinations of BES Exception Requests under Section 509 94

SECTION 100 — APPLICABILITY OF RULES OF PROCEDURE

NERC and NERC Members shall comply with these Rules of Procedure. Each Regional Entity shall comply with these Rules of Procedure as applicable to functions delegated to the Regional Entity by NERC or as required by an Applicable Governmental Authority or as otherwise provided.

Each Bulk Power System owner, operator, and user shall comply with all Rules of Procedure of NERC that are made applicable to such entities by approval pursuant to applicable legislation or regulation, or pursuant to agreement.

Any entity that is unable to comply or that is not in compliance with a NERC Rule of Procedure shall immediately notify NERC in writing, stating the Rule of Procedure of concern and the reason for not being able to comply with the Rule of Procedure.

NERC shall evaluate each case and inform the entity of the results of the evaluation. If NERC determines that a Rule of Procedure has been violated, or cannot practically be complied with, NERC shall notify the Applicable Governmental Authorities and take such other actions as NERC deems appropriate to address the situation.

NERC shall comply with each approved Reliability Standard that identifies NERC or the Electric Reliability Organization as a responsible entity. Regional Entities shall comply with each approved Reliability Standard that identifies Regional Entities as responsible entities. A violation by NERC or a Regional Entity of such a Reliability Standard shall constitute a violation of these Rules of Procedure.

SECTION 200 — DEFINITIONS OF TERMS

Definitions of terms used in the NERC Rules of Procedure are set forth in **Appendix 2**, *Definitions Used in the Rules of Procedure*.

SECTION 300 — RELIABILITY STANDARDS DEVELOPMENT

301. General

NERC shall develop and maintain Reliability Standards that apply to Bulk Power System owners, operators, and users and that enable NERC and Regional Entities to measure the reliability performance of Bulk Power System owners, operators, and users; and to hold them accountable for Reliable Operation of the Bulk Power Systems. The Reliability Standards shall be technically excellent, timely, just, reasonable, not unduly discriminatory or preferential, in the public interest, and consistent with other applicable standards of governmental authorities.

302. Essential Attributes for Technically Excellent Reliability Standards

1. **Applicability** — Each Reliability Standard shall clearly identify the functional classes of entities responsible for complying with the Reliability Standard, with any specific additions or exceptions noted. Such functional classes[1] include: Reliability Coordinators, Balancing Authorities, Transmission Operators, Transmission Owners, Generator Operators, Generator Owners, Interchange Authorities, Transmission Service Providers, market operators, Planning Authorities, Transmission Planners, Resource Planners, Load-Serving Entities, Purchasing-Selling Entities, and Distribution Providers. Each Reliability Standard shall also identify the geographic applicability of the Reliability Standard, such as the entire North American Bulk Power System, an Interconnection, or within a Region. A Reliability Standard may also identify any limitations on the applicability of the Reliability Standard based on electric Facility characteristics.

2. **Reliability Objectives** — Each Reliability Standard shall have a clear statement of purpose that shall describe how the Reliability Standard contributes to the reliability of the Bulk Power System. The following general objectives for the Bulk Power System provide a foundation for determining the specific objective(s) of each Reliability Standard:

    2.1 **Reliability Planning and Operating Performance**— Bulk Power Systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions.

    2.2 **Frequency and Voltage Performance**— The frequency and voltage of Bulk Power Systems shall be controlled within defined limits through the

[1] These functional classes of entities are derived from NERC's Reliability Functional Model. When a Reliability Standard identifies a class of entities to which it applies, that class must be defined in the Glossary of Terms Used in NERC Reliability Standards.

balancing of Real and Reactive Power ~~real and reactive power~~ supply and demand.

2.3 **Reliability Information** — Information necessary for the planning and operation of reliable Bulk Power Systems shall be made available to those entities responsible for planning and operating Bulk Power Systems.

2.4 **Emergency Preparation** — Plans for emergency operation and system restoration of Bulk Power Systems shall be developed, coordinated, maintained, and implemented.

2.5 **Communications and Control** — Facilities for communication, monitoring, and control shall be provided, used, and maintained for the reliability of Bulk Power Systems.

2.6 **Personnel** — Personnel responsible for planning and operating Bulk Power Systems shall be trained and qualified, and shall have the responsibility and authority to implement actions.

2.7 **Wide-Area View** — The reliability of the Bulk Power Systems shall be assessed, monitored, and maintained on a Wide-Area basis.

2.8 **Security** —Bulk Power Systems shall be protected from malicious physical or cyber attacks.

3. **Performance Requirement or Outcome**— Each Reliability Standard shall state one or more performance Requirements, which if achieved by the applicable entities, will provide for a reliable Bulk Power System, consistent with good utility practices and the public interest. Each Requirement is not a "lowest common denominator" compromise, but instead achieves an objective that is the best approach for Bulk Power System reliability, taking account of the costs and benefits of implementing the proposal.

4. **Measurability** — Each performance Requirement shall be stated so as to be objectively measurable by a third party with knowledge or expertise in the area addressed by that Requirement. Each performance Requirement shall have one or more associated measures used to objectively evaluate compliance with the Requirement. If performance can be practically measured quantitatively, metrics shall be provided to determine satisfactory performance.

5. **Technical Basis in Engineering and Operations**— Each Reliability Standard shall be based upon sound engineering and operating judgment, analysis, or experience, as determined by expert practitioners in that particular field.

6. **Completeness** — Reliability Standards shall be complete and self-contained. The Reliability Standards shall not depend on external information to determine the required level of performance.

7. **Consequences for Noncompliance** — In combination with guidelines for Penalties and sanctions, as well as other ERO and Regional Entity compliance documents, the consequences of violating a Reliability Standard are clearly presented to the entities responsible for complying with the Reliability Standards.

8. **Clear Language** — Each Reliability Standard shall be stated using clear and unambiguous language. Responsible entities, using reasonable judgment and in keeping with good utility practices, are able to arrive at a consistent interpretation of the required performance.

9. **Practicality** — Each Reliability Standard shall establish Requirements that can be practically implemented by the assigned responsible entities within the specified effective date and thereafter.

10. **Consistent Terminology** — To the extent possible, Reliability Standards shall use a set of standard terms and definitions that are approved through the NERC Reliability Standards development process.

303. Relationship between Reliability Standards and Competition

To ensure Reliability Standards are developed with due consideration of impacts on competition, to ensure Reliability Standards are not unduly discriminatory or preferential, and recognizing that reliability is an essential requirement of a robust North American economy, each Reliability Standard shall meet all of these market-related objectives:

1. **Competition** — A Reliability Standard shall not give any market participant an unfair competitive advantage.

2. **Market Structures** — A Reliability Standard shall neither mandate nor prohibit any specific market structure.

3. **Market Solutions** — A Reliability Standard shall not preclude market solutions to achieving compliance with that Reliability Standard.

4. **Commercially Sensitive Information** — A Reliability Standard shall not require the public disclosure of commercially sensitive information or other Confidential Information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with Reliability Standards.

5. **Adequacy** — NERC shall not set Reliability Standards defining an adequate amount of, or requiring expansion of, Bulk Power System resources or delivery capability.

304. Essential Principles for the Development of Reliability Standards

NERC shall develop Reliability Standards in accordance with the NERC *Standard Processes Manual*, which is incorporated into these Rules of Procedure as **Appendix 3A**. Appeals in connection with the development of a Reliability Standard shall also be conducted in accordance with the NERC *Standard Processes Manual*. Any amendments or revisions to the *Standard Processes Manual* shall be consistent with the following essential principles:

1. **Openness** — Participation shall be open to all Persons who are directly and materially affected by the reliability of the North American Bulk Power System. There shall be no undue financial barriers to participation. Participation shall not be conditional upon membership in NERC or any other organization, and shall not be unreasonably restricted on the basis of technical qualifications or other such requirements.

2. **Transparency** — The process shall be transparent to the public.

3. **Consensus-building** —The process shall build and document consensus for each Reliability Standard, both with regard to the need and justification for the Reliability Standard and the content of the Reliability Standard.

4. **Fair Balance of Interests** — The process shall fairly balance interests of all stakeholders and shall not be dominated by any single interest category.

5. **Due Process** — Development of Reliability Standards shall provide reasonable notice and opportunity for any Person with a direct and material interest to express views on a proposed Reliability Standard and the basis for those views, and to have that position considered in the development of the Reliability Standards.

6. **Timeliness** — Development of Reliability Standards shall be timely and responsive to new and changing priorities for reliability of the Bulk Power System.

305. Registered Ballot Body

NERC Reliability Standards shall be approved by a Registered Ballot Body prior to submittal to the Board and then to Applicable Governmental Authorities for their approval, where authorized by applicable legislation or agreement. This Section 305 sets

forth the rules pertaining to the composition of, and eligibility to participate in, the Registered Ballot Body.

1. **Eligibility to Vote on Reliability Standards** — Any person or entity may join the Registered Ballot Body to vote on Reliability Standards, whether or not such person or entity is a Member of NERC.

2. **Inclusive Participation** — The Segment qualification guidelines are inclusive; i.e., any entity with a legitimate interest in the reliability of the Bulk Power System that can meet any one of the eligibility criteria for a Segment is entitled to belong to and vote in each Segment for which it qualifies, subject to limitations defined in Sections 305.3 and 305.5.

3. **General Criteria for Registered Ballot Body Membership** — The general criteria for membership in the Segments are:

    3.1 **Multiple Segments** — A corporation or other organization with integrated operations or with affiliates that qualifies to belong to more than one Segment (e.g., Transmission Owners and Load-Serving Entities) may join once in each Segment for which it qualifies, provided that each Segment constitutes a separate membership and the organization is represented in each Segment by a different representative. Affiliated entities are collectively limited to one membership in each Segment for which they are qualified.

    3.2 **Withdrawing from a Segment or Changing Segments** — After its initial registration in a Segment, each registered participant may elect to withdraw from a Segment or apply to change Segments at any time.

    3.3 **Review of Segment Criteria** — The Board shall review the qualification guidelines and rules for joining Segments at least every three years to ensure that the process continues to be fair, open, balanced, and inclusive. Public input will be solicited in the review of these guidelines.

4. **Proxies for Voting on Reliability Standards** — Any registered participant may designate an agent or proxy to vote on its behalf. There are no limits on how many proxies an agent may hold. However, for the proxy to be valid, NERC must have in its possession written documentation signed by the representative of the registered participant that the voting right by proxy has been transferred from the registered participant to the agent.

5. **Segments** — The specific criteria for membership in each Registered Ballot Body Segment are defined in the *Standard Processes Manual* in **Appendix 3A.**

6. **Review of Segment Entries** — NERC shall review all applications for joining the Registered Ballot Body, and shall make a determination of whether the

applicant's self-selection of a Segment satisfies at least one of the guidelines to belong to that Segment. The entity shall then become eligible to participate as a voting member of that Segment. The Standards Committee shall resolve disputes regarding eligibility for membership in a Segment, with the applicant having the right of appeal to the Board.

306. Standards Committee

The Standards Committee shall provide oversight of the Reliability Standards development process to ensure stakeholder interests are fairly represented. The Standards Committee shall not under any circumstance change the substance of a draft or approved Reliability Standard.

1. **Membership** — The Standards Committee is a representative committee comprising representatives of two members of each of the Segments in the Registered Ballot Body.

2. **Elections** — Standards Committee members are elected for staggered (one per Segment per year) two-year terms by the respective Segments in accordance with the *Procedure for the Election of Members of the NERC Standards Committee*, which is incorporated into these Rules of Procedure as **Appendix 3B**. Segments may use their own election procedure if such a procedure is ratified by two-thirds of the members of a Segment and approved by the Board.

3. **Canadian Representation**

   3.1 **Provision for Sufficient Canadian Representation —** If any regular election of Standards Committee members does not result in at least two Canadian members on the Standards Committee, the Canadian nominees who were not elected but who received the next highest percentage of votes within their respective Segment(s) will be designated as additional members of the Standards Committee, as needed to achieve a total of two Canadian members.

   3.2 **Terms of Specially Designated Canadian Members** — Each specially designated Canadian member of the Standards Committee shall have a term ending with the next annual election.

   3.3 **Segment Preference** — If any Segment has an unfilled representative position on the Standards Committee following the annual election, the first preference is to assign each specially designated Canadian representative to a Segment with an unfilled representative position for which his or her organization qualifies.

   3.4 **Rights of Specially Designated Canadian Members** — Any specially designated Canadian members of the Standards Committee shall have the

same rights and obligations as all other members of the Standards Committee.

4. **Open Meetings** — All meetings of the Standards Committee shall be open and publicly noticed on the NERC website.

307. Standards Process Manager

NERC shall assign a standards process manager to administer the development of Reliability Standards. The standards process manager shall be responsible for ensuring that the development and revision of Reliability Standards are in accordance with the NERC *Standard Processes Manual*. The standards process manager shall work to achieve the highest degree of integrity and consistency of quality and completeness of the Reliability Standards. The standards process manager shall coordinate with any Regional Entities that develop Regional Reliability Standards to ensure those Regional Reliability Standards are effectively integrated with the NERC Reliability Standards.

308. Steps in the Development of Reliability Standards

1. **Procedure** — NERC shall develop Reliability Standards through the process set forth in the NERC *Standard Processes Manual* (**Appendix 3A**). The procedure includes a provision for approval of urgent action Reliability Standards that can be completed within 60 days and emergency actions that may be further expedited.

2. **Board Approval** — Reliability Standards or revisions to Reliability Standards approved by the ballot pool in accordance with the *Standard Processes Manual* shall be submitted for approval by the Board. No Reliability Standard or revision to a Reliability Standard shall be effective unless approved by the Board.

3. **Governmental Approval** — After receiving Board approval, a Reliability Standard or revision to a Reliability Standard shall be submitted to all Applicable Governmental Authorities in accordance with Section 309. No Reliability Standard or revision to a Reliability Standard shall be effective within a geographic area over which an Applicable Governmental Authority has jurisdiction unless approved by such Applicable Governmental Authority or is otherwise made effective pursuant to the laws applicable to such Applicable Governmental Authority.

309. Filing of Reliability Standards for Approval by Applicable Governmental Authorities

1. **Filing of Reliability Standards for Approval** — Where authorized by applicable legislation or agreement, NERC shall file with the Applicable Governmental

Authorities each Reliability Standard, modification to a Reliability Standard, or withdrawal of a Reliability Standard that is approved by the Board. Each filing shall be in the format required by the Applicable Governmental Authority and shall include: a concise statement of the basis and purpose of the Reliability Standard; the text of the Reliability Standard; the implementation plan for the Reliability Standard; a demonstration that the Reliability Standard meets the essential attributes of Reliability Standards as stated in Section 302; the drafting team roster; the ballot pool and final ballot results; and a discussion of public comments received during the development of the Reliability Standard and the consideration of those comments.

2. **Remanded Reliability Standards and Directives to Develop Standards** — If an Applicable Governmental Authority remands a Reliability Standard to NERC or directs NERC to develop a Reliability Standard, NERC shall within five (5) business days notify all other Applicable Governmental Authorities, and shall within thirty (30) calendar days report to all Applicable Governmental Authorities a plan and timetable for modification or development of the Reliability Standard. Reliability Standards that are remanded or directed by an Applicable Governmental Authority shall be modified or developed using the *Standard Processes Manual*. NERC shall, during the development of a modification for the remanded Reliability Standard or directed Reliability Standard, consult with other Applicable Governmental Authorities to coordinate any impacts of the proposed Reliability Standards in those other jurisdictions. The expedited action procedure may be applied if necessary to meet a timetable for action required by the Applicable Governmental Authorities, respecting to the extent possible the provisions in the Reliability Standards development process for reasonable notice and opportunity for public comment, due process, openness, and a balance of interest in developing Reliability Standards. If the Board of Trustees determines that the process did not result in a Reliability Standard that addresses a specific matter that is identified in a directive issued by an Applicable Governmental Authority, then Rule 321 of these Rules of Procedure shall apply.

3. **Directives to Develop Reliability Standards under Extraordinary Circumstances** — An Applicable Governmental Authority may, on its own initiative, determine that extraordinary circumstances exist requiring expedited development of a Reliability Standard. In such a case, the Applicable Governmental Authority may direct the development of a Reliability Standard within a certain deadline. NERC staff shall prepare the Standards Authorization Request and seek a stakeholder sponsor for the request. If NERC is unable to find a sponsor for the proposed Reliability Standard, NERC will be designated as the requestor. The proposed Reliability Standard will then proceed through the Reliability Standards development process, using the expedited action procedures described in the *Standard Processes Manual* as necessary to meet the specified deadline. The timeline will be developed to respect, to the extent possible, the provisions in the Reliability Standards development process for reasonable notice and opportunity for public comment, due process, openness, and a balance of

interests in developing Reliability Standards. If the Board of Trustees determines that the process did not result in a Reliability Standard that addresses a specific matter that is identified in a directive issued by an Applicable Governmental Authority, then Rule 321 of these Rules of Procedure shall apply, with appropriate modification of the timeline.

3.1 Consistent with all Reliability Standards developed under the expedited action process, each of the three possible follow-up actions as documented in the *Standard Processes Manual* are to be completed through the Reliability Standards development process and are subject to approval by the Applicable Governmental Authorities in the U.S. and Canada.

310. Annual Reliability Standards Development Plan

NERC shall develop and provide an annual Reliability Standards Development Plan for development of Reliability Standards to the Applicable Governmental Authorities. NERC shall consider the comments and priorities of the Applicable Governmental Authorities in developing and updating the annual Reliability Standards Development Plan. Each annual Reliability Standards Development Plan shall include a progress report comparing results achieved to the prior year's Reliability Standards Development Plan.

311. Regional Entity Standards Development Procedures

1. **NERC Approval of Regional Entity Reliability Standards Development Procedure** — To enable a Regional Entity to develop Regional Reliability Standards that are to be recognized and made part of NERC Reliability Standards, a Regional Entity may request NERC to approve a Regional Reliability Standards development procedure.

2. **Public Notice and Comment on Regional Reliability Standards Development Procedure** — Upon receipt of such a request, NERC shall publicly notice and request comment on the proposed Regional Reliability Standards development procedure, allowing a minimum of 45 days for comment. The Regional Entity shall have an opportunity to resolve any objections identified in the comments and may choose to withdraw the request, revise the Regional Reliability Standards development procedure and request another posting for comment, or submit the Regional Reliability Standards development procedure, along with its consideration of any objections received, for approval by NERC.

3. **Evaluation of Regional Reliability Standards Development Procedure** — NERC shall evaluate whether a Regional Reliability Standards development procedure meets the criteria listed below and shall consider stakeholder comments, any unresolved stakeholder objections, and the consideration of comments provided by the Regional Entity, in making that determination. If NERC determines the Regional Reliability Standards development procedure meets these requirements, the Regional Reliability Standards development

procedure shall be submitted to the Board for approval. The Board shall consider the recommended action, stakeholder comments, any unresolved stakeholder comments, and the Regional Entity consideration of comments in determining whether to approve the Regional Reliability Standards development procedure.

3.1 **Evaluation Criteria** — The Regional Reliability Standards development procedure shall be:

3.1.1 **Open** — The Regional Reliability Standards development procedure shall provide that any person or entity who is directly and materially affected by the reliability of the Bulk Power Systems within the Regional Entity shall be able to participate in the development and approval of Reliability Standards. There shall be no undue financial barriers to participation. Participation shall not be conditional upon membership in the Regional Entity, a Regional Entity or any organization, and shall not be unreasonably restricted on the basis of technical qualifications or other such requirements.

3.1.2 **Inclusive** — The Regional Reliability Standards development procedure shall provide that any Person with a direct and material interest has a right to participate by expressing an opinion and its basis, having that position considered, and appealing through an established appeals process if adversely affected.

3.1.3 **Balanced** — The Regional Reliability Standards development procedure shall have a balance of interests and shall not permit any two interest categories to control the vote on a matter or any single interest category to defeat a matter.

3.1.4 **Due Process** — The Regional Reliability Standards development procedure shall provide for reasonable notice and opportunity for public comment. At a minimum, the Regional Reliability Standards development procedure shall include public notice of the intent to develop a Regional Reliability Standard, a public comment period on the proposed Regional Reliability Standard, due consideration of those public comments, and a ballot of interested stakeholders.

3.1.5 **Transparent** — All actions material to the development of Regional Reliability Standards shall be transparent. All Regional Reliability Standards development meetings shall be open and publicly noticed on the Regional Entity's website.

3.1.6 **Accreditation of Regional Standards Development Procedure** — A Regional Entity's Regional Reliability Standards

development procedure that is accredited by the American National Standards Institute or the Standards Council of Canada shall be deemed to meet the criteria listed in this Section 311.3.1, although such accreditation is not a prerequisite for approval by NERC.

3.1.7 **Use of NERC Procedure** — A Regional Entity may adopt the NERC *Standard Processes Manual* as the Regional Reliability Standards development procedure, in which case the Regional Entity's Regional Reliability Standards development procedure shall be deemed to meet the criteria listed in this Section 311.3.1.

4. **Revisions of Regional Reliability Standards Development Procedures** — Any revision to a Regional Reliability Standards development procedure shall be subject to the same approval requirements set forth in Sections 311.1 through 311.3.

5. **Duration of Regional Reliability Standards Development Procedures** — The Regional Reliability Standards development procedure shall remain in effect until such time as it is replaced with a new version approved by NERC or it is withdrawn by the Regional Entity. The Regional Entity may, at its discretion, withdraw its Regional Reliability Standards development procedure at any time.

312. Regional Reliability Standards

1. **Basis for Regional Reliability Standards** — Regional Entities may propose Regional Reliability Standards that set more stringent reliability requirements than the NERC Reliability Standard or cover matters not covered by an existing NERC Reliability Standard. Such Regional Reliability Standards shall in all cases be approved by NERC and made part of the NERC Reliability Standards and shall be enforceable in accordance with the delegation agreement between NERC and the Regional Entity or other instrument granting authority over enforcement to the Regional Entity. No entities other than NERC and the Regional Entity shall be permitted to develop Regional Reliability Standards that are enforceable under statutory authority delegated to NERC and the Regional Entity.

2. **Regional Reliability Standards That are Directed by a NERC Reliability Standard** — Although it is the intent of NERC to promote uniform Reliability Standards across North America, in some cases it may not be feasible to achieve a reliability objective with a Reliability Standard that is uniformly applicable across North America. In such cases, NERC may direct Regional Entities to develop Regional Reliability Standards necessary to implement a NERC Reliability Standard. Such Regional Reliability Standards that are developed pursuant to a direction by NERC shall be made part of the NERC Reliability Standards.

3. **Procedure for Developing an Interconnection-wide Regional Standard** — A Regional Entity organized on an Interconnection-wide basis may propose a Regional Reliability Standard for approval as a NERC Reliability Standard to be made mandatory for all applicable Bulk Power System owners, operators, and users within that Interconnection.

3.1 **Presumption of Validity** — An Interconnection-wide Regional Reliability Standard that is determined by NERC to be just, reasonable, and not unduly discriminatory or preferential, and in the public interest, and consistent with such other applicable standards of governmental authorities, shall be adopted as a NERC Reliability Standard. NERC shall rebuttably presume that a Regional Reliability Standard developed, in accordance with a Regional Reliability Standards development process approved by NERC, by a Regional Entity organized on an Interconnection-wide basis, is just, reasonable, and not unduly discriminatory or preferential, and in the public interest, and consistent with such other applicable standards of governmental authorities.

3.2 **Notice and Comment Procedure for Interconnection-wide Regional Reliability Standard** — NERC shall publicly notice and request comment on the proposed Interconnection-wide Regional Reliability Standard, allowing a minimum of 45 days for comment. NERC may publicly notice and post for comment the proposed Regional Reliability Standard concurrent with similar steps in the Regional Entity's Regional Reliability Standards development process. The Regional Entity shall have an opportunity to resolve any objections identified in the comments and may choose to comment on or withdraw the request, revise the proposed Regional Reliability Standard and request another posting for comment, or submit the proposed Regional Reliability Standard along with its consideration of any objections received, for approval by NERC.

3.3 **Approval of Interconnection-wide Regional Reliability Standard by NERC** — NERC shall evaluate and recommend whether a proposed Interconnection-wide Regional Reliability Standard has been developed in accordance with all applicable procedural requirements and whether the Regional Entity has considered and resolved stakeholder objections that could serve as a basis for rebutting the presumption of validity of the Regional Reliability Standard. The Regional Entity, having been notified of the results of the evaluation and recommendation concerning NERC proposed Regional Reliability Standard, shall have the option of presenting the proposed Regional Reliability Standard to the Board for approval as a NERC Reliability Standard. The Board shall consider the Regional Entity's request, NERC's recommendation for action on the Regional Reliability Standard, any unresolved stakeholder comments, and the Regional Entity's consideration of comments, in determining whether

to approve the Regional Reliability Standard as a NERC Reliability Standard.

3.4 **Applicable Governmental Authority Approval** — An Interconnection-wide Regional Reliability Standard that has been approved by the Board shall be filed with the Applicable Governmental Authorities for approval, where authorized by applicable legislation or agreement, and shall become effective when approved by such Applicable Governmental Authorities or on a date set by the Applicable Governmental Authorities.

3.5 **Enforcement of Interconnection-wide Regional Reliability Standard** — An Interconnection-wide Regional Reliability Standard that has been approved by the Board and by the Applicable Governmental Authorities or is otherwise made effective within Canada as mandatory within a particular Region shall be applicable and enforced as a NERC Reliability Standard within the Region.

4. **Procedure for Developing Non-Interconnection-Wide Regional Reliability Standards** — Regional Entities that are not organized on an Interconnection-wide basis may propose Regional Reliability Standards to apply within their respective Regions. Such Regional Reliability Standards may be developed through the NERC Reliability Standards development procedure, or alternatively, through a Regional Reliability Standards development procedure that has been approved by NERC.

4.1 **No Presumption of Validity** — Regional Reliability Standards that are not proposed to be applied on an Interconnection-wide basis are not presumed to be valid but may be demonstrated by the proponent to be valid.

4.2 **Notice and Comment Procedure for Non-Interconnection-wide Regional Reliability Standards** — NERC shall publicly notice and request comment on the proposed Regional Reliability Standard, allowing a minimum of 45 days for comment. NERC may publicly notice and post for comment the proposed Regional Reliability Standard concurrent with similar steps in the Regional Entity's Regional Reliability Standards development process. The Regional Entity shall have an opportunity to comment on or resolve any objections identified in the comments and may choose to withdraw the request, revise the proposed Regional Reliability Standard and request another posting for comment, or submit the proposed Regional Reliability Standard along with its consideration of any objections received, for approval by NERC.

4.3 **NERC Approval of Non-Interconnection-wide Regional Reliability Standards** — NERC shall evaluate and recommend whether a proposed non-Interconnection-wide Regional Reliability Standard has been

developed in accordance with all applicable procedural requirements and whether the Regional Entity has considered and resolved stakeholder objections. The Regional Entity, having been notified of the results of the evaluation and recommendation concerning proposed Regional Reliability Standard, shall have the option of presenting the proposed Regional Reliability Standard to the Board for approval as a NERC Reliability Standard. The Board shall consider the Regional Entity's request, the recommendation for action on the Regional Reliability Standard, any unresolved stakeholder comments, and the Regional Entity's consideration of comments, in determining whether to approve the Regional Reliability Standard as a NERC Reliability Standard.

4.4 **Applicable Governmental Authority Approval** — A non-Interconnection-wide Regional Reliability Standard that has been approved by the Board shall be filed with the Applicable Governmental Authorities for approval, where authorized by applicable legislation or agreement, and shall become effective when approved by such Applicable Governmental Authorities or on a date set by the Applicable Governmental Authorities.

4.5 **Enforcement of Non-Interconnection-wide Regional Reliability Standards** — A non-Interconnection-wide Regional Reliability Standard that has been approved by the Board and by the Applicable Governmental Authorities or is otherwise made effective within Canada as mandatory within a particular Region shall be applicable and enforced as a NERC Reliability Standard within the Region.

5. **Appeals** — A Regional Entity shall have the right to appeal NERC's decision not to approve a proposed Regional Reliability Standard or Variance to the Commission or other Applicable Governmental Authority.

313. Other Regional Criteria, Guides, Procedures, Agreements, Etc.

1. **Regional Criteria** — Regional Entities may develop Regional Criteria that are necessary to implement, to augment, or to comply with Reliability Standards, but which are not Reliability Standards. Regional Criteria may also address issues not within the scope of Reliability Standards, such as resource adequacy. Regional Criteria may include specific acceptable operating or planning parameters, guides, agreements, protocols or other documents used to enhance the reliability of the Bulk Power System in the Region. These documents typically provide benefits by promoting more consistent implementation of the NERC Reliability Standards within the Region. These documents are not NERC Reliability Standards, Regional Reliability Standards, or regional Variances, and therefore are not enforceable under authority delegated by NERC pursuant to delegation agreements and do not require NERC approval.

2. **Catalog of Regional Criteria** — NERC shall maintain a current catalog of Regional Criteria. Regional Entities shall provide a catalog listing of Regional Criteria to NERC and shall notify NERC of changes to the listing. Regional Entities shall provide any listed document to NERC upon written request.

314. Conflicts with Statutes, Regulations, and Orders

Notice of Potential Conflict — If a Bulk Power System owner, operator, or user determines that a NERC or Regional Reliability Standard may conflict with a function, rule, order, tariff, rate schedule, legislative requirement or agreement that has been accepted, approved, or ordered by a governmental authority affecting that entity, the entity shall expeditiously notify the governmental authority, NERC, and the relevant Regional Entity of the conflict.

1. **Determination of Conflict —** NERC, upon request of the governmental authority, may advise the governmental authority regarding the conflict and propose a resolution of the conflict, including revision of the Reliability Standard if appropriate.

2. **Regulatory Precedence** — Unless otherwise ordered by a governmental authority, the affected Bulk Power System owner, operator, or user shall continue to follow the function, rule, order, tariff, rate schedule, legislative requirement, or agreement accepted, approved, or ordered by the governmental authority until the governmental authority finds that a conflict exists and orders a remedy and such remedy is affected.

315. Revisions to NERC Reliability Standards Development Procedure

Any person or entity may submit a written request to modify NERC *Standard Processes Manual*. Consideration of the request and development of the revision shall follow the process defined in the NERC *Standard Processes Manual*. Upon approval by the Board, the revision shall be submitted to the Applicable Governmental Authorities for approval. Changes shall become effective only upon approval by the Applicable Governmental Authorities or on a date designated by the Applicable Governmental Authorities or as otherwise applicable in a particular jurisdiction.

316. Accreditation

NERC shall seek continuing accreditation of the NERC Reliability Standards development process by the American National Standards Institute and the Standards Council of Canada.

317. Five-Year Review of Reliability Standards

NERC shall complete a review of each NERC Reliability Standard at least once every five years from the effective date of the Reliability Standard or the latest revision to the Reliability Standard, whichever is later. The review process shall be conducted in accordance with the NERC *Standard Processes Manual*. The standards process manager shall be responsible for administration of the five-year review of Reliability Standards. As a result of this review, the NERC Reliability Standard shall be reaffirmed, revised, or withdrawn. If the review indicates a need to revise or withdraw the Reliability Standard, a request for revision or withdrawal shall be prepared, submitted and addressed in accordance with the NERC *Standard Processes Manual*.

318. Coordination with the North American Energy Standards Board

NERC shall, through a memorandum of understanding, maintain a close working relationship with the North American Energy Standards Board and ISO/RTO Council to ensure effective coordination of wholesale electric business practice standards and market protocols with the NERC Reliability Standards.

319. Archived Standards Information

NERC shall maintain a historical record of Reliability Standards information that is no longer maintained on-line. For example, Reliability Standards that expired or were replaced may be removed from the on-line system. Archived information shall be retained indefinitely as practical, but in no case less than five years or one complete Reliability Standards review cycle from the date on which the Reliability Standard was no longer in effect. Archived records of Reliability Standards information shall be available electronically within 30 days following the receipt by the standards process manager of a written request.

320. Alternate Method for Adopting Violation Risk Factors

In the event the Reliability Standards development process fails to produce Violation Risk Factors for a particular Reliability Standard in a timely manner, the Board of Trustees may adopt Violation Risk Factors for that Reliability Standard using the procedures set out in Section 1400 of these Rules of Procedure.

321. Special Rule to Address Certain Regulatory Directives

In circumstances where this Rule 321 applies, the Board of Trustees shall have the authority to take one or more of the actions set out below. The Board of Trustees shall have the authority to choose which one or more of the actions are appropriate to the circumstances and need not take these actions in sequential steps.

1. The Standards Committee shall have the responsibility to ensure that standards drafting teams address specific matters that are identified in directives issued by Applicable Governmental Authorities. If the Board of Trustees is presented with a proposed Reliability Standard that fails to address such directives, the Board of Trustees has the authority to remand, with instructions (including establishing a timetable for action), the proposed Reliability Standard to the Standards Committee.

2. Upon a written finding by the Board of Trustees that a ballot pool has failed to approve a proposed Reliability Standard that contains a provision to address a specific matter identified in a directive issued by an Applicable Governmental Authority, the Board of Trustees has the authority to remand the proposed Reliability Standard to the Standards Committee, with instructions to (i) convene a public technical conference to discuss the issues surrounding the regulatory directive, including whether or not the proposed Reliability Standard is just, reasonable, not unduly discriminatory or preferential, in the public interest, helpful to reliability, practical, technically sound, technically feasible, and cost-justified; (ii) working with NERC staff, prepare a memorandum discussing the issues, an analysis of the alternatives considered and other appropriate matters; and (iii) re-ballot the proposed Reliability Standard one additional time, with such adjustments in the schedule as are necessary to meet the deadline contained in paragraph 2.1 of this Rule.

   2.1 Such a re-ballot shall be completed within forty-five (45) days of the remand. The Standards Committee memorandum shall be included in the materials made available to the ballot pool in connection with the re-ballot.

   2.2 In any such re-ballot, negative votes without comments related to the proposal shall be counted for purposes of establishing a quorum, but only affirmative votes and negative votes with comments related to the proposal shall be counted for purposes of determining the number of votes cast and whether the proposed Reliability Standard has been approved.

3. If the re-balloted proposed Reliability Standard achieves at least an affirmative two-thirds majority vote of the weighted Segment votes cast, with a quorum established, then the proposed Reliability Standard shall be deemed approved by the ballot pool and shall be considered by the Board of Trustees for approval.

4. If the re-balloted proposed Reliability Standard fails to achieve at least an affirmative two-thirds majority vote of the weighted Segment votes cast, but does achieve at least a sixty percent affirmative majority of the weighted Segment votes cast, with a quorum established, then the Board of Trustees has the authority to consider the proposed Reliability Standard for approval under the following procedures:

   4.1 The Board of Trustees shall issue notice of its intent to consider the proposed Reliability Standard and shall solicit written public comment

particularly focused on the technical aspects of the provisions of the proposed Reliability Standard that address the specific matter identified in the regulatory directive, including whether or not the proposed Reliability Standard is just, reasonable, not unduly discriminatory or preferential, in the public interest, helpful to reliability, practical, technically sound, technically feasible, and cost-justified.

4.2 The Board of Trustees may, in its discretion, convene a public technical conference to receive additional input on the matter.

4.3 After considering the developmental record, the comments received during balloting and the additional input received under paragraphs 4.1 and 4.2 of this Rule, the Board of Trustees has authority to act on the proposed Reliability Standard.

4.3.1 If the Board of Trustees finds that the proposed Reliability Standard is just, reasonable, not unduly discriminatory or preferential, and in the public interest, considering (among other things) whether it is helpful to reliability, practical, technically sound, technically feasible, and cost-justified, then it has authority to approve the proposed Reliability Standard and direct that it be filed with Applicable Governmental Authorities with a request that it be made effective.

4.3.2 If the Board of Trustees is unable to find that the proposed Reliability Standard is just, reasonable, not unduly discriminatory or preferential, and in the public interest, considering (among other things) whether it is helpful to reliability, practical, technically sound, technically feasible, and cost-justified, then it has authority to treat the proposed Reliability Standard as a draft Reliability Standard and direct that the draft Reliability Standard and complete developmental record, including the additional input received under paragraphs 4.1 and 4.2 of this Rule, be filed with the Applicable Governmental Authorities as a compliance filing in response to the order giving rise to the regulatory directive, along with a recommendation that the Reliability Standard not be made effective and an explanation of the basis for the recommendation.

A5. Upon a written finding by the Board of Trustees that standard drafting team has failed to develop, or a ballot pool has failed to approve, a proposed Reliability Standard that contains a provision to address a specific matter identified in a directive issued by an Applicable Governmental Authority, the Board of Trustees has the authority to direct the Standards Committee (with the assistance of stakeholders and NERC staff) to prepare a draft Reliability Standard that addresses the regulatory directive, taking account of the entire developmental record pertaining to the matter. If the Standards Committee fails to prepare such

draft Reliability Standard, the Board of Trustees may direct NERC management to prepare such draft Reliability Standard.

5.1 The Board of Trustees may, in its discretion, convene a public technical conference to receive input on the matter. The draft Reliability Standard shall be posted for a 45-day public comment period.

5.2 If, after considering the entire developmental record (including the comments received under paragraph 5.1 of this Rule), the Board of Trustees finds that the draft Reliability Standard, with such modifications as the Board of Trustees determines are appropriate in light of the comments received, is just, reasonable, not unduly discriminatory or preferential, and in the public interest, considering (among other things) whether it is practical, technically sound, technically feasible, cost-justified and serves the best interests of reliability of the Bulk Power System, then the Board of Trustees has the authority to approve the draft Reliability Standard and direct that the proposed Reliability Standard be filed with Applicable Governmental Authorities with a request that the proposed Reliability Standard be made effective.

5.3 If, after considering the entire developmental record (including the comments received under paragraph 5.1 of this Rule), the Board of Trustees is unable to find that the draft Reliability Standard, even with modifications, is just, reasonable, not unduly discriminatory or preferential, and in the public interest, considering (among other things) whether it is practical, technically sound, technically feasible, cost-justified and serves the best interests of reliability of the Bulk Power System, then the Board of Trustees has the authority to direct that the draft Reliability Standard and complete developmental record be filed as a compliance filing in response to the regulatory directive with the Applicable Governmental Authority issuing the regulatory directive, with a recommendation that the draft Reliability Standard not be made effective.

5.4 The filing of the Reliability Standard under either paragraph 5.2 or paragraph 5.3 of this Rule shall include an explanation of the basis for the decision by the Board of Trustees.

5.5 A Reliability Standard approved under paragraph 5 of this Rule shall not be eligible for submission as an American National Standard.

6. NERC shall on or before March 31st of each year file a report with Applicable Governmental Authorities on the status and timetable for addressing each outstanding directive to address a specific matter received from an Applicable Governmental Authority.

SECTION 400 — COMPLIANCE ENFORCEMENT

401. Scope of the NERC Compliance Monitoring and Enforcement Program

1. **Components of the NERC Compliance Monitoring and Enforcement Program** — NERC shall develop and implement a NERC Compliance Monitoring and Enforcement Program to promote the reliability of the Bulk Power System by enforcing compliance with approved Reliability Standards in those regions of North American in which NERC and/or a Regional Entity (pursuant to a delegation agreement with NERC that has been approved by the Applicable Governmental Authority) has been given enforcement authority. There are four distinct parts of the NERC Compliance Monitoring and Enforcement Program: (1) NERC's oversight of the Regional Entity Compliance Monitoring and Enforcement Programs (Section 402), (2) the definition of the required Regional Entity Compliance Monitoring and Enforcement Program attributes (Section 403), (3) NERC's monitoring of Regional Entity compliance with Reliability Standards (Section 404), and (4) the monitoring of compliance with Reliability Standards that are applicable to NERC (Sections 405–406).

2. **Who Must Comply** — Where required by applicable legislation, regulation, rule or agreement, all Bulk Power System owners, operators, and users, Regional Entities, and NERC, are required to comply with all approved NERC Reliability Standards at all times. Regional Reliability Standards and Variances approved by NERC and the Applicable Governmental Authority shall be considered NERC Reliability Standards and shall apply to all Bulk Power System owners, operators, or users responsible for meeting those Reliability Standards within the Regional Entity boundaries, whether or not the Bulk Power System owner, operator, or user is a member of the Regional Entity.

3. **Data Access** — All Bulk Power System owners, operators, and users shall provide to NERC and the applicable Regional Entity such information as is necessary to monitor compliance with the Reliability Standards. NERC and the applicable Regional Entity will define the data retention and reporting requirements in the Reliability Standards and compliance reporting procedures.

4. **Role of Regional Entities in the Compliance Monitoring and Enforcement Program** — Each Regional Entity that has been delegated authority through a delegation agreement or other legal instrument approved by the Applicable Governmental Authority shall, in accordance with the terms of the approved delegation agreement, administer a Regional Entity Compliance Monitoring and Enforcement program to meet the NERC Compliance Monitoring and Enforcement Program goals and the requirements in this Section 400.

5. **Program Continuity** — NERC will ensure continuity of compliance monitoring and enforcement within the geographic boundaries of a Regional Entity in the event that NERC does not have a delegation agreement, or the Regional Entity withdraws from the agreement or does not operate its Compliance Monitoring and Enforcement Program in accordance with the delegation agreement or other applicable requirements.

5.1 Should NERC not have a delegation agreement with a Regional Entity covering a geographic area, or a Regional Entity withdraws from an existing delegation agreement or the delegation agreement is otherwise terminated, NERC will directly administer the Compliance Monitoring and Enforcement Program applicable to owners, operators and users of the Bulk Power System within that geographic area.

1. This monitoring and enforcement will be accomplished by NERC and Compliance Staff from another approved Regional Entity.

2. If an existing delegation agreement with a Regional Entity is terminating, the Regional Entity shall promptly provide to NERC all relevant compliance information regarding Registered Entities, contacts, prior compliance information and actions, Mitigation Plans, and remedial actions for the period in which the Regional Entity was responsible for administering the Compliance Monitoring and Enforcement Program.

3. NERC will levy and collect all Penalties directly and will utilize any Penalty monies collected to offset the expenses of administering the Compliance Monitoring and Enforcement Program for the geographic area.

5.2 Should a Regional Entity seek to withdraw from its delegation agreement, NERC will seek agreement from another Regional Entity to amend its delegation agreement with NERC to extend that Regional Entity's boundaries for compliance monitoring and enforcement. In the event no Regional Entity is willing to accept this responsibility, NERC will administer the Compliance Monitoring and Enforcement Program within the geographical boundaries of the Regional Entity seeking to withdraw from the delegation agreement, in accordance with Section 401.5.1.

6. **Actively Monitored Requirements** — NERC, with input from the Regional entities, stakeholders, and regulators, shall annually select a subset of the NERC Reliability Standards and Requirements to be actively monitored and audited in the annual NERC Compliance Monitoring and Enforcement Program Implementation Plan. Compliance is required with all NERC Reliability Standards whether or not they are included in the subset of Reliability Standards and Requirements designated to be actively monitored and audited in the annual NERC Compliance Monitoring and Enforcement Program Implementation Plan.

7. **Penalties, Sanctions, and Remedial Actions** — NERC and Regional Entities will apply Penalties, sanctions, and remedial actions that bear a reasonable relation to the seriousness of a violation and take into consideration timely remedial efforts as defined in the NERC *Sanction Guidelines*, which is incorporated into these rules as **Appendix 4B**.

8. **Multiple Enforcement Actions** – A Registered Entity shall not be subject to an enforcement action by NERC and a Regional Entity for the same violation.

9. **Records** — NERC shall maintain a record of each compliance submission, including Self-Reported, Possible, Alleged, and Confirmed Violations of approved Reliability Standards; associated Penalties, sanctions, remedial actions and settlements; and the status of mitigation actions.

10. **Confidential Information** — NERC will treat all Possible and Alleged Violations of Reliability Standards and matters related to a Compliance Monitoring and Enforcement Program process, including the status of any Compliance Investigation or other Compliance Monitoring and Enforcement Program process, as confidential in accordance with Section 1500.

    The types of information that will be considered confidential and will not (subject to statutory and regulatory requirements) be disclosed in any public information reported by NERC are identified in Section 1500. Information that would jeopardize Bulk Power System reliability, including information relating to a Cyber Security Incident, will be identified and protected from public disclosure as Critical Energy Infrastructure Information in accordance with Section 1500.

    The Regional Entity and NERC shall give Bulk Power System owners, operators, and users a reasonable opportunity to demonstrate that information concerning a violation is confidential before such report is disclosed to the public.

11. **Public Posting** — When the affected Bulk Power System owner, operator, or user either agrees with a Possible or Alleged Violation(s) of a Reliability Standard(s) or a report of a Compliance Audit or Compliance Investigation, or enters into a settlement agreement concerning a Possible or Alleged Violation(s), or the time for submitting an appeal is passed, or all appeals processes are complete, NERC shall, subject to the confidentiality requirements of these Rules of Procedure, publicly post each Confirmed Violation, Penalty or sanction, settlement agreement, and final Compliance Audit or Compliance Investigation report, on its website.

    11.1 Each Bulk Power System owner, operator, or user may provide NERC with a statement to accompany the Confirmed Violation or report to be posted publicly. The statement must be on company letterhead and include a signature, as well as the name and title of the person submitting the information.

    11.2 In accordance with Section 1500, information deemed by a Bulk Power System owner, operator, or user, Regional Entity, or NERC as Critical Energy Infrastructure Information (*NERC Security Guidelines for the Electricity Sector — Protecting Potentially Sensitive Information* may be used as a guide) or other Confidential Information shall be redacted in accordance with Section 1500 and not be released publicly.

    11.3 Subject to redaction of Critical Energy Infrastructure Information or other Confidential Information, for each Confirmed Violation or settlement relating to a Possible Violation or an Alleged Violation, the public posting

shall include the name of any relevant entity, the nature, time period, and circumstances of such Possible, Alleged or Confirmed Violation, any Mitigation Plan to be implemented by the Registered Entity in connection with the Confirmed Violation or settlement, and sufficient facts to assist owners, operators and users of the Bulk Power System to evaluate whether they have engaged in or are engaging in similar activities.

12. **Violation Information Review** — NERC Compliance Staff shall periodically review and analyze all reports of Possible, Alleged and Confirmed Violations to identify trends and other pertinent reliability issues.

402. NERC Oversight of the Regional Entity Compliance Monitoring and Enforcement Programs

1. **NERC Monitoring Program** — NERC shall have a program to monitor the Compliance Monitoring and Enforcement Program of each Regional Entity that has been delegated authority. The objective of this monitoring program shall be to ensure that the Regional Entity carries out its Compliance Monitoring and Enforcement Program in accordance with these Rules of Procedure and the terms of the delegation agreement, and to ensure consistency and fairness of the Regional Entity's Compliance Monitoring and Enforcement Program. Oversight and monitoring by NERC shall be accomplished through an annual Compliance Monitoring and Enforcement Program review, program audits, and regular evaluations of Regional Entity Compliance Monitoring and Enforcement Program performance as described below.

   1.1 **NERC Review of Annual Regional Entity Compliance Monitoring and Enforcement Program Implementation Plans** — NERC shall require each Regional Entity to submit for review and approval an annual Regional Entity Compliance Monitoring and Enforcement Program Implementation Plan. NERC shall review each annual Regional Entity Compliance Monitoring and Enforcement Program Implementation Plan and shall accept the plan if it meets NERC requirements and the requirements of the delegation agreement.

   1.2 **Regional Entity Compliance Monitoring and Enforcement Program Evaluation** — NERC shall annually evaluate the goals, tools, and procedures of each Regional Entity Compliance Monitoring and Enforcement Program to determine the effectiveness of each Regional Entity Compliance Monitoring and Enforcement Program, using criteria developed by the NERC Compliance and Certification Committee.

   1.3 **Regional Entity Compliance Monitoring and Enforcement Program Audit** — At least once every five years, NERC shall conduct an audit to evaluate how each Regional Entity Compliance Monitoring and Enforcement Program implements the NERC Compliance Monitoring and Enforcement Program. The evaluation shall be based on these Rules of Procedure, including Appendix 4C, the delegation agreement, directives in effect pursuant to the delegation agreement, approved annual Regional

Entity Compliance Monitoring and Enforcement Program Implementation Plans, required Compliance Monitoring and Enforcement Program attributes, and the NERC Compliance Monitoring and Enforcement Program procedures. These evaluations shall be provided to the Applicable Governmental Authorities to demonstrate the effectiveness of each Regional Entity. In addition, audits of Cross-Border Regional Entities shall cover applicable requirements imposed on the Regional Entity by statute, regulation, or order of, or agreement with, provincial governmental and/or regulatory authorities for which NERC has auditing responsibilities over the Regional Entity's compliance with such requirements within Canada or Mexico. Participation of a representative of an Applicable Governmental Authority shall be subject to the limitations of sections 3.1.6 and 8.0 of Appendix 4C of these Rules of Procedure regarding disclosures of non-public compliance information related to other jurisdictions. NERC shall maintain an audit procedure containing the requirements, steps, and timelines to conduct an audit of each Regional Entity Compliance Monitoring and Enforcement Program. The current procedure is contained in the NERC Audit of Regional Entity Compliance Programs, which is incorporated into these rules as **Appendix 4A**.

1.3.1. NERC shall establish a program to audit bulk power system owners, operators, and users operating within a regional entity to verify the findings of previous compliance audits conducted by the regional entity to evaluate how well the regional entity compliance enforcement program is meeting its delegated authority and responsibility.

1.4 Applicable Governmental Authorities will be allowed to participate as an observer in any audit conducted by NERC of a Regional Entity's Compliance Monitoring and Enforcement Program. A representative of the Regional Entity being audited will be allowed to participate in the audit as an observer.

2. **Consistency Among Regional Compliance Monitoring and Enforcement Programs** — To provide for a consistent Compliance Monitoring and Enforcement Program for all Bulk Power System owners, operators, and users required to comply with approved Reliability Standards, NERC shall maintain a single, uniform Compliance Monitoring and Enforcement Program, which is incorporated into these rules of procedure as **Appendix 4C**. Any differences in Regional Entity Compliance Monitoring and Enforcement Program methods, including determination of violations and Penalty assessment, shall be justified on a case-by-case basis and fully documented in each Regional Entity delegation agreement.

2.1 NERC shall ensure that each of the Regional Entity Compliance Monitoring and Enforcement Programs meets these Rules of Procedure, including **Appendix 4C**, and follows the terms of the delegation

agreement and the approved annual Regional Entity Compliance Monitoring and Enforcement Program Implementation Plan.

2.2 NERC shall maintain a single, uniform Compliance Monitoring and Enforcement Program in **Appendix 4C** containing the procedures to ensure the consistency and fairness of the processes used to determine Regional Entity Compliance Monitoring and Enforcement Program findings of compliance and noncompliance, and the application of Penalties and sanctions.

2.3 NERC shall periodically conduct Regional Entity compliance manager forums. These forums shall use the results of Regional Entity Compliance Monitoring and Enforcement Program audits and findings of NERC Compliance Staff to identify and refine Regional Entity Compliance Monitoring and Enforcement Program differences into a set of best practices over time.

3. **Information Collection and Reporting** — NERC and the Regional Entities shall implement data management procedures that address data reporting requirements, data integrity, data retention, data security, and data confidentiality.

4. **Violation Disclosure** — NERC shall disclose all Confirmed Violations and maintain as confidential Possible Violations and Alleged Violations, according to the reporting and disclosure process in **Appendix 4C**.

5. **Authority to Determine Noncompliance, Levy Penalties and Sanctions, and Issue Remedial Action Directives** — NERC and Regional Entity Compliance Staff shall have the authority and responsibility to make initial determinations of compliance or noncompliance, and where authorized by the Applicable Governmental Authorities or where otherwise authorized, to determine Penalties and sanctions for noncompliance with a Reliability Standard, and issue Remedial Action Directives. Regional Entity boards or a compliance panel reporting directly to the Regional Entity board will be vested with the authority for the overall Regional Entity Compliance Monitoring and Enforcement Program and have the authority to impose Penalties and sanctions on behalf of NERC, where authorized by applicable legislation or agreement. Remedial Action Directives may be issued by NERC or a Regional Entity that is aware of a Bulk Power System owner, operator, or user that is about to engage in an act or practice that would result in noncompliance with a Reliability Standard, where such Remedial Action Directive is immediately necessary to protect the reliability of the Bulk Power System from an imminent threat. If, after receiving such a Remedial Action Directive, the Bulk Power System owner, operator, or user does not take appropriate action to avert a violation of a Reliability Standard, NERC may petition the Applicable Governmental Authority to issue a compliance order.

6. **Due Process** — NERC shall establish and maintain a fair, independent, and nondiscriminatory appeals process. The appeals process is set forth in Sections

408-410. The process shall allow Bulk Power System owners, operators, and users to appeal the Regional Entity's findings of noncompliance and to appeal Penalties, sanctions, and Remedial Action Directives that are levied by the Regional Entity. Appeals beyond the NERC process will be heard by the Applicable Governmental Authority.

The appeals process will also allow for appeals to NERC of any findings of noncompliance issued by NERC to a Regional Entity for Reliability Standards and Requirements where the Regional Entity is monitored for compliance to a Reliability Standard. No monetary Penalties will be levied in these matters; however sanctions, remedial actions, and directives to comply may be applied by NERC.

7. **Conflict Disclosure** — NERC shall disclose to the appropriate governmental authorities any potential conflicts between a market rule and the enforcement of a Regional Reliability Standard.

8. **Confidentiality** — To maintain the integrity of the NERC Compliance Monitoring and Enforcement Program, NERC and Regional Entity staff, Compliance Audit team members, and committee members shall maintain the confidentiality of information obtained and shared during compliance monitoring and enforcement processes including Compliance Investigations, Compliance Audits, Spot Checks, drafting of reports, appeals, and closed meetings.

   8.1 NERC and the Regional Entity shall have in place appropriate codes of conduct and confidentiality agreements for staff and other Compliance Monitoring and Enforcement Program participants.

   8.2 Individuals not bound by NERC or Regional Entity codes of conduct who serve on compliance-related committees or Compliance Audit teams shall sign a NERC confidentiality agreement prior to participating on the committee or Compliance Audit team.

   8.3 Information deemed by a Bulk Power System owner, operator, or user, Regional Entity, or NERC as Critical Energy Infrastructure Information shall not be distributed outside of a committee or team, nor released publicly. Other information subject to confidentiality is identified in Section 1500.

   8.4 In the event that a staff, committee, or Compliance Audit team member violates any of the confidentiality rules set forth above, the staff, committee, or Compliance Audit team member and any member organization with which the individual is associated may be subject to appropriate action by the Regional Entity or NERC, including prohibiting participation in future Compliance Monitoring and Enforcement Program activities.

9. **Auditor Training** — NERC shall develop and provide training in auditing skills to all people who participate in NERC and Regional Entity Compliance Audits. Training for NERC and Regional Entity personnel and others who serve as Compliance Audit team leaders shall be more comprehensive than training given to industry subject matter experts and Regional Entity members. Training for Regional Entity members may be delegated to the Regional Entity.

403. Required Attributes of Regional Entity Compliance Monitoring and Enforcement Programs

Each Regional Entity Compliance Monitoring and Enforcement Program shall promote excellence in the enforcement of Reliability Standards. To accomplish this goal, each Regional Entity Compliance Monitoring and Enforcement Program shall (i) conform to and comply with the NERC uniform Compliance Monitoring and Enforcement Program, **Appendix 4C** to these Rules of Procedure, except to the extent of any deviations that are stated in the Regional Entity's delegation agreement, and (ii) meet all of the attributes set forth in this Section 403.

Program Structure

1. **Independence** — Each Regional Entity's governance of its Compliance Monitoring and Enforcement Program shall exhibit independence, meaning the Compliance Monitoring and Enforcement Program shall be organized so that its compliance monitoring and enforcement activities are carried out separately from other activities of the Regional Entity. The Compliance Monitoring and Enforcement Program shall not be unduly influenced by the Bulk Power System owners, operators, and users being monitored or other Regional Entity activities that are required to meet the Reliability Standards. Regional Entities must include rules providing that no two industry sectors may control any decision and no single segment may veto any matter related to compliance.

2. **Exercising Authority** — Each Regional Entity Compliance Monitoring and Enforcement Program shall exercise the responsibility and authority in carrying out the delegated functions of the NERC Compliance Monitoring and Enforcement Program in accordance with delegation agreements and **Appendix 4C**. These functions include but are not limited to: data gathering, data reporting, Compliance Investigations, Compliance Audit activities, evaluating compliance and noncompliance, imposing Penalties and sanctions, and approving and tracking mitigation actions.

3. **Delegation of Authority** — To maintain independence, fairness, and consistency in the NERC Compliance Monitoring and Enforcement Program, a Regional Entity shall not sub-delegate its Compliance Monitoring and Enforcement Program duties to entities or persons other than the Regional Entity Compliance Staff, unless (i) required by statute or regulation in the applicable jurisdiction, or (ii) by agreement with express approval of NERC and of FERC or other Applicable Governmental Authority, to another Regional Entity.

4. **Hearings of Contested Findings or Sanctions —** The Regional Entity board or compliance panel reporting directly to the Regional Entity board (with appropriate

recusal procedures) will be vested with the authority for conducting compliance hearings in which any Bulk Power System owner, operator, or user provided a Notice of Alleged Violation may present facts and other information to contest a Notice of Alleged Violation or any proposed Penalty, sanction, any Remedial Action Directive, or any Mitigation Plan component. Compliance hearings shall be conducted in accordance with the Hearing Procedures set forth in Attachment 2 to **Appendix 4C**. If a stakeholder body serves as the Hearing Body, no two industry sectors may control any decision and no single segment may veto any matter related to compliance after recusals.

Program Resources

5. **Regional Entity Compliance Staff** — Each Regional Entity shall have sufficient resources to meet delegated compliance monitoring and enforcement responsibilities, including the necessary professional staff to manage and implement the Regional Entity Compliance Monitoring and Enforcement Program.

6. **Regional Entity Compliance Staff Independence** — The Regional Entity Compliance Staff shall be capable of and required to make all determinations of compliance and noncompliance and determine Penalties, sanctions, and remedial actions.

    6.1 Regional Entity Compliance Staff shall not have a conflict of interest, real or perceived, in the outcome of compliance monitoring and enforcement processes, reports, or sanctions. The Regional Entity shall have in effect a conflict of interest policy.

    6.2 Regional Entity Compliance Staff shall have the authority and responsibility to carry out compliance monitoring and enforcement processes (with the input of industry subject matter experts), make determinations of compliance or noncompliance, and levy Penalties and sanctions without interference or undue influence from Regional Entity members and their representative or other industry entities.

    6.3 Regional Entity Compliance Staff may call upon independent technical subject matter experts who have no conflict of interest in the outcome of the compliance monitoring and enforcement process to provide technical advice or recommendations in the determination of compliance or noncompliance.

    6.4 Regional Entity Compliance Staff shall abide by the confidentiality requirements contained in Section 1500 and **Appendix 4C** of these Rules of Procedure, the NERC delegation agreement and other confidentiality agreements required by the NERC Compliance Monitoring and Enforcement Program.

    6.5 Contracting with independent consultants or others working for the Regional Entity Compliance Monitoring and Enforcement Program shall be permitted provided the individual has not received compensation from a Bulk Power System owner, operator, or user being monitored for a

period of at least the preceding six months and owns no financial interest in any Bulk Power System owner, operator, or user being monitored for compliance to the Reliability Standard, regardless of where the Bulk Power System owner, operator, or user operates. Any such individuals for the purpose of these Rules of Procedure shall be considered as augmenting Regional Entity Compliance Staff.

7. Use of Industry Subject Matter Experts and Regional Entity Members — Industry experts and Regional Entity members may be called upon to provide their technical expertise in Compliance Monitoring and Enforcement Program activities.

7.1 The Regional Entity shall have procedures defining the allowable involvement of industry subject matter experts and Regional Entity members. The procedures shall address applicable antitrust laws and conflicts of interest.

7.2 Industry subject matter experts and Regional Entity members shall have no conflict of interest or financial interests in the outcome of their activities.

7.3 Regional Entity members and industry subject matter experts, as part of teams or Regional Entity committees, may provide input to the Regional Entity Compliance Staff so long as the authority and responsibility for (i) evaluating and determining compliance or noncompliance and (ii) levying Penalties, sanctions, or remedial actions shall not be delegated to any person or entity other than the Compliance Staff of the Regional Entity. Industry subject matter experts, Regional Entity members, or Regional Entity committees shall not make determinations of noncompliance or levy Penalties, sanctions, or remedial actions. Any committee involved shall be organized so that no two industry sectors may control any decision and no single segment may veto any matter related to compliance.

7.4 Industry subject matter experts and Regional Entity members shall sign a confidentiality agreement appropriate for the activity being performed.

7.5 All industry subject matter experts and Regional Entity members participating in Compliance Audits and Compliance Investigations shall successfully complete auditor training provided by NERC or the Regional Entity prior to performing these activities

Program Design

8. **Regional Entity Compliance Monitoring and Enforcement Program Content** — All approved Reliability Standards shall be included in the Regional Entity Compliance Monitoring and Enforcement Program for all Bulk Power System owners, operators, and users within the defined boundaries of the Regional Entity.

Compliance to approved Regional Reliability Standards is applicable only within the Region of the Regional Entity that submitted those particular Regional Reliability Standards for approval. NERC will identify the minimum set of Reliability Standards and Requirements to be actively monitored by the Regional Entity in a given year.

9. **Antitrust Provisions** — Each Regional Entity's Compliance Monitoring and Enforcement Program shall be structured and administered to abide by U.S. antitrust law and Canadian competition law.

10. **Information Submittal** — All Bulk Power System owners, operators, and users within the Regional Entity responsible for complying with Reliability Standards shall submit timely and accurate information when requested by the Regional Entity or NERC. NERC and the Regional Entities shall preserve any mark of confidentiality on information submitted pursuant to Section 1502.1.

    10.1 Each Regional Entity has the authority to collect the necessary information to determine compliance and shall develop processes for gathering data from the Bulk Power System owners, operators, and users the Regional Entity monitors.

    10.2 The Regional Entity or NERC has the authority to request information from Bulk Power System owners, operators, and users pursuant to Section 401.3 or this Section 403.10 without invoking a specific compliance monitoring and enforcement process in **Appendix 4C**, for purposes of determining whether to pursue one such process in a particular case and/or validating in the enforcement phase of a matter the conclusions reached through the compliance monitoring and enforcement process(es).

    10.3 When required or requested, the Regional Entities shall report information to NERC promptly and in accordance with **Appendix 4C** and other NERC procedures.

    10.4 Regional Entities shall notify NERC of all Possible, Alleged and Confirmed Violations of NERC Reliability Standards by Registered Entities over which the Regional Entity has compliance monitoring and enforcement authority, in accordance with **Appendix 4C**.

    10.5 A Bulk Power System owner, operator, or user found in noncompliance with a Reliability Standard shall submit a Mitigation Plan with a timeline addressing how the noncompliance will be corrected. The Regional Entity Compliance Staff shall review and approve the Mitigation Plan in accordance with **Appendix 4C**.

    10.6 An officer of a Bulk Power System owner, operator, or user shall certify as accurate all compliance data Self-Reported to the Regional Entity Compliance Monitoring and Enforcement Program.

10.7 Regional Entities shall develop and implement procedures to verify the compliance information submitted by Bulk Power System owners, operators, and users.

11. **Compliance Audits of Bulk Power System Owners, Operators, and Users** — Each Regional Entity will maintain and implement a program of proactive Compliance Audits of Bulk Power System owners, operators, and users responsible for complying with Reliability Standards, in accordance with **Appendix 4C**. A Compliance Audit is a process in which a detailed review of the activities of a Bulk Power System owner, operator, or user is performed to determine if that Bulk Power System owner, operator, or user is complying with approved Reliability Standards.

11.1 For an entity registered as a Balancing Authority, Reliability Coordinator, or Transmission Operator, the Compliance Audit will be performed at least once every three years. For other Bulk Power System owners, operators, and users on the NERC Compliance Registry, Compliance Audits shall be performed on a schedule established by NERC.

11.2 Compliance Audits of Balancing Authorities, Reliability Coordinators, and Transmission Operators will include a component at the audited entity's site. For other Bulk Power System owners, operators, and users on the NERC Compliance Registry, the Compliance Audit may be either an on-site Compliance Audit or based on review of documents, as determined to be necessary and appropriate by NERC or Regional Entity Compliance Staff.

11.3 Compliance Audits must include a detailed review of the activities of the Bulk Power System owner, operator, or user to determine if the Bulk Power System owner, operator, or user is complying with all approved Reliability Standards identified for audit by NERC. The Compliance Audit shall include a review of supporting documentation and evidence used by the Bulk Power System owner, operator or user to demonstrate compliance for an appropriate period prior to the Compliance Audit.

12. **Confidentiality of Compliance Monitoring and Enforcement Processes** — All compliance monitoring and enforcement processes, and information obtained from such processes, are to be non-public and treated as confidential in accordance with Section 1500 and **Appendix 4C** of these Rules of Procedure, unless NERC, the Regional Entity or FERC or another Applicable Governmental Authority with jurisdiction determines a need to conduct a Compliance Monitoring and Enforcement Program process on a public basis, provided, that NERC and the Regional Entities shall publish (i) schedules of Compliance Audits scheduled in each year, (ii) a public report of each Compliance Audit, and (iii) Notices of Penalty and settlement agreements. Advance authorization from the Applicable Governmental Authority is required to make public any compliance monitoring and enforcement process or any information relating to a compliance

monitoring and enforcement process, or to permit interventions when determining whether to impose a Penalty. This prohibition on making public any compliance monitoring and enforcement process does not prohibit NERC or a Regional Entity from publicly disclosing (i) the initiation of or results from an analysis of a significant system event under Section 807 or of off-normal events or system performance under Section 808, or (ii) information of general applicability and usefulness to owners, operators, and users of the Bulk Power System concerning reliability and compliance matters, so long as specific allegations or conclusions regarding Possible or Alleged Violations of Reliability Standards are not included in such disclosures.

13. **Critical Energy Infrastructure Information** — Information that would jeopardize Bulk Power System reliability, including information relating to a Cyber Security Incident will be identified and protected from public disclosure as Critical Energy Infrastructure Information. In accordance with Section 1500, information deemed by a Bulk Power System owner, operator, or user, Regional Entity, or NERC as Critical Energy Infrastructure Information shall be redacted according to NERC procedures and shall not be released publicly.

14. **Penalties, Sanctions, and Remedial Action Directives** — Each Regional Entity will apply all Penalties, sanctions, and Remedial Action Directives in accordance with the approved *Sanction Guidelines*, **Appendix 4B** to these Rules of Procedure. Any changes to the *Sanction Guidelines* to be used by any Regional Entity must be approved by NERC and submitted to the Applicable Governmental Authority for approval. All Confirmed Violations, Penalties, and sanctions will be provided to NERC for review and filing with Applicable Governmental Authorities as a Notice of Penalty, in accordance with **Appendix 4C**.

15. **Regional Entity Hearing Process** — Each Regional Entity Compliance Monitoring and Enforcement Program shall establish and maintain a fair, independent, and nondiscriminatory process for hearing contested violations and any Penalties or sanctions levied, in conformance with Attachment 2 to **Appendix 4C** to these Rules of Procedure and any deviations therefrom that are set forth in the Regional Entity's delegation agreement. The hearing process shall allow Bulk Power System owners, operators, and users to contest findings of compliance violations, any Penalties and sanctions that are proposed to be levied, proposed Remedial Action Directives, and components of proposed Mitigation Plans. The Regional Entity hearing process shall be conducted before the Regional Entity board or a balanced committee established by and reporting to the Regional Entity board as the final adjudicator, provided, that Canadian provincial regulators may act as the final adjudicator in their respective jurisdictions. The Regional Entity hearing process shall (i) include provisions for recusal of any members of the Hearing Body with a potential conflict of interest, real or perceived, from all compliance matters considered by the Hearing Body for which the potential conflict of interest exists and (ii) provide that no two industry sectors may control any decision and no single segment may veto any matter brought before the Hearing Body after recusals.

Each Regional Entity will notify NERC of all hearings and NERC may observe any of the proceedings. Each Regional Entity will notify NERC of the outcome of all hearings.

If a Bulk Power System owner, operator, or user has completed the Regional Entity hearing process and desires to appeal the outcome of the hearing, the Bulk Power System owner, operator, or user shall appeal to NERC in accordance with Section 409 of these Rules of Procedure, except that a determination of violation or Penalty that has been directly adjudicated by an Applicable Governmental Authority shall be appealed with that Applicable Governmental Authority.

16. **Annual Regional Entity Compliance Monitoring and Enforcement Program Implementation Plan** — Each Regional Entity shall annually develop and submit to NERC for approval a Regional Entity Compliance Monitoring and Enforcement Implementation Plan in accordance with **Appendix 4C** that identifies the Reliability Standards and Requirements to be actively monitored (both those required by NERC and any additional Reliability Standards the Regional Entity proposes to monitor), and how each NERC and Regional Entity identified Reliability Standard will be monitored, evaluated, reported, sanctioned, and appealed. These Regional Implementation Plans will be submitted to NERC on the schedule established by NERC, generally on or about November 1 of the preceding year. In conjunction with the annual Regional Implementation Plan, each Regional Entity must report to NERC regarding how it carried out its delegated compliance monitoring and enforcement authority in the previous year, the effectiveness of the Compliance Monitoring and Enforcement Program, and changes expected to correct any deficiencies identified. Each Regional Entity will provide its annual report on the schedule established by NERC, generally on or about February 15 of the following year.

404. NERC Monitoring of Compliance for Regional Entities or Bulk Power Owners, Operator, or Users

NERC shall monitor Regional Entity compliance with NERC Reliability Standards and, if no there is no delegation agreement in effect with a Regional Entity for the geographic area, shall monitor Bulk Power System owners, operators, and users for compliance with NERC Reliability Standards. Industry subject matter experts may be used as appropriate in Compliance Investigations, Compliance Audits, and other Compliance Monitoring and Enforcement Program activities, subject to confidentiality, antitrust, and conflict of interest provisions.

1. **NERC Obligations** — NERC Compliance Staff shall monitor the compliance of the Regional Entity with the Reliability Standards for which the Regional Entities are responsible, in accordance with **Appendix 4C**. NERC shall actively monitor in its annual Compliance Enforcement and Monitoring Program selected Reliability Standards that apply to the Regional Entities. NERC shall evaluate compliance and noncompliance with all of the Reliability Standards that apply to the Regional Entities and shall impose sanctions, Penalties, or Remedial Action

Directives when there is a finding of noncompliance. NERC shall post all violations of Reliability Standards that apply to the Regional Entities as described in the reporting and disclosure process in **Appendix 4C**.

In addition, NERC will directly monitor Bulk Power System owners, operators, and users for compliance with NERC Reliability Standards in any geographic area for which there is not a delegation agreement in effect with a Regional Entity, in accordance with **Appendix 4C**. In such cases, NERC will serve as the Compliance Enforcement Authority described in **Appendix 4C**. Compliance matters contested by Bulk Power System owners, operators, and users in such an event will be heard by the NERC Compliance and Certification Committee.

2. **Compliance Audit of the Regional Entity** — NERC shall perform a Compliance Audit of each Regional Entity responsible for complying with Reliability Standards at least once every three years. NERC shall make an evaluation of compliance based on the information obtained through the Compliance Audit. After due process is complete, the final Compliance Audit report shall be made public in accordance with the reporting and disclosure process in **Appendix 4C**.

3. **Appeals Process** —Any Regional Entity or Bulk Power System owner, operator or user found by NERC, as opposed to a Regional Entity, to be in noncompliance with a Reliability Standard may appeal the findings of noncompliance with Reliability Standards and any sanctions or Remedial Action Directives that are issued by, or Mitigation Plan components imposed by, NERC, pursuant to the processes described in Sections 408 through 410.

405. Monitoring of Reliability Standards and Other Requirements Applicable to NERC

The NERC Compliance and Certification Committee shall establish and implement a process to monitor NERC's compliance with the Reliability Standards that apply to NERC. The process shall use independent monitors with no conflict of interest, real or perceived, in the outcomes of the process. All violations shall be made public according to the reporting and disclosure process in **Appendix 4C**. The Compliance and Certification Committee will also establish a procedure for monitoring NERC's compliance with its Rules of Procedure for the Standards Development, Compliance Monitoring and Enforcement, and Organization Registration and Certification Programs. Such procedures shall not be used to circumvent the appeals processes established for those programs.

406. Independent Audits of the NERC Compliance Monitoring and Enforcement Program

NERC shall provide for an independent audit of its Compliance Monitoring and Enforcement Program at least once every three years, or more frequently as determined by the Board. The audit shall be conducted by independent expert auditors as selected by the Board. The independent audit shall meet the following minimum requirements and any other requirements established by the NERC Board.

1. **Effectiveness** — The audit shall evaluate the success and effectiveness of the NERC Compliance Monitoring and Enforcement Program in achieving its mission.

2. **Relationship** — The audit shall evaluate the relationship between NERC and the Regional Entity Compliance Monitoring and Enforcement Programs and the effectiveness of the programs in ensuring reliability.

3. **Final Report Posting** — The final report shall be posted by NERC for public viewing in accordance with **Appendix 4C**.

4. **Response to Recommendations** — If the audit report includes recommendations to improve the NERC Compliance Monitoring and Enforcement Program, the administrators of the NERC Compliance Monitoring and Enforcement Program shall provide a written response and plan to the Board within 30 days of the release of the final audit report.

407. Penalties, Sanctions, and Remedial Actions

1. **NERC Review of Regional Entity Penalties and Sanctions —** NERC shall review all Penalties, sanctions, and remedial actions imposed by each Regional Entity for violations of Reliability Standards to determine if the Regional Entity's determination is supported by a sufficient record compiled by the Regional Entity, is consistent with the *Sanction Guidelines* incorporated into these Rules of Procedure as **Appendix 4B** and with other directives, guidance and directions issued by NERC pursuant to the delegation agreement, and is consistent with Penalties, sanctions and remedial actions imposed by the Regional Entity and by other Regional Entities for violations involving the same or similar facts and circumstances.

2. **Developing Penalties and Sanctions** — The Regional Entity Compliance Staff shall use the *Sanction Guidelines*, which are incorporated into these Rules of Procedure as **Appendix 4B**, to develop an appropriate Penalty, sanction, or remedial action for a violation, and shall notify NERC of the Penalty or sanction.

3. **Effective Date of Penalty** — Where authorized by applicable legislation or agreement, no Penalty imposed for a violation of a Reliability Standard shall take effect until the thirty-first day after NERC files, with the Applicable Governmental Authority, a "Notice of Penalty" and the record of the proceedings in which the violation and Penalty were determined, or such other date as ordered by the Applicable Governmental Authority.

408. Review of NERC Decisions

1. **Scope of Review** — A Registered Entity or a Regional Entity wishing to challenge a finding of noncompliance and the imposition of a Penalty for a compliance measure directly administered by NERC, or a Regional Entity wishing to challenge a Regional Entity Compliance Monitoring and Enforcement Program audit finding, may do so by filing a notice of the challenge with NERC's

Director of Compliance no later than 21 days after issuance of the notice of finding of violation or audit finding. Appeals by Registered Entities of decisions of Regional Entity Hearing Bodies shall be pursuant to Section 409 .

2. **Contents of Notice** — The notice of challenge shall include the full text of the decision that is being challenged, a concise statement of the error or errors contained in the decision, a clear statement of the relief being sought, and argument in sufficient detail to justify such relief.

3. **Response by NERC Compliance Monitoring and Enforcement Program** — Within 21 days after receiving a copy of the notice of challenge, the NERC Director of Compliance may file with the Hearing Panel a response to the issues raised in the notice, with a copy to the Regional Entity.

4. **Hearing by Compliance and Certification Committee** — The NERC Compliance and Certification Committee shall provide representatives of the Regional Entity or Registered Entity, and the NERC Compliance Monitoring and Enforcement Program an opportunity to be heard and shall decide the matter based upon the filings and presentations made, with a written explanation of its decision.

5. **Appeal** — The Regional Entity, or Registered Entity may appeal the decision of the Compliance and Certification Committee by filing a notice of appeal with NERC's Director of Compliance no later than 21 days after issuance of the written decision by the Compliance and Certification Committee. The notice of appeal shall include the full text of the written decision of the Compliance and Certification Committee that is being appealed, a concise statement of the error or errors contained in the decision, a clear statement of the relief being sought, and argument in sufficient detail to justify such relief. No factual material shall be presented in the appeal that was not presented to the Compliance and Certification Committee.

6. **Response by NERC Compliance Monitoring and Enforcement Program** — Within 21 days after receiving a copy of the notice of appeal, the NERC Compliance Monitoring and Enforcement Program staff may file its response to the issues raised in the notice of appeal, with a copy to the entity filing the notice.

7. **Reply** — The entity filing the appeal may file a reply within 7 days.

8. **Decision** — The Compliance Committee of the NERC Board of Trustees shall decide the appeal, in writing, based upon the notice of appeal, the record, the response, and any reply. At its discretion, the Compliance Committee may invite representatives of the Regional Entity or Registered Entity, and the NERC Compliance Monitoring and Enforcement Program to appear before the Compliance Committee. Decisions of the Compliance Committee shall be final, except for further appeal to the Applicable Governmental Authority.

9. **Impartiality** — No member of the Compliance and Certification Committee or the Board of Trustees Compliance Committee having an actual or perceived conflict of interest in the matter may participate in any aspect of the challenge or appeal except as a party or witness.

10. **Expenses** — Each party in the challenge and appeals processes shall pay its own expenses for each step in the process.

11. **Non-Public Proceedings —** All challenges and appeals shall be closed to the public to protect Confidential Information.

409. Appeals from Final Decisions of Regional Entities

1. **Time for Appeal** — An owner, operator or user of the Bulk Power System wishing to appeal from a final decision of a Regional Entity that finds a violation of a Reliability Standard or imposes a Penalty for violation of a Reliability Standard shall file its notice of appeal with NERC's Director of Compliance, with a copy to the Regional Entity, no later than 21 days after issuance of the final decision of the Regional Entity Hearing Body. The same appeal procedures will apply regardless of whether the matter first arose in a Compliance Investigation, Compliance Audit or Self-Report, other compliance monitoring and enforcement process, or in a reliability readiness evaluation.

2. **Contents** — The notice of appeal shall include the full text of the final decision of the Regional Entity Hearing Body that is being appealed, a concise statement of the error or errors contained in the final decision, a clear statement of the relief being sought, and argument in sufficient detail to justify such relief. No factual material shall be presented in the appeal that was not first presented during the compliance hearing before the Regional Entity Hearing Body.

3. **Response by Regional Entity** — Within 21 days after receiving a copy of the notice of appeal, the Regional Entity shall file the entire record of the matter with NERC's Director of Compliance, with a copy to the Registered Entity filing the notice, together with its response to the issues raised in the notice of appeal.

4. **Reply** — The Registered Entity filing the appeal may file a reply to the Regional Entity within 7 days.

5. **Decision** — The Compliance Committee of the NERC Board of Trustees shall decide the appeal, in writing, based upon the notice of appeal, the record of the matter from the Regional Entity, the response, and any reply filed with NERC. At its discretion, the Compliance Committee may invite representatives of the Registered Entity making the appeal and the Regional Entity to appear before the Committee. Decisions of the Compliance Committee shall be final, except for further appeal to the Applicable Governmental Authority.

6. **Expenses** — Each party in the appeals process shall pay its own expenses for each step in the process.

7. **Non-Public Proceedings** — All appeals shall be closed to the public to protect Confidential Information.

410. Hold Harmless

A condition of invoking the challenge or appeals processes under Section 408 or 409 is that the entity requesting the challenge or appeal agrees that neither NERC (defined to include its Members, Board of Trustees, committees, subcommittees, staff and industry subject matter experts), any person assisting in the challenge or appeals processes, nor any company employing a person assisting in the challenge or appeals processes, shall be liable, and they shall be held harmless against the consequences of or any action or inaction or of any agreement reached in resolution of the dispute or any failure to reach agreement as a result of the challenge or appeals proceeding. This "hold harmless" clause does not extend to matters constituting gross negligence, intentional misconduct, or a breach of confidentiality.

411. Requests for Technical Feasibility Exceptions to NERC Critical Infrastructure Protection Reliability Standards

A Registered Entity that is subject to an Applicable Requirement of a NERC Critical Infrastructure Protection Standard for which Technical Feasibility Exceptions are permitted, may request a Technical Feasibility Exception to the Requirement, and the request will be reviewed, approved or disapproved, and if approved, implemented, in accordance with the NERC *Procedure for Requesting and Receiving Technical Feasibility Exceptions to NERC Critical Infrastructure Protection Standard*, Appendix 4D to these Rules of Procedure.

SECTION 500 — ORGANIZATION REGISTRATION AND CERTIFICATION

501. Scope of the Organization Registration and Organization Certification Programs

The purpose of the Organization Registration Program is to clearly identify those entities that are responsible for compliance with the FERC approved Reliability Standards. Organizations that are registered are included on the NERC Compliance Registry (NCR) and are responsible for knowing the content of and for complying with all applicable Reliability Standards. Registered Entities are not and do not become Members of NERC or a Regional Entity, by virtue of being listed on the NCR. Membership in NERC is governed by Article II of NERC's Bylaws; membership in a Regional Entity or regional reliability organization is governed by that entity's bylaws or rules.

The purpose of the Organization Certification Program is to ensure that the new entity (i.e., applicant to be an RC, BA, or TOP that is not already performing the function for which it is applying to be certified as) has the tools, processes, training, and procedures to demonstrate their ability to meet the Requirements/sub-Requirements of all of the Reliability Standards applicable to the function(s) for which it is applying thereby demonstrating the ability to become certified and then operational.

Organization Registration and Organization Certification may be delegated to Regional Entities in accordance with the procedures in this Section 500; the NERC *Organization Registration and Organization Certification Manual*, which is incorporated into these Rules of Procedure as **Appendix 5A**; and, approved Regional Entity delegation agreements or other applicable agreements.

1. **NERC Compliance Registry** — NERC shall establish and maintain the NCR of the Bulk Power System owners, operators, and users that are subject to approved Reliability Standards.

   1.1 (a) The NCR shall set forth the identity and functions performed for each organization responsible for meeting Requirements/sub-Requirements of the Reliability Standards. Bulk Power System owners, operators, and users (i) shall provide to NERC and the applicable Regional Entity information necessary to complete the Registration, and (ii) shall provide NERC and the applicable Regional Entity with timely updates to information concerning the Registered Entity's ownership, operations, contact information, and other information that may affect the Registered Entity's Registration status or other information recorded in the Compliance Registry.

   (b) A generation or transmission cooperative, a joint-action agency or another organization may register as a Joint Registration Organization (JRO), in lieu of each of the JRO's members or related entities being registered individually for one or more functions. Refer to Section 507.

(c) Multiple entities may each register using a Coordinated Functional Registration (CFR) for one or more Reliability Standard(s) and/or for one or more Requirements/sub-Requirements within particular Reliability Standard(s) applicable to a specific function pursuant to a written agreement for the division of compliance responsibility. Refer to Section 508.

1.2 In the development of the NCR, NERC and the Regional Entities shall determine which organizations should be placed on the NCR based on the criteria provided in the NERC *Statement of Compliance Registry Criteria* which is incorporated into these Rules of Procedure as **Appendix 5B**.

1.3 NERC and the Regional Entities shall use the following rules for establishing and maintaining the NCR based on the Registration criteria as set forth in **Appendix 5B** *Statement of Compliance Registry Criteria*:

1.3.1 NERC shall notify each organization that it is on the NCR. The Registered Entity is responsible for compliance with all the Reliability Standards applicable to the functions for which it is registered from the time it receives the Registration notification from NERC.

1.3.2 Any organization receiving such a notice may challenge its placement on the NCR according to the process in **Appendix 5A** *Organization Registration and Organization Certification Manual*, Section V.

1.3.3 The Compliance Committee of the Board of Trustees shall promptly issue a written decision on the challenge, including the reasons for the decision.

1.3.4 The decision of the Compliance Committee of the Board of Trustees shall be final unless, within 21 days of the date of the Compliance Committee of the Board of Trustees decision, the organization appeals the decision to the Applicable Governmental Authority.

1.3.5 Each Registered Entity identified on the NCR shall notify its corresponding Regional Entity(s) of any corrections, revisions, deletions, changes in ownership, corporate structure, or similar matters that affect the Registered Entity's responsibilities with respect to the Reliability Standards. Failure to notify will not relieve the Registered Entity from any responsibility to comply with the Reliability Standards or shield it from any Penalties or sanctions associated with failing to comply with the Reliability Standards applicable to its associated Registration.

1.4 For all geographical or electrical areas of the Bulk Power System, the Registration process shall ensure that (1) no areas are lacking any entities to perform the duties and tasks identified in and required by the Reliability Standards to the fullest extent practical, and (2) there is no unnecessary duplication of such coverage or of required oversight of such coverage. In particular the process shall:

1.4.1 Ensure that all areas are under the oversight of one and only one Reliability Coordinator.

1.4.2 Ensure that all Balancing Authorities and Transmission Operator entities[2] are under the responsibility of one and only one Reliability Coordinator.

1.4.3 Ensure that all transmission Facilities of the Bulk Power System are the responsibility and under the control of one and only one Transmission Planner, Planning Authority, and Transmission Operator.

1.4.4 Ensure that all Loads~~loads~~ and generators are under the responsibility and control of one and only one Balancing Authority.

1.5 NERC shall maintain the NCR of organizations responsible for meeting the Requirements/sub-Requirements of the Reliability Standards currently in effect on its website and shall update the NCR monthly.

2. **Entity Certification** — NERC shall provide for Certification of all entities with primary reliability responsibilities requiring Certification. This includes those entities that satisfy the criteria established in the NERC provisional Certification process. The NERC programs shall:

2.1 Evaluate and certify the competency of entities performing reliability functions. The entities presently expected to be certified include Reliability Coordinators, Transmission Operators, and Balancing Authorities.

2.2 Evaluate and certify each applicant's ability to meet the requirements for Certification.

2.3 Maintain process documentation.

[2] Some organizations perform the listed functions (e.g., Balancing Authority, Transmission Operator) over areas that transcend the Footprints of more than one Reliability Coordinator. Such organizations will have multiple Registrations, with each such Registration corresponding to that portion of the organization's overall area that is within the Footprint of a particular Reliability Coordinator.

2.4 Maintain records of currently certified entities.

2.5 Issue a Certification document to the applicant that successfully demonstrates its competency to perform the evaluated functions.

3. **Delegation and Oversight**

3.1 NERC may delegate responsibilities for Organization Registration and Organization Certification to Regional Entities in accordance with requirements established by NERC. Delegation will be via the delegation agreement between NERC and the Regional Entity or other applicable agreement. The Regional Entity shall administer Organization Registration and Organization Certification Programs in accordance with such delegations to meet NERC's programs goals and requirements subject to NERC oversight.

3.2 NERC shall develop and maintain a plan to ensure the continuity of Organization Registration and Organization Certification within the geographic or electrical boundaries of a Regional Entity in the event that no entity is functioning as a Regional Entity for that Region, or the Regional Entity withdraws as a Regional Entity, or does not operate its Organization Registration and Organization Certification Programs in accordance with delegation agreements.

3.3 NERC shall develop and maintain a program to monitor and oversee the NERC Organization Registration and Organization Certification Programs activities that are delegated to each Regional Entity through a delegation agreement or other applicable agreement.

3.3.1 This program shall monitor whether the Regional Entity carries out those delegated activities in accordance with NERC requirements, and whether there is consistency, fairness of administration, and comparability.

3.3.2 Monitoring and oversight shall be accomplished through direct participation in the Organization Registration and Organization Certification Programs with periodic reviews of documents and records of both programs.

502. Organization Registration and Organization Certification Program Requirements

1. NERC shall maintain the Organization Registration and Organization Certification Programs.

1.1 The roles and authority of Regional Entities in the programs are delegated from NERC pursuant to the Rules of Procedure through regional delegation agreements or other applicable agreements.

1.2 Processes for the programs shall be administered by NERC and the Regional Entities. Materials that each Regional Entity uses are subject to review and approval by NERC.

1.3 The appeals process for the Organization Registration and Organization Certification Programs are identified in **Appendix 5A** *Organization Registration and Organization Certification Manual*, Sections V and VI, respectively.

1.4 The Certification Team membership is identified in **Appendix 5A** *Organization Registration and Organization Certification Manual*, Section IV.8.d.

2. To ensure consistency and fairness of the Organization Registration and Organization Certification Programs, NERC shall develop procedures to be used by all Regional Entities and NERC in accordance with the following criteria:

2.1 NERC and the Regional Entities shall have data management processes and procedures that provide for confidentiality, integrity, and retention of data and information collected.

2.2 Documentation used to substantiate the conclusions of the Regional Entity/ NERC related to Registration and/or Certification must be retained by the Regional Entity for (6) six years, unless a different retention period is otherwise identified, for the purposes of future audits of these programs.

2.3 To maintain the integrity of the NERC Organization Registration and Organization Certification Programs, NERC, Regional Entities, Certification Team members, program audit team members (Section 506), and committee members shall maintain the confidentiality of information provided by an applicant or entities.

2.2.1 NERC and the Regional Entities shall have appropriate codes of conduct and confidentiality agreements for staff, Certification Team, Certification related committees, and Certification program audit team members.

2.2.2 NERC, Regional Entities, Certification Team members, program audit team members and committee members shall maintain the confidentiality of any Registration or Certification-related discussions or documents designated as confidential (see Section 1500 for types of Confidential Information).

2.2.3 NERC, Regional Entities, Certification Team members, program audit team members and committee members shall treat as confidential the individual comments expressed during evaluations, program audits and report-drafting sessions.

2.2.4 Copies of notes, draft reports, and other interim documents developed or used during an entity Certification evaluation or program audit shall be destroyed after the public posting of a final, uncontested report.

2.2.5 Information deemed by an applicant, entity, a Regional Entity, or NERC as confidential, including Critical Energy Infrastructure Information, shall not be released publicly or distributed outside of a committee or team.

2.2.6 In the event that an individual violates any of the confidentiality rules set forth above, that individual and any member organization with which the individual is associated will be subject to immediate dismissal from the audit team and may be prohibited from future participation in Compliance Monitoring and Enforcement Program activities by the Regional Entity or NERC.

2.2.7 NERC shall develop and provide training in auditing skills to all individuals prior to their participation in Certification evaluations. Training for Certification Team leaders shall be more comprehensive than the training given to industry subject matter experts and Regional Entity members. Training for Regional Entity members may be delegated to the Regional Entity.

2.4 An applicant that is determined to be competent to perform a function after completing all Certification requirements shall be deemed certified by NERC to perform that function for which it has demonstrated full competency.

2.4.1 All NERC certified entities shall be included on the NCR.

503. Regional Entity Implementation of Organization Registration and Organization Certification Program Requirements

1. **Delegation** — Recognizing the Regional Entity's knowledge of and experience with their members, NERC may delegate responsibility for Organization Registration and Organization Certification to the Regional Entity through a delegation agreement.

2. **Registration** — The following Organization Registration activities shall be managed by the Regional Entity per the NERC *Organization Registration and Organization Certification Manual*, which is incorporated into the Rules of Procedure as Appendix 5A *Organization Registration and Organization Certification Manual*:

2.1 Regional Entities shall verify that all Reliability Coordinators, Balancing Authorities, and Transmission Operators meet the Registration requirements of Section 501(1.4).

3. **Certification —** The following Organization Certification activities shall be managed by the Regional Entity in accordance with an approved delegation agreement or another applicable agreement:

   3.1 An entity seeking Certification to perform one of the functions requiring Certification shall contact the Regional Entity for the Region(s) in which it plans to operate to apply for Certification.

   3.2 An entity seeking Certification and other affected entities shall provide all information and data requested by NERC or the Regional Entity to conduct the Certification process.

   3.3 Regional Entities shall notify NERC of all Certification applicants.

   3.4 NERC and/or the Regional Entity shall evaluate the competency of entities requiring Certification to meet the NERC Certification requirements.

   3.5 NERC or the Regional Entity shall establish Certification procedures to include evaluation processes, schedules and deadlines, expectations of the applicants and all entities participating in the evaluation and Certification processes, and requirements for Certification Team members.

      3.5.1 The NERC / Regional Entity Certification procedures will include provisions for on-site visits to the applicant's facilities to review the data collected through questionnaires, interviewing the operations and management personnel, inspecting the facilities and equipment (including requesting a demonstration of all tools identified in the Certification process), reviewing all necessary documents and data (including all agreements, processes, and procedures identified in the Certification process), reviewing Certification documents and projected system operator work schedules, and reviewing any additional documentation needed to support the completed questionnaire or inquiries arising during the site visit.

      3.5.2 The NERC/ Regional Entity Certification procedures will provide for preparation of a written report by the Certification Team, detailing any deficiencies that must be resolved prior to granting Certification, along with any other recommendations for consideration by the applicant, the Regional Entity, or NERC.

504. Appeals

1. NERC shall maintain an appeals process to resolve any disputes related to Registration or Certification activities per the *Organization Registration and Organization Certification Manual,* which is incorporated in these Rules of Procedure as Appendix 5A.

2. The Regional Entity Certification appeals process shall culminate with the Regional Entity board or a committee established by and reporting to the Regional Entity board as the final adjudicator, provided that where applicable, Canadian provincial governmental authorities may act as the final adjudicator in their jurisdictions. NERC shall be notified of all appeals and may observe any proceedings **(Appendix 5A** *Organization Registration and Organization Certification Manual*).

505. Program Maintenance

NERC shall maintain its program materials, including such manuals or other documents as it deems necessary, of the governing policies and procedures of the Organization Registration and Organization Certification Programs.

506. Independent Audit of NERC Organization Registration and Organization Certification Program

1. NERC, through the Compliance and Certification Committee, shall provide for an independent audit of its Organization Registration and Organization Certification Programs at least once every three years, or more frequently, as determined by the Board. The audit shall be conducted by independent expert auditors as selected by the Board.

2. The audit shall evaluate the success, effectiveness and consistency of the NERC Organization Registration and Organization Certification Programs.

3. The final report shall be posted by NERC for public viewing.

4. If the audit report includes recommendations to improve the program, the administrators of the program shall provide a written response to the Board within 30 days of the final report, detailing the disposition of each and every recommendation, including an explanation of the reasons for rejecting a recommendation and an implementation plan for the recommendations accepted.

507. Provisions Relating to Joint Registration Organizations (JRO)

1. In addition to registering as the entity responsible for all functions that it performs itself, an entity may register as a JRO on behalf of one or more of its members or related entities for one or more functions for which such members or related entities would otherwise be required to register and, thereby, accept on behalf of such members or related entities all compliance responsibility for that function or those functions including all reporting requirements. Any entity seeking to register as a JRO must submit a written agreement with its members or related entities for all Requirements/sub-Requirements for the function(s) for which the entity is registering for and takes responsibility for, which would otherwise be the responsibility of one or more of its members or related entities. Neither NERC nor

the Regional Entity shall be parties to any such agreement, nor shall NERC or the Regional Entity have responsibility for reviewing or approving any such agreement, other than to verify that the agreement provides for an allocation or assignment of responsibilities consistent with the JRO Registration.

2. The JRO Registration data must include the same Registration information as a normal compliance Registration entry. The JRO is responsible for providing all of the information and data, including submitting reports, as needed by the Regional Entity for performing assessments of compliance.

3. The Regional Entity shall notify NERC of each JRO that the Regional Entity accepts. The notification will identify the point of contact and the functions(s) being registered for on behalf of its members or related entities.

4. For purposes of Compliance Audits, the Regional Entity shall keep a list of all JROs. This document shall contain a list of each JRO's members or related entities and the function(s) for which the JRO is registered for that member(s) or related entity(s). It is the responsibility of the JRO to provide the Regional Entity with this information as well as the applicable JRO agreement(s).

5. The Regional Entity may request clarification of any list submitted to it that identifies the members of the JRO and may request such additional information as the Regional Entity deems appropriate.

6. The Regional Entity's acceptance of a JRO shall be a representation by the Regional Entity to NERC that the Regional Entity has concluded the JRO will meet the Registration requirements of Section 501(1.4).

7. NERC shall maintain, and post on its website, a JRO registry listing all JRO Registrations that have been reviewed and accepted by the Regional Entity. The posting shall identify the JRO entity taking compliance responsibilities for itself and its members.

8. The JRO shall inform the Regional Entity of any changes to an existing JRO. The Regional Entity shall promptly notify NERC of each such revision.

9. Nothing in Section 507 shall preclude a member of a JRO, a related entity, or any other entity from registering on its own behalf and undertaking full compliance responsibility including reporting Requirements for the Reliability Standards applicable to the function(s) for which the member or other entity is registering. A JRO member or related entity that registers as responsible for any Reliability Standard or Requirement/sub-Requirement of a Reliability Standard shall inform the JRO of its Registration.

508. Provisions Relating to Coordinated Functional Registration (CFR) Entities

1. In addition to registering as an entity responsible for all functions that it performs itself, multiple entities may each register using a CFR for one or more Reliability

Standard(s) and/or for one or more Requirements/sub-Requirements within particular Reliability Standard(s) applicable to a specific function. The CFR submission must include a written agreement that governs itself and clearly specifies the entities' respective compliance responsibilities. The Registration of the CFR is the complete Registration for each entity. Additionally, each entity shall take full compliance responsibility for those Reliability Standards and/or Requirements/sub-Requirements it has registered for in the CFR. Neither NERC nor the Regional Entity shall be parties to any such agreement, nor shall NERC or the Regional Entity have responsibility for reviewing or approving any such agreement, other than to verify that the agreement provides for an allocation or assignment of responsibilities consistent with the CFR.

2. Each CFR or each individual entity within a CFR must identify a point of contact that is responsible for providing information and data, including submitting reports as needed by the Regional Entity related to the CFR Registration.

3. The Regional Entity shall notify NERC of each CFR that the Regional Entity accepts.

4. NERC or the Regional Entity may request clarification of any list submitted to it that identifies the compliance responsibilities of the CFR and may request such additional information as NERC or the Regional Entity deems appropriate.

5. The Regional Entity's acceptance of that CFR shall be a representation by the Regional Entity to NERC that the Regional Entity has concluded the CFR will meet the Registration requirements of Section 501(1.4).

6. NERC shall maintain, and post on its website, a CFR registry listing all CFR Registrations that have been accepted by NERC or by a Regional Entity. The posting shall clearly list all the Reliability Standards or Requirements/sub-Requirements thereof for which each entity of the CFR is responsible for under the CFR.

7. The point of contact shall inform the Regional Entity of any changes to an existing CFR. The Regional Entity shall promptly notify NERC of each such revision.

8. In the event of a violation of a Reliability Standard or of a Requirement/sub-Requirement of a Reliability Standard for which an entity of a CFR is registered, that entity shall be identified in the Notice of Alleged Violation and shall be assessed the sanction or Penalty in accordance with the NERC Sanctions Guidelines. In the event a Regional Entity is not able to determine which entity(ies) is responsible for a particular Reliability Standard, or Requirements/sub-Requirements thereof that has been violated, the Regional Entity shall investigate the noncompliance in accordance with the NERC Rules of Procedure Section 400, *Compliance Enforcement*, to determine the entity(ies) to which the Regional Entity shall to issue the sanction or Penalty for the violation.

9. Nothing in Section 508 shall preclude an entity registered in a CFR, or any other entity from registering on its own behalf and undertaking full compliance responsibility including reporting Requirements for the Reliability Standards applicable to the function(s) for which the entity is registering. An entity registered in a CFR that registers as responsible for any Reliability Standard or Requirement/sub-Requirement of a Reliability Standard shall inform the point of contact of its Registration.

509. Exceptions to the Definition of the Bulk Electric System

An Element is considered to be (or not be) part of the Bulk Electric System by applying the BES Definition to the Element (including the inclusions and exclusions set forth therein). Appendix 5C sets forth the procedures by which (i) an entity may request a determination that an Element that falls within the definition of the Bulk Electric System should be exempted from being considered a part of the Bulk Electric System, or (ii) an entity may request that an Element that falls outside of the definition of the Bulk Electric System should be considered part of the Bulk Electric System.

SECTION 600 — PERSONNEL CERTIFICATION

601. Scope of Personnel Certification

Maintaining the reliability of the Bulk Electric System through implementation of the Reliability Standards requires skilled, trained and qualified system operators. The System Operator Certification Program provides the mechanism to ensure system operators are provided the education and training necessary to obtain the essential knowledge and skills and are therefore qualified to operate the Bulk Electric System. NERC, as the ERO, will ensure skilled, trained, and qualified system operators through the System Operator Certification Program.

NERC shall develop and maintain a personnel Certification program to evaluate individuals and to issue Credentials to individuals who demonstrate the required level of competence. A current version of such a program is the *System Operator Certification Program Manual*, which is incorporated into these Rules of Procedure as **Appendix 6**.

602. Structure of ERO Personnel Certification Program

1. The NERC personnel Certification program shall be international in scope.

2. The personnel Certification program shall have a governing body that (1) is able to independently exercise decision-making for all matters pertaining to Certification, (2) includes individuals from the discipline being certified and whose composition addresses the needs of the users of the program (e.g., employers, regulators, etc.), and (3) has representation for each specialty or level within a discipline.

3. NERC shall maintain a nominating process for membership in the governing body. Nominations shall be open to all interested parties and self-nominations shall be accepted. The NERC Board of Trustees shall appoint members to the governing body from among those nominated. The members of the governing body shall serve at the pleasure of the Board.

4. The personnel Certification program governing body shall have control over the matters related to the personnel Certification and re-Certification programs listed below, without being subject to approval by any other body.

    4.1 Policies and procedures, including eligibility requirements and application processing.

    4.2 Requirements for personnel Certification, maintaining Certification, and re-Certification.

    4.3 Examination content, development, and administration.

    4.4 Examination cut score.

    4.5 Grievance and disciplinary processes.

4.6 Governing body and subgroup(s)' meeting rules including agenda, frequency, and related procedures.

4.7 Subgroup(s) appointments and work assignments.

4.8 Publications about personnel Certification and re-Certification.

4.9 Setting fees for application, and all other services provided as a part of the personnel Certification and re-Certification activities.

4.10 Program funding, spending, and budget authority. Financial matters related to the operation of the program shall be segregated from other NERC activities.

5. The personnel Certification program shall utilize written procedures for the selection of members of the governing body that prohibit the governing body from selecting a majority of its successors.

6. The personnel Certification program shall be separate from the accreditation and education functions of NERC in related disciplines.

7. No member of the personnel Certification program governing body or staff member working with the personnel Certification program governing body shall have or exercise any authority or responsibility for compliance matters related to Reliability Standards concerning personnel Certification.

603. Candidate Testing Mechanisms

1. The personnel Certification program shall utilize reliable testing mechanisms to evaluate individual competence in a manner that is objective, fair to all candidates, job-related, and based on the knowledge and skill needed to function in the discipline.

2. The personnel Certification program shall implement a formal policy of periodic review of the testing mechanisms to ensure ongoing relevance of the mechanisms to knowledge and skill needed in the discipline.

3. The personnel Certification program shall utilize policies and procedures to ensure that all test administration and development materials are secure and demonstrate that these policies and procedures are consistently implemented.

4. The personnel Certification program shall establish pass/fail levels that protect the public with a method that is based on competence and generally accepted in the psychometric community as being fair and reasonable.

5. The personnel Certification program shall conduct ongoing studies to substantiate the reliability and validity of the testing mechanisms.

6. The personnel Certification program shall utilize policies and procedures that govern how long examination records are kept in their original format.

7. The personnel Certification program shall demonstrate that different forms of the testing mechanisms assess equivalent content and that candidates are not penalized for taking forms of varying difficulty.

604. Public Information About the Personnel Certification Program

1. The personnel Certification program shall provide for publishing and availability of general descriptive material on the procedures used in examination construction and validation; all eligibility requirements and determination; fees; and examination administration documents, including: reporting of results, re-Certification requirements, and disciplinary and grievance procedures.

2. The personnel Certification program shall publish and make available a comprehensive summary or outline of the information, knowledge, or functions covered by the examination.

3. The personnel Certification program shall publish and make available at least annually a summary of Certification activities for the program, including at least the following information: number of examinations delivered, the number passed, the number failed, and the number certified.

605. Responsibilities to Applicants for Certification or Re-Certification

The personnel Certification program:

1. Shall not discriminate among applicants as to age, gender, race, religion, national origin, disability, or marital status and shall include a statement of non-discrimination in announcements of the program.

2. Shall comply with all requirements of applicable federal and state/provincial laws with respect to all Certification and re-Certification activities, and shall require compliance of all contractors and/or providers of services.

3. Shall make available to all applicants copies of formalized procedures for application for, and attainment of, personnel Certification and re-Certification and shall uniformly follow and enforce such procedures for all applicants.

4. Shall implement a formal policy for the periodic review of eligibility criteria and application procedures to ensure that they are fair and equitable.

5. Shall provide competently proctored examination sites.

6. Shall uniformly report examination results to applicants in a timely manner.

7. Shall give applicants failing the examination information on general content areas of deficiency.

8. Shall implement policies and procedures providing due process for applicants questioning eligibility determination, examination results, and Certification status, and shall publish this information. A current version of such a procedure is the NERC *System Operator Certification Dispute Resolution Process*, which is incorporated into these Rules of Procedure as part of **Appendix 6**.

9. Shall develop and maintain a program manual containing the processes and procedures for applicants for Certification and re-Certification.

606. Responsibilities to the Public and to Employers of Certified Practitioners

The personnel Certification program:

1. Shall demonstrate that the testing mechanisms adequately measure the knowledge and skill required for entry, maintenance, and/or advancement in the profession for each position to be certified.

2. Shall award Certification and re-Certification only after the skill and knowledge of the individual have been evaluated and determined to be acceptable.

3. Shall periodically publish or maintain, in an electronic format, a current list of those persons certified in the programs and have polices and procedures that delineate what information about a Credential holder may be made public and under what circumstances.

4. Shall have formal policies and procedures for discipline of a Credential holder, including the revocation of the certificate, for conduct deemed harmful to the public or inappropriate to the discipline (e.g., incompetence, unethical behavior, physical or mental impairment affecting performance). These procedures shall incorporate due process. The current procedure is the *NERC Certified System Operator Credential Disciplinary Action Procedure*, which is incorporated into these Rules of Procedure as part of **Appendix 6**.

5. Shall demonstrate that any title or Credential awarded accurately reflects or applies to the practitioner's daily occupational or professional duties and is not confusing to employers, consumers, regulators, related professions, and/or other interested parties.

SECTION 700 — RELIABILITY READINESS EVALUATION AND IMPROVEMENT AND FORMATION OF SECTOR FORUMS

701. Confidentiality Requirements for Readiness Evaluations and Evaluation Team Members

1. All information made available or created during the course of any reliability readiness evaluation including, but not limited to, data, Documents, observations and notes, shall be maintained as confidential by all evaluation team members, in accordance with the requirements of Section 1500.

2. Evaluation team members are obligated to destroy all confidential evaluation notes following the posting of the final report of the reliability readiness evaluation.

3. NERC will retain reliability readiness evaluation-related documentation, notes, and materials for a period of time as defined by NERC.

4. These confidentiality requirements shall survive the termination of the NERC Reliability Readiness Evaluation and Improvement Program.

702. Formation of Sector Forum

1. NERC will form a sector forum at the request of any five members of NERC that share a common interest in the safety and reliability of the Bulk Power System. The members of sector forum may invite such others of the members of NERC to join the sector forum as the sector forum deems appropriate.

2. The request to form a sector forum must include a proposed charter for the sector forum. The Board must approve the charter.

3. NERC will provide notification of the formation of a sector forum to its membership roster. Notices and agendas of meetings shall be posted on NERC's website.

4. A sector forum may make recommendations to any of the NERC committees and may submit a Standards Authorization Request to the NERC *Reliability Standards Development Procedure*.

SECTION 800 — RELIABILITY ASSESSMENT AND PERFORMANCE ANALYSIS

801. Objectives of the Reliability Assessment and Performance Analysis Program

The objectives of the NERC Reliability Assessment and Performance Analysis Program are to: (1) conduct, and report the results of, an independent assessment of the overall reliability and adequacy of the interconnected North American Bulk Power Systems, both as existing and as planned; (2) analyze off-normal events on the Bulk Power System; (3) identify the root causes of events that may be precursors of potentially more serious events; (4) assess past reliability performance for lessons learned; (5) disseminate findings and lessons learned to the electric industry to improve reliability performance; and (6) develop reliability performance benchmarks. The final reliability assessment reports shall be approved by the Board for publication to the electric industry and the general public.

802. Scope of the Reliability Assessment Program

1. The scope of the Reliability Assessment Program shall include:

    1.1 Review, assess, and report on the overall electric generation and transmission reliability (adequacy and operating reliability) of the interconnected Bulk Power Systems, both existing and as planned.

    1.2 Assess and report on the key issues, risks, and uncertainties that affect or have the potential to affect the reliability of existing and future electric supply and transmission.

    1.3 Review, analyze, and report on Regional Entity self-assessments of electric supply and bulk power transmission reliability, including reliability issues of specific regional concern.

    1.4 Identify, analyze, and project trends in electric customer demand, supply, and transmission and their impacts on Bulk Power System reliability.

    1.5 Investigate, assess, and report on the potential impacts of new and evolving electricity market practices, new or proposed regulatory procedures, and new or proposed legislation (e.g. environmental requirements) on the adequacy and operating reliability of the Bulk Power Systems.

2. The Reliability Assessment Program shall be performed in a manner consistent with the Reliability Standards of NERC including but not limited to those that specify reliability assessment Requirements.

803. Reliability Assessment Reports

The number and type of periodic assessments that are to be conducted shall be at the discretion of NERC. The results of the reliability assessments shall be documented in three reports: the long-term and the annual seasonal (summer) and the annual seasonal (winter) assessment reports. NERC shall also conduct special reliability assessments from time to time as circumstances warrant. The reliability assessment reports shall be reviewed and approved for publication by the Board. The three regular reports are described below.

1. **Long-Term Reliability Assessment Report** — The annual long-term report shall cover a ten-year planning horizon. The planning horizon of the long-term reliability assessment report shall be subject to change at the discretion of NERC. Detailed generation and transmission adequacy assessments shall be conducted for the first five years of the review period. For the second five years of the review period, the assessment shall focus on the identification, analysis, and projection of trends in peak demand, electric supply, and transmission adequacy, as well as other industry trends and developments that may impact future electric system reliability. Reliability issues of concern and their potential impacts shall be presented along with any mitigation plans or alternatives. The long-term reliability assessment reports will generally be published in the fall (September) of each year. NERC will also publish electricity supply and demand data associated with the long-term reliability assessment report.

2. **Summer Assessment Report** — The annual summer seasonal assessment report typically shall cover the four-month (June–September) summer period. It shall provide an overall perspective on the adequacy of the generation resources and the transmission systems necessary to meet projected summer peak demands. It shall also identify reliability issues of interest and regional and subregional areas of concern in meeting projected customer demands and may include possible mitigation alternatives. The report will generally be published in mid-May for the upcoming summer period.

3. **Winter Assessment Report** — The annual winter seasonal assessment report shall cover the three-month (December–February) winter period. The report shall provide an overall perspective on the adequacy of the generation resources and the transmission systems necessary to meet projected winter peak demands. Similar to the summer assessment, the winter assessment shall identify reliability issues of interest and regional and subregional areas of concern in meeting projected customer demands and may also include possible mitigation alternatives. The winter assessment report will generally be published in mid-November for the upcoming winter period.

4. **Special Reliability Assessment Reports** — In addition to the long-term and seasonal reliability assessment reports, NERC shall also conduct special reliability assessments on a regional, interregional, and Interconnection basis as conditions warrant, or as requested by the Board or governmental authorities. The teams of reliability and technical experts also may initiate special assessments of key

reliability issues and their impacts on the reliability of a regions, subregions, or Interconnection (or a portion thereof). Such special reliability assessments may include, among other things, operational reliability assessments, evaluations of emergency response preparedness, adequacy of fuel supply, hydro conditions, reliability impacts of new or proposed environmental rules and regulations, and reliability impacts of new or proposed legislation that affects or has the potential to affect the reliability of the interconnected Bulk Power Systems in North America.

804. Reliability Assessment Data and Information Requirements

To carry out the reviews and assessments of the overall reliability of the interconnected Bulk Power Systems, the Regional Entities and other entities shall provide sufficient data and other information requested by NERC in support of the annual long-term and seasonal assessments and any special reliability assessments.

Some of the data provided for these reviews and assessment may be considered confidential from a competitive marketing perspective, a Critical Energy Infrastructure Information perspective, or for other purposes. Such data shall be treated in accordance with the provisions of Section 1500 – Confidential Information.

While the major sources of data and information for this program are the Regional Entities, a team of reliability and technical experts is responsible for developing and formulating its own independent conclusions about the near-term and long-term reliability of the Bulk Power Systems.

In connection with the reliability assessment reports, requests shall be submitted to each of the Regional Entities for required reliability assessment data and other information, and for each Regional Entity's self-assessment report. The timing of the requests will be governed by the schedule for the preparation of the assessment reports.

The Regional Entity self-assessments are to be conducted in compliance with NERC Reliability Standards and the respective regional planning criteria. The team(s) of reliability and technical experts shall also conduct interviews with the Regional Entities as needed. The summary of the Regional Entity self-assessments that are to be included in the assessment reports shall follow the general outline identified in NERC's request. This outline may change from time to time as key reliability issues change.

In general, the Regional Entity reliability self-assessments shall address, among other areas, the following topics: demand and Net Energy for Load; assessment of projected resource adequacy; any transmission constraints that may impact bulk transmission adequacy and plans to alleviate those constraints; any unusual operating conditions that could impact reliability for the assessment period; fuel supply adequacy; the deliverability of generation (both internal and external) to Load~~load~~; and any other reliability issues in the Region and their potential impacts on the reliability of the Bulk Power Systems.

805. Reliability Assessment Process

Based on their expertise, the review of the collected data, the review of the Regional Entity self-assessment reports, and interviews with the Regional Entities, as appropriate, the teams of reliability and technical experts shall perform an independent review and assessment of the generation and transmission adequacy of each Region's existing and planned Bulk Power System. The results of the review teams shall form the basis of NERC's long-term and seasonal reliability assessment reports. The review and assessment process is briefly summarized below.

1. **Resource Adequacy Assessment** — The teams shall evaluate the regional demand and resource capacity data for completeness in the context of the overall resource capacity needs of the Region. The team shall independently evaluate the ability of the Regional Entity members to serve their obligations given the demand growth projections, the amount of existing and planned capacity, including committed and uncommitted capacity, contracted capacity, or capacity outside of the Region. If the Region relies on capacity from outside of the Region to meet its resource objectives, the ability to deliver that capacity shall be factored into the assessment. The demand and resource capacity information shall be compared to the resource adequacy requirements of the Regional Entity for the year(s) or season(s) being assessed. The assessment shall determine if the resource information submitted represents a reasonable and attainable plan for the Regional Entity and its members. For cases of inadequate capacity or reserve margin, the Regional Entity will be requested to analyze and explain any resource capacity inadequacies and its plans to mitigate the reliability impact of the potential inadequacies. The analysis may be expanded to include surrounding areas. If the expanded analysis indicates further inadequacies, then an interregional problem may exist and will be explored with the applicable Regions. The results of these analyses shall be described in the assessment report.

2. **Transmission Adequacy and Operating Reliability Assessment** — The teams shall evaluate transmission system information that relates to the adequacy and operating reliability of the regional transmission system. That information shall include: regional planning study reports, interregional planning study reports, and/or regional operational study reports. If additional information is required, another data request shall be sent to the Regional Entity. The assessment shall provide a judgment on the ability of the regional transmission system to operate reliably under the expected range of operating conditions over the assessment period as required by NERC Reliability Standards. If sub-areas of the regional system are especially critical to the Reliable Operation of the regional bulk transmission system, these Facilities or sub-areas shall be reviewed and addressed in the assessment. Any areas of concern related to the adequacy or operating reliability of the system shall be identified and reported in the assessment.

3. **Seasonal Operating Reliability Assessment** — The team(s) shall evaluate the overall operating reliability of the regional bulk transmission systems. In areas with potential resource adequacy or system operating reliability problems, operational readiness of the affected Regional Entities for the upcoming season

shall be reviewed and analyzed. The assessment may consider unusual but possible operating scenarios and how the system is expected to perform. Operating reliability shall take into account a wide range of activities, all of which should reinforce the Regional Entity's ability to deal with the situations that might occur during the upcoming season. Typical activities in the assessment may include: facility modifications and additions, new or modified operating procedures, emergency procedures enhancement, and planning and operating studies. The teams shall report the overall seasonal operating reliability of the regional transmission systems in the annual summer and winter assessment reports.

4. **Reporting of Reliability Assessment Results** — The teams of reliability and technical experts shall provide an independent assessment of the reliability of the Regional Entities and the North American interconnected Bulk Power System for the period of the assessment. While the Regional Entities are relied upon to provide the information to perform such assessments, the review team is not required to accept the conclusions provided by the Regional Entities. Instead, the review team is expected, based on their expertise, to reach their own independent conclusions about the status of the adequacy of the generation and bulk power transmission systems of North America.

   The review team also shall strive to achieve consensus in their assessments. The assessments that are made are based on the best information available at the time. However, since judgment is applied to this information, legitimate differences of opinion can develop. Despite these differences, the review team shall work to achieve consensus on their findings.

   In addition to providing long-term and seasonal assessments in connection with the Reliability Assessment Program, the review team of experts shall also be responsible for recommending new and revised Reliability Standards related to the reliability assessments and the reliability of the Bulk Power Systems. These proposals for new or revised Reliability Standards shall be entered into NERC's Reliability Standards development process.

   Upon completion of the assessment, the team shall share the results with the Regional Entities. The Regional Entities shall be given the opportunity to review and comment on the conclusions in the assessment and to provide additional information as appropriate. The reliability assessments and their conclusions are the responsibility of NERC's technical review team and NERC.

   The preparation and approval of NERC's reliability assessment reports shall follow a prescribed schedule including review, comment, and possible approval by appropriate NERC committees. The long-term and seasonal (summer and winter) reliability assessment reports shall be further reviewed for approval by the Board for publication to the electric industry.

806. Scope of the Reliability Performance and Analysis Program

The components of the program will include analysis of large-scale outages, disturbances, and near misses to determine root causes and lessons learned; identification and continuous monitoring of performance indices to detect emerging trends and signs of a decline in reliability performance; and communications of performance results, trends, recommendations, and initiatives to those responsible to take actions; followed with confirmation of actions to correct any deficiencies identified. Within NERC, the reliability performance program will provide performance results to the Reliability Standards Development and Compliance Monitoring and Enforcement Programs to make the necessary adjustments to preserve reliability based on a risk-based approach.

807. Analysis of Major Events

Responding to major blackouts and other system disturbances or emergencies can be divided into four phases: situational assessment and communications; situation tracking and communications; data collection, investigation, analysis, and reporting; and follow-up on recommendations.

a. NERC's role following a blackout or other major Bulk Power System disturbance or emergency is to provide leadership, coordination, technical expertise, and assistance to the industry in responding to the event. Working closely with the Regional Entities and Reliability Coordinators, NERC will coordinate and facilitate efforts among industry participants, and with state, federal, and provincial governments in the United States and Canada to support the industry's response.

b. When responding to any event where physical or cyber security is suspected as a cause or contributing factor to an event, NERC will immediately notify appropriate government agencies and coordinate its activities with them.

c. Each user, owner, and operator of the Bulk Power System shall provide NERC and the applicable Regional Entities with such information as is necessary to enable NERC and the applicable Regional Entities to carry out their responsibilities under this section.

d. During the conduct of some NERC analyses, assistance may be needed from government agencies. This assistance could include: authority to require data reporting from affected or involved parties; communications with other agencies of government; investigations related to possible criminal or terrorist involvement in the event; resources for initial data gathering immediately after the event; authority to call meetings of affected or involved parties; and technical and analytical resources for studies.

e. NERC shall work with other participants to establish a clear delineation of roles, responsibilities, and coordination requirements among industry and government for the investigation and reporting of findings, conclusions, and recommendations related to major blackouts, disturbances, or other emergencies affecting the Bulk Power System with the objective of avoiding, to the extent possible, multiple

investigations of the same event. If the event is confined to a single Regional Entity, NERC representatives will participate as members of the Regional Entity analysis team.

f. NERC and applicable entity(s) shall apply the NERC *Blackout and Disturbance Response Procedures*, which are incorporated into these Rules of Procedure as **Appendix 8**. These procedures provide a framework to guide NERC's response to events that may have multiregional, national, or international implications. Experienced industry leadership shall be applied to tailor the response to the specific circumstances of the event. In accordance with that procedure, the NERC president will determine whether the event warrants analysis at the NERC-level. A Regional Entity may request that NERC elevate any analysis to a NERC level.

g. NERC will screen and analyze the findings and recommendations from the analysis, and those with generic applicability will be disseminated to the industry in accordance with Section 810.

808. Analysis of Off-Normal Events, Potential System Vulnerabilities, and System Performance

1. NERC and Regional Entities shall analyze system and equipment performance events that do not rise to the level of a major blackout, disturbance, or system emergency, as described in Section 807. NERC and Regional Entities shall also analyze potential vulnerabilities in the Bulk Power System brought to their attention by government agencies. The purpose of these analyses is to identify the root causes of events that may be precursors of potentially more serious events or that have the potential to cause more serious events, to assess past reliability performance for lessons learned, and to develop reliability performance benchmarks and trends.

2. NERC and Regional Entities will screen and analyze events and potential vulnerabilities for significance, and information from those with generic applicability will be disseminated to the industry in accordance with Section 810.

3. Each user, owner, and operator, of the Bulk Power System shall provide NERC and the applicable Regional Entities with such information as is necessary to enable NERC and the applicable Regional Entities to carry out their responsibilities under this section.

809. Reliability Benchmarking

NERC shall identify and track key reliability indicators as a means of benchmarking reliability performance and measuring reliability improvements. This program will include assessing available metrics, developing guidelines for acceptable metrics, maintaining a performance metrics "dashboard" on the NERC website, and developing appropriate reliability performance benchmarks.

810. Information Exchange and Issuance of NERC Advisories, Recommendations and Essential Actions

1. Members of NERC and Bulk Power System owners, operators, and users shall provide NERC with detailed and timely operating experience information and data.

2. In the normal course of operations, NERC disseminates the results of its events analysis findings, lessons learned and other analysis and information gathering to the industry. These findings, lessons learned and other information will be used to guide the Reliability Assessment Program.

3. When NERC determines it is necessary to place the industry or segments of the industry on formal notice of its findings, analyses, and recommendations, NERC will provide such notification in the form of specific operations or equipment Advisories, Recommendations or Essential Actions:

3.1 Level 1 (Advisories) – purely informational, intended to advise certain segments of the owners, operators and users of the Bulk Power System of findings and lessons learned;

3.2 Level 2 (Recommendations) – specific actions that NERC is recommending be considered on a particular topic by certain segments of owners, operators, and users of the Bulk Power System according to each entity's facts and circumstances;

3.3 Level 3 (Essential Actions) – specific actions that NERC has determined are essential for certain segments of owners, operators, or users of the Bulk Power System to take to ensure the reliability of the Bulk Power System. Such Essential Actions require NERC Board approval before issuance.

4. The Bulk Power System owners, operators, and users to which Level 2 (Recommendations) and Level 3 (Essential Actions) notifications apply are to evaluate and take appropriate action on such issuances by NERC. Such Bulk Power System owners, operators, and users shall also provide reports of actions taken and timely updates on progress towards resolving the issues raised in the Recommendations and Essential Actions in accordance with the reporting date(s) specified by NERC.

5. NERC will advise the Commission and other Applicable Governmental Authorities of its intent to issue all Level 1 (Advisories), Level 2 (Recommendations), and Level 3 (Essential Actions) at least five (5) business days prior to issuance, unless extraordinary circumstances exist that warrant issuance less than five (5) business days after such advice. NERC will file a report with the Commission and other Applicable Governmental Authorities no later than thirty (30) days following the date by which NERC has requested the Bulk Power System owners, operators, and users to which a Level 2

(Recommendation) or Level 3 (Essential Action) issuance applies to provide reports of actions taken in response to the notification. NERC's report to the Commission and other Applicable Governmental Authorities will describe the actions taken by the relevant owners, operators, and users of the Bulk Power System and the success of such actions taken in correcting any vulnerability or deficiency that was the subject of the notification, with appropriate protection for Confidential Information or Critical Energy Infrastructure Information.

811. Equipment Performance Data

Through its Generating Availability Data System (GADS), NERC shall collect operating information about the performance of electric generating equipment; provide assistance to those researching information on power plant outages stored in its database; and support equipment reliability as well as availability analyses and other decision-making processes developed by GADS subscribers. GADS data is also used in conducting assessments of generation resource adequacy.

SECTION 900 — TRAINING AND EDUCATION

901. Scope of the Training and Education Program

Maintaining the reliability of the Bulk Electric System through implementation of the Reliability Standards requires informed and trained personnel. The training and education program will provide the education and training necessary for Bulk Power System personnel and regulators to obtain the essential knowledge necessary to understand and operate the Bulk Electric System.

NERC shall develop and maintain training and education programs for the purpose of establishing training requirements, developing materials, and developing training activities. The target audience of the training and education programs shall be Bulk Power System operating personnel including system operations personnel, operations support personnel (engineering and information technology), supervisors and managers, training personnel, and other personnel directly responsible for complying with NERC Reliability Standards who, through their actions or inactions, may impact the real-time, or day-ahead reliability of the Bulk Power System.

NERC shall also develop and provide appropriate training and education for industry participants and regulators affected by new or changed Reliability Standards or compliance Requirements.

To accomplish those objectives:

1. NERC shall periodically conduct job task analyses for targeted Bulk Power System personnel to ensure that the training program content is properly aligned to the job tasks performed by those personnel.

2. NERC shall develop and maintain personnel training program curriculum requirements based on valid job-task analysis.

3. NERC shall periodically conduct performance surveys to determine the effectiveness of the training program and identify areas for further training development and improvement.

4. NERC shall develop training and education materials and activities to assist Bulk Power System entities implementing new or revised Reliability Standard Requirements or other NERC-related changes.

5. NERC shall develop and provide training to people who participate in NERC and Regional Entity evaluations, audits, and investigations for the Compliance Monitoring and Enforcement Program, Organization Certification Program, and the continuing education program.

902. Continuing Education Program

NERC shall develop and maintain a continuing education program to foster the improvement of training and to promote quality in the training programs used by and

implemented by Bulk Power System entities. The program shall approve or accredit those activities and entities meeting NERC continuing education requirements.

1. NERC shall develop and implement continuing education program requirements that promote excellence in training programs and advance improved performance for Bulk Power System personnel identified in Section 901.

2. NERC shall develop and maintain a process to approve or accredit continuing education Providers and activities seeking approval or accreditation and meeting NERC-approved continuing education requirements.

3. NERC shall perform periodic audits on continuing education Providers and training activities to ensure that the approved or accredited Providers and training activities satisfy NERC continuing education requirements.

4. NERC shall develop and maintain an appeals process for disputed application reviews, interpretations of guidelines and standards, probation or suspension of NERC-approved Provider status, or Continuing Education Hour disputes.

SECTION 1000 — SITUATION AWARENESS AND INFRASTRUCTURE SECURITY

1001. Situation Awareness

NERC shall through the use of Reliability Coordinators and available tools, monitor present conditions on the Bulk Power System and provide leadership coordination, technical expertise, and assistance to the industry in responding to events as necessary. To accomplish these goals, NERC will:

1. Maintain real-time situation awareness of conditions on the Bulk Power System;

2. Notify the industry of significant Bulk Power System events that have occurred in one area, and which have the potential to impact reliability in other areas;

3. Maintain and strengthen high-level communication, coordination, and cooperation with governments and government agencies regarding real-time conditions; and

4. Enable the Reliable Operation of interconnected Bulk Power Systems by facilitating information exchange and coordination among reliability service organizations.

1002. Reliability Support Services

NERC will provide tools and other support services for the benefit of Reliability Coordinators and other system operators, including the Area Control Error (ACE) and Frequency Monitoring System, NERC Hotline, Real-time Flows, System Data Exchange (SDX), Reliability Coordinator Information System (RCIS), Transmission Services Information Network (TSIN), Interchange Distribution Calculator (IDC), Interregional Security Network (ISN), and Central Repository for Security Events (CRC). To accomplish this goal, NERC will:

1. Maintain the reliability and effectiveness of all mission-critical operating reliability support systems and services;

2. Continue to support maintenance of a transmission provider curtailment report on the CRC site in response to Federal Energy Regulatory Commission Order 605;

3. Investigate and analyze the use of high-speed real-time system measurements, including phasors, in predicting the behavior and performance of the Eastern Interconnection; and

4. Facilitate real-time voice and data exchange services among Reliability Coordinators (e.g., Hotline, Interregional Security Network, NERCnet, System Data Exchange, etc.).

1003. Infrastructure Security Program

NERC shall coordinate electric industry activities to promote Critical Infrastructure protection of the Bulk Power System in North America by taking a leadership role in

Critical Infrastructure protection of the electricity sector so as to reduce vulnerability and improve mitigation and protection of the electricity sector's Critical Infrastructure. To accomplish these goals, NERC shall perform the following functions.

1. Electric Sector Information Sharing and Analysis Center (ESISAC)

    1.1 NERC shall serve as the electricity sector's sector coordinator and operate its Information Sharing and Analysis Center to gather information and communicate security-related threats and incidents within the sector, with United States and Canadian government agencies, and with other Critical Infrastructure sectors.

    1.2 NERC shall improve the capability of the ESISAC to analyze security threats and incident information and provide situational assessments for the electricity sector and governments.

    1.3 NERC shall work closely with the United States Department of Homeland Security, Department of Energy, Natural Resources Canada, and Public Safety and Emergency Preparedness Canada.

    1.4 NERC shall strengthen and expand these functions and working relationships with the electricity sector, other Critical Infrastructure industries, governments, and government agencies throughout North America to ensure the protection of the infrastructure of the Bulk Power System.

    1.5 NERC shall fill the role of the Electricity Sector Coordinating Council and coordinate with the Government Coordinating Council.

    1.6 NERC shall coordinate with other Critical Infrastructure sectors through active participation with the other Sector Coordinating Councils, the other ISACs, and the National Infrastructure Advisory Committee.

    1.7 NERC shall encourage and participate in coordinated Critical Infrastructure protection exercises, including interdependencies with other Critical Infrastructure sectors.

2. Security Planning

    2.1 NERC shall take a risk management approach to Critical Infrastructure protection, considering probability and severity, and recognizing that mitigation and recovery can be practical alternatives to prevention.

    2.2 NERC shall keep abreast of the changing threat environment through collaboration with government agencies.

    2.3 NERC shall develop criteria to identify critical physical assets and Critical Cyber Assets, assess security threats, identify risk assessment

methodologies, and assess effectiveness of physical and cyber protection measures.

2.4 NERC shall enhance and maintain the Bulk Power System critical spare transformer program, encourage increased participation by asset owners, and continue to assess the need to expand this program to include other critical Bulk Power System equipment.

2.5 NERC shall support implementation of the Critical Infrastructure Protection Standards through education and outreach.

2.6 NERC shall review and improve existing security guidelines, develop new security guidelines to meet the needs of the electricity sector, and consider whether any guidelines should be developed into Reliability Standards.

2.7 NERC shall conduct education and outreach initiatives to increase awareness and respond to the needs of the electricity sector.

2.8 NERC shall strengthen relationships with federal, state, and provincial government agencies on Critical Infrastructure protection matters.

2.9 NERC shall maintain and improve mechanisms for the sharing of sensitive or classified information with federal, state, and provincial government agencies on Critical Infrastructure protection matters; work with DOE and DHS to implement the National Infrastructure Protection Plan, as applicable to the electricity sector; and coordinate this work with PSEPC.

2.10 NERC shall improve methods to better assess the impact of a possible physical attack on the Bulk Power System and means to deter, mitigate, and respond following an attack.

2.11 NERC shall assess the results of vulnerability assessments and enhance the security of system control and data acquisition (SCADA) and process control systems by developing methods to detect an emerging cyber attack and the means to mitigate impacts on the Bulk Power Systems.

2.12 NERC shall work with the National SCADA Test Bed and the Process Control Systems Forum to accelerate the development of technology that will enhance the security, safety, and reliability of process control and SCADA systems.

SECTION 1100 — ANNUAL NERC BUSINESS PLANS AND BUDGETS

1101. Scope of Business Plans and Budgets

The Board shall determine the content of the budgets to be submitted to the Applicable Governmental Authorities with consultation from the members of the Member Representatives Committee, Regional Entities, and others in accordance with the Bylaws. The Board shall identify any activities outside the scope of NERC's statutory reliability functions, if any, and the appropriate funding mechanisms for those activities.

1102. NERC Funding and Cost Allocation

1. In order that NERC's costs shall be fairly allocated among Interconnections and among Regional Entities, the NERC funding mechanism for all statutory functions shall be based on Net Energy for Load (NEL).

2. NERC's costs shall be allocated so that all Load~~load~~ (or, in the case of costs for an Interconnection or Regional Entity, all Load~~load~~ within that Interconnection or Regional Entity) bears an equitable share of such costs based on NEL.

3. Costs shall be equitably allocated between countries or Regional Entities thereof for which NERC has been designated or recognized as the Electric Reliability Organization.

4. Costs incurred to accomplish the statutory functions for one Interconnection, Regional Entity, or group of entities will be directly assigned to that Interconnection, Regional Entity, or group of entities provided that such costs are allocated equitably to end-users based on Net Energy for Load.

1103. NERC Budget Development

1. The NERC annual budget process shall be scheduled and conducted for each calendar year so as to allow a sufficient amount of time for NERC to receive Member inputs, develop the budget, and receive Board and, where authorized by applicable legislation or agreement, Applicable Governmental Authority approval of the NERC budget for the following fiscal year, including timely submission of the proposed budget to FERC for approval in accordance with FERC regulations.

2. The NERC budget submittal to Applicable Governmental Authorities shall include provisions for all ERO functions, all Regional Entity delegated functions as specified in delegation agreements and reasonable reserves and contingencies.

3. The NERC annual budget submittal to Applicable Governmental Authorities shall include description and explanation of NERC's proposed ERO program activities for the year; budget component justification based on statutory or other authorities; explanation of how each budgeted activity lends itself to the accomplishment of the statutory or other authorities; sufficiency of resources

provided for in the budget to carry out the ERO program responsibilities; explanation of the calculations and budget estimates; identification and explanation of changes in budget components from the previous year's budget; information on staffing and organization charts; and such other information as is required by FERC and other Applicable Governmental Authorities having authority to approve the proposed budget.

4. NERC shall develop, in consultation with the Regional Entities, a reasonable and consistent system of accounts, to allow a meaningful comparison of actual results at the NERC and Regional Entity level by the Applicable Governmental Authorities.

1104. Submittal of Regional Entity Budgets to NERC

1. Each Regional Entity shall submit its proposed annual budget for carrying out its delegated authority functions as well as all other activities and funding to NERC in accordance with a schedule developed by NERC and the Regional Entities, which shall provide for the Regional Entity to submit its final budget that has been approved by its board of directors or other governing body no later than July 1 of the prior year, in order to provide sufficient time for NERC's review and comment on the proposed budget and approval of the Regional Entity budget by the NERC Board of Trustees in time for the NERC and Regional Entity budgets to be submitted to FERC and other Applicable Governmental Authorities for approval in accordance with their regulations. The Regional Entity's budget shall include supporting materials in accordance with the budget and reporting format developed by NERC and the Regional Entities, including the Regional Entity's complete business plan and organization chart, explaining the proposed collection of all dues, fees, and charges and the proposed expenditure of funds collected in sufficient detail to justify the requested funding collection and budget expenditures.

2. NERC shall review and approve each Regional Entity's budget for meeting the requirements of its delegated authority. Concurrent with approving the NERC budget, NERC shall review and approve, or reject, each Regional Entity budget for filing.

3. NERC shall also have the right to review from time to time, in reasonable intervals but no less frequently than every three years, the financial books and records of each Regional Entity having delegated authority in order to ensure that the documentation fairly represents in all material aspects appropriate funding of delegated functions.

1105. Submittal of NERC and Regional Entity Budgets to Governmental Authorities for Approval

1. NERC shall file for approval by the Applicable Governmental Authorities at least 130 days in advance of the start of each fiscal year. The filing shall include: (1) the complete NERC and Regional Entity budgets including the business plans and organizational charts approved by the Board, (2) NERC's annual funding requirement (including Regional Entity costs for delegated functions), and (3) the

mechanism for assessing charges to recover that annual funding requirement, together with supporting materials in sufficient detail to support the requested funding requirement.

2. NERC shall seek approval from each Applicable Governmental Authority requiring such approval for the funding requirements necessary to perform ERO activities within their jurisdictions.

1106. NERC and Regional Entity Billing and Collections

1. NERC shall request the Regional Entities to identify all Load-Serving Entities[3] within each Regional Entity and the NEL assigned to each Load-Serving Entity, and the Regional Entities shall supply the requested information. The assignment of a funding requirement to an entity shall not be the basis for determining that the entity must be registered in the Compliance Registry.

2. NERC shall accumulate the NEL by Load-Serving Entities for each Applicable Governmental Authority and submit the proportional share of NERC funding requirements to each Applicable Governmental Authority for approval together with supporting materials in sufficient detail to support the requested funding requirement.

3. NEL reported by Balancing Authorities within a Region shall be used to rationalize and validate amounts allocated for collection through Regional Entity processes.

4. The billing and collection processes shall provide:

   4.1 A clear validation of billing and application of payments.

   4.2 A minimum of data requests to those being billed.

   4.3 Adequate controls to ensure integrity in the billing determinants including identification of entities responsible for funding NERC's activities.

   4.4 Consistent billing and collection terms.

5. NERC will bill and collect all budget requirements approved by Applicable Governmental Authorities (including the funds required to support those functions assigned to the Regional Entities through the delegation agreements) directly from the Load-Serving Entities or their designees or as directed by particular Applicable Governmental Authorities, except where the Regional Entity is required to collect the budget requirements for NERC, in which case the Regional Entity will collect directly from the Load-Serving Entities or as otherwise

[3] A Regional Entity may allocate funding obligations using an alternative method approved by NERC and by FERC and other Applicable Governmental Authorities, as provided for in the regional delegation agreement.

provided by agreement and submit funds to NERC. Alternatively, a load-serving entity may pay its allocated ERO costs through a Regional Entity managed collection mechanism.

6. NERC shall set a minimum threshold limit on the billing of small LSEs to minimize the administrative burden of collection.

7. NERC shall pursue any non-payments and shall request assistance from Applicable Governmental Authorities as necessary to secure collection.

8. In the case where a Regional Entity performs the collection for ERO, the Regional Entity will not be responsible for non-payment in the event that a user, owner or operator of the Bulk Power System does not pay its share of dues, fees and charges in a timely manner, provided that such a Regional Entity shall use reasonably diligent efforts to collect dues, fees, and other charges from all entities obligated to pay them. However, any revenues not paid shall be recovered from others within the same Region to avoid cross-subsidization between Regions.

9. Both NERC and the Regional Entities also may bill members or others for functions and services not within statutory requirements or otherwise authorized by the Applicable Governmental Authorities. Costs and revenues associated with these functions and services shall be separately identified and not commingled with billings associated with the funding of NERC or of the Regional Entities for delegated activities.

1107. Penalty Applications

1. Where NERC or a Regional Entity initiates a compliance monitoring and enforcement process that leads to imposition of a Penalty, the entity that initiated the process shall receive any Penalty monies imposed and collected as a result of that process, unless a different disposition of the Penalty monies is provided for in the delegation agreement, or in a contract or a disposition of the violation that is approved by NERC and FERC.

2. All funds from financial Penalties assessed in the United States received by the entity initiating the compliance monitoring and enforcement process shall be applied as a general offset to the entity's budget requirements for the subsequent fiscal year, if received by July 1, or for the second subsequent fiscal year, if received on or after July 1. Funds from financial Penalties shall not be directly applied to any program maintained by the entity conducting the compliance monitoring and enforcement process. Funds from financial Penalties assessed against a Canadian entity shall be applied as specified by legislation or agreement.

3. In the event that a compliance monitoring and enforcement process is conducted jointly by NERC and a Regional Entity, the Regional Entity shall receive the Penalty monies and offset the Regional Entity's budget requirements for the subsequent fiscal year.

4. Exceptions or alternatives to the foregoing provisions will be allowed if approved by NERC and by FERC or any other Applicable Governmental Authority.

1108. Special Assessments

On a demonstration of unforeseen and extraordinary circumstances requiring additional funds prior to the next funding cycle, NERC shall file with the Applicable Governmental Authorities, where authorized by applicable legislation or agreement, for authorization for an amended or supplemental budget for NERC or a Regional Entity and, if necessary under the amended or supplemental budget, to collect a special or additional assessment for statutory functions of NERC or the Regional Entity. Such filing shall include supporting materials to justify the requested funding, including any departure from the approved funding formula or method.

SECTION 1200 — REGIONAL DELEGATION AGREEMENTS

1201. Pro Forma Regional Delegation Agreement

NERC shall develop and maintain a pro forma Regional Entity delegation agreement, which shall serve as the basis for negotiation of consistent agreements for the delegation of ERO functions to Regional Entities.

1202. Regional Entity Essential Requirements

NERC shall establish the essential requirements for an entity to become qualified and maintain good standing as a Regional Entity.

1203. Negotiation of Regional Delegation Agreements

NERC shall, for all areas of North America that have provided NERC with the appropriate authority, negotiate regional delegation agreements for the purpose of ensuring all areas of the North American Bulk Power Systems are within a Regional Entity Region. In the event NERC is unable to reach agreement with Regional Entities for all areas, NERC shall provide alternative means and resources for implementing NERC functions within those areas. No delegation agreement shall take effect until it has been approved by the Applicable Governmental Authority.

1204. Conformance to Rules and Terms of Regional Delegation Agreements

NERC and each Regional Entity shall comply with all applicable ERO Rules of Procedure and the obligations stated in the regional delegation agreement.

1205. Sub-delegation

The Regional Entity shall not sub-delegate any responsibilities and authorities delegated to it by its regional delegation agreement with NERC except with the approval of NERC and FERC and other Applicable Governmental Authorities. Responsibilities and authorities may only be sub-delegated to another Regional Entity. Regional Entities may share resources with one another so long as such arrangements do not result in cross-subsidization or in any sub-delegation of authorities.

1206. Nonconformance to Rules or Terms of Regional Delegation Agreement

If a Regional Entity is unable to comply or is not in compliance with an ERO Rule of Procedure or the terms of the regional delegation agreement, the Regional Entity shall immediately notify NERC in writing, describing the area of nonconformance and the reason for not being able to conform to the Rule of Procedure. NERC shall evaluate each case and inform the affected Regional Entity of the results of the evaluation. If NERC determines that a Rule of Procedure or term of the regional delegation agreement has been violated by a Regional Entity or cannot practically be implemented by a Regional Entity, NERC shall notify the Applicable Governmental Authorities and take any actions necessary to address the situation.

1207. Regional Entity Audits

Approximately every five years and more frequently if necessary for cause, NERC shall audit each Regional Entity to verify that the Regional Entity continues to comply with NERC Rules of Procedure and the obligations of NERC delegation agreement. Audits of Regional Entities shall be conducted, to the extent practical, based on professional auditing standards recognized in the U.S., including Generally Accepted Auditing Standards, Generally Accepted Government Auditing Standards, and standards sanctioned by the Institute of Internal Auditors, and if applicable to the coverage of the audit, may be based on Canadian or other international standards. The audits required by this Section 1207 shall not duplicate the audits of Regional Entity Compliance Monitoring and Enforcement Programs provided for in **Appendix 4A**, Audit of Regional Compliance Programs, to these Rules of Procedure.

1208. Process for Considering Registered Entity Requests to Transfer to Another Regional Entity

1. A Registered Entity that is registered in the Region of one Regional Entity and believes its registration should be transferred to a different Regional Entity may submit a written request to both Regional Entities requesting that they process the proposed transfer in accordance with this section. The Registered Entity's written request shall set forth the reasons the Registered Entity believes justify the proposed transfer and shall describe any impacts of the proposed transfer on other Bulk Power System owners, operators, and users.

2. After receiving the Registered Entity's written request, the two Regional Entities shall consult with each other as to whether they agree or disagree that the requested transfer is appropriate. The Regional Entities may also consult with affected Reliability Coordinators, Balancing Authorities and Transmission Operators as appropriate. Each Regional Entity shall post the request on its website for public comment period of 21 days. In evaluating the proposed transfer, the Regional Entities shall consider the location of the Registered Entity's Bulk Power System facilities in relation to the geographic and electrical boundaries of the respective Regions; the impacts of the proposed transfer on other Bulk Power System owners, operators; and users, the impacts of the proposed transfer on the current and future staffing, resources, budgets and assessments to other Load-Serving Entities of each Regional Entity, including the sufficiency of the proposed transferee Regional Entity's staffing and resources to perform compliance monitoring and enforcement activities with respect to the Registered Entity; the Registered Entity's compliance history with its current Regional Entity; and the manner in which pending compliance monitoring and enforcement matters concerning the Registered Entity would be transitioned from the current Regional Entity to the transferee Regional Entity; along with any other reasons for the proposed transfer stated by the Registered Entity and any other reasons either Regional Entity considers relevant. The Regional Entities may

request that the Registered Entity provide additional data and information concerning the proposed transfer for the Regional Entities' use in their evaluation. The Registered Entity's current Regional Entity shall notify the Registered Entity in writing as to whether (i) the two Regional Entities agree that the requested transfer is appropriate, (ii) the two Regional Entities agree that the requested transfer is not appropriate and should not be processed further, or (iii) the two Regional Entities disagree as to whether the proposed transfer is appropriate.

3. If the two Regional Entities agree that the requested transfer is appropriate, they shall submit a joint written request to NERC requesting that the proposed transfer be approved and that the delegation agreement between NERC and each of the Regional Entities be amended accordingly. The Regional Entities' joint written submission to NERC shall describe the reasons for the proposed transfer; the location of the Registered Entity's Bulk Power System Facilities in relation to the geographic and electrical boundaries of the respective Regions; the impacts of the proposed transfer on other Bulk Power System owners, operators, and users; the impacts of the proposed transfer on the current and future staffing, resources, budgets and assessments of each Regional Entity, including the sufficiency of the proposed transferee Regional Entity's staffing and resources to perform compliance monitoring and enforcement activities with respect to the Registered Entity; the Registered Entity's compliance history with its current Regional Entity; and the manner in which pending compliance monitoring and enforcement matters concerning the Registered Entity will be transitioned from the current Regional Entity to the transferee Regional Entity. The NERC Board of Trustees shall consider the proposed transfer based on the submissions of the Regional Entities and any other information the Board considers relevant, and shall approve or disapprove the proposed transfer and the related delegation agreement amendments. The NERC Board may request that the Regional Entities provide additional information, or obtain additional information from the Registered Entity, for the use of the NERC Board in making its decision. If the NERC Board approves the proposed transfer, NERC shall file the related delegation agreements with FERC for approval.

4. If the two Regional Entities do not agree with each other that the proposed transfer is appropriate, the Regional Entity supporting the proposed transfer shall, if requested by the Registered Entity, submit a written request to NERC to approve the transfer and the related delegation agreement amendments. The Regional Entity's written request shall include the information specified in Section 1208.3. The Regional Entity that does not believe the proposed transfer is appropriate will be allowed to submit a written statement to NERC explaining why the Regional Entity believes the transfer is not appropriate and should not be approved. The NERC Board of Trustees shall consider the proposed transfer based on the submissions of the Regional Entities and any other information the Board considers relevant, and shall approve or disapprove the proposed transfer and the related delegation agreement amendments. The NERC Board may request that the Regional Entities provide additional information, or obtain additional

information from the Registered Entity, for the use of the NERC Board in making its decision. If the NERC Board approves the proposed transfer, NERC shall file the related delegation agreements with FERC for approval.

5. Prior to action by the NERC Board of Trustees on a proposed transfer of registration under Section 1208.3 or 1208.4, NERC shall post information concerning the proposed transfer, including the submissions from the Regional Entities, on its website for at least twenty-one (21) days for the purpose of receiving public comment.

6. If the NERC Board of Trustees disapproves a proposed transfer presented to it pursuant to either Section 1208.3 or 1208.4, the Regional Entity or Regional Entities that believe the transfer is appropriate may, if requested to do so by the Registered Entity, file a petition with FERC pursuant to 18 C.F.R. section 39.8(f) and (g) requesting that FERC order amendments to the delegation agreements of the two Regional Entities to effectuate the proposed transfer.

7. No transfer of a Registered Entity from one Regional Entity to another Regional Entity shall be effective (i) unless approved by FERC, and (ii) any earlier than the first day of January of the second calendar year following approval by FERC, unless an earlier effective date is agreed to by both Regional Entities and NERC and approved by FERC.

SECTION 1300 — COMMITTEES

1301. Establishing Standing Committees

The Board may from time to time create standing committees. In doing so, the Board shall approve the charter of each committee and assign specific authority to each committee necessary to conduct business within that charter. Each standing committee shall work within its Board-approved charter and shall be accountable to the Board for performance of its Board-assigned responsibilities. A NERC standing committee may not delegate its assigned work to a member forum, but, in its deliberations, may request the opinions of and consider the recommendations of a member forum.

1302. Committee Membership

Each committee shall have a defined membership composition that is explained in its charter. Committee membership may be unique to each committee, and can provide for balanced decision-making by providing for representatives from each Sector or, where Sector representation will not bring together the necessary diversity of opinions, technical knowledge and experience in a particular subject area, by bringing together a wide diversity of opinions from industry experts with outstanding technical knowledge and experience in a particular subject area. Committee membership shall also provide the opportunity for an equitable number of members from the United States and Canada, based approximately on proportionate Net Energy for Load. All committees and other subgroups (except for those organized on other than a Sector basis because Sector representation will not bring together the necessary diversity of opinions, technical knowledge and experience in a particular subject area) must ensure that no two stakeholder Sectors are able to control the vote on any matter, and no single Sector is able to defeat a matter. With regard to committees and subgroups pertaining to development of, interpretation of, or compliance with Reliability Standards, NERC shall provide a reasonable opportunity for membership from Sectors desiring to participate. Committees and subgroups organized on other than a Sector basis shall be reported to the NERC Board and the Member Representatives Committee, along with the reasons for constituting the committee or subgroup in the manner chosen. In such cases and subject to reasonable restrictions necessary to accomplish the mission of such committee or subgroup, NERC shall provide a reasonable opportunity for additional participation, as members or official observers, for Sectors not represented on the committee or subgroup.

1303. Procedures for Appointing Committee Members

Committee members shall be nominated and selected in a manner that is open, inclusive, and fair. Unless otherwise stated in these Rules of Procedure or approved by the Board, all committee member appointments shall be approved by the board, and committee officers shall be appointed by the Chairman of the Board.

1304. Procedures for Conduct of Committee Business

1. Notice to the public of the dates, places, and times of meetings of all committees, and all nonconfidential material provided to committee members, shall be posted

on NERC's website at approximately the same time that notice is given to committee members. Meetings of all standing committees shall be open to the public, subject to reasonable limitations due to the availability and size of meeting facilities; provided that the meeting may be held in or adjourn to closed session to discuss matters of a confidential nature, including but not limited to personnel matters, compliance enforcement matters, litigation, or commercially sensitive or Critical Energy Infrastructure Information of any entity.

2. NERC shall maintain a set of procedures, approved by the Board, to guide the conduct of business by standing committees.

1305. Committee Subgroups

Standing committees may appoint subgroups using the same principles as in Section 1302.

SECTION 1400 — AMENDMENTS TO THE NERC RULES OF PROCEDURE

1401. Proposals for Amendment or Repeal of Rules of Procedure

In accordance with the Bylaws of NERC, requests to amend or repeal the Rules of Procedure may be submitted by (1) any ten Members of NERC, which number shall include Members from at least three membership Sectors, (2) the Member Representatives Committee, (3) a standing committee of NERC to whose function and purpose the Rule of Procedure pertains, or (4) an officer of the ERO.

1402. Approval of Amendment or Repeal of Rules of Procedure

Amendment to or repeal of Rules of Procedure shall be approved by the Board after public notice and opportunity for comment in accordance with the Bylaws of NERC. In approving changes to the Rules of Procedure, the Board shall consider the inputs of the Member Representatives Committee, other ERO committees affected by the particular changes to the Rules of Procedure, and other stakeholders as appropriate. After Board approval, the amendment or repeal shall be submitted to the Applicable Governmental Authorities for approval, where authorized by legislation or agreement. No amendment to or repeal of the Rules of Procedure shall be effective until it has been approved by the Applicable Governmental Authorities.

1403. Alternative Procedure for Violation Risk Factors

In the event the Reliability Standards development process fails to produce Violation Risk Factors for a particular Reliability Standard in a timely manner, the Board of Trustees may adopt Violation Risk Factors for that standard after notice and opportunity for comment. In adopting Violation Risk Factors, the Board shall consider the inputs of the Member Representatives Committee and affected stakeholders.

SECTION 1500 — CONFIDENTIAL INFORMATION

1501. Definitions

1. **Confidential Information** means (i) Confidential Business and Market Information; (ii) Critical Energy Infrastructure Information; (iii) personnel information that identifies or could be used to identify a specific individual, or reveals personnel, financial, medical, or other personal information; (iv) work papers, including any records produced for or created in the course of an evaluation or audit; (v) investigative files, including any records produced for or created in the course of an investigation; or (vi) Cyber Security Incident Information; provided, that public information developed or acquired by an entity shall be excluded from this definition.

2. **Confidential Business and Market Information** means any information that pertains to the interests of any entity, that was developed or acquired by that entity, and that is proprietary or competitively sensitive.

3. **Critical Energy Infrastructure Information** means specific engineering, vulnerability, or detailed design information about proposed or existing Critical Infrastructure that (i) relates details about the production, generation, transportation, transmission, or distribution of energy; (ii) could be useful to a person in planning an attack on Critical Infrastructure; and (iii) does not simply give the location of the Critical Infrastructure.

4. **Critical Infrastructure** means existing and proposed systems and assets, whether physical or virtual, the incapacity or destruction of which would negatively affect security, economic security, public health or safety, or any combination of those matters.

5. **Cyber Security Incident Information** means any information related to, describing, or which could be used to plan or cause a Cyber Security Incident.

1502. Protection of Confidential Information

1. **Identification of Confidential Information** — An owner, operator, or user of the Bulk Power System and any other party (the "Submitting Entity") shall mark as confidential any information that it submits to NERC or a Regional Entity (the "Receiving Entity") that it reasonably believes contains Confidential Information as defined by these Rules of Procedure, indicating the category or categories defined in Section 1501 in which the information falls. If the information is subject to a prohibition on public disclosure in the Commission-approved rules of a regional transmission organization or independent system operator or a similar prohibition in applicable federal, state, or provincial laws, the Submitting Entity shall so indicate and provide supporting references and details.

2. **Confidentiality** — Except as provided herein, a Receiving Entity shall keep in confidence and not copy, disclose, or distribute any Confidential Information or

any part thereof without the permission of the Submitting Entity, except as otherwise legally required.

3. **Information no longer Confidential –** If a Submitting Entity concludes that information for which it had sought confidential treatment no longer qualifies for that treatment, the Submitting Entity shall promptly so notify NERC or the relevant Regional Entity.

1503. Requests for Information

1. **Limitation** — A Receiving Entity shall make information available only to one with a demonstrated need for access to the information from the Receiving Entity.

2. **Form of Request** — A person with such a need may request access to information by using the following procedure:

   2.1 The request must be in writing and clearly marked "Request for Information."

   2.2 The request must identify the individual or entity that will use the information, explain the requester's need for access to the information, explain how the requester will use the information in furtherance of that need, and state whether the information is publicly available or available from another source or through another means. If the requester seeks access to information that is subject to a prohibition on public disclosure in the Commission-approved rules of a regional transmission organization or independent system operator or a similar prohibition in applicable federal, state, or provincial laws, the requester shall describe how it qualifies to receive such information.

   2.3 The request must stipulate that, if the requester does not seek public disclosure, the requester will maintain as confidential any information received for which a Submitting Party has made a claim of confidentiality in accordance with NERC's rules. As a condition to gaining access to such information, a requester shall execute a non-disclosure agreement in a form approved by NERC's Board of Trustees.

3. **Notice and Opportunity for Comment** — Prior to any decision to disclose information marked as confidential, the Receiving Entity shall provide written notice to the Submitting Entity and an opportunity for the Submitting Entity to either waive objection to disclosure or provide comments as to why the Confidential Information should not be disclosed. Failure to provide such comments or otherwise respond is not deemed waiver of the claim of confidentiality.

4. **Determination by ERO or Regional Entity** — Based on the information provided by the requester under Rule 1503.2, any comments provided by the Submitting Entity, and any other relevant available information, the chief

executive officer or his or her designee of the Receiving Entity shall determine whether to disclose such information.

5. **Appeal** — A person whose request for information is denied in whole or part may appeal that determination to the President of NERC (or the President's designee) within 30 days of the determination. Appeals filed pursuant to this Section must be in writing, addressed to the President of NERC (or the President's designee), and clearly marked "Appeal of Information Request Denial."

   NERC will provide written notice of such appeal to the Submitting Entity and an opportunity for the Submitting Entity to either waive objection to disclosure or provide comments as to why the Confidential Information should not be disclosed; provided that any such comments must be received within 30 days of the notice and any failure to provide such comments or otherwise respond is not deemed a waiver of the claim of confidentiality.

   The President of NERC (or the President's designee) will make a determination with respect to any appeal within 30 days. In unusual circumstances, this time limit may be extended by the President of NERC (or the President's designee), who will send written notice to the requester setting forth the reasons for the extension and the date on which a determination on the appeal is expected.

6. **Disclosure of Information** — In the event the Receiving Entity, after following the procedures herein, determines to disclose information designated as Confidential Information, it shall provide the Submitting Entity no fewer than 21 days' written notice prior to releasing the Confidential Information in order to enable such Submitting Entity to (a) seek an appropriate protective order or other remedy, (b) consult with the Receiving Entity with respect to taking steps to resist or narrow the scope of such request or legal process, or (c) waive compliance, in whole or in part, with the terms of this Section. Should a Receiving Entity be required to disclose Confidential Information, or should the Submitting Entity waive objection to disclosure, the Receiving Entity shall furnish only that portion of the Confidential Information which the Receiving Entity's counsel advises is legally required.

7. Posting of Determinations on Requests for Disclosure of Confidential Information — Upon making its determination on a request for disclosure of Confidential Information, NERC or the Regional Entity, as applicable, shall (i) notify the requester that the request for disclosure is granted or denied, (ii) publicly post any determination to deny the request to disclose Confidential Information, including in such posting an explanation of the reasons for the denial (but without in such explanation disclosing the Confidential Information), and (iii) publicly post any determination that information claimed by the Submitting Entity to be Confidential Information is not Confidential Information (but without in such posting disclosing any information that has been determined to be Confidential Information).

1504. Employees, Contractors and Agents

A Receiving Entity shall ensure that its officers, trustees, directors, employees, subcontractors and subcontractors' employees, and agents to whom Confidential Information is exposed are under obligations of confidentiality that are at least as restrictive as those contained herein.

1505. Provision of Information to FERC and Other Governmental Authorities

1. **Request** — A request from FERC for reliability information with respect to owners, operators, and users of the Bulk Power System within the United States is authorized by Section 215 of the Federal Power Act. Other Applicable Governmental Authorities may have similar authorizing legislation that grants a right of access to such information. Unless otherwise directed by FERC or its staff or the other Applicable Governmental Authority requesting the information, upon receiving such a request, a Receiving Entity shall provide contemporaneous notice to the applicable Submitting Entity. In its response to such a request, a Receiving Entity shall preserve any mark of confidentiality and shall notify FERC or other Applicable Governmental Authorities that the Submitting Entity has marked the information as confidential.

2. **Continued Confidentiality** — Each Receiving Entity shall continue to treat as confidential all Confidential Information that it has submitted to NERC or to FERC or another Applicable Governmental Authority, until such time as FERC or the other Applicable Governmental Authority authorizes disclosure of such information.

1506. Permitted Disclosures

1. **Confirmed Violations** — Nothing in this Section 1500 shall prohibit the disclosure of a violation at the point when the matter is filed with an Applicable Governmental Authority as a Notice of Penalty, the "violator" admits to the violation, or the alleged violator and NERC or the Regional Entity reach a settlement regarding the violation.

2. **Compliance Information** — NERC and the Regional Entities are authorized to exchange Confidential Information related to evaluations, Compliance Audits, and Compliance Investigations in furtherance of the Compliance Monitoring and Enforcement Program, on condition they continue to maintain the confidentiality of such information.

1507. Remedies for Improper Disclosure

Any person engaged in NERC or Regional Entity activity under Section 215 of the Federal Power Act or the equivalent laws of other Applicable Governmental Authorities who improperly discloses information determined to be confidential may lose access to Confidential Information on a temporary or permanent basis and may be subject to adverse personnel action, including suspension or termination. Nothing in Section 1500

precludes an entity whose information was improperly disclosed from seeking a remedy in an appropriate court.

SECTION 1600 — REQUESTS FOR DATA OR INFORMATION

1601. Scope of a NERC or Regional Entity Request for Data or Information

Within the United States, NERC and Regional Entities may request data or information that is necessary to meet their obligations under Section 215 of the Federal Power Act, as authorized by Section 39.2(d) of the Commission's regulations, 18 C.F.R. § 39.2(d). In other jurisdictions NERC and Regional Entities may request comparable data or information, using such authority as may exist pursuant to these Rules of Procedure and as may be granted by Applicable Governmental Authorities in those other jurisdictions. The provisions of Section 1600 shall not apply to Requirements contained in any Reliability Standard to provide data or information; the Requirements in the Reliability Standards govern. The provisions of Section 1600 shall also not apply to data or information requested in connection with a compliance or enforcement action under Section 215 of the Federal Power Act, Section 400 of these Rules of Procedure, or any procedures adopted pursuant to those authorities, in which case the Rules of Procedure applicable to the production of data or information for compliance and enforcement actions shall apply.

1602. Procedure for Authorizing a NERC Request for Data or Information

1. NERC shall provide a proposed request for data or information or a proposed modification to a previously-authorized request, including the information specified in Section 1602.2.1 or 1602.2.2 as applicable, to the Commission's Office of Electric Reliability at least twenty-one (21) days prior to initially posting the request or modification for public comment. Submission of the proposed request or modification to the Office of Electric Reliability is for the information of the Commission. NERC is not required to receive any approval from the Commission prior to posting the proposed request or modification for public comment in accordance with Section 1602.2 or issuing the request or modification to Reporting Entities following approval by the Board of Trustees.

2. NERC shall post a proposed request for data or information or a proposed modification to a previously authorized request for data or information for a forty-five (45) day public comment period.

    2.1. A proposed request for data or information shall contain, at a minimum, the following information: (i) a description of the data or information to be requested, how the data or information will be used, and how the availability of the data or information is necessary for NERC to meet its obligations under applicable laws and agreements; (ii) a description of how the data or information will be collected and validated; (iii) a description of the entities (by functional class and jurisdiction) that will be required to provide the data or information ("Reporting Entities"); (iv) the schedule or due date for the data or information; (v) a description of any restrictions on disseminating the data or information (e.g., "Confidential Information," "Critical Energy Infrastructure Information,"

"aggregating" or "identity masking"); and (vi) an estimate of the relative burden imposed on the Reporting Entities to accommodate the data or information request.

2.2. A proposed modification to a previously authorized request for data or information shall explain (i) the nature of the modifications; (ii) an estimate of the burden imposed on the Reporting Entities to accommodate the modified data or information request, and (iii) any other items from Section 1602.2.1 that require updating as a result of the modifications.

3. After the close of the comment period, NERC shall make such revisions to the proposed request for data or information as are appropriate in light of the comments. NERC shall submit the proposed request for data or information, as revised, along with the comments received, NERC's evaluation of the comments and recommendations, to the Board of Trustees.

4. In acting on the proposed request for data or information, the Board of Trustees may authorize NERC to issue it, modify it, or remand it for further consideration.

5. NERC may make minor changes to an authorized request for data or information without Board approval. However, if a Reporting Entity objects to NERC in writing to such changes within 21 days of issuance of the modified request, such changes shall require Board approval before they are implemented.

6. Authorization of a request for data or information shall be final unless, within thirty (30) days of the decision by the Board of Trustees, an affected party appeals the authorization under this Section 1600 to the Applicable Governmental Authority.

1603. Owners, Operators, and Users to Comply

Owners, operators, and users of the Bulk Power System registered on the NERC Compliance Registry shall comply with authorized requests for data and information. In the event a Reporting Entity within the United States fails to comply with an authorized request for data or information under Section 1600, NERC may request the Commission to exercise its enforcement authority to require the Reporting Entity to comply with the request for data or information and for other appropriate enforcement action by the Commission. NERC will make any request for the Commission to enforce a request for data or information through a non-public submission to the Commission's enforcement staff.

1604. Requests by Regional Entity for Data or Information

1. A Regional Entity may request that NERC seek authorization for a request for data or information to be applicable within the Region of the Regional Entity, either as a freestanding request or as part of a proposed NERC request for data or information. Any such request must be consistent with this Section 1600.

2. A Regional Entity may also develop its own procedures for requesting data or information, but any such procedures must include at least the same procedural elements as are included in this Section 1600. Any such Regional Entity procedures or changes to such procedures shall be submitted to NERC for approval. Upon approving such procedures or changes thereto, NERC shall file the proposed procedures or proposed changes for approval by the Commission and any other Applicable Governmental Authorities applicable to the Regional Entity. The Regional Entity procedures or changes to such procedures shall not be effective in a jurisdiction until approved by, and in accordance with any revisions directed by, the Commission or other Applicable Governmental Authority.

1605. Confidentiality

If the approved data or information request includes a statement under Section 1602.1.1(v) that the requested data or information will be held confidential or treated as Critical Energy Infrastructure Information, then the applicable provisions of Section 1500 will apply without further action by a Submitting Entity. A Submitting Entity may designate any other data or information as Confidential Information pursuant to the provisions of Section 1500, and NERC or the Regional Entity shall treat that data or information in accordance with Section 1500. NERC or a Regional Entity may utilize additional protective procedures for handling particular requests for data or information as may be necessary under the circumstances.

1606. Expedited Procedures for Requesting Time-Sensitive Data or Information

1. In the event NERC or a Regional Entity must obtain data or information by a date or within a time period that does not permit adherence to the time periods specified in Section 1602, the procedures specified in Section 1606 may be used to obtain the data or information. Without limiting the circumstances in which the procedures in Section 1606 may be used, such circumstances include situations in which it is necessary to obtain the data or information (in order to evaluate a threat to the reliability or security of the Bulk Power System, or to comply with a directive in an order issued by the Commission or by another Applicable Governmental Authority) within a shorter time period than possible under Section 1602. The procedures specified in Section 1606 may only be used if authorized by the NERC Board of Trustees prior to activation of such procedures.

2. Prior to posting a proposed request for data or information, or a modification to a previously-authorized request, for public comment under Section 1606, NERC shall provide the proposed request or modification, including the information specified in paragraph 1602.2.1 or 1602.2.2 as applicable, to the Commission's Office of Electric Reliability. The submission to the Commission's Office of Electric Reliability shall also include an explanation of why it is necessary to use the expedited procedures of Section 1606 to obtain the data or information. The submission shall be made to the Commission's Office of Electric Reliability as far in advance, up to twenty-one (21) days, of the posting of the proposed request or modification for public comments as is

reasonably possible under the circumstances, but in no event less than two (2) days in advance of the public posting of the proposed request or modification.

3. NERC shall post the proposed request for data or information or proposed modification to a previously-authorized request for data or information for a public comment period that is reasonable in duration given the circumstances, but in no event shorter than five (5) days. The proposed request for data or information or proposed modification to a previously-authorized request for data or information shall include the information specified in Section 1602.2.1 or 1602.2.2, as applicable, and shall also include an explanation of why it is necessary to use the expedited procedures of Section 1606 to obtain the data or information.

4. The provisions of Sections 1602.3, 1602.4, 1602.5 and 1602.6 shall be applicable to a request for data or information or modification to a previously-authorized request for data or information developed and issued pursuant to Section 1606, except that (a) if NERC makes minor changes to an authorized request for data or information without Board approval, such changes shall require Board approval if a Reporting Entity objects to NERC in writing to such changes within five (5) days of issuance of the modified request; and (b) authorization of the request for data or information shall be final unless an affected party appeals the authorization of the request by the Board of Trustees to the Applicable Governmental Authority within five (5) days following the decision of the Board of Trustees authorizing the request, which decision shall be promptly posted on NERC's website.

SECTION 1700 — CHALLENGES TO DETERMINATIONS

1701. Scope of Authority

Section ~~1700~~1702 sets forth the procedures to be followed for Registered Entities to challenge determinations made by Planning Coordinators under ~~various~~ Reliability Standard~~s~~ PRC-023~~ or terms defined in the Glossary of Terms Used in NERC Reliability Standards~~. Section 1703 sets forth the procedures to be followed when a Submitting Entity or Owner wishes to challenge a determination by NERC to approve or to disapprove an Exception Request or to terminate an Exception under Section 509.

1702. Challenges to Determinations by Planning Coordinators Under Reliability Standard PRC-023

1. This Section 1702 establishes the procedures to be followed when a Registered Entity wishes to challenge a determination by a Planning Coordinator of the sub-200 kV circuits in its Planning Coordinator area for which Transmission Owners, Generator Owners, and Distribution Providers (defined as "Registered Entities" for purposes of this Section 1702) must comply with the requirements of Reliability Standard PRC-023.

2. Planning Coordinator Procedures

   2.1 Each Planning Coordinator shall establish a procedure for a Registered Entity to submit a written request for an explanation of a determination made by the Planning Coordinator under PRC-023.

   2.2 A Registered Entity shall follow the procedure established by the Planning Coordinator for submitting the request for explanation and must submit any such request within 60 days of receiving the determination under PRC-023 from the Planning Coordinator.

   2.3 Within 30 days of receiving a written request from a Registered Entity, the Planning Coordinator shall provide the Registered Entity with a written explanation of the basis for its determination under PRC-023, unless the Planning Coordinator provided a written explanation of the basis for its determination when it initially informed the Registered Entity of its determination.

3. A Registered Entity may challenge the determination of the Planning Coordinator by filing with the appropriate Regional Entity, with a copy to the Planning Coordinator, within 60 days of receiving the written explanation from the Planning Coordinator. The challenge shall include the following: (a) an explanation of the technical reasons for its disagreement with the Planning Coordinator's determination, along with any supporting documentation, and (b) a copy of the Planning Coordinator's written explanation. Within 30 days of

receipt of a challenge, the Planning Coordinator may file a response to the Regional Entity, with a copy to the Registered Entity.

4. The filing of a challenge in good faith shall toll the time period for compliance with PRC-023 with respect to the subject facility until such time as the challenge is withdrawn, settled or resolved.

5. The Regional Entity shall issue its written decision setting forth the basis of its determination within 90 days after it receives the challenge and send copies of the decision to the Registered Entity and the Planning Coordinator. The Regional Entity may convene a meeting of the involved entities and may request additional information. The Regional Entity shall affirm the determination of the Planning Coordinator if it is supported by substantial evidence.

6. A Planning Coordinator or Registered Entity affected by the decision of the Regional Entity may, within 30 days of the decision, file an appeal with NERC, with copies to the Regional Entity and the Planning Coordinator or Registered Entity. The appeal shall state the basis of the objection to the decision of the Regional Entity and shall include the Regional Entity decision, the written explanation of the Planning Coordinator's determination under PRC-023, and the documents and reasoning filed by the Registered Entity with the Regional Entity in support of its objection. The Regional Entity, Planning Coordinator or Registered Entity may file a response to the appeal within 30 days of the appeal.

7. The NERC Board of Trustees shall appoint a panel to decide appeals from Region Entity decisions under Section 1702.5. The panel, which may contain alternates, shall consist of at least three appointees, one of whom must be a member of the NERC staff, who are knowledgeable about PRC-023 and transmission planning and do not have a direct financial or business interest in the outcome of the appeal. The panel shall decide the appeal within 90 days of receiving the appeal from the decision of the Regional Entity and shall affirm the determination of the Planning Coordinator if it is supported by substantial evidence.

8. The Planning Coordinator or Registered Entity affected by the decision of the panel may request that the NERC Board of Trustees review the decision by filing its request for review and a statement of reasons with NERC's Chief Reliability Officer within 30 days of the panel decision. The Board of Trustees may, in its discretion, decline to review the decision of the panel, in which case the decision of the panel shall be the final NERC decision. Within 90 days of the request for review under this Section 1702.8, the NERC Board of Trustees may either (a) issue a decision on the merits, which shall be the final NERC decision, or (b) issue a notice declining to review the decision of the panel, in which case the decision of the panel shall be the final NERC decision. If no written decision or notice declining review is issued within 90 calendar days, the appeal shall be deemed to have been denied by the NERC Board of Trustees and this will have the same effect as a notice declining review.

9. The Registered Entity or Planning may appeal the final NERC decision to the applicable governmental authority within 30 days of receipt of the Board of Trustees' final decision or notice declining review, or expiration of the 90-day review period without any action by NERC.

10. The Planning Coordinator and Registered Entity are encouraged, but not required, to meet to resolve any dispute, including use of mutually agreed to alternative dispute resolution procedures, at any time during the course of the matter. In the event resolution occurs after the filing of a challenge, the Registered Entity and Planning Coordinator shall jointly provide to the applicable Regional Entity a written acknowledgement of withdrawal of the challenge or appeal, including a statement that all outstanding issues have been resolved.

1703. Challenges to NERC Determinations of BES Exception Requests Under Section 509

1. This Section 1703 establishes the procedures to be followed when a Submitting Entity or Owner wishes to challenge a determination by NERC to approve or to disapprove an Exception Request or to terminate an Exception under Section 509.

2. A Submitting Entity (or Owner if different) aggrieved by the decision of NERC to approve or disapprove an Exception Request or to terminate an Exception with respect to any Element may, within 30 days following the date of the decision, file a written challenge to the decision with the NERC director of compliance operations, with copies to the Regional Entity and the Submitting Entity or Owner if different. The written challenge shall state the basis of the objection to the decision of NERC. The Regional Entity and the Submitting Entity or Owner if different may file a response to the challenge within 30 days following the date the challenge is filed with NERC.

3. The challenge shall be decided by the Board of Trustees Compliance Committee. Within 90 days of the date of submission of the challenge, the Board of Trustees Compliance Committee shall issue its decision on the challenge. The decision of the Board of Trustees Compliance Committee shall be the final NERC decision; provided, that the Board of Trustees Compliance Committee may extend the deadline date for its decision to a date more than 90 days following submission of the challenge, by issuing a notice to the Submitting Entity, the Owner (if different) and the Regional Entity stating the revised deadline date and the reason for the extension.

4. The Submitting Entity, or Owner if different, may appeal the final NERC decision to, or seek review of the final NERC decision by, the Applicable Governmental Authority(ies), in accordance with the legal authority and rules and procedures of the Applicable Governmental Authority(ies). Any such appeal shall be filed within thirty (30) days following the date of the decision of the Board of Trustees Compliance Committee, or within such other time period as is provided for in the legal authority, rules or procedures of the Applicable Governmental Authority.

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF REVISIONS TO ITS RULES OF PROCEDURE
TO ADOPT A BULK ELECTRIC SYSTEM EXCEPTION PROCEDURE

ATTACHMENT 3A

REVISED APPENDIX 2 OF THE RULES OF PROCEDURE,

DEFINITIONS USED IN THE RULES OF PROCEDURE

CLEAN VERSION

Proposed revisions 1-9-2012

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

DEFINITIONS USED IN THE RULES OF PROCEDURE

APPENDIX 2 TO THE RULES OF PROCEDURE

Effective: [DATE], 2012

General

For purposes of the NERC Rules of Procedure, including all Appendices, the terms defined in this Appendix shall have the meanings set forth herein. For convenience of reference to the user, definitions of terms that are used in a particular Appendix may be repeated in that Appendix.

Where used in the Rules of Procedure, a defined term will be capitalized. Where a term defined in this Appendix appears in the Rules of Procedure but is not capitalized, the term is there being used in its ordinary and commonly understood meaning and not as defined in this Appendix (if different). Other terms that are not defined terms, such as the names of entities, organizations, committees, or programs; position titles; titles of documents or forms; section headings; geographic locations; and other terms commonly presented as proper nouns, may also be capitalized in the Rules of Procedure without being defined in this Appendix.

Definitions of terms in this Appendix that are marked with asterisks (**) are taken from the NERC *Glossary of Terms Used in Reliability Standards*. Definitions of terms in this Appendix that are marked with "pluses" (++) are taken from Section 215 of the Federal Power Act or the Commission's regulations at 18 C.F.R. Part 39 or Part 388.

Other terms used in the Rules of Procedure but not defined in this Appendix that have commonly understood and used technical meanings in the electric power industry, including applicable codes and standards, shall be construed in accordance with such commonly understood and used technical meanings.

Specific Definitions

"Acceptance of the Exception Request" or "Acceptance" means the determination that an eligible Exception Request (i.e., a Request permitted by section 4.1 of Appendix 5C) contains all the Required Information so that it can undergo substantive review.

"Adjacent Balancing Authority" means a Balancing Authority Area that is interconnected to another Balancing Authority Area either directly or via a multi-party agreement or transmission tariff.**

"Adjusted Penalty Amount" means the proposed Penalty for a violation of a Reliability Standard as determined based on application of the adjustment factors identified in Section 4.3 of the *Sanction Guidelines* to the Base Penalty Amount.

"Advisories" or "Level 1 (Advisories)" is a notification issued by NERC in accordance with Section 810.3.1 of the Rules of Procedure.

"Alleged Violation" means a Possible Violation for which the Compliance Enforcement Authority has determined, based on an assessment of the facts and circumstances surrounding the Possible Violation, that evidence exists to indicate a Registered Entity has violated a Reliability Standard.

"Annual Audit Plan" means a plan developed annually by the Compliance Enforcement Authority that includes the Reliability Standards and Registered Entities to be audited, the schedule of Compliance Audits, and Compliance Audit Participant requirements for the calendar year.

"Annual Report" means the annual report to be filed by NERC with FERC and other Applicable Governmental Authorities in accordance with Section 13.0 of Appendix 4D.

"Applicable Governmental Authority" means the FERC within the United States and the appropriate governmental authority with subject matter jurisdiction over reliability in Canada and Mexico.

"Applicable Requirement" means a Requirement of a CIP Standard that (i) expressly provides either (A) that compliance with the terms of the Requirement is required where or as technically feasible, or (B) that technical limitations may preclude compliance with the terms of the Requirement; or (ii) is subject to Appendix 4D by FERC directive.

"Approval of the Exception Request" or "Approval" means the determination by NERC that an Exception Request meets the criteria to receive the requested Exception.

"Balancing Authority" means the responsible entity that integrates resource plans ahead of time, maintains Load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real time.**

"Balancing Authority Area" means the collection of generation, transmission, and Loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains Load-resource balance within this area.**

"Base Penalty Amount" means the proposed Penalty for a violation of a Reliability Standard as initially determined pursuant to Sections 4.1 and 4.2 of the NERC *Sanction Guidelines,* before application of any adjustment factors.

"BES Definition" means the NERC definition of the Bulk Electric System as set forth in the NERC *Glossary of Terms Used in Reliability Standards.*

"Blackstart Resource" means a generating unit(s) and its associated set of equipment which has the ability to be started without support from the System or is designed to remain energized without connection to the remainder of the System, with the ability to energize a bus, meeting the Transmission Operator's restoration plan needs for Real and Reactive Power capability, frequency and voltage control, and that has been included in the Transmission Operator's restoration plan.**

"Board" or "Board of Trustees" means the Board of Trustees of NERC.

"Board of Trustees Compliance Committee," "BOTCC" or "Compliance Committee" means the Compliance Committee of the NERC Board of Trustees.

"Bulk Electric System" or "BES" means unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. This does not include facilities used in the local distribution of electric energy.

Inclusions:

- **I1** - Transformers with the primary terminal and at least one secondary terminal operated at 100 kV or higher unless excluded under Exclusion E1 or E3.
- **I2** - Generating resource(s) with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.
- **I3** - Blackstart Resources identified in the Transmission Operator's restoration plan.
- **I4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above.
- **I5** –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.

Exclusions:

- **E1** - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher and:
    a) Only serves Load. Or,
    b) Only includes generation resources, not identified in Inclusion I3, with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,
    c) Where the radial system serves Load and includes generation resources, not identified in Inclusion I3, with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

    Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.
- **E2** - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail Load with electric energy if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding

obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.

- **E3** - Local networks (LN): A group of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the interconnected system. LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The LN is characterized by all of the following:
    a) Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating);
    b) Power flows only into the LN and the LN does not transfer energy originating outside the LN for delivery through the LN; and
    c) Not part of a Flowgate or transfer path: The LN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
- **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.**

"Bulk Power System" means, depending on the context: (i) Facilities and control systems necessary for operating an interconnected electric energy supply and transmission network (or any portion thereof), and electric energy from generating facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy [++]. (ii) Solely for purposes of Appendix 4E, Bulk Electric System.

"Canadian" means one of the following: (a) a company or association incorporated or organized under the laws of Canada, or its designated representative(s) irrespective of nationality; (b) an agency of a federal, provincial, or local government in Canada, or its designated representative(s) irrespective of nationality; or (c) a self-representing individual who is a Canadian citizen residing in Canada.

"Canadian Entity" means a Registered Entity (or, solely for purposes of Appendix 4D, a Responsible Entity) that is organized under Canadian federal or provincial law.

"Cascading" means the uncontrolled successive loss of System Elements triggered by an incident at any location. Cascading results in widespread electric service interruption that cannot be restrained from sequentially spreading beyond an area predetermined by studies.**

"CCC" means the NERC Compliance and Certification Committee.

"Certification" means, depending on the context, (i) the process undertaken by NERC and a Regional Entity to verify that an entity is capable of responsibilities for tasks associated with a particular function such as a Balancing Authority, Transmission Operator and/or Reliability Coordinator; such Certification activities are further described in Section 500 and Appendix 5A of the NERC Rules of Procedure; or (ii) for purposes of Appendix 6, an official recognition that indicates the recipient has passed a NERC exam or completed a specified number of Continuing Education Hours.

"Certification Staff" means individuals employed or contracted by NERC who have the authority to make initial determinations of Certification of entities performing reliability functions.

"Certification Team" means a team assembled by a Regional Entity that will be responsible for performing the activities included in the Certification process for an entity pursuant to Appendix 5A.

"Classified National Security Information" means Required Information that has been determined to be protected from unauthorized disclosure pursuant to Executive Order No. 12958, as amended, and/or the regulations of the NRC at 10 C.F.R. §95.35; or pursuant to any comparable provision of Canadian federal or provincial law.

"Clerk" means an individual as assigned by the Compliance Enforcement Authority to perform duties described in Attachment 2, Hearing Procedures, to Appendix 4C.

"Commission" means the Federal Energy Regulatory Commission or FERC.

"Complaint" means an allegation that a Registered Entity violated a Reliability Standard.

"Compliance and Certification Manager" means individual/individuals within the Regional Entity that is/are responsible for monitoring compliance of entities with applicable NERC Reliability Standards.

"Compliance Audit" means a systematic, objective review and examination of records and activities to determine whether a Registered Entity meets the Requirements of applicable Reliability Standards.

"Compliance Audit Participants" means Registered Entities scheduled to be audited and the audit team members.

"Compliance Enforcement Authority" means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

"Compliance Enforcement Authority's Area of Responsibility" means the Compliance Enforcement Authority's Region. If a Regional Entity is the Compliance Enforcement Authority, the Compliance Enforcement Authority's Area of Responsibility is shown in Exhibit A to the delegation agreement between the Regional Entity and NERC.

"Compliance Investigation" means a comprehensive investigation, which may include an on-site visit with interviews of the appropriate personnel, to determine if a violation of a Reliability Standard has occurred.

"Compliance Monitoring and Enforcement Program" or "CMEP" means, depending on the context (1) the NERC *Uniform Compliance Monitoring and Enforcement Program* (Appendix 4C to the NERC Rules of Procedure) or the Commission-approved program of a Regional Entity, as applicable, or (2) the program, department or organization within NERC or a Regional Entity that is responsible for performing compliance monitoring and enforcement activities with respect to Registered Entities' compliance with Reliability Standards.

"Compliant Date" means the date by which a Responsible Entity is required to be in compliance with an Applicable Requirement of a CIP Standard.

"Confidential Business and Market Information" means any information that pertains to the interests of any entity, that was developed or acquired by that entity, and that is proprietary or competitively sensitive.

"Confidential Information" means (i) Confidential Business and Market Information; (ii) Critical Energy Infrastructure Information; (iii) personnel information that identifies or could be used to identify a specific individual, or reveals personnel, financial, medical, or other personal information; (iv) work papers, including any records produced for or created in the course of an evaluation or audit; (v) investigative files, including any records produced for or created in the course of an investigation; or (vi) Cyber Security Incident Information; provided, that public information developed or acquired by an entity shall be excluded from this definition; or (vii) for purposes of Appendix 4D, any other information that is designated as Confidential Information in Section 11.0 of Appendix 4D.

"Confirmed Violation" means an Alleged Violation for which an entity has: (1) accepted the finding of the violation by a Regional Entity or NERC and will not seek an appeal, or (2) completed the hearing and appeals process within NERC, or (3) allowed the time for requesting a hearing or submitting an appeal to expire, or (4) admitted to the violation in a settlement agreement.

"Continuing Education Hour" or "CE Hour" means sixty minutes of participation in a group, independent study, or self-study learning activity as approved by the NERC Continuing Education Program.

"Continuing Education Program Provider" or "Provider" means the individual or organization offering a learning activity to participants and maintaining documentation required by Appendix 6.

"Coordinated Functional Registration" means where two or more entities (parties) agree in writing upon a division of compliance responsibility among the parties for one or more Reliability Standard(s) applicable to a particular function, and/or for one or more Requirement(s)/sub-Requirement(s) within particular Reliability Standard(s).

"Covered Asset" means a Cyber Asset or Critical Cyber Asset that is subject to an Applicable Requirement.

"Credential" means a NERC designation that indicates the level of qualification achieved (i.e., reliability operator; balancing, interchange, and transmission operator; balancing and interchange operator; and transmission operator).

"Credential Maintenance" means to meet NERC CE Hours' requirements to maintain a valid NERC-issued system operator Credential.

"Critical Assets" means Facilities, systems, and equipment which, if destroyed, degraded, or otherwise rendered unavailable, would affect the reliability or operability of the Bulk Electric System.**

"Critical Cyber Assets" means Cyber Assets critical to the reliable operation of Critical Assets.**

"Critical Energy Infrastructure Information" means specific engineering, vulnerability, or detailed design information about proposed or existing Critical Infrastructure that (i) relates details about the production, generation, transportation, transmission, or distribution of energy; (ii) could be useful to a person in planning an attack on Critical Infrastructure; and (iii) does not simply give the location of the Critical Infrastructure.++

"Critical Infrastructure" means existing and proposed systems and assets, whether physical or virtual, the incapacity or destruction of which would negatively affect security, economic security, public health or safety, or any combination of those matters.++

"Critical Infrastructure Protection Standard" or "CIP Standard" means any of NERC Reliability Standards CIP-002 through CIP-009.

"Cross-Border Regional Entity" means a Regional Entity that encompasses a part of the United States and a part of Canada or Mexico.++

"Cyber Assets" means programmable electronic devices and communication networks including hardware, software, and data.**

"Cyber Security Incident" means any malicious or suspicious event that disrupts, or was an attempt to disrupt, the operation of those programmable electronic devices and communications networks including hardware, software and data that are essential to the Reliable Operation of the Bulk Power System.++

"Cyber Security Incident Information" means any information related to, describing, or which could be used to plan or cause a Cyber Security Incident.

"Days", as used in Appendix 5A with respect to the Registration and Certification processes, means calendar days.

"Delegate" means a person to whom the Senior Manager of a Responsible Entity has delegated authority pursuant to Requirement R2.3 of CIP Standard CIP-003-1 (or any successor provision).

"Director of Compliance" means the Director of Compliance of NERC or of the Compliance Enforcement Authority, as applicable, who is responsible for the management and supervision of Compliance Staff, or his or her designee.

"Disapproval of the Exception Request" or "Disapproval" means the determination by NERC that an Exception Request does not meet the criteria to receive the requested Exception.

"Distribution Factor" means the portion of an Interchange Transaction, typically expressed in per unit that flows across a transmission facility (Flowgate).**

"Distribution Provider" means the entity that provides and operates the "wires" between the transmission system and the end-use customer. For those end-use customers who are served at transmission voltages, the Transmission Owner also serves as the Distribution Provider. Thus, the Distribution Provider is not defined by a specific voltage, but rather as performing the distribution function at any voltage.**

"Document" means, in addition to the commonly understood meaning of the term as information written or printed on paper, any electronically stored information, including writings, drawings, graphs, charts, photographs, sound recordings, images and other data or data compilations stored in any medium from which information can be obtained, and shall be translated by the producing party into reasonably usable form.

"Effective Date" means the date, as specified in a notice rejecting or disapproving a TFE Request or terminating an approved TFE, on which the rejection, disapproval or termination becomes effective.

"Electric Reliability Organization" or "ERO" means the organization that is certified by the Commission under Section 39.3 of its regulations, the purpose of which is to establish and enforce Reliability Standards for the Bulk Power System in the United States, subject to Commission review. The organization may also have received recognition by Applicable Governmental Authorities in Canada and Mexico to establish and enforce Reliability Standards for the Bulk Power Systems of the respective countries.

"Element" means any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An Element may be comprised of one or more components.**

"Eligible Reviewer" means a person who has the required security clearances or other qualifications, or who otherwise meets the applicable criteria, to have access to Confidential Information, Classified National Security Information, NRC Safeguards Information or Protected FOIA Information, as applicable to the particular information to be reviewed.

"End Date" means the last date of the period to be covered in a Compliance Audit.

"Essential Actions" or "Level 3 (Essential Actions)" is a notification issued by NERC in accordance with Section 810.3.3 of the Rules of Procedure.

"Exception" means either an Inclusion Exception or an Exclusion Exception.

"Exception Procedure" means the procedure set forth in Appendix 5C.

"Exception Reporting" means information provided to the Compliance Enforcement Authority by a Registered Entity indicating that a violation of a Reliability Standard has occurred (e.g., a System Operating Limit has been exceeded) or enabling the Compliance Enforcement Authority to ascertain the Registered Entity's compliance.

"Exception Request" means a request made by a Submitting Entity in accordance with Appendix 5C for an Exception.

"Exception Request Form" means the form adopted by each Regional Entity, in accordance with a template provided by NERC, for use by Submitting Entities in submitting Exception Requests; provided, that the Exception Request Form must include Section III.B as adopted by NERC.

"Exclusion Exception" means a determination that an Element that falls within the BES Definition should be excluded from the BES.

"Expiration Date" means the date on which an approved TFE expires.

"Facility" means a set of electrical equipment that operates as a single Bulk Electric System Element (e.g., a line, a generator, a shunt compensator, transformer, etc.)**

"FERC" means the United States Federal Energy Regulatory Commission.

"Final Penalty Amount" means the final, proposed Penalty for violation of a Reliability Standard, determined in accordance with the *Sanction Guidelines*.

"Flowgate" means 1.) A portion of the transmission system through which the Interchange Distribution Calculator calculates the power flow from Interchange Transactions. 2.) A mathematical construct, comprised of one or more monitored transmission Facilities and optionally one or more contingency Facilities, used to analyze the impact of power flows upon the Bulk Electric System.**

"FOIA" means the U.S. Freedom of Information Act, 5 U.S.C. §552.

"Footprint" means the geographical or electric area served by an entity.

"Functional Entity" means an entity responsible for a function that is required to ensure the Reliable Operation of the electric grid as identified in the NERC Reliability Standards.

"Generator Operator" means the entity that operates generating unit(s) and performs the functions of supplying energy and Interconnected Operations Services.**

"Generator Owner" means an entity that owns and maintains generating units.**

"Hearing Body" or "Regional Entity Hearing Body" means the body established by a Regional Entity to conduct hearings pursuant to the Hearing Procedures.

"Hearing Officer" means, depending on the context, (i) an individual employed or contracted by the Compliance Enforcement Authority and designated by the Compliance Enforcement Authority to preside over hearings conducted pursuant to Attachment 2, Hearing Procedures, of Appendix 4C, or (ii) solely for hearings conducted pursuant to Appendix 4E, (A) a CCC member or (B) an individual employed or contracted by NERC, as designated and approved by the CCC to preside over hearings conducted pursuant to the Hearing Procedures in Appendix E; the Hearing Officer shall not be a member of the Hearing Panel.

"Hearing Panel" means the five person hearing body established as set forth in the CCC Charter on a case by case basis and that is responsible for adjudicating a matter as set forth in Appendix 4E.

"Hearing Procedures" means, depending on the context, (i) Attachment 2 to the NERC or a Regional Entity CMEP, as applicable, or (ii) the hearing procedures of the NERC Compliance and Certification Committee in Appendix 4E.

"Inclusion Exception" means a determination that an Element that falls outside the BES Definition should be included in the BES.

"Interchange" means energy transfers that cross Balancing Authority boundaries.**

"Interchange Authority" means the responsible entity that authorizes the implementation of valid and balanced Interchange Schedules between Balancing Authority Areas, and ensures communications of Interchange information for reliability assessment purposes.**

"Interchange Distribution Calculator" means the mechanism used by Reliability Coordinators in the Eastern Interconnection to calculate the distribution of Interchange Transactions over specific Flowgates. It includes a database of all Interchange Transactions and a matrix of the Distribution Factors for the Eastern Interconnection.**

"Interchange Schedule" means an agreed-upon Interchange Transaction size (megawatts), start and end time, beginning and ending ramp times and rate, and type required for delivery and

receipt of power and energy between the Source and Sink Balancing Authorities involved in the transaction.**

"Interchange Transaction" means an agreement to transfer energy from a seller to a buyer that crosses one or more Balancing Authority Area boundaries.**

"Interconnected Operations Service" means a service (exclusive of basic energy and Transmission Services) that is required to support the Reliable Operation of interconnected Bulk Electric Systems.**

"Interconnection" means a geographic area in which the operation of Bulk Power System components is synchronized such that the failure of one or more of such components may adversely affect the ability of the operators of other components within the system to maintain Reliable Operation of the Facilities within their control.++

"Interconnection Reliability Operating Limit" means a System Operating Limit that, if violated, could lead to instability, uncontrolled separation, or Cascading outages that adversely impact the reliability of the Bulk Electric System.**

"Interpretation" means an addendum to a Reliability Standard, developed in accordance with the NERC *Standard Processes Manual* and approved by the Applicable Governmental Authority(ies), that provides additional clarity about one or more Requirements in the Reliability Standard.

"Joint Registration Organization" means an entity that registers in the Compliance Registry to perform reliability functions for itself and on behalf of one or more of its members or related entities for which such members or related entities would otherwise be required to register.

"Lead Entity" means the entity that submits Exception Request information that is common to a group of Submitting Entities that are submitting Exception Requests jointly.

"Lead Mediator" means a member of a mediation team formed pursuant to Appendix 4E who is selected by the members to coordinate the mediation process and serve as the mediation team's primary contact with the Parties.

"Load" means an end-user device or customer that receives power from the electric system.**

"Load-Serving Entity" means an entity that secures energy and Transmission Service (and related Interconnected Operations Services) to serve the electrical demand and energy requirements of its end-use customers.**

"Mapping" means the process of determining whether a Regional Entity's Footprint is being served by Registered Entities.
"Mediation Settlement Agreement" means a written agreement entered into by the Parties to a mediation pursuant to Appendix 4E that resolves the dispute.

"Member" means a member of NERC pursuant to Article II of its Bylaws.

"Member Representatives Committee" or "MRC" means the body established pursuant to Article VIII of the NERC Bylaws.

"Mexican Entity" means a Registered Entity that is organized under Mexican law.

"Mitigation Plan" means an action plan, required when a Registered Entity violates a Reliability Standard as determined by any means including Compliance Enforcement Authority decision, settlement agreement, or otherwise, that is developed by the Registered Entity to (1) correct a violation of a Reliability Standard and (2) prevent re-occurrence of the violation.

"NERC-Approved Learning Activity" means training that maintains or improves professional competence and has been approved by NERC for use in its Continuing Education Program.

"NERC Compliance Monitoring and Enforcement Program Implementation Plan" or "NERC Implementation Plan" means the annual NERC Compliance Monitoring and Enforcement Program Implementation Plan that specifies the Reliability Standards that are subject to reporting by Registered Entities to the Compliance Enforcement Authority in order to verify compliance and identifies the appropriate monitoring procedures and reporting schedules for each such Reliability Standard.

"NERC Compliance Registry," "Compliance Registry" or "NCR" means a list, maintained by NERC pursuant to Section 500 of the NERC Rules of Procedure and Appendix 5B, the NERC *Statement of Compliance Registry Criteria*, of the owners, operators and users of the Bulk Power System, and the entities registered as their designees, that perform one or more functions in support of reliability of the Bulk Power System and are required to comply with one or more Requirements of Reliability Standards.

"NERC Identification Number" or "NERC ID" means a number given to NERC Registered Entities that will be used to identify the entity for certain NERC activities. Corporate entities may have multiple NERC IDs to show different corporate involvement in NERC activities.

"NERC Organization Certification" or "Organization Certification" means the process undertaken by NERC and a Regional Entity to verify that a new entity is capable of responsibilities for tasks associated with a particular function such as a Balancing Authority, Transmission Operator, and/or Reliability Coordinator; such certification activities are further described in Section 500 and Appendix 5A of the NERC Rules of Procedure.

"Net Energy for Load" or "NEL" means net generation of an electric system plus energy received from others less energy delivered to others through interchange. It includes system losses but excludes energy required for the storage of energy at energy storage facilities.

"Notice of Alleged Violation" means a notice issued by the Compliance Enforcement Authority to a Registered Entity pursuant to Section 5.3 of Appendix 4C.

"Notice of Completion of Enforcement Action" means a notice issued by the Compliance Enforcement Authority to a Registered Entity, pursuant to Section 5.10 of Appendix 4C, stating than an enforcement action is closed.

"Notice of Confirmed Violation" means a notice issued by the Compliance Enforcement Authority to a Registered Entity confirming the violation of one or more Reliability Standards, as a result of (1) the Registered Entity accepting a Notice of Alleged Violation and the proposed Penalty or sanction, or (2) the finding of a violation through a hearing and appeal, or (3) the expiration of the period for requesting a hearing or an appeal, or (4) the Registered Entity admitting the violation as part of an executed settlement agreement.

"Notice of Penalty" means a notice prepared by NERC and filed with FERC, following approval by NERC of a Notice of Confirmed Violation or a settlement agreement, stating the Penalty or sanction imposed or agreed to for the Confirmed Violation or as part of the settlement.

"Notice of Possible Violation" means a notice issued by the Compliance Enforcement Authority to a Registered Entity that (1) states a Possible Violation has been identified, (2) provides a brief description of the Possible Violation, including the Reliability Standard Requirement(s) and the date(s) involved, and (3) instructs the Registered Entity to retain and preserve all data and records relating to the Possible Violation.

"NRC" means the United States Nuclear Regulatory Commission.

"NRC Safeguards Information" means Required Information that is subject to restrictions on disclosure pursuant to 42 U.S.C. §2167 and the regulations of the NRC at 10 C.F.R. §73.21-73.23; or pursuant to comparable provisions of Canadian federal or provincial law.

"Open Access Transmission Tariff" means an electronic transmission tariff accepted by the U.S. Federal Energy Regulatory Commission requiring the Transmission Service Provider to furnish to all shippers with non-discriminating service comparable to that provided by Transmission Owners to themselves.**

"Owner" means the owner(s) of an Element or Elements that is or may be determined to be part of the BES as a result of either the application of the BES Definition or an Exception, or another entity, such as an operator, authorized to act on behalf of the owner of the Element or Elements in the context of an Exception Request.

"Part A Required Information" means Required Information that is to be provided in Part A of a Responsible Entity's TFE Request.

"Part B Required Information" means Required Information that is to be provided in Part B of a Responsible Entity's TFE Request.

"Participant" means a Respondent and any other Person who is allowed or required by FERC to participate as an intervenor in a proceeding conducted pursuant to the Hearing Procedures, and as used in the Hearing Procedures shall include, depending on the context, the members of the

Compliance Staff that participate in a proceeding or the members of the Certification Staff that participate in a proceeding pursuant to Appendix 4E.

"Party" or "Parties" means a Person or the Persons participating in a mediation pursuant to Appendix 4E.

"Penalty" means and includes all penalties and sanctions, including but not limited to a monetary or non-monetary penalty; a limitation on an activity, function, operation or other appropriate sanction; or the addition of the Registered Entity or Respondent to a reliability watch list composed of major violators. Penalties must be within the range set forth in the NERC *Sanction Guidelines* approved by FERC pursuant to 18 C.F.R. Section 39.7(g)(2), and shall bear a reasonable relation to the seriousness of a Registered Entity's or Respondent's violation and take into consideration any timely efforts made by the Registered Entity or Respondent to remedy the violation.

"Periodic Data Submittals" means modeling, studies, analyses, documents, procedures, methodologies, operating data, process information or other information to demonstrate compliance with Reliability Standards and provided by Registered Entities to the Compliance Enforcement Authority on a time frame required by a Reliability Standard or an ad hoc basis.

"Person" means any individual, partnership, corporation, limited liability company, governmental body, association, joint stock company, public trust, organized group of persons, whether incorporated or not, or any other legal entity.

"Planning Authority" means the responsible entity that coordinates and integrates transmission Facilities and service plans, resource plans, and Protection Systems.**

"Point of Delivery" means a location that a Transmission Service Provider specifies on its transmission system where an Interchange Transaction leaves or a Load-Serving Entity receives its energy.**

"Point of Receipt" means a location that the Transmission Service Provider specifies on its transmission system where an Interchange Transaction enters or a generator delivers its output.

"Possible Violation" means the identification, by the Compliance Enforcement Authority, using one of the compliance monitoring and enforcement processes in Section 3.0 of Appendix 4C, of a possible failure by a Registered Entity to comply with a Reliability Standard that is applicable to the Registered Entity.

"Preliminary Screen" means an initial evaluation of evidence indicating potential noncompliance with a Reliability Standard has occurred or is occurring, conducted by the Compliance Enforcement Authority for the purpose of determining whether a Possible Violation exists, and consisting of an evaluation of whether (1) the entity allegedly involved in the potential noncompliance is registered, and (2) the Reliability Standard Requirement to which the evidence of potential noncompliance relates is applicable to a reliability function for which the entity is registered.

"Probation" means a step in the disciplinary process pursuant to Appendix 6 during which the certificate is still valid. During the probationary period, a subsequent offense of misconduct, as determined through the same process as described above, may be cause for more serious consequences.

"Protected FOIA Information" means Required Information, held by a governmental entity, that is subject to an exemption from disclosure under FOIA (5 U.S.C. §552(e)), under any similar state or local statutory provision, or under any comparable provision of Canadian federal or provincial law, which would be lost were the Required Information to be placed into the public domain.

"Protection System" means protective relays which respond to electrical quantities, communications systems necessary for correct operation of protective functions, voltage and current sensing devices providing inputs to protective relays, station dc supply associated with protective functions (including batteries, battery chargers, and non-battery-based dc supply), and control circuitry associated with protective functions through the trip coil(s) of the circuit breakers or other interrupting devices.**

"Purchasing-Selling Entity" means the entity that purchases, or sells, and takes title to, energy, capacity, and Interconnected Operations Services. Purchasing-Selling Entities may be affiliated or unaffiliated merchants and may or may not own generating facilities.**

"Reactive Power" means the portion of electricity that establishes and sustains the electric and magnetic fields of alternating-current equipment. Reactive Power must be supplied to most types of magnetic equipment, such as motors and transformers. It also must supply the reactive losses on transmission facilities. Reactive Power is provided by generators, synchronous condensers, or electrostatic equipment such as capacitors and directly influences electric system voltage. It is usually expressed in kilovars (kvar) or megavars (Mvar).**

"Real Power" means the portion of electricity that supplies energy to the Load.**

"Receiving Entity" means NERC or a Regional Entity receiving Confidential Information from an owner, operator, or user of the Bulk Power System or from any other party.

"Recommendation" for purposes of Appendix 5C means the report to NERC containing the evaluation prepared in accordance with section 5.2 of Appendix 5C concerning whether or to what extent an Exception Request should be approved.

"Recommendations" or "Level 2 (Recommendations)" is a notification issued by NERC in accordance with Section 810.3.2 of the Rules of Procedure.

"Region" means the geographic area, as specified in a Regional Entity's delegation agreement with NERC, within which the Regional Entity is responsible for performing delegated functions.

"Regional Criteria" means reliability requirements developed by a Regional Entity that are necessary to implement, to augment, or to comply with Reliability Standards, but which are not

Reliability Standards. Such Regional Criteria may be necessary to account for physical differences in the Bulk Power System but are not inconsistent with Reliability Standards nor do they result in lesser reliability. Such Regional Criteria are not enforceable pursuant to NERC-delegated authorities, but may be enforced through other available mechanisms. Regional Criteria may include specific acceptable operating or planning parameters, guides, agreements, protocols or other documents.

"Regional Entity" means an entity having enforcement authority pursuant to 18 C.F.R. § 39.8.++

"Regional Entity Compliance Monitoring and Enforcement Program Implementation Plan" or "Regional Implementation Plan" means an annual plan, submitted by November 1 of each year to NERC for approval that, in accordance with NERC Rule of Procedure Section 401.6 and the NERC Compliance Monitoring and Enforcement Program Implementation Plan, identifies (1) all Reliability Standards identified by NERC to be actively monitored during each year, (2) other Reliability Standards proposed for active monitoring by the Regional Entity, (3) the methods to be used by the Regional Entity for reporting, monitoring, evaluation, and assessment of performance criteria with each Reliability Standard, and (4) the Regional Entity's Annual Audit Plan.

"Regional Reliability Standard" means a type of Reliability Standard that is applicable only within a particular Regional Entity or group of Regional Entities. A Regional Reliability Standard may augment, add detail to, or implement another Reliability Standard or cover matters not addressed by other Reliability Standards. Regional Reliability Standards, upon adoption by NERC and approval by the Applicable Governmental Authority(ies), shall be Reliability Standards and shall be enforced within the applicable Regional Entity or Regional Entities pursuant to delegated authorities or to procedures prescribed by the Applicable Governmental Authority.

"Registered Ballot Body" means that aggregation of all entities or individuals that qualify for one of the Segments approved by the Board of Trustees, and are registered with NERC as potential ballot participants in the voting on proposed Reliability Standards.

"Registered Entity" means an owner, operator, or user of the Bulk Power System, or the entity registered as its designee for the purpose of compliance, that is included in the NERC Compliance Registry.

"Registration" or "Organization Registration" means the processes undertaken by NERC and Regional Entities to identify which entities are responsible for reliability functions within the Regional Entity's Region.

"Rejection of the Exception Request" or "Rejection" means the determination that an Exception Request is not an eligible Exception Request (i.e., a Request permitted by section 4.1 of Appendix 5C) or does not contain all the Required Information in accordance with section 4.5 of Appendix 5C in order to be reviewed for substance.

"Reliability Coordinator" means the entity that is the highest level of authority who is responsible for the Reliable Operation of the Bulk Electric System, has the Wide Area view of the Bulk Electric System, and has the operating tools, processes and procedures, including the authority to prevent or mitigate emergency operating situations in both next-day analysis and real-time operations. The Reliability Coordinator has the purview that is broad enough to enable the calculation of Interconnection Reliability Operating Limits, which may be based on the operating parameters of transmission systems beyond any Transmission Operator's vision.**

"Reliability Coordinator Area" means the collection of generation, transmission and loads within the boundaries of the Reliability Coordinator. Its boundary coincides with one or more Balancing Authority Areas.**

"Reliability Standard" means a requirement to provide for Reliable Operation of the Bulk Power System, including without limiting the foregoing, requirements for the operation of existing Bulk Power System Facilities, including cyber security protection, and including the design of planned additions or modifications to such Facilities to the extent necessary for Reliable Operation of the Bulk Power System, but the term does not include any requirement to enlarge Bulk Power System Facilities or to construct new transmission capacity or generation capacity. A Reliability Standard shall not be effective in the United States until approved by the Federal Energy Regulatory Commission and shall not be effective in other jurisdictions until made or allowed to become effective by the Applicable Governmental Authority.

"Reliability Standards Development Plan" means the forward-looking plan developed by NERC on an annual basis setting forth the Reliability Standards development projects that are scheduled to be worked on during the ensuing three-year period, as specified in Section 310 of the Rules of Procedure.

"Reliable Operation" means operating the Elements of the Bulk Power System within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or Cascading failures of such system will not occur as a result of a sudden disturbance, including a Cyber Security Incident, or unanticipated failure of system Elements.++

"Remedial Action Directive" means an action (other than a Penalty or sanction) required by a Compliance Enforcement Authority that (1) is to bring a Registered Entity into compliance with a Reliability Standard or to avoid a Reliability Standard violation, and (2) is immediately necessary to protect the reliability of the Bulk Power System from an imminent threat.

"Reporting Entity" means an entity required to provide data or information requested by NERC or a Regional Entity in a request for data or information pursuant to Section 1600 of the Rules of Procedure.

"Requirement" means an explicit statement in a Reliability Standard that identifies the functional entity responsible, the action or outcome that must be achieved, any conditions achieving the action or outcome, and the reliability-related benefit of the action or outcome. Each Requirement shall be a statement with which compliance is mandatory.

"Required Date" means the date given a Registered Entity in a notice from the Compliance Enforcement Authority by which some action by the Registered Entity is required.

"Required Information" means, as applicable, either (i) the information required to be provided in a TFE Request, as specified in Section 4.0 of Appendix 4D; or (ii) the information required to be provided in an Exception Request, as specified in section 4.0 of Appendix 5C.

"Reserve Sharing Group" means a group whose members consist of two or more Balancing Authorities that collectively maintain, allocate, and supply operating reserves required for each Balancing Authority's use in recovering from contingencies within the group. Scheduling energy from an Adjacent Balancing Authority to aid recovery need not constitute reserve sharing provided the transaction is ramped in over a period the supplying party could reasonably be expected to load generation in (e.g. ten minutes). If the transaction is ramped in quicker, (e.g., between zero and ten minutes), then, for the purposes of disturbance control performance, the areas become a Reserve Sharing Group.**

"Resource Planner" means the entity that develops a long-term (generally one year and beyond) plan for the resource adequacy of specific loads (customer demand and energy requirements) within a Planning Authority area.**

"Respondent" means, depending on the context, the Registered Entity, who is the subject of the Notice of Alleged Violation, contested Mitigation Plan or contested Remedial Action Directive that is the basis for the proceeding, whichever is applicable, or the Registered Entity that is the subject of the Certification decision that is the basis for a proceeding under Appendix 4E.

"Responsible Entity" means an entity that is registered for a reliability function in the NERC Compliance Registry and is responsible for complying with an Applicable Requirement, as specified in the "Applicability" section of the CIP Standard.

"Revoked" means a NERC certificate that has been suspended for more than twelve months. While in this state, a certificate holder can not perform any task that requires an operator to be NERC-certified. The certificate holder will be required to pass an exam to be certified again. Any CE Hours accumulated prior to or during the revocation period will not be counted towards Credential Maintenance.

"Revoke for Cause" means a step in the disciplinary process pursuant to Appendix 6 during which the certificate is no longer valid and requiring successfully passing an exam to become certified. However, an exam will not be authorized until the revocation period expires. CE Hours earned before or during this revocation period will not be counted for maintaining a Credential.

"Scope of Responsibility" means the registered functions of a Planning Authority, Reliability Coordinator, Transmission Operator, Transmission Planner or Balancing Authority and the geographical or electric region in which the Planning Authority, Reliability Coordinator, Transmission Operator, Transmission Planner or Balancing Authority operates to perform its registered functions, or with respect to a Regional Entity, its Regional Entity Region.

"Section I Required Information" means Required Information that is to be provided in Section I of a Submitting Entity's Exception Request.

"Section II Required Information" means Required Information that is to be provided in Section II of a Submitting Entity's Exception Request.

"Section III Required Information" means Required Information that is to be provided in Section III of a Submitting Entity's Exception Request.

"Sector" means a group of Members of NERC that are Bulk Power System owners, operators, or users or other persons and entities with substantially similar interests, including governmental entities, as pertinent to the purposes and operations of NERC and the operation of the Bulk Power System, as defined in Article II, Section 4 of the NERC Bylaws. Each Sector shall constitute a class of Members for purposes of the New Jersey Nonprofit Corporation Act.

"Segment" means one of the subsets of the Registered Ballot Body whose members meet the qualification criteria for the subset.

"Self-Certification" means attestation by a Registered Entity of compliance or non-compliance with a Reliability Standard for which Self-Certification is required by the Compliance Enforcement Authority and that is included for monitoring in the Regional Implementation Plan.

"Self-Reporting" means a report by a Registered Entity stating (1) that the Registered Entity believes it has violated a Reliability Standard, and (2) the actions that have been taken or will be taken to resolve the violation.

"Senior Manager" means the person assigned by the Responsible Entity, in accordance with CIP Standard CIP-003-1 Requirement R2 (or subsequent versions), to have overall responsibility for leading and managing the Responsible Entity's implementation of, and adherence to, the CIP Standards.

"Sink Balancing Authority" means the Balancing Authority in which the Load (sink) is located for an Interchange Transaction.**

"Source Balancing Authority" means the Balancing Authority in which the generation (source) is located for an Interchange Transaction.**

"Special Protection System" means an automatic protection system designed to detect abnormal or predetermined system conditions, and take corrective actions other than and/or in addition to the isolation of faulted components to maintain system reliability. Such action may include changes in demand, generation (MW and Mvar), or system configuration to maintain system stability, acceptable voltage, or power flows. A Special Protection System does not include (a) underfrequency or undervoltage Load shedding or (b) fault conditions that must be isolated, or (c) out-of-step relaying (not designed as an integral part of a Special Protection System).**

"Spot Checking" means a process in which the Compliance Enforcement Authority requests a Registered Entity to provide information (1) to support the Registered Entity's Self-Certification,

Self-Reporting, or Periodic Data Submittal and to assess whether the Registered Entity complies with Reliability Standards, or (2) as a random check, or (3) in response to events, as described in the Reliability Standards or based on operating problems or system events.

"Staff" or "Compliance Staff" means individuals employed or contracted by NERC or the Compliance Enforcement Authority who have the authority to make initial determinations of compliance or violation with Reliability Standards by Registered Entities and associated Penalties and Mitigation Plans.

"Strict Compliance" means compliance with the terms of an Applicable Requirement without reliance on a Technical Feasibility Exception.

"Submitting Entity" means (i) an owner, operator, or user of the Bulk Power System or any other party that submits information to NERC or a Regional Entity that it reasonably believes contains Confidential Information or, (ii) solely for purposes of Appendix 5C, the entity that submits an Exception Request in accordance with section 4.0 of Appendix 5C.

"Suspended" means certificate status due to an insufficient number of CE Hours being submitted prior to the expiration of a certificate. While in this state, a certificate holder can not perform any task that requires an operator to be NERC-certified.

"System" means a combination of generation, transmission and distribution components.**

"System Operating Limit" means the value (such as MW, Mvar, amperes, frequency or volts) that satisfies the most limiting of the prescribed operating criteria for a specified system configuration to ensure operation within acceptable reliability criteria.**

"Technical Advisor" means any Staff member, third-party contractor, or industry stakeholder who satisfies NERC's or the Compliance Enforcement Authority's (as applicable) conflict of interest policy and is selected to assist in a proceeding by providing technical advice to the Hearing Officer and/or the Hearing Body or Hearing Panel.

"Technical Feasibility Exception" or "TFE" means an exception from Strict Compliance with the terms of an Applicable Requirement on grounds of technical feasibility or technical limitations in accordance with one or more of the criteria in section 3.0 of Appendix 4D.

"Technical Review Panel" means a panel established pursuant to section 5.3 of Appendix 5C.

"Termination of Credential" means a step in the disciplinary process pursuant to Appendix 6 whereby a Credential is permanently Revoked.
"TFE Request" means a request submitted by a Responsible Entity in accordance with Appendix 4D for an exception from Strict Compliance with an Applicable Requirement.

"Transmission Customer" means 1. any eligible customer (or its designated agent) that can or does execute a Transmission Service agreement or can and does receive Transmission Service.

2. Any of the following responsible entities: Generator Owner, Load-Serving Entity, or Purchasing-Selling Entity.**

"Transmission Operator" means the entity responsible for the reliability of its "local" transmission system, and that operates or directs the operations of the transmission Facilities.**

"Transmission Owner" means the entity that owns and maintains transmission Facilities.**

"Transmission Planner" means the entity that develops a long-term (generally one year and beyond) plan for the reliability (adequacy) of the interconnected bulk electric transmission systems within its portion of the Planning Authority area.**

"Transmission Service" means services provided to the Transmission Customer by the Transmission Service Provider to move energy from a Point of Receipt to a Point of Delivery.**

"Transmission Service Provider" means the entity that administers the transmission tariff and provides Transmission Service to Transmission Customers under applicable Transmission Service agreements.**

"Type of CE Hours" means NERC-Approved Learning Activity covering topics from Appendix A to Appendix 6, NERC Reliability Standards and/or simulations for which there is a minimum requirement for Credential Maintenance.

"Variance" means an aspect or element of a Reliability Standard that applies only within a particular Regional Entity or group of Regional Entities, or to a particular entity or class of entities. A Variance allows an alternative approach to meeting the same reliability objective as the Reliability Standard, and is typically necessitated by a physical difference. A Variance is embodied within a Reliability Standard and as such, if adopted by NERC and approved by the Applicable Governmental Authority(ies), shall be enforced within the applicable Regional Entity or Regional Entities pursuant to delegated authorities or to procedures prescribed by the Applicable Governmental Authority.

"Violation Risk Factor" or "VRF" means a factor (lower, medium or high) assigned to each Requirement of a Reliability Standard to identify the potential reliability significance of noncompliance with the Requirement.

"Violation Severity Level" or "VSL" means a measure (lower, moderate, high or severe) of the degree to which compliance with a Requirement was not achieved.

"Wide Area" means the entire Reliability Coordinator Area as well as the critical flow and status information from adjacent Reliability Coordinator Areas as determined by detailed system studies to allow the calculation of Interconnected Reliability Operating Limits.**

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF REVISIONS TO ITS RULES OF PROCEDURE
TO ADOPT A BULK ELECTRIC SYSTEM EXCEPTION PROCEDURE

ATTACHMENT 3B

REVISED APPENDIX 2 OF THE RULES OF PROCEDURE,

DEFINITIONS USED IN THE RULES OF PROCEDURE

REDLINED VERSION

Proposed revisions 1-9-2012

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

DEFINITIONS USED IN THE RULES OF PROCEDURE

APPENDIX 2 TO THE RULES OF PROCEDURE

Effective: [DATE], 2012

General

For purposes of the NERC Rules of Procedure, including all Appendices, the terms defined in this Appendix shall have the meanings set forth herein. For convenience of reference to the user, definitions of terms that are used in a particular Appendix may be repeated in that Appendix.

Where used in the Rules of Procedure, a defined term will be capitalized. Where a term defined in this Appendix appears in the Rules of Procedure but is not capitalized, the term is there being used in its ordinary and commonly understood meaning and not as defined in this Appendix (if different). Other terms that are not defined terms, such as the names of entities, organizations, committees, or programs; position titles; titles of documents or forms; section headings; geographic locations; and other terms commonly presented as proper nouns, may also be capitalized in the Rules of Procedure without being defined in this Appendix.

Definitions of terms in this Appendix that are marked with asterisks (**) are taken from the NERC *Glossary of Terms Used in Reliability Standards*. Definitions of terms in this Appendix that are marked with "pluses" (++) are taken from Section 215 of the Federal Power Act or the Commission's regulations at 18 C.F.R. Part 39 or Part 388.

Other terms used in the Rules of Procedure but not defined in this Appendix that have commonly understood and used technical meanings in the electric power industry, including applicable codes and standards, shall be construed in accordance with such commonly understood and used technical meanings.

Specific Definitions

"Acceptance of the Exception Request" or "Acceptance" means the determination that an eligible Exception Request (i.e., a Request permitted by section 4.1 of Appendix 5C) contains all the Required Information so that it can undergo substantive review.

"Adjacent Balancing Authority" means a Balancing Authority Area that is interconnected to another Balancing Authority Area either directly or via a multi-party agreement or transmission tariff.**

"Adjusted Penalty Amount" means the proposed Penalty for a violation of a Reliability Standard as determined based on application of the adjustment factors identified in Section 4.3 of the *Sanction Guidelines* to the Base Penalty Amount.

"Advisories" or "Level 1 (Advisories)" is a notification issued by NERC in accordance with Section 810.3.1 of the Rules of Procedure.

"Alleged Violation" means a Possible Violation for which the Compliance Enforcement Authority has determined, based on an assessment of the facts and circumstances surrounding the Possible Violation, that evidence exists to indicate a Registered Entity has violated a Reliability Standard.

"Annual Audit Plan" means a plan developed annually by the Compliance Enforcement Authority that includes the Reliability Standards and Registered Entities to be audited, the schedule of Compliance Audits, and Compliance Audit Participant requirements for the calendar year.

"Annual Report" means the annual report to be filed by NERC with FERC and other Applicable Governmental Authorities in accordance with Section 13.0 of Appendix 4D.

"Applicable Governmental Authority" means the FERC within the United States and the appropriate governmental authority with subject matter jurisdiction over reliability in Canada and Mexico.

"Applicable Requirement" means a Requirement of a CIP Standard that (i) expressly provides either (A) that compliance with the terms of the Requirement is required where or as technically feasible, or (B) that technical limitations may preclude compliance with the terms of the Requirement; or (ii) is subject to Appendix 4D by FERC directive.

"Approval of the Exception Request" or "Approval" means the determination by NERC that an Exception Request meets the criteria to receive the requested Exception.

"Balancing Authority" means the responsible entity that integrates resource plans ahead of time, maintains ~~l~~Load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real time.**

"Balancing Authority Area" means the collection of generation, transmission, and ~~l~~Loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains ~~l~~Load-resource balance within this area.**

"Base Penalty Amount" means the proposed Penalty for a violation of a Reliability Standard as initially determined pursuant to Sections 4.1 and 4.2 of the NERC *Sanction Guidelines*, before application of any adjustment factors.

"BES Definition" means the NERC definition of the Bulk Electric System as set forth in the NERC *Glossary of Terms Used in Reliability Standards.*

"Blackstart Resource" means a generating unit(s) and its associated set of equipment which has the ability to be started without support from the System or is designed to remain energized without connection to the remainder of the System, with the ability to energize a bus, meeting the Transmission Operator's restoration plan needs for ~~r~~Real and ~~r~~Reactive ~~p~~Power capability, frequency and voltage control, and that has been included in the Transmission Operator's restoration plan.**

"Board" or "Board of Trustees" means the Board of Trustees of NERC.

"Board of Trustees Compliance Committee," "BOTCC" or "Compliance Committee" means the Compliance Committee of the NERC Board of Trustees.

"Bulk Electric System" or "BES" means unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. This does not include facilities used in the local distribution of electric energy.

Inclusions:

- **I1** - Transformers with the primary terminal and at least one secondary terminal operated at 100 kV or higher unless excluded under Exclusion E1 or E3.
- **I2** - Generating resource(s) with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.
- **I3** - Blackstart Resources identified in the Transmission Operator's restoration plan.
- **I4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above.
- **I5** –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.

Exclusions:

- **E1** - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher and:
    a) Only serves Load. Or,
    b) Only includes generation resources, not identified in Inclusion I3, with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,
    c) Where the radial system serves Load and includes generation resources, not identified in Inclusion I3, with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

    Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.
- **E2** - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail Load with electric energy if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding

obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.

- **E3** - Local networks (LN): A group of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the interconnected system. LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The LN is characterized by all of the following:
    a) Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating);
    b) Power flows only into the LN and the LN does not transfer energy originating outside the LN for delivery through the LN; and
    c) Not part of a Flowgate or transfer path: The LN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
- **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.~~, as defined by the Regional Entity, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition.~~**

"Bulk Power System" means, depending on the context: (i) Facilities and control systems necessary for operating an interconnected electric energy supply and transmission network (or any portion thereof), and electric energy from generating facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy [++]. (ii) Solely for purposes of Appendix 4E, Bulk Electric System.

"Canadian" means one of the following: (a) a company or association incorporated or organized under the laws of Canada, or its designated representative(s) irrespective of nationality; (b) an agency of a federal, provincial, or local government in Canada, or its designated representative(s) irrespective of nationality; or (c) a self-representing individual who is a Canadian citizen residing in Canada.

"Canadian Entity" means a Re~~sponsible~~gistered Entity (or, solely for purposes of Appendix 4D, a Responsible Entity) that is organized under Canadian federal or provincial law.

"Cascading" means the uncontrolled successive loss of System Elements triggered by an incident at any location. Cascading results in widespread electric service interruption that cannot be restrained from sequentially spreading beyond an area predetermined by studies.**

"CCC" means the NERC Compliance and Certification Committee.

"Certification" means, depending on the context, (i) the process undertaken by NERC and a Regional Entity to verify that an entity is capable of responsibilities for tasks associated with a particular function such as a Balancing Authority, Transmission Operator and/or Reliability Coordinator; such Certification activities are further described in Section 500 and Appendix 5A of the NERC Rules of Procedure; or (ii) for purposes of Appendix 6, an official recognition that indicates the recipient has passed a NERC exam or completed a specified number of Continuing Education Hours.

"Certification Staff" means individuals employed or contracted by NERC who have the authority to make initial determinations of Certification of entities performing reliability functions.

"Certification Team" means a team assembled by a Regional Entity that will be responsible for performing the activities included in the Certification process for an entity pursuant to Appendix 5A.

"Classified National Security Information" means Required Information that has been determined to be protected from unauthorized disclosure pursuant to Executive Order No. 12958, as amended, and/or the regulations of the NRC at 10 C.F.R. §95.35; or pursuant to any comparable provision of Canadian federal or provincial law.

"Clerk" means an individual as assigned by the Compliance Enforcement Authority to perform duties described in Attachment 2, Hearing Procedures, to Appendix 4C.

"Commission" means the Federal Energy Regulatory Commission or FERC.

"Complaint" means an allegation that a Registered Entity violated a Reliability Standard.

"Compliance and Certification Manager" means individual/individuals within the Regional Entity that is/are responsible for monitoring compliance of entities with applicable NERC Reliability Standards.

"Compliance Audit" means a systematic, objective review and examination of records and activities to determine whether a Registered Entity meets the Requirements of applicable Reliability Standards.

"Compliance Audit Participants" means Registered Entities scheduled to be audited and the audit team members.

"Compliance Enforcement Authority" means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

"Compliance Enforcement Authority's Area of Responsibility" means the Compliance Enforcement Authority's Region. If a Regional Entity is the Compliance Enforcement Authority, the Compliance Enforcement Authority's Area of Responsibility is shown in Exhibit A to the delegation agreement between the Regional Entity and NERC.

"Compliance Investigation" means a comprehensive investigation, which may include an on-site visit with interviews of the appropriate personnel, to determine if a violation of a Reliability Standard has occurred.

"Compliance Monitoring and Enforcement Program" or "CMEP" means, depending on the context (1) the NERC *Uniform Compliance Monitoring and Enforcement Program* (Appendix 4C to the NERC Rules of Procedure) or the Commission-approved program of a Regional Entity, as applicable, or (2) the program, department or organization within NERC or a Regional Entity that is responsible for performing compliance monitoring and enforcement activities with respect to Registered Entities' compliance with Reliability Standards.

"Compliant Date" means the date by which a Responsible Entity is required to be in compliance with an Applicable Requirement of a CIP Standard.

"Confidential Business and Market Information" means any information that pertains to the interests of any entity, that was developed or acquired by that entity, and that is proprietary or competitively sensitive.

"Confidential Information" means (i) Confidential Business and Market Information; (ii) Critical Energy Infrastructure Information; (iii) personnel information that identifies or could be used to identify a specific individual, or reveals personnel, financial, medical, or other personal information; (iv) work papers, including any records produced for or created in the course of an evaluation or audit; (v) investigative files, including any records produced for or created in the course of an investigation; or (vi) Cyber Security Incident Information; provided, that public information developed or acquired by an entity shall be excluded from this definition; or (vii) for purposes of Appendix 4D, any other information that is designated as Confidential Information in Section 11.0 of Appendix 4D.

"Confirmed Violation" means an Alleged Violation for which an entity has: (1) accepted the finding of the violation by a Regional Entity or NERC and will not seek an appeal, or (2) completed the hearing and appeals process within NERC, or (3) allowed the time for requesting a hearing or submitting an appeal to expire, or (4) admitted to the violation in a settlement agreement.

"Continuing Education Hour" or "CE Hour" means sixty minutes of participation in a group, independent study, or self-study learning activity as approved by the NERC Continuing Education Program.

"Continuing Education Program Provider" or "Provider" means the individual or organization offering a learning activity to participants and maintaining documentation required by Appendix 6.

"Coordinated Functional Registration" means where two or more entities (parties) agree in writing upon a division of compliance responsibility among the parties for one or more Reliability Standard(s) applicable to a particular function, and/or for one or more Requirement(s)/sub-Requirement(s) within particular Reliability Standard(s).

"Covered Asset" means a Cyber Asset or Critical Cyber Asset that is subject to an Applicable Requirement.

"Credential" means a NERC designation that indicates the level of qualification achieved (i.e., reliability operator; balancing, interchange, and transmission operator; balancing and interchange operator; and transmission operator).

"Credential Maintenance" means to meet NERC CE Hours' requirements to maintain a valid NERC-issued system operator Credential.

"Critical Assets" means Facilities, systems, and equipment which, if destroyed, degraded, or otherwise rendered unavailable, would affect the reliability or operability of the Bulk Electric System.**

"Critical Cyber Assets" means Cyber Assets critical to the reliable operation of Critical Assets.**

"Critical Energy Infrastructure Information" means specific engineering, vulnerability, or detailed design information about proposed or existing Critical Infrastructure that (i) relates details about the production, generation, transportation, transmission, or distribution of energy; (ii) could be useful to a person in planning an attack on Critical Infrastructure; and (iii) does not simply give the location of the Critical Infrastructure.++

"Critical Infrastructure" means existing and proposed systems and assets, whether physical or virtual, the incapacity or destruction of which would negatively affect security, economic security, public health or safety, or any combination of those matters.++

"Critical Infrastructure Protection Standard" or "CIP Standard" means any of NERC Reliability Standards CIP-002 through CIP-009.

"Cross-Border Regional Entity" means a Regional Entity that encompasses a part of the United States and a part of Canada or Mexico.++

"Cyber Assets" means programmable electronic devices and communication networks including hardware, software, and data.**

"Cyber Security Incident" means any malicious or suspicious event that disrupts, or was an attempt to disrupt, the operation of those programmable electronic devices and communications networks including hardware, software and data that are essential to the Reliable Operation of the Bulk Power System.++

"Cyber Security Incident Information" means any information related to, describing, or which could be used to plan or cause a Cyber Security Incident.

"Days", as used in Appendix 5A with respect to the Registration and Certification processes, means calendar days.

"Delegate" means a person to whom the Senior Manager of a Responsible Entity has delegated authority pursuant to Requirement R2.3 of CIP Standard CIP-003-1 (or any successor provision).

"Director of Compliance" means the Director of Compliance of NERC or of the Compliance Enforcement Authority, as applicable, who is responsible for the management and supervision of Compliance Staff, or his or her designee.

"Disapproval of the Exception Request" or "Disapproval" means the determination by NERC that an Exception Request does not meet the criteria to receive the requested Exception.

"Distribution Factor" means the portion of an Interchange Transaction, typically expressed in per unit that flows across a transmission facility (Flowgate).**

"Distribution Provider" means the entity that provides and operates the "wires" between the transmission system and the end-use customer. For those end-use customers who are served at transmission voltages, the Transmission Owner also serves as the Distribution Provider. Thus, the Distribution Provider is not defined by a specific voltage, but rather as performing the distribution function at any voltage.**

"Document" means, in addition to the commonly understood meaning of the term as information written or printed on paper, any electronically stored information, including writings, drawings, graphs, charts, photographs, sound recordings, images and other data or data compilations stored in any medium from which information can be obtained, and shall be translated by the producing party into reasonably usable form.

"Effective Date" means the date, as specified in a notice rejecting or disapproving a TFE Request or terminating an approved TFE, on which the rejection, disapproval or termination becomes effective.

"Electric Reliability Organization" or "ERO" means the organization that is certified by the Commission under Section 39.3 of its regulations, the purpose of which is to establish and enforce Reliability Standards for the Bulk Power System in the United States, subject to Commission review. The organization may also have received recognition by Applicable Governmental Authorities in Canada and Mexico to establish and enforce Reliability Standards for the Bulk Power Systems of the respective countries.

"Element" means any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An Element may be comprised of one or more components.**

"Eligible Reviewer" means a person who has the required security clearances or other qualifications, or who otherwise meets the applicable criteria, to have access to Confidential Information, Classified National Security Information, NRC Safeguards Information or Protected FOIA Information, as applicable to the particular information to be reviewed.

"End Date" means the last date of the period to be covered in a Compliance Audit.

"Essential Actions" or "Level 3 (Essential Actions)" is a notification issued by NERC in accordance with Section 810.3.3 of the Rules of Procedure.

"Exception" means either an Inclusion Exception or an Exclusion Exception.

"Exception Procedure" means the procedure set forth in Appendix 5C.

"Exception Reporting" means information provided to the Compliance Enforcement Authority by a Registered Entity indicating that a violation of a Reliability Standard has occurred (e.g., a System Operating Limit has been exceeded) or enabling the Compliance Enforcement Authority to ascertain the Registered Entity's compliance.

"Exception Request" means a request made by a Submitting Entity in accordance with Appendix 5C for an Exception.

"Exception Request Form" means the form adopted by each Regional Entity, in accordance with a template provided by NERC, for use by Submitting Entities in submitting Exception Requests; provided, that the Exception Request Form must include Section III.B as adopted by NERC.

"Exclusion Exception" means a determination that an Element that falls within the BES Definition should be excluded from the BES.

"Expiration Date" means the date on which an approved TFE expires.

"Facility" means a set of electrical equipment that operates as a single Bulk Electric System Element (e.g., a line, a generator, a shunt compensator, transformer, etc.)**

"FERC" means the United States Federal Energy Regulatory Commission.

"Final Penalty Amount" means the final, proposed Penalty for violation of a Reliability Standard, determined in accordance with the *Sanction Guidelines*.

"Flowgate" means 1.) A portion of the transmission system through which the Interchange Distribution Calculator calculates the power flow from Interchange Transactions. 2.) A mathematical construct, comprised of one or more monitored transmission Facilities and

optionally one or more contingency Facilities, used to analyze the impact of power flows upon the Bulk Electric System.**

"FOIA" means the U.S. Freedom of Information Act, 5 U.S.C. §552.

"Footprint" means the geographical or electric area served by an entity.
"Functional Entity" means an entity responsible for a function that is required to ensure the Reliable Operation of the electric grid as identified in the NERC Reliability Standards.

"Generator Operator" means the entity that operates generating unit(s) and performs the functions of supplying energy and Interconnected Operations Services.**

"Generator Owner" means an entity that owns and maintains generating units.**

"Hearing Body" or "Regional Entity Hearing Body" means the body established by a Regional Entity to conduct hearings pursuant to the Hearing Procedures.

"Hearing Officer" means, depending on the context, (i) an individual employed or contracted by the Compliance Enforcement Authority and designated by the Compliance Enforcement Authority to preside over hearings conducted pursuant to Attachment 2, Hearing Procedures, of Appendix 4C, or (ii) solely for hearings conducted pursuant to Appendix 4E, (A) a CCC member or (B) an individual employed or contracted by NERC, as designated and approved by the CCC to preside over hearings conducted pursuant to the Hearing Procedures in Appendix E; the Hearing Officer shall not be a member of the Hearing Panel.

"Hearing Panel" means the five person hearing body established as set forth in the CCC Charter on a case by case basis and that is responsible for adjudicating a matter as set forth in Appendix 4E.

"Hearing Procedures" means, depending on the context, (i) Attachment 2 to the NERC or a Regional Entity CMEP, as applicable, or (ii) the hearing procedures of the NERC Compliance and Certification Committee in Appendix 4E.

"Inclusion Exception" means a determination that an Element that falls outside the BES Definition should be included in the BES.

"Interchange" means energy transfers that cross Balancing Authority boundaries.**

"Interchange Authority" means the responsible entity that authorizes the implementation of valid and balanced Interchange Schedules between Balancing Authority Areas, and ensures communications of Interchange information for reliability assessment purposes.**

"Interchange Distribution Calculator" means the mechanism used by Reliability Coordinators in the Eastern Interconnection to calculate the distribution of Interchange Transactions over specific Flowgates. It includes a database of all Interchange Transactions and a matrix of the Distribution Factors for the Eastern Interconnection.**

"Interchange Schedule" means an agreed-upon Interchange Transaction size (megawatts), start and end time, beginning and ending ramp times and rate, and type required for delivery and receipt of power and energy between the Source and Sink Balancing Authorities involved in the transaction.**

"Interchange Transaction" means an agreement to transfer energy from a seller to a buyer that crosses one or more Balancing Authority Area boundaries.**

"Interconnected Operations Service" means a service (exclusive of basic energy and Transmission Services) that is required to support the Reliable Operation of interconnected Bulk Electric Systems.**

"Interconnection" means a geographic area in which the operation of Bulk Power System components is synchronized such that the failure of one or more of such components may adversely affect the ability of the operators of other components within the system to maintain Reliable Operation of the Facilities within their control.++

"Interconnection Reliability Operating Limit" means a System Operating Limit that, if violated, could lead to instability, uncontrolled separation, or Cascading outages that adversely impact the reliability of the Bulk Electric System.**

"Interpretation" means an addendum to a Reliability Standard, developed in accordance with the NERC *Standard Processes Manual* and approved by the Applicable Governmental Authority(ies), that provides additional clarity about one or more Requirements in the Reliability Standard.

"Joint Registration Organization" means an entity that registers in the Compliance Registry to perform reliability functions for itself and on behalf of one or more of its members or related entities for which such members or related entities would otherwise be required to register.

"Lead Entity" means the entity that submits Exception Request information that is common to a group of Submitting Entities that are submitting Exception Requests jointly.

"Lead Mediator" means a member of a mediation team formed pursuant to Appendix 4E who is selected by the members to coordinate the mediation process and serve as the mediation team's primary contact with the Parties.

"Load" means an end-user device or customer that receives power from the electric system.**

"Load-Serving Entity" means an entity that secures energy and Transmission Service (and related Interconnected Operations Services) to serve the electrical demand and energy requirements of its end-use customers.**

"Mapping" means the process of determining whether a Regional Entity's Footprint is being served by Registered Entities.

"Mediation Settlement Agreement" means a written agreement entered into by the Parties to a mediation pursuant to Appendix 4E that resolves the dispute.

"Member" means a member of NERC pursuant to Article II of its Bylaws.

"Member Representatives Committee" or "MRC" means the body established pursuant to Article VIII of the NERC Bylaws.

"Mexican Entity" means a Registered Entity that is organized under Mexican law.

"Mitigation Plan" means an action plan, required when a Registered Entity violates a Reliability Standard as determined by any means including Compliance Enforcement Authority decision, settlement agreement, or otherwise, that is developed by the Registered Entity to (1) correct a violation of a Reliability Standard and (2) prevent re-occurrence of the violation.

"NERC-Approved Learning Activity" means training that maintains or improves professional competence and has been approved by NERC for use in its Continuing Education Program.

"NERC Compliance Monitoring and Enforcement Program Implementation Plan" or "NERC Implementation Plan" means the annual NERC Compliance Monitoring and Enforcement Program Implementation Plan that specifies the Reliability Standards that are subject to reporting by Registered Entities to the Compliance Enforcement Authority in order to verify compliance and identifies the appropriate monitoring procedures and reporting schedules for each such Reliability Standard.

"NERC Compliance Registry," "Compliance Registry" or "NCR" means a list, maintained by NERC pursuant to Section 500 of the NERC Rules of Procedure and Appendix 5B, the NERC *Statement of Compliance Registry Criteria*, of the owners, operators and users of the Bulk Power System, and the entities registered as their designees, that perform one or more functions in support of reliability of the Bulk Power System and are required to comply with one or more Requirements of Reliability Standards.

"NERC Identification Number" or "NERC ID" means a number given to NERC Registered Entities that will be used to identify the entity for certain NERC activities. Corporate entities may have multiple NERC IDs to show different corporate involvement in NERC activities.

"NERC Organization Certification" or "Organization Certification" means the process undertaken by NERC and a Regional Entity to verify that a new entity is capable of responsibilities for tasks associated with a particular function such as a Balancing Authority, Transmission Operator, and/or Reliability Coordinator; such certification activities are further described in Section 500 and Appendix 5A of the NERC Rules of Procedure.

"Net Energy for Load" or "NEL" means net generation of an electric system plus energy received from others less energy delivered to others through interchange. It includes system losses but excludes energy required for the storage of energy at energy storage facilities.

"Notice of Alleged Violation" means a notice issued by the Compliance Enforcement Authority to a Registered Entity pursuant to Section 5.3 of Appendix 4C.

"Notice of Completion of Enforcement Action" means a notice issued by the Compliance Enforcement Authority to a Registered Entity, pursuant to Section 5.10 of Appendix 4C, stating than an enforcement action is closed.

"Notice of Confirmed Violation" means a notice issued by the Compliance Enforcement Authority to a Registered Entity confirming the violation of one or more Reliability Standards, as a result of (1) the Registered Entity accepting a Notice of Alleged Violation and the proposed Penalty or sanction, or (2) the finding of a violation through a hearing and appeal, or (3) the expiration of the period for requesting a hearing or an appeal, or (4) the Registered Entity admitting the violation as part of an executed settlement agreement.

"Notice of Penalty" means a notice prepared by NERC and filed with FERC, following approval by NERC of a Notice of Confirmed Violation or a settlement agreement, stating the Penalty or sanction imposed or agreed to for the Confirmed Violation or as part of the settlement.

"Notice of Possible Violation" means a notice issued by the Compliance Enforcement Authority to a Registered Entity that (1) states a Possible Violation has been identified, (2) provides a brief description of the Possible Violation, including the Reliability Standard Requirement(s) and the date(s) involved, and (3) instructs the Registered Entity to retain and preserve all data and records relating to the Possible Violation.

"NRC" means the United States Nuclear Regulatory Commission.

"NRC Safeguards Information" means Required Information that is subject to restrictions on disclosure pursuant to 42 U.S.C. §2167 and the regulations of the NRC at 10 C.F.R. §73.21-73.23; or pursuant to comparable provisions of Canadian federal or provincial law.

"Open Access Transmission Tariff" means an electronic transmission tariff accepted by the U.S. Federal Energy Regulatory Commission requiring the Transmission Service Provider to furnish to all shippers with non-discriminating service comparable to that provided by Transmission Owners to themselves.**

"Owner" means the owner(s) of an Element or Elements that is or may be determined to be part of the BES as a result of either the application of the BES Definition or an Exception, or another entity, such as an operator, authorized to act on behalf of the owner of the Element or Elements in the context of an Exception Request.

"Part A Required Information" means Required Information that is to be provided in Part A of a Responsible Entity's TFE Request.

"Part B Required Information" means Required Information that is to be provided in Part B of a Responsible Entity's TFE Request.

"Participant" means a Respondent and any other Person who is allowed or required by FERC to participate as an intervenor in a proceeding conducted pursuant to the Hearing Procedures, and as used in the Hearing Procedures shall include, depending on the context, the members of the Compliance Staff that participate in a proceeding or the members of the Certification Staff that participate in a proceeding pursuant to Appendix 4E.

"Party" or "Parties" means a Person or the Persons participating in a mediation pursuant to Appendix 4E.

"Penalty" means and includes all penalties and sanctions, including but not limited to a monetary or non-monetary penalty; a limitation on an activity, function, operation or other appropriate sanction; or the addition of the Registered Entity or Respondent to a reliability watch list composed of major violators. Penalties must be within the range set forth in the NERC *Sanction Guidelines* approved by FERC pursuant to 18 C.F.R. Section 39.7(g)(2), and shall bear a reasonable relation to the seriousness of a Registered Entity's or Respondent's violation and take into consideration any timely efforts made by the Registered Entity or Respondent to remedy the violation.

"Periodic Data Submittals" means modeling, studies, analyses, documents, procedures, methodologies, operating data, process information or other information to demonstrate compliance with Reliability Standards and provided by Registered Entities to the Compliance Enforcement Authority on a time frame required by a Reliability Standard or an ad hoc basis.

"Person" means any individual, partnership, corporation, limited liability company, governmental body, association, joint stock company, public trust, organized group of persons, whether incorporated or not, or any other legal entity.

"Planning Authority" means the responsible entity that coordinates and integrates transmission Facilities and service plans, resource plans, and Protection Systems.**

"Point of Delivery" means a location that a Transmission Service Provider specifies on its transmission system where an Interchange Transaction leaves or a Load-Serving Entity receives its energy.**

"Point of Receipt" means a location that the Transmission Service Provider specifies on its transmission system where an Interchange Transaction enters or a generator delivers its output.

"Possible Violation" means the identification, by the Compliance Enforcement Authority, using one of the compliance monitoring and enforcement processes in Section 3.0 of Appendix 4C, of a possible failure by a Registered Entity to comply with a Reliability Standard that is applicable to the Registered Entity.

"Preliminary Screen" means an initial evaluation of evidence indicating potential noncompliance with a Reliability Standard has occurred or is occurring, conducted by the Compliance Enforcement Authority for the purpose of determining whether a Possible Violation exists, and consisting of an evaluation of whether (1) the entity allegedly involved in the potential

noncompliance is registered, and (2) the Reliability Standard Requirement to which the evidence of potential noncompliance relates is applicable to a reliability function for which the entity is registered.

"Probation" means a step in the disciplinary process pursuant to Appendix 6 during which the certificate is still valid. During the probationary period, a subsequent offense of misconduct, as determined through the same process as described above, may be cause for more serious consequences.

"Protected FOIA Information" means Required Information, held by a governmental entity, that is subject to an exemption from disclosure under FOIA (5 U.S.C. §552(e)), under any similar state or local statutory provision, or under any comparable provision of Canadian federal or provincial law, which would be lost were the Required Information to be placed into the public domain.

"Protection System" means protective relays which respond to electrical quantities, communications systems necessary for correct operation of protective functions, voltage and current sensing devices providing inputs to protective relays, station dc supply associated with protective functions (including batteries, battery chargers, and non-battery-based dc supply), and control circuitry associated with protective functions through the trip coil(s) of the circuit breakers or other interrupting devices.**

"Purchasing-Selling Entity" means the entity that purchases, or sells, and takes title to, energy, capacity, and Interconnected Operations Services. Purchasing-Selling Entities may be affiliated or unaffiliated merchants and may or may not own generating facilities.**

"Reactive Power" means the portion of electricity that establishes and sustains the electric and magnetic fields of alternating-current equipment. Reactive Power must be supplied to most types of magnetic equipment, such as motors and transformers. It also must supply the reactive losses on transmission facilities. Reactive Power is provided by generators, synchronous condensers, or electrostatic equipment such as capacitors and directly influences electric system voltage. It is usually expressed in kilovars (kvar) or megavars (Mvar).**

"Real Power" means the portion of electricity that supplies energy to the Load.**

"Receiving Entity" means NERC or a Regional Entity receiving Confidential Information from an owner, operator, or user of the Bulk Power System or from any other party.

"Recommendation" for purposes of Appendix 5C means the report to NERC containing the evaluation prepared in accordance with section 5.2 of Appendix 5C concerning whether or to what extent an Exception Request should be approved.

"Recommendations" or "Level 2 (Recommendations)" is a notification issued by NERC in accordance with Section 810.3.2 of the Rules of Procedure.

"Region" means the geographic area, as specified in a Regional Entity's delegation agreement with NERC, within which the Regional Entity is responsible for performing delegated functions.

"Regional Criteria" means reliability requirements developed by a Regional Entity that are necessary to implement, to augment, or to comply with Reliability Standards, but which are not Reliability Standards. Such Regional Criteria may be necessary to account for physical differences in the Bulk Power System but are not inconsistent with Reliability Standards nor do they result in lesser reliability. Such Regional Criteria are not enforceable pursuant to NERC-delegated authorities, but may be enforced through other available mechanisms. Regional Criteria may include specific acceptable operating or planning parameters, guides, agreements, protocols or other documents.

"Regional Entity" means an entity having enforcement authority pursuant to 18 C.F.R. § 39.8.++

"Regional Entity Compliance Monitoring and Enforcement Program Implementation Plan" or "Regional Implementation Plan" means an annual plan, submitted by November 1 of each year to NERC for approval that, in accordance with NERC Rule of Procedure Section 401.6 and the NERC Compliance Monitoring and Enforcement Program Implementation Plan, identifies (1) all Reliability Standards identified by NERC to be actively monitored during each year, (2) other Reliability Standards proposed for active monitoring by the Regional Entity, (3) the methods to be used by the Regional Entity for reporting, monitoring, evaluation, and assessment of performance criteria with each Reliability Standard, and (4) the Regional Entity's Annual Audit Plan.

"Regional Reliability Standard" means a type of Reliability Standard that is applicable only within a particular Regional Entity or group of Regional Entities. A Regional Reliability Standard may augment, add detail to, or implement another Reliability Standard or cover matters not addressed by other Reliability Standards. Regional Reliability Standards, upon adoption by NERC and approval by the Applicable Governmental Authority(ies), shall be Reliability Standards and shall be enforced within the applicable Regional Entity or Regional Entities pursuant to delegated authorities or to procedures prescribed by the Applicable Governmental Authority.

"Registered Ballot Body" means that aggregation of all entities or individuals that qualify for one of the Segments approved by the Board of Trustees, and are registered with NERC as potential ballot participants in the voting on proposed Reliability Standards.

"Registered Entity" means an owner, operator, or user of the Bulk Power System, or the entity registered as its designee for the purpose of compliance, that is included in the NERC Compliance Registry.

"Registration" or "Organization Registration" means the processes undertaken by NERC and Regional Entities to identify which entities are responsible for reliability functions within the Regional Entity's Region.

"Rejection of the Exception Request" or "Rejection" means the determination that an Exception Request is not an eligible Exception Request (i.e., a Request permitted by section 4.1 of Appendix 5C) or does not contain all the Required Information in accordance with section 4.5 of Appendix 5C in order to be reviewed for substance.

"Reliability Coordinator" means the entity that is the highest level of authority who is responsible for the Reliable Operation of the Bulk Electric System, has the Wide Area view of the Bulk Electric System, and has the operating tools, processes and procedures, including the authority to prevent or mitigate emergency operating situations in both next-day analysis and real-time operations. The Reliability Coordinator has the purview that is broad enough to enable the calculation of Interconnection Reliability Operating Limits, which may be based on the operating parameters of transmission systems beyond any Transmission Operator's vision.**

"Reliability Coordinator Area" means the collection of generation, transmission and loads within the boundaries of the Reliability Coordinator. Its boundary coincides with one or more Balancing Authority Areas.**

"Reliability Standard" means a requirement to provide for Reliable Operation of the Bulk Power System, including without limiting the foregoing, requirements for the operation of existing Bulk Power System Facilities, including cyber security protection, and including the design of planned additions or modifications to such Facilities to the extent necessary for Reliable Operation of the Bulk Power System, but the term does not include any requirement to enlarge Bulk Power System Facilities or to construct new transmission capacity or generation capacity. A Reliability Standard shall not be effective in the United States until approved by the Federal Energy Regulatory Commission and shall not be effective in other jurisdictions until made or allowed to become effective by the Applicable Governmental Authority.

"Reliability Standards Development Plan" means the forward-looking plan developed by NERC on an annual basis setting forth the Reliability Standards development projects that are scheduled to be worked on during the ensuing three-year period, as specified in Section 310 of the Rules of Procedure.

"Reliable Operation" means operating the Elements of the Bulk Power System within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or Cascading failures of such system will not occur as a result of a sudden disturbance, including a Cyber Security Incident, or unanticipated failure of system Elements.++

"Remedial Action Directive" means an action (other than a Penalty or sanction) required by a Compliance Enforcement Authority that (1) is to bring a Registered Entity into compliance with a Reliability Standard or to avoid a Reliability Standard violation, and (2) is immediately necessary to protect the reliability of the Bulk Power System from an imminent threat.

"Reporting Entity" means an entity required to provide data or information requested by NERC or a Regional Entity in a request for data or information pursuant to Section 1600 of the Rules of Procedure.

"Requirement" means an explicit statement in a Reliability Standard that identifies the functional entity responsible, the action or outcome that must be achieved, any conditions achieving the action or outcome, and the reliability-related benefit of the action or outcome. Each Requirement shall be a statement with which compliance is mandatory.

"Required Date" means the date given a Registered Entity in a notice from the Compliance Enforcement Authority by which some action by the Registered Entity is required.

"Required Information" means, as applicable, either (i) the information required to be provided in a TFE Request, as specified in Section 4.0 of Appendix 4D; or (ii) the information required to be provided in an Exception Request, as specified in section 4.0 of Appendix 5C.

"Reserve Sharing Group" means a group whose members consist of two or more Balancing Authorities that collectively maintain, allocate, and supply operating reserves required for each Balancing Authority's use in recovering from contingencies within the group. Scheduling energy from an Adjacent Balancing Authority to aid recovery need not constitute reserve sharing provided the transaction is ramped in over a period the supplying party could reasonably be expected to load generation in (e.g. ten minutes). If the transaction is ramped in quicker, (e.g., between zero and ten minutes), then, for the purposes of disturbance control performance, the areas become a Reserve Sharing Group.**

"Resource Planner" means the entity that develops a long-term (generally one year and beyond) plan for the resource adequacy of specific loads (customer demand and energy requirements) within a Planning Authority area.**

"Respondent" means, depending on the context, the Registered Entity, who is the subject of the Notice of Alleged Violation, contested Mitigation Plan or contested Remedial Action Directive that is the basis for the proceeding, whichever is applicable, or the Registered Entity that is the subject of the Certification decision that is the basis for a proceeding under Appendix 4E.

"Responsible Entity" means an entity that is registered for a reliability function in the NERC Compliance Registry and is responsible for complying with an Applicable Requirement, as specified in the "Applicability" section of the CIP Standard.

"Revoked" means a NERC certificate that has been suspended for more than twelve months. While in this state, a certificate holder can not perform any task that requires an operator to be NERC-certified. The certificate holder will be required to pass an exam to be certified again. Any CE Hours accumulated prior to or during the revocation period will not be counted towards Credential Maintenance.

"Revoke for Cause" means a step in the disciplinary process pursuant to Appendix 6 during which the certificate is no longer valid and requiring successfully passing an exam to become certified. However, an exam will not be authorized until the revocation period expires. CE Hours earned before or during this revocation period will not be counted for maintaining a Credential.

"Scope of Responsibility" means the registered functions of a Planning Authority, Reliability Coordinator, Transmission Operator, Transmission Planner or Balancing Authority and the geographical or electric region in which the Planning Authority, Reliability Coordinator, Transmission Operator, Transmission Planner or Balancing Authority operates to perform its registered functions, or with respect to a Regional Entity, its Regional Entity Region.

"Section I Required Information" means Required Information that is to be provided in Section I of a Submitting Entity's Exception Request.

"Section II Required Information" means Required Information that is to be provided in Section II of a Submitting Entity's Exception Request.

"Section III Required Information" means Required Information that is to be provided in Section III of a Submitting Entity's Exception Request.

"Sector" means a group of Members of NERC that are Bulk Power System owners, operators, or users or other persons and entities with substantially similar interests, including governmental entities, as pertinent to the purposes and operations of NERC and the operation of the Bulk Power System, as defined in Article II, Section 4 of the NERC Bylaws. Each Sector shall constitute a class of Members for purposes of the New Jersey Nonprofit Corporation Act.

"Segment" means one of the subsets of the Registered Ballot Body whose members meet the qualification criteria for the subset.

"Self-Certification" means attestation by a Registered Entity of compliance or non-compliance with a Reliability Standard for which Self-Certification is required by the Compliance Enforcement Authority and that is included for monitoring in the Regional Implementation Plan.

"Self-Reporting" means a report by a Registered Entity stating (1) that the Registered Entity believes it has violated a Reliability Standard, and (2) the actions that have been taken or will be taken to resolve the violation.

"Senior Manager" means the person assigned by the Responsible Entity, in accordance with CIP Standard CIP-003-1 Requirement R2 (or subsequent versions), to have overall responsibility for leading and managing the Responsible Entity's implementation of, and adherence to, the CIP Standards.

"Sink Balancing Authority" means the Balancing Authority in which the ~~l~~Load (sink) is located for an Interchange Transaction.**

"Source Balancing Authority" means the Balancing Authority in which the generation (source) is located for an Interchange Transaction.**

"Special Protection System" means an automatic protection system designed to detect abnormal or predetermined system conditions, and take corrective actions other than and/or in addition to the isolation of faulted components to maintain system reliability. Such action may include changes in demand, generation (MW and Mvar), or system configuration to maintain system

stability, acceptable voltage, or power flows. A Special Protection System does not include (a) underfrequency or undervoltage ~~l~~Load shedding or (b) fault conditions that must be isolated, or (c) out-of-step relaying (not designed as an integral part of a Special Protection System).**

"Spot Checking" means a process in which the Compliance Enforcement Authority requests a Registered Entity to provide information (1) to support the Registered Entity's Self-Certification, Self-Reporting, or Periodic Data Submittal and to assess whether the Registered Entity complies with Reliability Standards, or (2) as a random check, or (3) in response to events, as described in the Reliability Standards or based on operating problems or system events.

"Staff" or "Compliance Staff" means individuals employed or contracted by NERC or the Compliance Enforcement Authority who have the authority to make initial determinations of compliance or violation with Reliability Standards by Registered Entities and associated Penalties and Mitigation Plans.

"Strict Compliance" means compliance with the terms of an Applicable Requirement without reliance on a Technical Feasibility Exception.

"Submitting Entity" means (i) an owner, operator, or user of the Bulk Power System or any other party that submits information to NERC or a Regional Entity that it reasonably believes contains Confidential Information or, (ii) solely for purposes of Appendix 5C, the entity that submits an Exception Request in accordance with section 4.0 of Appendix 5C.

"Suspended" means certificate status due to an insufficient number of CE Hours being submitted prior to the expiration of a certificate. While in this state, a certificate holder can not perform any task that requires an operator to be NERC-certified.

"System" means a combination of generation, transmission and distribution components.**

"System Operating Limit" means the value (such as MW, Mvar, amperes, frequency or volts) that satisfies the most limiting of the prescribed operating criteria for a specified system configuration to ensure operation within acceptable reliability criteria.**

"Technical Advisor" means any Staff member, third-party contractor, or industry stakeholder who satisfies NERC's or the Compliance Enforcement Authority's (as applicable) conflict of interest policy and is selected to assist in a proceeding by providing technical advice to the Hearing Officer and/or the Hearing Body or Hearing Panel.

"Technical Feasibility Exception" or "TFE" means an exception from Strict Compliance with the terms of an Applicable Requirement on grounds of technical feasibility or technical limitations in accordance with one or more of the criteria in section 3.0 of Appendix 4D.

"Technical Review Panel" means a panel established pursuant to section 5.3 of Appendix 5C.

"Termination of Credential" means a step in the disciplinary process pursuant to Appendix 6 whereby a Credential is permanently Revoked.

"TFE Request" means a request submitted by a Responsible Entity in accordance with Appendix 4D for an exception from Strict Compliance with an Applicable Requirement.

"Transmission Customer" means 1. any eligible customer (or its designated agent) that can or does execute a Transmission Service agreement or can and does receive Transmission Service. 2. Any of the following responsible entities: Generator Owner, Load-Serving Entity, or Purchasing-Selling Entity.**

"Transmission Operator" means the entity responsible for the reliability of its "local" transmission system, and that operates or directs the operations of the transmission Facilities.**

"Transmission Owner" means the entity that owns and maintains transmission Facilities.**

"Transmission Planner" means the entity that develops a long-term (generally one year and beyond) plan for the reliability (adequacy) of the interconnected bulk electric transmission systems within its portion of the Planning Authority area.**

"Transmission Service" means services provided to the Transmission Customer by the Transmission Service Provider to move energy from a Point of Receipt to a Point of Delivery.**

"Transmission Service Provider" means the entity that administers the transmission tariff and provides Transmission Service to Transmission Customers under applicable Transmission Service agreements.**

"Type of CE Hours" means NERC-Approved Learning Activity covering topics from Appendix A to Appendix 6, NERC Reliability Standards and/or simulations for which there is a minimum requirement for Credential Maintenance.

"Variance" means an aspect or element of a Reliability Standard that applies only within a particular Regional Entity or group of Regional Entities, or to a particular entity or class of entities. A Variance allows an alternative approach to meeting the same reliability objective as the Reliability Standard, and is typically necessitated by a physical difference. A Variance is embodied within a Reliability Standard and as such, if adopted by NERC and approved by the Applicable Governmental Authority(ies), shall be enforced within the applicable Regional Entity or Regional Entities pursuant to delegated authorities or to procedures prescribed by the Applicable Governmental Authority.

"Violation Risk Factor" or "VRF" means a factor (lower, medium or high) assigned to each Requirement of a Reliability Standard to identify the potential reliability significance of noncompliance with the Requirement.

"Violation Severity Level" or "VSL" means a measure (lower, moderate, high or severe) of the degree to which compliance with a Requirement was not achieved.

"Wide Area" means the entire Reliability Coordinator Area as well as the critical flow and status information from adjacent Reliability Coordinator Areas as determined by detailed system studies to allow the calculation of Interconnected Reliability Operating Limits.**

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF REVISIONS TO ITS RULES OF PROCEDURE
TO ADOPT A BULK ELECTRIC SYSTEM EXCEPTION PROCEDURE

ATTACHMENT 4A

REVISED APPENDIX 3D OF THE RULES OF PROCEDURE,

REGISTERED BALLOT BODY CRITERIA

CLEAN VERSION

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Proposed Revisions 1-9-2012
[Incorporates revisions filed with FERC on November 29, 2012]

Appendix 3D

Registered Ballot Body Criteria

Effective: November 17, 2011

116 -390 Village Boulevard, Princeton, New Jersey 08540-5721

Phone: 609.452.8030 · Fax: 609.452.9550 · www.nerc.com

Appendix 3D — Development of the Registered Ballot Body[1]

Registration Procedures

The Registered Ballot Body comprises all organizations, entities, and individuals that:

1. Qualify for one of the Segments, and
2. Are registered with NERC as potential ballot participants in the voting on Reliability Standards, and
3. Are current with any designated fees.

Each participant, when initially registering to join the Registered Ballot Body, and annually thereafter, shall self-select to belong to one of the Segments described below.

NERC general counsel will review all applications for joining the Registered Ballot Body, and make a determination of whether the self-selection satisfies at least one of the guidelines to belong to that Segment. The entity or individual will then be "credentialed" to participate as a voting member of that Segment. The Standards Committee will decide disputes, with an appeal to the Board of Trustees.

All registrations will be done electronically.

Segment Qualification Guidelines

1. Except as set forth below, the Segment qualification guidelines are inclusive; i.e., any entity or individual with a legitimate interest in the reliability of the Bulk Power System that can meet any one of the guidelines for a Segment is entitled to belong to and vote in that Segment.

2. Corporations or organizations with integrated operations or with affiliates that qualify to belong to more than one Segment (e.g., transmission owners and Load Serving Entities) may belong to each of the Segments in which they qualify, provided that each Segment constitutes a separate membership and is represented by a different representative. Individuals or entities that elect to participate in Segment 8 are not eligible to participate in multiple Segments.

3. At any given time, affiliated entities may collectively be registered only once within a Segment.

4. Any individual or entity, such as a consultant or vendor, providing products or services related to Bulk Power System reliability within the previous 12 months to another entity eligible to join Segments 1 through 7 shall be qualified to join any one Segment for which one of the entities receiving those products or services is qualified to join.

5. Corporations, organizations, entities, and individuals may participate freely in all subgroups.

6. After their initial selection, registered participants may apply to change Segments annually, on a schedule determined by the Standards Committee.

---

[1] The Segment qualification guidelines were proposed in the final report of the NERC Standing Committees Representation Task Force on February 7, 2002. The Board of Trustees endorsed the industry Segments and weighted Segment voting model on February 20, 2002 and may change the model from time to time.

7. The qualification guidelines and rules for joining Segments will be reviewed periodically to ensure that the process continues to be fair, open, balanced, and inclusive. Public input will be solicited in the review of these guidelines.

8. Since all balloting of Reliability Standards will be done electronically, any registered participant may designate a proxy to vote on its behalf. There are no limits on how many proxies a person may hold. However, NERC must have in its possession, either in writing or by email, documentation that the voting right by proxy has been transferred.

Segments

Segment 1. Transmission Owners

a. Any entity that owns or controls at least 200 circuit miles of integrated transmission facilities, or has an Open Access Transmission Tariff or equivalent on file with a regulatory authority.

b. Transmission owners that have placed their transmission under the operational control of an RTO or ISO.

c. Independent transmission companies or organizations, merchant transmission developers, and transcos that are not RTOs or ISOs.

d. Excludes RTOs and ISOs that are eligible to join to Segment 2.

Segment 2. Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs)

a. Any entity authorized by appropriate governmental authority to operate as an RTO or ISO.

Segment 3. Load-Serving Entities (LSEs)

a. Entities serving end-use customers under a regulated tariff, a contract governed by a regulatory tariff, or other legal obligation to serve.

b. A member of a generation and transmission (G&T) cooperative or a joint-action agency is permitted to designate the G&T or joint-action agency to represent it in this Segment; such designation does not preclude the G&T or joint-action agency from participation and voting in another Segment representing its direct interests.

c. Agents or associations can represent groups of LSEs

Segment 4. Transmission Dependent Utilities (TDUs)

a. Entities with a regulatory, contractual, or other legal obligation to serve wholesale aggregators or customers or end-use customers and that depend primarily on the transmission systems of third parties to provide this service.

b. Agents or associations can represent groups of TDUs.

Segment 5. Electric Generators

a. Affiliated and independent generators, including variable and other renewable resources.

b. A corporation that sets up separate corporate entities for each one or more generating plants in which it is involved may only have one vote in this Segment regardless of how many single-plant or multiple-plant corporations the parent corporation has established or is involved in.

c. Agents or associations can represent groups of electrical generators.

Segment 6. Electricity Brokers, Aggregators, and Marketers

a. Entities serving end-use customers under a power marketing agreement or other authorization not classified as a regulated tariff.

b. An entity that buys, sells, or brokers energy and related services for resale in wholesale or retail markets, whether a non-jurisdictional entity operating within its charter or an entity licensed by a jurisdictional regulator.

c. G&T cooperatives and joint-action agencies that perform an electricity broker, aggregator, or marketer function are permitted to belong to this Segment.

d. Agents or associations can represent groups of electricity brokers, aggregators, or marketers.

e. This Segment also includes demand-side management providers.

Segment 7. Large Electricity End Users

a. At least one service delivery taken at 50 kV (radial supply or facilities dedicated to serve customers) that is not purchased for resale.

b. A single customer with an average aggregated service Load (not purchased for resale) of at least 50,000 MWh annually, excluding cogeneration or other back feed to the serving utility.

c. Agents or associations can represent groups of large end users.

Segment 8. Small Electricity Users

a. Service taken at below 50 kV.

b. A single customer with an average aggregated service Load (not purchased for resale) of less than 50,000 MWh annually, excluding cogeneration or other back feed to the serving utility.

c. Agents, state consumer advocates, or other advocate groups can represent groups of small customers.

d. Any entity or individual currently employed by an entity that is eligible to join one or more of the other nine Segments, shall not be qualified to join Segment 8.

e. Any individual or entity, such as a consultant, employee or vendor, providing products or services related to Bulk Power System reliability within the previous 12 months to another entity eligible to join Segments 1 through 7, including trade associations representing such Segments, shall be qualified to join any one Segment for which one of the entities receiving those products or services is qualified to join and shall not be eligible to join Segment 8.

Segment 9. Federal, State, and Provincial Regulatory or other Government Entities

a. Does not include federal power management agencies or the Tennessee Valley Authority.

b. May include public utility commissions.

Segment 10. Regional Entities

a. Any entity that is a Regional Entity. It is recognized that there may be instances in which an entity is both an RTO or ISO and a Regional Entity. In such a case, the two functions must be sufficiently independent to meet NERC's Rules of Procedure and applicable regulatory

requirements, as evidenced by the approval of a Regional Entity delegation agreement. Without such an approval, the entity shall be limited to choosing to enter one Segment or the other, but not both.

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF REVISIONS TO ITS RULES OF PROCEDURE
TO ADOPT A BULK ELECTRIC SYSTEM EXCEPTION PROCEDURE

ATTACHMENT 4B

REVISED APPENDIX 3D OF THE RULES OF PROCEDURE,

REGISTERED BALLOT BODY CRITERIA

REDLINED VERSION

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Proposed Revisions 1-9-2012
[Incorporates revisions filed with FERC on November 29, 2012]

Appendix 3D

Registered Ballot Body Criteria

Effective: November 17, 2011

116 -390 Village Boulevard, Princeton, New Jersey 08540-5721

Phone: 609.452.8030 · Fax: 609.452.9550 · www.nerc.com

Appendix 3D — Development of the Registered Ballot Body[1]

Registration Procedures

The Registered Ballot Body comprises all organizations, entities, and individuals that:

1. Qualify for one of the Segments, and
2. Are registered with NERC as potential ballot participants in the voting on Reliability Standards, and
3. Are current with any designated fees.

Each participant, when initially registering to join the Registered Ballot Body, and annually thereafter, shall self-select to belong to one of the Segments described below.

NERC general counsel will review all applications for joining the Registered Ballot Body, and make a determination of whether the self-selection satisfies at least one of the guidelines to belong to that Segment. The entity or individual will then be "credentialed" to participate as a voting member of that Segment. The Standards Committee will decide disputes, with an appeal to the Board of Trustees.

All registrations will be done electronically.

Segment Qualification Guidelines

1. Except as set forth below, the Segment qualification guidelines are inclusive; i.e., any entity or individual with a legitimate interest in the reliability of the Bulk Power System that can meet any one of the guidelines for a Segment is entitled to belong to and vote in that Segment.

2. Corporations or organizations with integrated operations or with affiliates that qualify to belong to more than one Segment (e.g., transmission owners and Load Serving Entities) may belong to each of the Segments in which they qualify, provided that each Segment constitutes a separate membership and is represented by a different representative. Individuals or entities that elect to participate in Segment 8 are not eligible to participate in multiple Segments.

3. At any given time, affiliated entities may collectively be registered only once within a Segment.

4. Any individual or entity, such as a consultant or vendor, providing products or services related to Bulk Power System reliability within the previous 12 months to another entity eligible to join Segments 1 through 7 shall be qualified to join any one Segment for which one of the entities receiving those products or services is qualified to join.

5. Corporations, organizations, entities, and individuals may participate freely in all subgroups.

6. After their initial selection, registered participants may apply to change Segments annually, on a schedule determined by the Standards Committee.

---

[1] The Segment qualification guidelines were proposed in the final report of the NERC Standing Committees Representation Task Force on February 7, 2002. The Board of Trustees endorsed the industry Segments and weighted Segment voting model on February 20, 2002 and may change the model from time to time.

7. The qualification guidelines and rules for joining Segments will be reviewed periodically to ensure that the process continues to be fair, open, balanced, and inclusive. Public input will be solicited in the review of these guidelines.

8. Since all balloting of Reliability Standards will be done electronically, any registered participant may designate a proxy to vote on its behalf. There are no limits on how many proxies a person may hold. However, NERC must have in its possession, either in writing or by email, documentation that the voting right by proxy has been transferred.

Segments

Segment 1. Transmission Owners

a. Any entity that owns or controls at least 200 circuit miles of integrated transmission facilities, or has an Open Access Transmission Tariff or equivalent on file with a regulatory authority.

b. Transmission owners that have placed their transmission under the operational control of an RTO or ISO.

c. Independent transmission companies or organizations, merchant transmission developers, and transcos that are not RTOs or ISOs.

d. Excludes RTOs and ISOs that are eligible to join to Segment 2.

Segment 2. Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs)

a. Any entity authorized by appropriate governmental authority to operate as an RTO or ISO.

Segment 3. Load-Serving Entities (LSEs)

a. Entities serving end-use customers under a regulated tariff, a contract governed by a regulatory tariff, or other legal obligation to serve.

b. A member of a generation and transmission (G&T) cooperative or a joint-action agency is permitted to designate the G&T or joint-action agency to represent it in this Segment; such designation does not preclude the G&T or joint-action agency from participation and voting in another Segment representing its direct interests.

c. Agents or associations can represent groups of LSEs

Segment 4. Transmission Dependent Utilities (TDUs)

a. Entities with a regulatory, contractual, or other legal obligation to serve wholesale aggregators or customers or end-use customers and that depend primarily on the transmission systems of third parties to provide this service.

b. Agents or associations can represent groups of TDUs.

Segment 5. Electric Generators

a. Affiliated and independent generators, including variable and other renewable resources.

b. A corporation that sets up separate corporate entities for each one or more generating plants in which it is involved may only have one vote in this Segment regardless of how many single-plant or multiple-plant corporations the parent corporation has established or is involved in.

c. Agents or associations can represent groups of electrical generators.

Segment 6. Electricity Brokers, Aggregators, and Marketers

a. Entities serving end-use customers under a power marketing agreement or other authorization not classified as a regulated tariff.

b. An entity that buys, sells, or brokers energy and related services for resale in wholesale or retail markets, whether a non-jurisdictional entity operating within its charter or an entity licensed by a jurisdictional regulator.

c. G&T cooperatives and joint-action agencies that perform an electricity broker, aggregator, or marketer function are permitted to belong to this Segment.

d. Agents or associations can represent groups of electricity brokers, aggregators, or marketers.

e. This Segment also includes demand-side management providers.

Segment 7. Large Electricity End Users

a. At least one service delivery taken at 50 kV (radial supply or facilities dedicated to serve customers) that is not purchased for resale.

b. A single customer with an average aggregated service Load~~load~~ (not purchased for resale) of at least 50,000 MWh annually, excluding cogeneration or other back feed to the serving utility.

c. Agents or associations can represent groups of large end users.

Segment 8. Small Electricity Users

a. Service taken at below 50 kV.

b. A single customer with an average aggregated service Load~~load~~ (not purchased for resale) of less than 50,000 MWh annually, excluding cogeneration or other back feed to the serving utility.

c. Agents, state consumer advocates, or other advocate groups can represent groups of small customers.

d. Any entity or individual currently employed by an entity that is eligible to join one or more of the other nine Segments, shall not be qualified to join Segment 8.

e. Any individual or entity, such as a consultant, employee or vendor, providing products or services related to Bulk Power System reliability within the previous 12 months to another entity eligible to join Segments 1 through 7, including trade associations representing such Segments, shall be qualified to join any one Segment for which one of the entities receiving those products or services is qualified to join and shall not be eligible to join Segment 8.

Segment 9. Federal, State, and Provincial Regulatory or other Government Entities

a. Does not include federal power management agencies or the Tennessee Valley Authority.

b. May include public utility commissions.

Segment 10. Regional Entities

a. Any entity that is a Regional Entity. It is recognized that there may be instances in which an entity is both an RTO or ISO and a Regional Entity. In such a case, the two functions must be sufficiently independent to meet NERC's Rules of Procedure and applicable regulatory

requirements, as evidenced by the approval of a Regional Entity delegation agreement. Without such an approval, the entity shall be limited to choosing to enter one Segment or the other, but not both.

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF REVISIONS TO ITS RULES OF PROCEDURE
TO ADOPT A BULK ELECTRIC SYSTEM EXCEPTION PROCEDURE

ATTACHMENT 5A

REVISED APPENDIX 4B OF THE RULES OF PROCEDURE,

SANCTION GUIDELINES OF THE

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

CLEAN VERSION

Appendix 4B

Proposed Revisions 1-9-2012
[Incorporates revisions filed with
FERC on November 29, 2011]

Sanction Guidelines of the North American Electric Reliability Corporation

Effective: January 1, 2011

Table of Contents

1. Preamble and Overview 1

2. Document Scope and Exclusions 2

3. Basic Principles 3
3.1 Necessary Element of NERC Compliance Program 3
3.2 Settlement of Compliance Violations 3
3.3 Settlement Request 4
3.4 Settlement Effect on Continuation of Determination of Penalties, Sanctions, or Remedial Actions 4
3.5 Timing of Determination of Penalty, Sanction or Remedial Action 4
3.6 Determining Party 4
3.7 No Influence of Penalty, Sanction or Remedial Action upon Violation Confirmation Process 4
3.8 Reasonable Relationship to Violation 4
3.9 Use and Facets of Factors to Determine Penalties 5
3.10 Multiple Violations 5
3.11 Relation of the Penalty to the Seriousness of the Violation and Violator's Ability to Pay 5
3.12 Violation Time Horizon 6
3.13 Extenuating Circumstances 7
3.14 Concealment or Intentional Violation 7
3.15 Economic Choice to Violate 7
3.16 No Influence by Outcome of Economic Choice to Violate 7
3.17 Non-Monetary Sanctions or Remedial Actions 7
3.18 Non-Exclusiveness of Monetary Penalties or Non-Monetary Sanctions 7
3.19 Monetization of the Value of Sanctions 7
3.20 Maximum Limitations on Penalties 8
3.21 Frequency and Duration of Violations 9

4. Determination of Monetary Penalties 11
4.1 Initial Value Range of the Base Penalty Amount 11
4.1.1 Violation Risk Factor 11
4.1.2 Violation Severity Level 11
4.2 Setting of the Base Penalty Amount 12
4.2.1 Applicability of the Violation Risk Factor 12
4.2.2 First Violation 12
4.3 Application of Adjustment Factors 13
4.3.1 Repetitive Violations and Compliance History 13
4.3.2 Failure to Comply with Compliance Directives 14
4.3.3 Self-Disclosure and Voluntary Corrective Action 14
4.3.4 Degree and Quality of Cooperation in Violation Investigation and Remedial Action 14
4.3.5 Presence and Quality of Compliance Program 14
4.3.6 Violation Concealment 14
4.3.7 Intentional Violation 15
4.3.8 Extenuating Circumstances 15
4.4 Setting of the Final Penalty Amount 15
4.4.1 Violator's Financial Ability to Pay 15
4.4.2 Reconfirmation of Disgorgement of Unjust Profit or Gain 16

5. Determination of Non-Monetary Sanctions 17

6. Remedial Action 18
6.1 Definition and Anticipated Use 18
6.2 Compliance Requirements 18
6.3 No Obligation to Issue 18

6.4 Scope of Application 18
6.5 Availability 19
6.6 No Impact on Confirmation of Violation, or Penalties or Sanctions 19
6.7 Types of Remedial Actions 19

Appendix A: Base Penalty Amount Table 20

1. Preamble and Overview

The North American Electric Reliability Corporation, as the Electric Reliability Organization (ERO), and Regional Entities to whom NERC has delegated authority (hereinafter referred to collectively as "Regional Entities" or individually as a "Regional Entity") shall determine and may levy monetary Penalties and non-monetary sanctions and remedial actions against owners, operators, and users of the Bulk Power System for violations of the Requirements of NERC Reliability Standards approved by the Federal Energy Regulatory Commission (FERC) and Applicable Governmental Authorities in Canada and/or Mexico. This document sets out the processes and principles to be followed, and factors that will be considered when determining Penalties, sanctions, or remedial actions for violations. Collectively these processes, principles and factors are NERC's Penalties, sanctions, and remedial action guidelines.

NERC and the Regional Entities will exclusively follow the directives, principles and processes in these Sanction Guidelines when determining Penalties, sanctions, or remedial action for a violation. However, adjustment factors are also provided to afford NERC or the Regional Entity the flexibility needed to accommodate the facts surrounding each violation. In this manner, rigid prescription of specific Penalty formulae can be avoided at the same time that appropriate limitations on the degree of discretion and flexibility available to address each violation on its merits is maintained. The outcome will be remedies that are commensurate and fair compared to the reliability impact of the violation and to remedies levied for similar violations, yet appropriately reflective of any unique facts and circumstances regarding the specific violation and violator.

The adjustment factors established in this document are generally consistent with those listed in the FERC Policy Statement on Enforcement issued on October 20, 2005. However, discussion of the factors presented in this document is not exhaustive as other facets of these factors, or other additional factors not discussed herein, may also be considered to determine a given Penalty, sanction, or remedial action, as NERC or the Regional Entity deems appropriate under the circumstances.

Regional Entities shall follow these guidelines to determine Penalties, sanctions, or remedial actions. NERC shall oversee the Regional Entities' application of the guidelines to ensure that acceptable levels of consistency are achieved. NERC's oversight will also ensure comparable outcomes; i.e. that there is acceptable similarity in the degree and type of sanction for violations constituting comparable levels of threat to reliability of the Bulk Power System. In order to facilitate this oversight, Regional Entities' reporting to NERC of Penalties and sanctions they have determined will be thorough and in sufficient detail that NERC can understand and reasonably replicate the outcomes reached; NERC may develop reporting requirements or a standard reporting form for use by the Regional Entities for this purpose, as NERC deems necessary or appropriate.

As experience is gained by NERC and the Regional Entities through the use and application of these guidelines, NERC will review the guidelines and may modify them as NERC deems appropriate or necessary. Authority delegated by NERC to the Regional Entities with respect to Penalties, sanctions, or remedial actions does not include the authority to modify these guidelines.

Any revision to this document or to the principles and factors identified or addressed within it must first be approved by the NERC Board, then by FERC, Applicable Governmental Authorities in Canada or Applicable Governmental Authorities in Mexico prior to becoming effective and applicable within the United States or these Applicable Governmental Authorities' respective jurisdictions.

2. Document Scope and Exclusions

This document identifies and discusses the processes and principles to be followed, and factors that will be considered to determine Penalties, sanctions, or remedial actions for violations of the Reliability Standards.

This document notes but does not otherwise address the progression of actions and steps that NERC or the Regional Entity will follow to process a violation from its initial incoming status upon discovery as a Possible Violation, through to its possible final determination as a Confirmed Violation. This is set out in the NERC Compliance Monitoring and Enforcement Program, Appendix 4C to the NERC Rules of Procedure.

This document notes but does not otherwise address how a Possible Violation or Alleged Violation is reviewed in order to confirm or dismiss it. NERC's process and requirements for this review are set out in the NERC Compliance Monitoring and Enforcement Program, Appendix 4C to the NERC Rules of Procedure. Regional Entities will undertake such reviews using the processes and requirements set out in the NERC Compliance Monitoring and Enforcement Program.

This document notes but does not otherwise address the processes and procedural steps by which a Confirmed Violation can be appealed, or by which a Penalty, sanction, or remedial action determined and levied for a violation can be appealed. These procedures are set out in the NERC Compliance Monitoring and Enforcement Program, Appendix 4C to the NERC Rules of Procedure, and applicable Regional Entity program documents.

The NERC Compliance Monitoring and Enforcement Program provides for the possibility of settlements within NERC or Regional Entity Compliance Monitoring and Enforcement Programs. This document makes reference to settlements too, but does not address them further.

3. Basic Principles

The following paragraphs identify and discuss the basic principles underpinning why and how NERC and the Regional Entities will determine Penalties, sanctions, and remedial actions for violations of the Requirements of the Reliability Standards.

The principles are unique and complimentary; the order in which they are presented does not set or indicate order of precedence.

3.1 Necessary Element of NERC Compliance Program

Primary objectives of NERC as the ERO include the promotion and enforcement of compliance with the Reliability Standards by owners, operators, and users of the Bulk Power System; Reliability Standards made mandatory by duly-authorized legislative bodies in the U.S and Canada, and designed to maintain and promote the reliability of the two countries' shared power grids. Consistent with these objectives, NERC and the Regional Entities will monitor and act to verify compliance with Reliability Standards' Requirements; however, beyond monitoring and acting only to verify compliance, NERC and the Regional Entities will also hold Bulk Power System owners, operators, and users — or their delegates — accountable for Confirmed Violations. This accountability will include determination and the possible levying of Penalties, sanctions, or remedial actions.

Penalties, sanctions, and remedial actions are valid and necessary mechanisms to NERC and the Regional Entities for the enforcement and promotion of compliance to the Reliability Standards, in part because they can:

a. promote compliance behavior;

b. provide deterrence to future incidents, actions or situations of noncompliance by the violator or others;

c. implement actions that will promptly correct behavior;

d. disgorge benefits that may or may have accrued to a violator as a consequence of violating;

e. visit upon a violator some portion of any damage their violation may or may have visited upon others.

Accordingly, the determination and potential levying of appropriate Penalties, sanctions, or remedial actions by NERC or the Regional Entity upon those responsible for violations shall be a required step within the NERC and Regional Entity Compliance Monitoring and Enforcement Programs.

3.2 Settlement of Compliance Violations

NERC and the Regional Entities shall maintain the reliability of the Bulk Power System by enforcing compliance with NERC and Regional Reliability Standards. NERC and Regional Entity Compliance Monitoring and Enforcements Programs will lay out how NERC and the Regional Entities will do this. In particular and by necessity, elements of these programs regarding the confirmation of violations, the determination and levying of Penalties, sanctions, or remedial actions, and appeals are rigid and legalistic in form and nature in order to respect the basic tenets of due process and natural justice inherent within United States and Canadian justice systems, respectively, upon which they are being based. However, absolute adherence to the Compliance Monitoring and Enforcement Programs, to the exclusion of other options, may not be the most appropriate, efficient or desirable means by which to achieve the end goal in all circumstances, to all entities party to a violation.

As set out in the NERC Compliance Monitoring and Enforcement Program, Appendix 4C to the NERC Rules of Procedure, violations of the Reliability Standards may be dealt with through settlements reached between NERC, Regional Entity and the Registered Entity or Entities to whom a Possible, Alleged, or Confirmed Violation is attributed to by NERC or the Regional Entity. Any provisions made within a settlement regarding Penalties, sanctions, or remedial actions can supersede

any corresponding Penalties, sanctions that would otherwise be determined pursuant to these guidelines.

3.3 Settlement Request

Any Registered Entity found in or being investigated for a violation may request settlement negotiations at any time, including prior to issuance of a Notice of Alleged Violation; however, NERC or the Regional Entity may decline to enter into or continue settlement negotiations after the Possible Violation or Alleged Violation becomes a Confirmed Violation.

3.4 Settlement Effect on Continuation of Determination of Penalties, Sanctions, or Remedial Actions

Until a settlement is finalized or parties to that settlement agree otherwise, NERC or the Regional Entity may continue activities and actions towards the determination and levying of a Penalty, sanction, or remedial action that would otherwise be applicable pursuant to these guidelines, or that will be applicable if the settlement is not finalized.

3.5 Timing of Determination of Penalty, Sanction or Remedial Action

All Possible Violations and Alleged Violations will be reviewed by NERC or the Regional Entity with the outcome that either the violation will be confirmed or the violation will be dismissed.

The Penalty, sanction, or other remedial action for a violation will be determined when the violation becomes a Confirmed Violation or is resolved as part of a settlement agreement.

At any time during confirmation review, hearing, or appeals NERC or the Regional Entity may determine that remedial action is warranted by the subject Registered Entity of the review, hearing, or appeals. NERC or the Regional Entity may direct that such remedial actions be undertaken by the subject Registered Entity at any time, including prior to confirmation of a violation, and without regulatory approval.

3.6 Determining Party

The determination of Penalty, sanction or other remedial action for a violation will generally be undertaken by the same entity determining the violation to be a Confirmed Violation, but subject to review by NERC if the determination is made by a Regional Entity.

3.7 No Influence of Penalty, Sanction or Remedial Action upon Violation Confirmation Process

The Penalty, sanction, or remedial action determined for a violation will not influence the outcome of the Regional Entity' or NERC's confirmation review of the violation. In particular, if the determination of Penalty, sanction, or remedial action for a probable violation is being undertaken by the same entity undertaking the confirmation review, the entity will insure that there is sufficient separation, in such terms as time, process, personnel or the like, to preclude that the Penalty, sanction, or remedial action determined influences the outcome of the confirmation review.

3.8 Reasonable Relationship to Violation

Penalties, sanctions, and remedial actions levied or applied for the violation of a Reliability Standard shall bear a reasonable relation to the seriousness of the violation while also reflecting consideration of the factors that these guidelines direct to take into account. In the United States, the legislation establishing mandatory enforceable Reliability Standards and the ERO requires that "Any penalty imposed … shall; (A) bear a reasonable relation to the seriousness of the violation; and (B) take into consideration the efforts of the user, owner, or operator to remedy the violation in a timely manner[1]."

[1] H.R.6, Energy Policy Act of 2005, Section 215, Paragraph e, subparagraph 6.

3.9 Use and Facets of Factors to Determine Penalties

Penalties levied for a given violation will be based on all facts and other information relevant to the incident or situation. To that end, these guidelines include factors which NERC and the Regional Entities will consider while determining the Penalty or sanction to be levied.

NERC considers, and these guidelines direct, that the presence of some factors within a violation aggravates the seriousness of that violation and should cause an increase or expansion of the Penalty to be levied. Conversely, the presence of some other factors mitigates that seriousness and should cause a decrease or reduction of the Penalty to be levied. Also, some factors may mitigate or aggravate, and should have commensurate impact. NERC considers, and these guidelines direct, that the absence of an aggravating or mitigating factor will have no impact, as opposed to a mitigating or aggravating impact, respectively, to a Penalty.

This document presents many of the relevant facets of the factors included in these guidelines. However, additional facets of these factors, or additional factors not discussed herein, may also be considered to determine a given Penalty, sanction, or remedial action, as NERC or the Regional Entity deems appropriate under the circumstances. Where additional factors or facets are used they will be identified and their use will be justified. The effect of using these factors or facets on the Penalty, sanction, or remedial action determined will also be fully and clearly disclosed.

3.10 Multiple Violations

A violation is a failure or inadequacy to meet a Requirement of a Reliability Standard by a party responsible to comply with that Requirement.

The failure or inadequacy of a violator to comply may involve more than one Reliability Standard or several Requirements of a single Reliability Standard; as such, multiple individual violations may be in play when Penalties, sanctions, or remedial actions for an incident or situation of noncompliance are being determined.

Strictly speaking, NERC or the Regional Entity can determine and levy a separate Penalty or sanction, or direct remedial action, upon a violator for each individual violation. However, in instances of multiple violations related to a single act or common incidence of noncompliance, NERC or the Regional Entity will generally determine and issue a single aggregate Penalty, sanction, or Remedial Action Directive bearing reasonable relationship to the aggregate of the related violations. The Penalty, sanction, or remedial action will not be that determined individually for the least serious of the violations; it will generally be at least as large or expansive as what would be called for individually for the most serious of the violations.

Some entities may be registered as being responsible for more than one function (e.g., Transmission Owner, Transmission Operator, Balancing Authority, Generation Operator), and a single Requirement in some Reliability Standards may apply to the responsible entity for several functions. Where several functions are performed by the same Registered Entity, a violation will be assessed against the Registered Entity, not against each function.

3.11 Relation of the Penalty to the Seriousness of the Violation and Violator's Ability to Pay

As discussed in Section 3.8, above, Penalties levied for the violation of a Reliability Standard shall bear a reasonable relation to the seriousness of the violation. The seriousness of a given violation by a given violator shall be assessed by review of the applicability of the Violation Risk Factors[2] associated with the violation to the characteristics of the violator's operation or power system. Size is a characteristic of a violator's operation or system. The size of the violator can be considered in the assessment but shall not be the only characteristic considered. Where size is considered in such a

[2] See Section 4 Part 4.11 for a discussion of these factors

review the facts relating to the violation in question will be reviewed such that the "actual" size of the violator is properly discerned and appropriately considered; the following are provided as illustrative examples:

- If the violator belongs to a generation and transmission cooperative or joint-action agency, size will be attributed to the particular violator, rather than to that generation and transmission cooperative or joint-action agency.
- If the violator constitutes part of a corporate family the size of the violator will be attributed to that violator alone, in the absence of any facts indicating involvement of the whole corporation or corporate affiliates of the violator.
- If the violator is an entity established solely as a shell to register as subject to one or more Reliability Standards the size of the entity will be disregarded in favor of consideration of the size of parent entity or any affiliates that NERC or the Regional Entity deems involved and constituting the "actual" size of the violator.

At the request of the violator, NERC or the Regional Entity may review the Penalty in light of the violator's financial ability to pay the Penalty. Financial ability shall include both the financial strength of the Registered Entity as well as its structure (e.g., for-profit versus non-profit). Where Penalties are reduced or eliminated NERC or the Regional Entity shall consider non-monetary sanctions or remedial action as alternatives or substitutes to the Penalty, pursuant to Sections 3.17, 3.18 and 3.19, below, of this document.

The above actions will: (i) promote that violators are penalized or sanctioned commensurate with the risk or effect that their specific violation of the Reliability Standards had or is having to the reliability of the Bulk Power System while also; (ii) mitigating overly burdensome Penalties to less consequential or financially-limited entities concurrent with; (iii) promoting that no Penalty is inconsequential to the violator to whom it is assessed. This will promote that Penalties levied for violations of Reliability Standards bear a reasonable relation to the seriousness of the violation while also addressing violators' ability to pay the Penalties they are assessed.

3.12 Violation Time Horizon

Reliability Standards involving longer and broader time horizons, such as long-term planning activities, may have a lesser immediate impact and pose less immediate risk to the reliability of the Bulk Power System than Reliability Standards addressing shorter and narrower timeframes, such as Registered Entities' conduct in real time. Similarly, Reliability Standards involving longer and broader time horizons typically will provide a longer time period over which to discover and remedy a violation when compared to Reliability Standards addressing more immediate activities such as next-day planning, same-day operations or real-time operations. Using a time horizon element in the determination of Penalties for violations provides for recognition of the "more immediate" nature — and hence higher risk — of the threat of some violations as opposed to the lesser-risk "future threat if not corrected" nature of other violations.

Penalties levied for the violation of a Reliability Standard shall consider the time horizon of the Reliability Standard violated; violations of Reliability Standards involving more immediate or real-time activities will generally incur larger Penalties than violations of Reliability Standards with longer or broader horizons.

Time horizons inherent in Reliability Standard Requirements are not reflected in their assigned Violation Risk Factors or Violation Severity Levels[3]. Accordingly, the time horizon element of a violation will be considered when determining the Base Penalty Amount[4] for the violation.

[3] See Section 4 Part 4.11 for a discussion of these factors.
[4] See Section 4 Part 4.2

The time horizon considered and its impact on the selection of the Base Penalty Amount for the violation will be decided upon by NERC or the Regional Entity based upon judgment and the facts of the violation. The rationale for the time horizon used and its impact on the setting of the Base Penalty Amount will be documented by NERC or the Regional Entity and provided within the Notice of Penalty issued for the violation.

3.13 Extenuating Circumstances

In unique extenuating circumstances, such as significant natural disasters, Penalties may be significantly reduced or eliminated.

3.14 Concealment or Intentional Violation

Penalties levied for the violation of a Reliability Standard shall always take into consideration any attempt by a violator to conceal the violation from NERC or the Regional Entity, or any intentional violation incurred for purposes other than a demonstrably good faith effort to avoid a significant and greater threat to the immediate reliability of the Bulk Power System.

3.15 Economic Choice to Violate

Owners, operators, and users of the Bulk Power System may be presented with situations or circumstances where compliance with the Reliability Standards preclude or reduce an economic gain that could be realized by violating the Reliability Standards. Penalties shall be sufficient to assure that entities responsible for complying with Reliability Standards do not find it attractive to make economic choices that cause or unduly risk violations to Reliability Standards, or risk or cause incidents resulting from violations of the Reliability Standards. Penalties levied to violators who have made such a choice shall reflect this aspect of the violation.

3.16 No Influence by Outcome of Economic Choice to Violate

Economic choices to violate are generally made for the violator's own potential gain, but making such a choice does not always result in all potential gains being realized or may result in damage or loss. However, irrespective of the outcome to the Registered Entity making an economic choice to violate, such decisions risk others' reliability, commonly without either their knowledge or consent. Penalties levied to violators making an economic choice to violate shall reflect only that the choice was made at all; the lack of or reduced magnitude of any actual benefit received, or any damage suffered, by the violator as a consequence of making this choice will have no influence on the determination of the Penalty to be levied.

3.17 Non-Monetary Sanctions or Remedial Actions

Enforcement actions taken by NERC or a Regional Entity are not limited to monetary Penalties; at the discretion of NERC or the Regional Entity, sanctions or remedial actions may also be applied and can include limitations on activities, functions, operations, or other appropriate sanctions, including the establishment of a reliability watch list composed of major violators.

3.18 Non-Exclusiveness of Monetary Penalties or Non-Monetary Sanctions

A non-monetary sanction may be imposed either in lieu of or in addition to a monetary Penalty imposed for the same Confirmed Violation, and vice versa. Imposition of a monetary Penalty or non-monetary sanction for a violation does not preclude the imposition of the other as long as, in combination, the aggregate Penalty continues to bear a reasonable relation to the seriousness of the violation.

3.19 Monetization of the Value of Sanctions

A significant element of NERC's oversight of Penalties, sanctions, and remedial action determined and levied by Regional Entities is ensuring acceptable similarity in the degree and type of sanction for violations constituting comparable levels of threat to the reliability of the Bulk Power System. It is also a requirement and a commitment of NERC and its designees that Penalties, sanctions, or

remedial actions levied or applied for the violation of a Reliability Standard bear reasonable relation to the seriousness of the violation. Specifically with respect to Penalties and sanctions, it is intuitive that it will be easier, more objective, and more transparent to monitor and test for acceptable similarity if (monetary) Penalties or monetized values of sanctions determined for violations are used as the primary basis of comparison, versus comparisons made on the basis of other (non-monetized) considerations. Similarly, there will be strong intuitiveness and transparency, particularly to those interested but not strongly familiar with the power industry, that the seriousness of a violation has been reasonably addressed if the consequences for it to the violator are determined and can be expressed clearly and quantifiably in monetary terms.

Penalties determined and levied by NERC or Regional Entities will by definition be valued in monetary terms: U.S or Canadian dollars. It will be the preference of NERC that (non-monetary) sanctions imposed either in lieu of or in addition to a Penalty include disclosure of the monetary value that the sanctions represent to the violator. It is intuitive that defensible monetary values for those sanctions will be most easily determined if the Penalty for the violation pursuant to these guidelines is first determined and then the sanctions to be levied are introduced and justified as appropriate alternatives to that Penalty or additions to a lesser Penalty. However, sanctions may be determined directly (e.g. without first determining a Penalty amount) and monetized using other methods.

NERC does not have a preference between Penalties and sanctions for violations. The preference expressed here will support ensuring comparability of outcomes regarding application of these guidelines and the promotion of reasonable relationship between the seriousness of a violation and the sanctions, or Penalties and sanctions, levied for it.

3.20 Maximum Limitations on Penalties

Penalties are direct, monetary judgments levied against a violator by NERC or the Regional Entity for the violation of Requirements of the Reliability Standards. In contrast, sanctions will impose limitations or restrictions of some kind that may result in economic or other impacts to the violator, and remedial actions are directives by NERC or a Regional Entity to the violator regarding the correction of conditions, practices or any other relevant action or activity underlying the noncompliance(s) involved.

In the United States, the Federal Power Act allows for the imposition of civil penalties of up to $1,000,000 per day per violation. NERC and the Regional Entities draw their authority to levy Penalties from the Federal Power Act; accordingly this figure is and can be understood as the maximum monetary Penalty that NERC or Regional Entities are authorized to levy. However, as this legislation also requires that "[a]ny penalty imposed … shall; (A) bear a reasonable relation to the seriousness of the violation; and (B) take into consideration the efforts of the user, owner, or operator to remedy the violation in a timely manner[5]**" *entities required to comply with the Reliability Standards must also understand that NERC and the Regional Entities will be obligated to assess Penalties amounts up to and including the maximum amount for violations where warranted pursuant to these guidelines.***

In Canadian jurisdictions, the maximum monetary Penalty potentially assessable for a Reliability Standard violation is significantly less than the amount allowed in the United States under the Federal Power Act. Also, legislation presently governing some Canadian jurisdictions does not accommodate the levying of such a Penalty under some circumstances, may not accommodate the levying of such a Penalty for all violations, or does not accommodate the levying of any monetary Penalties.

[5] H.R.6, Energy Policy Act of 2005, Section 215, Paragraph e, subparagraph 6.

When a Penalty may be levied, or proposed to Applicable Governmental Authorities with jurisdiction to be levied, the following steps will be followed:

a. NERC or the Regional Entity will initially disregard the Penalty limitations of the Applicable Governmental Authorities with jurisdiction, and determine what the Penalties or sanctions would be pursuant to these sanction guidelines only.

b. NERC or the Regional Entity will review the maximum Penalty allowed by the Applicable Governmental Authorities with jurisdiction.

c. NERC or the Regional Entity will set the actual Penalty to be levied, or proposed to the Applicable Governmental Authorities with jurisdiction to be levied, as the lesser of that determined pursuant to these guidelines and the maximum Penalty or sanction allowed by the Applicable Governmental Authorities.

d. If the lesser Penalty is the maximum Penalty allowed by the Applicable Governmental Authorities, the Notice of Penalty or similar document issued by NERC or the Regional Entity regarding the violation will also list the Penalty that was determined pursuant to these guidelines.

Adhering to the above steps will insure that the result of the determination of any Penalty for any violation will produce output that can be directly compared (i.e. without influence of local Applicable Governmental Authorities' Penalty limitations or restrictions) with the Penalty determined for any other violation, assisting efforts of NERC and others to ensure that these guidelines are uniformly applied and that there is an acceptable level of consistency in the application of these sanction guidelines across North America. Applicable Governmental Authorities with jurisdiction may also find such information useful for their determination of the appropriateness of any Penalty or sanction proposed to them to be levied. Similarly, policy and legislative bodies may find such information of value to the review or development of arrangements addressing such matters.

3.21 Frequency and Duration of Violations

Section 316A of the Federal Power Act [16 U.S.C. § 825o-1(b)], as amended by the Energy Policy Act of 2005, provides that "any person who violates any provision of Part II of this title or any provision of any rule or order thereunder shall be subject to a civil penalty of not more than $1,000,000 for each day that such violation continues."

FERC Order No. 672 interprets this statement as setting a cap on the monetary Penalties that the Commission, NERC and Regional Entities can impose under FPA section 215. FERC has referred to this statutory provision as imposing a maximum $1,000,000 "per day, per violation" Penalty and has directed that the ERO must ensure that in the U.S. such a Penalty amount ($1,000,000), in such a manner ("per day, per violation"), can be imposed for a violation of the Reliability Standards should the conduct at issue so warrant.

Some Reliability Standards may not support the assessment of Penalties on a "per day, per violation" basis, but instead should have Penalties calculated based on an alternative Penalty frequency or duration. Where NERC or the Regional Entity deems that a monetary Penalty is warranted, or where NERC or the Regional Entity is monetizing (Section 3.19) the value of a non-monetary sanction, for the violation of such a Reliability Standard NERC or the Regional Entity shall determine the Penalty or monetized amount consistent with the following:

Multiple Instances of Violation on One Day

The nature of some Reliability Standards includes the possibility that a Registered Entity could violate the same Requirement two or more times on the same day. In this instance NERC or the Regional Entity is not limited to penalizing the violator a maximum of $1,000,000 per day. As NERC or the Regional Entity deems appropriate NERC or the Regional Entity may deem that there have

been multiple violations that occurred on the same day, each of which is subject to the maximum potential Penalty of $1,000,000 per violation, per day. Also, NERC or the Regional Entity is not constrained to assessing the same Penalty amount for each of the multiple violations, irrespective of their proximity in time.

Cumulative Over Time

Certain Requirements of the Reliability Standards are measured not on the basis of discrete acts, but of cumulative acts over time. Reliability Standards that fall into this category are generally those involving measurements based on averages over a given period. Where a violation of such a Reliability Standard has occurred the element of averaging performance over a period of time introduces the difficulty to NERC or the Regional Entity of reasonably identifying (i) what date the violation should be deemed to have occurred and (ii) its duration.

If a Reliability Standard Requirement measured by an average over time can only be violated once per applicable period, then there is risk that a disproportionately mild Penalty might be levied in a situation where the violation was serious and the effects on the Bulk Power System severe. In the future, each Reliability Standard Requirement that is based on an average over time will specify the minimum period in which a violation could occur and how to determine when a violation arises, which may be other than once per applicable period[6]. In the interim until relevant Reliability Standards are so modified, any ambiguity on this point will be construed conservatively, meaning that where a Registered Entity has not complied with such a Reliability Standard NERC or the Regional Entity will generally consider that only one violation occurred per measurement period. However, notwithstanding this general principle of one violation per measurement period, if an average must be measured by a span of time greater than a month, each month of that span shall constitute at a minimum one violation.

Periodically Monitored Discrete Violation

Some Reliability Standards may involve discrete events which are only monitored periodically or which are reported by exception. If a Requirement of such a Reliability Standard states that a discrete event constitutes a violation, then (i) a violation arises when that event occurs and (ii) that violation continues until remedied; furthermore, (iii) the violation is deemed to have occurred at the point that the Registered Entity entered into noncompliance with the Reliability Standard regardless of the monitoring period for the activity or its date of discovery or reporting. For example, if a task required by a Reliability Standard Requirement has not been done by the required date, it is irrelevant that monitoring for compliance for the Requirement occurs only on a yearly or other periodic basis; NERC or the Regional Entity will deem a violation to have occurred on the first day of noncompliance and each day thereafter until compliance is effectuated. Similarly, if a discrete event occurs and is not remedied on the date of occurrence, then NERC or the Regional Entity will deem a violation to have occurred on the day of the first instance of the noncompliance and each day, or portion thereof thereafter until compliance is effectuated.

Non-compliance with a Reliability Standard of this type will subject the violator to the potential maximum monetary Penalty of $1,000,000 per violation per day in violation.

NERC or the Regional Entity is not constrained to assessing the same Penalty amount for each day that the Registered Entity was in violation of the Reliability Standard Requirement in question.

[6] Para. 41; FERC Order on Clarification and Rehearing [Docket No. RR06-1-006]

4. Determination of Monetary Penalties

The following describes the steps that NERC or the Regional Entity will follow to determine the monetary Penalty for a violation[7]. The determination of non-monetary sanctions is discussed in Section 5 of this document; Section 6 discusses remedial action.

Step 1. The Base Penalty Amount for the violation will be set as discussed in Sections 4.1 and 4.2, below.

Step 2. The Base Penalty Amount set in Step 1 will be reviewed pursuant to Section 4.3, below. This will result in the Adjusted Penalty Amount.

Step 3. The Adjusted Penalty Amount determined in Step 2 may be reviewed in light of the violator's financial ability to pay the Penalty. Also, where applicable NERC or the Regional Entity will reconfirm that the Penalty set will disgorge unjust profits or economic benefits associated with an economic choice to violate[8]. At the conclusion of this review the Final Penalty Amount will be set.

Unless NERC or the Regional Entity deems alternative frequency or duration is warranted Penalties shall be assessed on a per violation per day basis. Where NERC or the Regional Entity deems that alternative Penalty frequency or duration is warranted the Notice of Penalty associated with the violation will clearly identify this and provide the rationale for it. Where NERC or the Regional Entity deems that alternative Penalty frequency or duration is warranted, Penalties shall be determined in accordance with section 3.21 of the Sanction Guidelines.

4.1 Initial Value Range of the Base Penalty Amount

NERC or the Regional Entity will determine an initial value range for the Base Penalty Amount by considering two factors regarding the violation: the Violation Risk Factor (VRF) of the Requirement violated and the Violation Severity Level (VSL) assessed for the violation. Using the Base Penalty Amount Table provided in Appendix A NERC or the Regional Entity will look up the initial value range for the Base Penalty Amount by finding the intersection of the violation's VRF and VSL on the table[9].

4.1.1 Violation Risk Factor

Each Requirement set out within NERC's Reliability Standards has been assigned a Violation Risk Factor (VRF) through the NERC Reliability Standards development process. The factors have been defined and approved through the Reliability Standards development process and are assigned to Requirements to provide clear, concise and comparative association between the violation of a Requirement and the expected or potential impact of the violation to the reliability of the Bulk Power System. One of three defined levels of risk is assigned to each Reliability Standards Requirement: lower Violation Risk Factor, or; medium Violation Risk Factor, or; high Violation Risk Factor. Definitions of the factors can be found in appropriate Reliability Standards development process documentation.

4.1.2 Violation Severity Level

Violation Severity Levels (VSLs) are defined measurements of the degree to which a violator violated a Requirement of a Reliability Standard. Whereas Violation Risk Factors are determined pre-violation and indicate the relative potential impacts that violations of each

[7] The text in this section discusses the determination of a single Penalty for an individual violation; however, the process laid out is also applicable to determining the individual Penalties, or a single aggregate Penalty, for multiple violations that are associated with each other as discussed in Section 3 Part 3.1 of this document.
[8] Reference: Section 3 Parts 3.15 and 3.16.
[9] As discussed in Section 3 Part 3.1 of this document where there is more than one violation in play, but the violations are sufficiently associated, NERC or the Regional Entity may set a single initial value range that is appropriate in light of the individual VRF/VSL combinations of the violations.

Reliability Standard could pose to the reliability of the Bulk Power System, the Violation Severity Level is assessed post-violation and is an indicator of how severely the violator actually violated the Reliability Standard(s) Requirement(s) in question.

These guidelines utilize the Violation Severity Levels that have been established[10] by NERC for Requirements of the Reliability Standards. Up to four levels can be defined for each Requirement; the levels have been designated as: lower, moderate, high, and severe.

4.2 Setting of the Base Penalty Amount

NERC or the Regional Entity will set the Base Penalty Amount for the violation. The Base Penalty Amount set for the violation may be set at the highest figure of the initial value range determined pursuant to Section 4.1, above. However, NERC or the Regional Entity may set the Base Penalty Amount at or below the lowest figure of the initial value range in light of two specific circumstances regarding the violation and the violator, specifically:

a. The applicability of the Violation Risk Factor of the violation to the specific circumstances[11] of violator.

b. Whether this is an inconsequential first violation by the violator of the Reliability Standard(s) in question.

As noted in Section 3.12 NERC or the Regional Entity will consider the time horizon involved with the violation when setting the Base Penalty Amount for the violation. As also noted in Section 3.12 this consideration will be documented for inclusion in the Notice of Penalty issued for the violation.

The Penalty amount resulting from this review will be the Base Penalty Amount that is used as the basis for further adjustment pursuant to the factors discussed in the next section (4.3) of this document.

4.2.1 Applicability of the Violation Risk Factor

Violation Risk Factors are assigned to Reliability Standards' Requirements as indicators of the expected risk or harm to the Bulk Power System posed by the violation of a Requirement by a typical or median Registered Entity that is required to comply. NERC or the Regional Entity may consider the specific circumstances of the violator to determine if the violation of the Requirement in question actually produced the degree of risk or harm anticipated by the Violation Risk Factor. If that expected risk or harm was not or would not have been produced, NERC or the Regional Entity may set the Base Penalty Amount to a value it (i) deems appropriate and (ii) is within the initial value range set above pursuant to Section 4.1.

4.2.2 First Violation

If the actual or foreseen impact of the violation is judged to be inconsequential by NERC or the Regional Entity and the violation is the first incidence of violation of the Requirement in question by the violator, NERC or the Regional Entity may at its discretion: (i) set the Base Penalty Amount to a value it deems appropriate within the initial value range set above pursuant to Section 4.1, or (ii) excuse the Penalty for the violation (i.e. set the Base Penalty Amount to 0$).

This relief will generally not be afforded to the violator if NERC or the Regional Entity determines that the violator has a poor compliance record; e.g. the circumstances discussed in

[10] Assignment of these levels will be complete and filed with the Commission by March 1, 2008 in accordance with FERC Order on Compliance Filing dated June 7, 2007 [Docket No. RR06-1-007] .

[11] The circumstances of the violator will include but not be limited to, as appropriate: the violator's aggregate and net Load; interconnections characteristics such as voltage class and transfer ratings.

Section 4.3.1 have been an aggravating factor in one or more previous Penalties assessed to the violator.

This relief will not be available for consideration in instances where the violator has concealed or attempted to conceal the violation, failed or refused to comply with compliance directives from NERC or the Regional Entity, or intentionally violated for purposes other than a demonstrably good faith effort to avoid a significant and greater threat to the immediate reliability of the Bulk Power System.

4.3 Application of Adjustment Factors

Adjustment factors provide the opportunity to NERC or the Regional Entity to adjust the Base Penalty Amount to reflect the specific facts and circumstances material to each violation and violator.

These guidelines recognize and require that, as a minimum, NERC or the Regional Entity consider the following:

a. Repetitive violations and the violator's compliance history

b. Failure of the violator to comply with compliance directives

c. Self-disclosure and voluntary corrective action by the violator

d. Degree and quality of cooperation by the violator in the violation investigation and in any remedial action directed for the violation

e. The presence and quality of the violator's compliance program quality

f. Any attempt by the violator to conceal the violation

g. Intentional violations

h. Extenuating circumstances

Two documents issued by United States regulatory agencies will be instructive to NERC and the Regional Entities when they are determining Penalties for violations of the Reliability Standards: the FERC's Policy Statement on Enforcement issued on October 20, 2005 under Docket No. PL06-00, and; U.S Securities and Exchange Commission (SEC) Release No. 44969 under the Securities and Exchange Act of 1934, issued on October 23 2001, also concurrently issued by the SEC as Release No. 1470 under Accounting and Auditing Enforcement.

NERC or the Regional Entity may also consider other additional factors it deems appropriate under the circumstances as long as their use is clearly identified and adequately justified. The effect of using these factors will also be fully and clearly disclosed.

4.3.1 Repetitive Violations and Compliance History

A bulleted point under Paragraph 20 of the FERC Policy Statement on Enforcement highlights repeat offenses by a violator. If a violator has had repetitive infractions of the same or a closely-related Reliability Standard Requirement, particularly within a time frame defined within the Reliability Standard(s) or deemed appropriate by NERC or the Regional Entity in the absence of the Reliability Standard(s) defining the time frame, NERC or the Regional Entity shall consider some increase to the Penalty.

The term "violation reset time period" of a Reliability Standards Requirement may be defined or implied within a given Reliability Standard to describe the period of time generally required for a violator to continue operations without incidence of further violation(s) of the Reliability Standards, particularly of the initial or a similar Reliability Standard violated, in order to avoid or minimize consideration of the violator's previous violation history for sanctioning purposes in the event of a subsequent violation(s). NERC and the Regional

Entities shall exercise appropriate judgment and discretion in this regard as warranted, particularly where no reset time period is specifically set within the Reliability Standard violated. Repeat violations within violation reset time periods are aggravating factors in the determination of sanctioning. Accordingly, a violation history of no violations will produce no mitigation of the Penalty otherwise determined; a violation history of infrequent minor violations of lesser risk Requirements assessed lower Violation Severity Levels may result in small or no increase; a history of more frequent violations or previous violations of higher risk Requirements assessed more severe Violation Severity Levels will generally incur commensurately larger increases.

4.3.2 Failure to Comply with Compliance Directives

If the violator has violated Reliability Standard Requirements notwithstanding having received related compliance directives, such as for remedial action from NERC or the Regional Entity, NERC or the Regional Entity shall consider some increase to the Penalty.

4.3.3 Self-Disclosure and Voluntary Corrective Action

NERC or the Regional Entity shall consider whether a violator self-disclosed the violation prior to detection or intervention by NERC or the Regional Entity, and any action undertaken by the violator to correct the situation. NERC or the Regional Entity will be instructed in their consideration of these factors by the text of Paragraphs 24 and 25 of the FERC Policy Statement on Enforcement. As they deem warranted, NERC or the Regional Entity may reduce the violator's Penalty consistent with the cited sections of the FERC policy.

4.3.4 Degree and Quality of Cooperation in Violation Investigation and Remedial Action

NERC or the Regional Entity shall consider the degree and quality of the violator's cooperation with NERC or the Regional Entity in the investigation of the violation and any remedial action arising from it. NERC or the Regional Entity will be instructed in making their determination on this by the text of Paragraphs 26 and 27 of the FERC Policy Statement on Enforcement. NERC or the Regional Entity may adjust the violator's Penalty as they deem warranted commensurate with the cited sections of the FERC policy statement. This may result in an increase, a decrease or no change to the Penalty.

4.3.5 Presence and Quality of Compliance Program

NERC or the Regional Entity shall consider the presence and quality of the violator's compliance program. NERC or the Regional Entity will be instructed in making their determination on this factor by the text of Paragraphs 22 and 23 of the FERC Policy Statement on Enforcement. As they deem warranted, NERC or the Regional Entity may reduce the violator's Penalty consistent with the cited sections of the FERC policy. Consistent with the FERC policy NERC or the Regional Entity may not increase a violator's Penalty specifically on the grounds that the violator has no program or a poor quality program.

4.3.6 Violation Concealment

Two bulleted points under Paragraph 20 of the FERC Policy Statement on Enforcement highlight misrepresentation of material facts and resistance or impediment to inquiry of a violation. When determining a Penalty NERC or the Regional Entity shall consider any concealment or attempt to conceal the violation, or information needed to investigate the violation, on the part of the violator. If the violator concealed or attempted to conceal, some significant increase to the Penalty shall be considered; doubling of the Penalty otherwise determined is suggested. Conduct of this nature on more than one occasion regarding one violation, or with respect to more than one violation, should incur an even larger increase to the Penalty otherwise determined.

4.3.7 Intentional Violation

Another bulleted point under Paragraph 20 of the FERC Policy Statement on Enforcement highlights offenses as willful action by a violator. When determining a Penalty NERC or the Regional Entity shall consider if the violator intentionally violated without just cause; i.e., for purposes other than a demonstrably good faith effort to avoid a significant and greater threat to the immediate reliability of the Bulk Power System. If the violator engaged in such conduct, some significant increase to the Penalty shall be considered; doubling of the Penalty otherwise determined is suggested. If conduct of this nature has been detected on more than one occasion, NERC or the Regional Entity should assess an even larger increase to the Penalty otherwise determined.

NERC or the Regional Entity will consider violations attributable to an economic choice to violate as intentional violations. Consistent with the FERC Policy Statement on Enforcement any Penalty issued involving conduct of this manner shall as a minimum disgorge any profits or economic benefits acquired as a consequence of the behavior, whenever and to the extent that they can be determined or reasonably estimated.

4.3.8 Extenuating Circumstances

NERC or the Regional Entity will consider if there are extenuating circumstances regarding the violation that justify reduction or elimination of the Penalty otherwise determined.

Consideration of adjusting a Penalty for this factor would be inconsistent with NERC or the Regional Entity increasing a Penalty after consideration of any other factor included in this section of these guidelines, such as intentional violation without justifiable cause or concealment or attempt to conceal.

4.4 Setting of the Final Penalty Amount

The Adjusted Penalty Amount determined in Step 2 may be reviewed in light of the violator's financial ability to pay the Penalty. Also, if the violation was an economic choice, NERC or the Regional Entity will reconfirm that the Penalty set will disgorge any unjust profits or economic benefits. At the conclusion of this review the Final Penalty Amount will be set.

4.4.1 Violator's Financial Ability to Pay[12]

At the written request of the violator NERC or the Regional Entity will review the Penalty determined in Step 2 in light of relevant, verifiable information that the violator provides regarding their financial ability to pay. At the conclusion of this review NERC or the Regional Entity may:

1. Reduce the Penalty payable to an amount that NERC or the Regional Entity, as applicable, deems the violator has the financial ability to pay, or;
2. Excuse the Penalty amount payable, or;
3. Sustain the Penalty amount determined in Step 2.

Where the Penalty amount has been reduced or excused, NERC or the Regional Entity shall consider the assessment of appropriate non-monetary sanction(s) as a substitute or an alternative for the Penalty amount that has been excused or by which the Penalty has been reduced.

[12] NERC anticipates that this will be the primary vehicle for addressing the ability to pay of "not-for-profit" and other similar organizations.

4.4.2 Reconfirmation of Disgorgement of Unjust Profit or Gain

Notwithstanding the application of any other consideration or factor applicable to the determination of a just and reasonable Penalty for the violation, if the violation in question involved an economic choice to violate NERC or the Regional Entity shall reconfirm that the Penalty set meets the requirements set forth in Parts 3.15 and 3.16 of Section 3 of this document.

5. Determination of Non-Monetary Sanctions

The imposition of sanctions is not bounded to monetary Penalties. Non-monetary sanctions applied must be applied with the objective of promoting reliability and compliance with the Reliability Standards. Non-monetary sanctions may include, but not be limited to, the following:

a. Limitations on activities, functions, or operations

b. Placing an entity on a reliability watch list composed of major violators

6. Remedial Action Directives

6.1 Definition and Anticipated Use

Remedial Action Directives are directives that may be issued to a Bulk Power System owner, operator, or user to resolve an Alleged Violation of a Reliability Standard by addressing conditions, practices, or any other relevant action or activity that is immediately necessary to terminate or correct to protect the reliability of the Bulk Power System from an imminent threat. A Remedial Action Directive will be issued when NERC or the Regional Entity identifies an Alleged Violation of a Reliability Standard that must be corrected immediately to protect the reliability of the Bulk Power System from the imminent threat that NERC or the Regional Entity has identified.

NERC or the Regional Entity will generally employ Remedial Action Directives where they deem it necessary to clearly specify minimum corrective actions that the subject of the Remedial Action Directive must take; additionally or alternatively a Remedial Action Directive may clearly specify timelines within which the Registered Entity must take specified actions, complete specified tasks, or achieve specified outcomes. Also, to the extent NERC or the Regional Entity is authorized to do so, a Remedial Action Directive may communicate Penalties, sanctions, or further Remedial Action Directives that may be imposed should the specific Remedial Action Directive not be complied with by those to whom it has been issued. As a rule of thumb, Remedial Action Directives will be of use to NERC or the Regional Entity whenever any significant combination of specificity, clarity, or time is of the essence to address a threat to the reliability of the Bulk Power System brought on by lack of or inadequate compliance to the Reliability Standards.

6.2 Compliance Requirements

In the United States, the Commission has concluded that owners, operators, or users of the Bulk Power System must comply with Remedial Action Directives issued to them by NERC or a Regional Entity. Noncompliance with a Remedial Action Directive may result in a substantially increased Penalty or sanction.

Remedial Action Directives issued by NERC or the Regional Entity will include a deadline by which time the owner, operator, or user must complete requirements set out in the Remedial Action Directive, and by which time the Registered Entity must demonstrate compliance to the Remedial Action Directive to NERC or the Regional Entity that issued it. Failure or refusal to meet the requirements or deadlines set out in a Remedial Action Directive may itself result in further Remedial Action Directives or significantly increased Penalties or sanctions by NERC or the Regional Entity.

6.3 No Obligation to Issue

NERC or the Regional Entity may, but is not obligated, to issue Remedial Action Directives. Lack of being issued a Remedial Action Directive does not relieve a Bulk Power System owner, operator, or user from any responsibilities they otherwise have to comply or maintain compliance with Requirements of the Reliability Standards. Remedial Action Directives will be used by NERC or the Regional Entities only as they deem warranted, when they deem warranted.

6.4 Scope of Application

The scope of Remedial Action Directives issued by NERC or the Regional Entity will be limited to conditions, practices, or any other relevant actions or activities resulting in noncompliance, or that NERC or the Regional Entity considers at significant risk of becoming noncompliant, to Requirements of the Reliability Standards, and that present an imminent threat to the reliability of the Bulk Power System. However, beyond merely directing compliance or improved compliance with Reliability Standards' Requirements, where NERC or the Regional Entity is authorized to do so, the Remedial Action Directive may also stipulate how compliance or the improvement to compliance is to be achieved.

6.5 Availability

In the United States, the Commission has interpreted the Federal Power Act to authorize the NERC or the Regional Entity can issue a Remedial Action Directive prior to completion of the confirmation review of a probable violation, or prior to the determination of a Penalty or sanction for that violation. The Commission also concluded it is not necessary for NERC or the Regional Entity to acquire the Commission's or other regulators' approval prior to issuing Remedial Action Directives. Accordingly, NERC or the Regional Entity may issue Remedial Action Directives to Registered Entities in the United States whenever they deem it necessary or otherwise warranted to do so. Also, NERC or the Regional Entity may issue Remedial Action Directives to Registered Entities in the United States regarding a violation that is immediately necessary to terminate or correct to protect the reliability of the Bulk Power System from an imminent threat, irrespective of whether that violation is ultimately verified or dismissed by NERC or the Regional Entity's investigation of the violation.

6.6 No Impact on Confirmation of Violation, or Penalties or Sanctions

Remedial Action Directives issued regarding a violation, in particular any costs incurred by the violator to comply with any such Remedial Action Directive, will not be considered when reviewing whether the aggregate of any Penalties and sanctions levied for that violation bear a reasonable relation to the seriousness of the violation. Also, any Remedial Action Directives issued with respect to a violation will not influence the outcome of the confirmation review of that violation nor the determination of Penalties or sanctions for that violation; ordering a violator to correct what needs correcting anyway is no grounds for dispelling a violation nor reducing or eliminating a Penalty or sanction that would otherwise be determined appropriate for the violator for that violation.

6.7 Types of Remedial Actions

NERC or the Regional Entities may issue Remedial Action Directives to correct compliance with NERC or Regional Reliability Standards and reduce or eliminate imminent threats to the reliability of the Bulk Power System. Examples of Remedial Action Directives include:

a. Specifying operating or planning criteria, limits, or limitations

b. Requiring specific system studies

c. Defining operating practices or guidelines

d. Requiring confirmation of data, practices, or procedures through inspection testing or other methods

e. Requiring specific training for personnel

f. Requiring development of specific operating plans

Appendix A: Base Penalty Amount Table

The following lists the Base Penalty amounts corresponding to combinations of Violation Risk Factor and Violation Severity Level.

Violation Risk Factor	Violation Severity Level							
	Lower		Moderate		High		Severe	
	Range Limits		Range Limits		Range Limits		Range Limits	
	Low	High	Low	High	Low	High	Low	High
Lower	$1,000	$3,000	$2,000	$7,500	$3,000	$15,000	$5,000	$25,000
Medium	$2,000	$30,000	$4,000	$100,000	$6,000	$200,000	$10,000	$335,000
High	$4,000	$125,000	$8,000	$300,000	$12,000	$625,000	$20,000	$1,000,000

NOTE: This table describes the amount of Penalty that could be applied for each day that a violation continues, subject to the considerations of Section 3.21 regarding frequency and duration of violations.

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF REVISIONS TO ITS RULES OF PROCEDURE
TO ADOPT A BULK ELECTRIC SYSTEM EXCEPTION PROCEDURE

ATTACHMENT 5B

REVISED APPENDIX 4B OF THE RULES OF PROCEDURE,

SANCTION GUIDELINES OF THE

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

REDLINED VERSION

Appendix 4B

Proposed Revisions 1-9-2012
[Incorporates revisions filed with
FERC on November 29, 2011]

Sanction Guidelines of the North American Electric Reliability Corporation

Effective: January 1, 2011

Table of Contents

1. Preamble and Overview 1

2. Document Scope and Exclusions 2

3. Basic Principles 3
3.1 Necessary Element of NERC Compliance Program 3
3.2 Settlement of Compliance Violations 3
3.3 Settlement Request 4
3.4 Settlement Effect on Continuation of Determination of Penalties, Sanctions, or Remedial Actions 4
3.5 Timing of Determination of Penalty, Sanction or Remedial Action 4
3.6 Determining Party 4
3.7 No Influence of Penalty, Sanction or Remedial Action upon Violation Confirmation Process 4
3.8 Reasonable Relationship to Violation 4
3.9 Use and Facets of Factors to Determine Penalties 5
3.10 Multiple Violations 5
3.11 Relation of the Penalty to the Seriousness of the Violation and Violator's Ability to Pay 5
3.12 Violation Time Horizon 6
3.13 Extenuating Circumstances 7
3.14 Concealment or Intentional Violation 7
3.15 Economic Choice to Violate 7
3.16 No Influence by Outcome of Economic Choice to Violate 7
3.17 Non-Monetary Sanctions or Remedial Actions 7
3.18 Non-Exclusiveness of Monetary Penalties or Non-Monetary Sanctions 7
3.19 Monetization of the Value of Sanctions 7
3.20 Maximum Limitations on Penalties 8
3.21 Frequency and Duration of Violations 9

4. Determination of Monetary Penalties 11
4.1 Initial Value Range of the Base Penalty Amount 11
4.1.1 Violation Risk Factor 11
4.1.2 Violation Severity Level 11
4.2 Setting of the Base Penalty Amount 12
4.2.1 Applicability of the Violation Risk Factor 12
4.2.2 First Violation 12
4.3 Application of Adjustment Factors 13
4.3.1 Repetitive Violations and Compliance History 13
4.3.2 Failure to Comply with Compliance Directives 14
4.3.3 Self-Disclosure and Voluntary Corrective Action 14
4.3.4 Degree and Quality of Cooperation in Violation Investigation and Remedial Action 14
4.3.5 Presence and Quality of Compliance Program 14
4.3.6 Violation Concealment 14
4.3.7 Intentional Violation 15
4.3.8 Extenuating Circumstances 15
4.4 Setting of the Final Penalty Amount 15
4.4.1 Violator's Financial Ability to Pay 15
4.4.2 Reconfirmation of Disgorgement of Unjust Profit or Gain 16

5. Determination of Non-Monetary Sanctions 17

6. Remedial Action 18
6.1 Definition and Anticipated Use 18
6.2 Compliance Requirements 18
6.3 No Obligation to Issue 18

6.4 Scope of Application 18
6.5 Availability 19
6.6 No Impact on Confirmation of Violation, or Penalties or Sanctions 19
6.7 Types of Remedial Actions 19

Appendix A: Base Penalty Amount Table 20

1. Preamble and Overview

The North American Electric Reliability Corporation, as the Electric Reliability Organization (ERO), and Regional Entities to whom NERC has delegated authority (hereinafter referred to collectively as "Regional Entities" or individually as a "Regional Entity") shall determine and may levy monetary Penalties and non-monetary sanctions and remedial actions against owners, operators, and users of the Bulk Power System for violations of the Requirements of NERC Reliability Standards approved by the Federal Energy Regulatory Commission (FERC) and Applicable Governmental Authorities in Canada and/or Mexico. This document sets out the processes and principles to be followed, and factors that will be considered when determining Penalties, sanctions, or remedial actions for violations. Collectively these processes, principles and factors are NERC's Penalties, sanctions, and remedial action guidelines.

NERC and the Regional Entities will exclusively follow the directives, principles and processes in these Sanction Guidelines when determining Penalties, sanctions, or remedial action for a violation. However, adjustment factors are also provided to afford NERC or the Regional Entity the flexibility needed to accommodate the facts surrounding each violation. In this manner, rigid prescription of specific Penalty formulae can be avoided at the same time that appropriate limitations on the degree of discretion and flexibility available to address each violation on its merits is maintained. The outcome will be remedies that are commensurate and fair compared to the reliability impact of the violation and to remedies levied for similar violations, yet appropriately reflective of any unique facts and circumstances regarding the specific violation and violator.

The adjustment factors established in this document are generally consistent with those listed in the FERC Policy Statement on Enforcement issued on October 20, 2005. However, discussion of the factors presented in this document is not exhaustive as other facets of these factors, or other additional factors not discussed herein, may also be considered to determine a given Penalty, sanction, or remedial action, as NERC or the Regional Entity deems appropriate under the circumstances.

Regional Entities shall follow these guidelines to determine Penalties, sanctions, or remedial actions. NERC shall oversee the Regional Entities' application of the guidelines to ensure that acceptable levels of consistency are achieved. NERC's oversight will also ensure comparable outcomes; i.e. that there is acceptable similarity in the degree and type of sanction for violations constituting comparable levels of threat to reliability of the Bulk Power System. In order to facilitate this oversight, Regional Entities' reporting to NERC of Penalties and sanctions they have determined will be thorough and in sufficient detail that NERC can understand and reasonably replicate the outcomes reached; NERC may develop reporting requirements or a standard reporting form for use by the Regional Entities for this purpose, as NERC deems necessary or appropriate.

As experience is gained by NERC and the Regional Entities through the use and application of these guidelines, NERC will review the guidelines and may modify them as NERC deems appropriate or necessary. Authority delegated by NERC to the Regional Entities with respect to Penalties, sanctions, or remedial actions does not include the authority to modify these guidelines.

Any revision to this document or to the principles and factors identified or addressed within it must first be approved by the NERC Board, then by FERC, Applicable Governmental Authorities in Canada or Applicable Governmental Authorities in Mexico prior to becoming effective and applicable within the United States or these Applicable Governmental Authorities' respective jurisdictions.

2. Document Scope and Exclusions

This document identifies and discusses the processes and principles to be followed, and factors that will be considered to determine Penalties, sanctions, or remedial actions for violations of the Reliability Standards.

This document notes but does not otherwise address the progression of actions and steps that NERC or the Regional Entity will follow to process a violation from its initial incoming status upon discovery as a Possible Violation, through to its possible final determination as a Confirmed Violation. This is set out in the NERC Compliance Monitoring and Enforcement Program, Appendix 4C to the NERC Rules of Procedure.

This document notes but does not otherwise address how a Possible Violation or Alleged Violation is reviewed in order to confirm or dismiss it. NERC's process and requirements for this review are set out in the NERC Compliance Monitoring and Enforcement Program, Appendix 4C to the NERC Rules of Procedure. Regional Entities will undertake such reviews using the processes and requirements set out in the NERC Compliance Monitoring and Enforcement Program.

This document notes but does not otherwise address the processes and procedural steps by which a Confirmed Violation can be appealed, or by which a Penalty, sanction, or remedial action determined and levied for a violation can be appealed. These procedures are set out in the NERC Compliance Monitoring and Enforcement Program, Appendix 4C to the NERC Rules of Procedure, and applicable Regional Entity program documents.

The NERC Compliance Monitoring and Enforcement Program provides for the possibility of settlements within NERC or Regional Entity Compliance Monitoring and Enforcement Programs. This document makes reference to settlements too, but does not address them further.

3. Basic Principles

The following paragraphs identify and discuss the basic principles underpinning why and how NERC and the Regional Entities will determine Penalties, sanctions, and remedial actions for violations of the Requirements of the Reliability Standards.

The principles are unique and complimentary; the order in which they are presented does not set or indicate order of precedence.

3.1 Necessary Element of NERC Compliance Program

Primary objectives of NERC as the ERO include the promotion and enforcement of compliance with the Reliability Standards by owners, operators, and users of the Bulk Power System; Reliability Standards made mandatory by duly-authorized legislative bodies in the U.S and Canada, and designed to maintain and promote the reliability of the two countries' shared power grids. Consistent with these objectives, NERC and the Regional Entities will monitor and act to verify compliance with Reliability Standards' Requirements; however, beyond monitoring and acting only to verify compliance, NERC and the Regional Entities will also hold Bulk Power System owners, operators, and users — or their delegates — accountable for Confirmed Violations. This accountability will include determination and the possible levying of Penalties, sanctions, or remedial actions.

Penalties, sanctions, and remedial actions are valid and necessary mechanisms to NERC and the Regional Entities for the enforcement and promotion of compliance to the Reliability Standards, in part because they can:

a. promote compliance behavior;

b. provide deterrence to future incidents, actions or situations of noncompliance by the violator or others;

c. implement actions that will promptly correct behavior;

d. disgorge benefits that may or may have accrued to a violator as a consequence of violating;

e. visit upon a violator some portion of any damage their violation may or may have visited upon others.

Accordingly, the determination and potential levying of appropriate Penalties, sanctions, or remedial actions by NERC or the Regional Entity upon those responsible for violations shall be a required step within the NERC and Regional Entity Compliance Monitoring and Enforcement Programs.

3.2 Settlement of Compliance Violations

NERC and the Regional Entities shall maintain the reliability of the Bulk Power System by enforcing compliance with NERC and Regional Reliability Standards. NERC and Regional Entity Compliance Monitoring and Enforcements Programs will lay out how NERC and the Regional Entities will do this. In particular and by necessity, elements of these programs regarding the confirmation of violations, the determination and levying of Penalties, sanctions, or remedial actions, and appeals are rigid and legalistic in form and nature in order to respect the basic tenets of due process and natural justice inherent within United States and Canadian justice systems, respectively, upon which they are being based. However, absolute adherence to the Compliance Monitoring and Enforcement Programs, to the exclusion of other options, may not be the most appropriate, efficient or desirable means by which to achieve the end goal in all circumstances, to all entities party to a violation.

As set out in the NERC Compliance Monitoring and Enforcement Program, Appendix 4C to the NERC Rules of Procedure, violations of the Reliability Standards may be dealt with through settlements reached between NERC, Regional Entity and the Registered Entity or Entities to whom a Possible, Alleged, or Confirmed Violation is attributed to by NERC or the Regional Entity. Any provisions made within a settlement regarding Penalties, sanctions, or remedial actions can supersede

any corresponding Penalties, sanctions that would otherwise be determined pursuant to these guidelines.

3.3 Settlement Request

Any Registered Entity found in or being investigated for a violation may request settlement negotiations at any time, including prior to issuance of a Notice of Alleged Violation; however, NERC or the Regional Entity may decline to enter into or continue settlement negotiations after the Possible Violation or Alleged Violation becomes a Confirmed Violation.

3.4 Settlement Effect on Continuation of Determination of Penalties, Sanctions, or Remedial Actions

Until a settlement is finalized or parties to that settlement agree otherwise, NERC or the Regional Entity may continue activities and actions towards the determination and levying of a Penalty, sanction, or remedial action that would otherwise be applicable pursuant to these guidelines, or that will be applicable if the settlement is not finalized.

3.5 Timing of Determination of Penalty, Sanction or Remedial Action

All Possible Violations and Alleged Violations will be reviewed by NERC or the Regional Entity with the outcome that either the violation will be confirmed or the violation will be dismissed.

The Penalty, sanction, or other remedial action for a violation will be determined when the violation becomes a Confirmed Violation or is resolved as part of a settlement agreement.

At any time during confirmation review, hearing, or appeals NERC or the Regional Entity may determine that remedial action is warranted by the subject Registered Entity of the review, hearing, or appeals. NERC or the Regional Entity may direct that such remedial actions be undertaken by the subject Registered Entity at any time, including prior to confirmation of a violation, and without regulatory approval.

3.6 Determining Party

The determination of Penalty, sanction or other remedial action for a violation will generally be undertaken by the same entity determining the violation to be a Confirmed Violation, but subject to review by NERC if the determination is made by a Regional Entity.

3.7 No Influence of Penalty, Sanction or Remedial Action upon Violation Confirmation Process

The Penalty, sanction, or remedial action determined for a violation will not influence the outcome of the Regional Entity' or NERC's confirmation review of the violation. In particular, if the determination of Penalty, sanction, or remedial action for a probable violation is being undertaken by the same entity undertaking the confirmation review, the entity will insure that there is sufficient separation, in such terms as time, process, personnel or the like, to preclude that the Penalty, sanction, or remedial action determined influences the outcome of the confirmation review.

3.8 Reasonable Relationship to Violation

Penalties, sanctions, and remedial actions levied or applied for the violation of a Reliability Standard shall bear a reasonable relation to the seriousness of the violation while also reflecting consideration of the factors that these guidelines direct to take into account. In the United States, the legislation establishing mandatory enforceable Reliability Standards and the ERO requires that "Any penalty imposed … shall; (A) bear a reasonable relation to the seriousness of the violation; and (B) take into consideration the efforts of the user, owner, or operator to remedy the violation in a timely manner[1]."

[1] H.R.6, Energy Policy Act of 2005, Section 215, Paragraph e, subparagraph 6.

3.9 Use and Facets of Factors to Determine Penalties

Penalties levied for a given violation will be based on all facts and other information relevant to the incident or situation. To that end, these guidelines include factors which NERC and the Regional Entities will consider while determining the Penalty or sanction to be levied.

NERC considers, and these guidelines direct, that the presence of some factors within a violation aggravates the seriousness of that violation and should cause an increase or expansion of the Penalty to be levied. Conversely, the presence of some other factors mitigates that seriousness and should cause a decrease or reduction of the Penalty to be levied. Also, some factors may mitigate or aggravate, and should have commensurate impact. NERC considers, and these guidelines direct, that the absence of an aggravating or mitigating factor will have no impact, as opposed to a mitigating or aggravating impact, respectively, to a Penalty.

This document presents many of the relevant facets of the factors included in these guidelines. However, additional facets of these factors, or additional factors not discussed herein, may also be considered to determine a given Penalty, sanction, or remedial action, as NERC or the Regional Entity deems appropriate under the circumstances. Where additional factors or facets are used they will be identified and their use will be justified. The effect of using these factors or facets on the Penalty, sanction, or remedial action determined will also be fully and clearly disclosed.

3.10 Multiple Violations

A violation is a failure or inadequacy to meet a Requirement of a Reliability Standard by a party responsible to comply with that Requirement.

The failure or inadequacy of a violator to comply may involve more than one Reliability Standard or several Requirements of a single Reliability Standard; as such, multiple individual violations may be in play when Penalties, sanctions, or remedial actions for an incident or situation of noncompliance are being determined.

Strictly speaking, NERC or the Regional Entity can determine and levy a separate Penalty or sanction, or direct remedial action, upon a violator for each individual violation. However, in instances of multiple violations related to a single act or common incidence of noncompliance, NERC or the Regional Entity will generally determine and issue a single aggregate Penalty, sanction, or Remedial Action Directive bearing reasonable relationship to the aggregate of the related violations. The Penalty, sanction, or remedial action will not be that determined individually for the least serious of the violations; it will generally be at least as large or expansive as what would be called for individually for the most serious of the violations.

Some entities may be registered as being responsible for more than one function (e.g., Transmission Owner, Transmission Operator, Balancing Authority, Generation Operator), and a single Requirement in some Reliability Standards may apply to the responsible entity for several functions. Where several functions are performed by the same Registered Entity, a violation will be assessed against the Registered Entity, not against each function.

3.11 Relation of the Penalty to the Seriousness of the Violation and Violator's Ability to Pay

As discussed in Section 3.8, above, Penalties levied for the violation of a Reliability Standard shall bear a reasonable relation to the seriousness of the violation. The seriousness of a given violation by a given violator shall be assessed by review of the applicability of the Violation Risk Factors[2] associated with the violation to the characteristics of the violator's operation or power system. Size is a characteristic of a violator's operation or system. The size of the violator can be considered in the assessment but shall not be the only characteristic considered. Where size is considered in such a

[2] See Section 4 Part 4.11 for a discussion of these factors

review the facts relating to the violation in question will be reviewed such that the "actual" size of the violator is properly discerned and appropriately considered; the following are provided as illustrative examples:

- If the violator belongs to a generation and transmission cooperative or joint-action agency, size will be attributed to the particular violator, rather than to that generation and transmission cooperative or joint-action agency.
- If the violator constitutes part of a corporate family the size of the violator will be attributed to that violator alone, in the absence of any facts indicating involvement of the whole corporation or corporate affiliates of the violator.
- If the violator is an entity established solely as a shell to register as subject to one or more Reliability Standards the size of the entity will be disregarded in favor of consideration of the size of parent entity or any affiliates that NERC or the Regional Entity deems involved and constituting the "actual" size of the violator.

At the request of the violator, NERC or the Regional Entity may review the Penalty in light of the violator's financial ability to pay the Penalty. Financial ability shall include both the financial strength of the Registered Entity as well as its structure (e.g., for-profit versus non-profit). Where Penalties are reduced or eliminated NERC or the Regional Entity shall consider non-monetary sanctions or remedial action as alternatives or substitutes to the Penalty, pursuant to Sections 3.17, 3.18 and 3.19, below, of this document.

The above actions will: (i) promote that violators are penalized or sanctioned commensurate with the risk or effect that their specific violation of the Reliability Standards had or is having to the reliability of the Bulk Power System while also; (ii) mitigating overly burdensome Penalties to less consequential or financially-limited entities concurrent with; (iii) promoting that no Penalty is inconsequential to the violator to whom it is assessed. This will promote that Penalties levied for violations of Reliability Standards bear a reasonable relation to the seriousness of the violation while also addressing violators' ability to pay the Penalties they are assessed.

3.12 Violation Time Horizon

Reliability Standards involving longer and broader time horizons, such as long-term planning activities, may have a lesser immediate impact and pose less immediate risk to the reliability of the Bulk Power System than Reliability Standards addressing shorter and narrower timeframes, such as Registered Entities' conduct in real time. Similarly, Reliability Standards involving longer and broader time horizons typically will provide a longer time period over which to discover and remedy a violation when compared to Reliability Standards addressing more immediate activities such as next-day planning, same-day operations or real-time operations. Using a time horizon element in the determination of Penalties for violations provides for recognition of the "more immediate" nature — and hence higher risk — of the threat of some violations as opposed to the lesser-risk "future threat if not corrected" nature of other violations.

Penalties levied for the violation of a Reliability Standard shall consider the time horizon of the Reliability Standard violated; violations of Reliability Standards involving more immediate or real-time activities will generally incur larger Penalties than violations of Reliability Standards with longer or broader horizons.

Time horizons inherent in Reliability Standard Requirements are not reflected in their assigned Violation Risk Factors or Violation Severity Levels[3]. Accordingly, the time horizon element of a violation will be considered when determining the Base Penalty Amount[4] for the violation.

[3] See Section 4 Part 4.11 for a discussion of these factors.
[4] See Section 4 Part 4.2

The time horizon considered and its impact on the selection of the Base Penalty Amount for the violation will be decided upon by NERC or the Regional Entity based upon judgment and the facts of the violation. The rationale for the time horizon used and its impact on the setting of the Base Penalty Amount will be documented by NERC or the Regional Entity and provided within the Notice of Penalty issued for the violation.

3.13 Extenuating Circumstances

In unique extenuating circumstances, such as significant natural disasters, Penalties may be significantly reduced or eliminated.

3.14 Concealment or Intentional Violation

Penalties levied for the violation of a Reliability Standard shall always take into consideration any attempt by a violator to conceal the violation from NERC or the Regional Entity, or any intentional violation incurred for purposes other than a demonstrably good faith effort to avoid a significant and greater threat to the immediate reliability of the Bulk Power System.

3.15 Economic Choice to Violate

Owners, operators, and users of the Bulk Power System may be presented with situations or circumstances where compliance with the Reliability Standards preclude or reduce an economic gain that could be realized by violating the Reliability Standards. Penalties shall be sufficient to assure that entities responsible for complying with Reliability Standards do not find it attractive to make economic choices that cause or unduly risk violations to Reliability Standards, or risk or cause incidents resulting from violations of the Reliability Standards. Penalties levied to violators who have made such a choice shall reflect this aspect of the violation.

3.16 No Influence by Outcome of Economic Choice to Violate

Economic choices to violate are generally made for the violator's own potential gain, but making such a choice does not always result in all potential gains being realized or may result in damage or loss. However, irrespective of the outcome to the Registered Entity making an economic choice to violate, such decisions risk others' reliability, commonly without either their knowledge or consent. Penalties levied to violators making an economic choice to violate shall reflect only that the choice was made at all; the lack of or reduced magnitude of any actual benefit received, or any damage suffered, by the violator as a consequence of making this choice will have no influence on the determination of the Penalty to be levied.

3.17 Non-Monetary Sanctions or Remedial Actions

Enforcement actions taken by NERC or a Regional Entity are not limited to monetary Penalties; at the discretion of NERC or the Regional Entity, sanctions or remedial actions may also be applied and can include limitations on activities, functions, operations, or other appropriate sanctions, including the establishment of a reliability watch list composed of major violators.

3.18 Non-Exclusiveness of Monetary Penalties or Non-Monetary Sanctions

A non-monetary sanction may be imposed either in lieu of or in addition to a monetary Penalty imposed for the same Confirmed Violation, and vice versa. Imposition of a monetary Penalty or non-monetary sanction for a violation does not preclude the imposition of the other as long as, in combination, the aggregate Penalty continues to bear a reasonable relation to the seriousness of the violation.

3.19 Monetization of the Value of Sanctions

A significant element of NERC's oversight of Penalties, sanctions, and remedial action determined and levied by Regional Entities is ensuring acceptable similarity in the degree and type of sanction for violations constituting comparable levels of threat to the reliability of the Bulk Power System. It is also a requirement and a commitment of NERC and its designees that Penalties, sanctions, or

remedial actions levied or applied for the violation of a Reliability Standard bear reasonable relation to the seriousness of the violation. Specifically with respect to Penalties and sanctions, it is intuitive that it will be easier, more objective, and more transparent to monitor and test for acceptable similarity if (monetary) Penalties or monetized values of sanctions determined for violations are used as the primary basis of comparison, versus comparisons made on the basis of other (non-monetized) considerations. Similarly, there will be strong intuitiveness and transparency, particularly to those interested but not strongly familiar with the power industry, that the seriousness of a violation has been reasonably addressed if the consequences for it to the violator are determined and can be expressed clearly and quantifiably in monetary terms.

Penalties determined and levied by NERC or Regional Entities will by definition be valued in monetary terms: U.S or Canadian dollars. It will be the preference of NERC that (non-monetary) sanctions imposed either in lieu of or in addition to a Penalty include disclosure of the monetary value that the sanctions represent to the violator. It is intuitive that defensible monetary values for those sanctions will be most easily determined if the Penalty for the violation pursuant to these guidelines is first determined and then the sanctions to be levied are introduced and justified as appropriate alternatives to that Penalty or additions to a lesser Penalty. However, sanctions may be determined directly (e.g. without first determining a Penalty amount) and monetized using other methods.

NERC does not have a preference between Penalties and sanctions for violations. The preference expressed here will support ensuring comparability of outcomes regarding application of these guidelines and the promotion of reasonable relationship between the seriousness of a violation and the sanctions, or Penalties and sanctions, levied for it.

3.20 Maximum Limitations on Penalties

Penalties are direct, monetary judgments levied against a violator by NERC or the Regional Entity for the violation of Requirements of the Reliability Standards. In contrast, sanctions will impose limitations or restrictions of some kind that may result in economic or other impacts to the violator, and remedial actions are directives by NERC or a Regional Entity to the violator regarding the correction of conditions, practices or any other relevant action or activity underlying the noncompliance(s) involved.

In the United States, the Federal Power Act allows for the imposition of civil penalties of up to $1,000,000 per day per violation. NERC and the Regional Entities draw their authority to levy Penalties from the Federal Power Act; accordingly this figure is and can be understood as the maximum monetary Penalty that NERC or Regional Entities are authorized to levy. However, as this legislation also requires that "[a]ny penalty imposed … shall; (A) bear a reasonable relation to the seriousness of the violation; and (B) take into consideration the efforts of the user, owner, or operator to remedy the violation in a timely manner[5]**" *entities required to comply with the Reliability Standards must also understand that NERC and the Regional Entities will be obligated to assess Penalties amounts up to and including the maximum amount for violations where warranted pursuant to these guidelines.***

In Canadian jurisdictions, the maximum monetary Penalty potentially assessable for a Reliability Standard violation is significantly less than the amount allowed in the United States under the Federal Power Act. Also, legislation presently governing some Canadian jurisdictions does not accommodate the levying of such a Penalty under some circumstances, may not accommodate the levying of such a Penalty for all violations, or does not accommodate the levying of any monetary Penalties.

[5] H.R.6, Energy Policy Act of 2005, Section 215, Paragraph e, subparagraph 6.

When a Penalty may be levied, or proposed to Applicable Governmental Authorities with jurisdiction to be levied, the following steps will be followed:

a. NERC or the Regional Entity will initially disregard the Penalty limitations of the Applicable Governmental Authorities with jurisdiction, and determine what the Penalties or sanctions would be pursuant to these sanction guidelines only.

b. NERC or the Regional Entity will review the maximum Penalty allowed by the Applicable Governmental Authorities with jurisdiction.

c. NERC or the Regional Entity will set the actual Penalty to be levied, or proposed to the Applicable Governmental Authorities with jurisdiction to be levied, as the lesser of that determined pursuant to these guidelines and the maximum Penalty or sanction allowed by the Applicable Governmental Authorities.

d. If the lesser Penalty is the maximum Penalty allowed by the Applicable Governmental Authorities, the Notice of Penalty or similar document issued by NERC or the Regional Entity regarding the violation will also list the Penalty that was determined pursuant to these guidelines.

Adhering to the above steps will insure that the result of the determination of any Penalty for any violation will produce output that can be directly compared (i.e. without influence of local Applicable Governmental Authorities' Penalty limitations or restrictions) with the Penalty determined for any other violation, assisting efforts of NERC and others to ensure that these guidelines are uniformly applied and that there is an acceptable level of consistency in the application of these sanction guidelines across North America. Applicable Governmental Authorities with jurisdiction may also find such information useful for their determination of the appropriateness of any Penalty or sanction proposed to them to be levied. Similarly, policy and legislative bodies may find such information of value to the review or development of arrangements addressing such matters.

3.21 Frequency and Duration of Violations

Section 316A of the Federal Power Act [16 U.S.C. § 825o-1(b)], as amended by the Energy Policy Act of 2005, provides that "any person who violates any provision of Part II of this title or any provision of any rule or order thereunder shall be subject to a civil penalty of not more than $1,000,000 for each day that such violation continues."

FERC Order No. 672 interprets this statement as setting a cap on the monetary Penalties that the Commission, NERC and Regional Entities can impose under FPA section 215. FERC has referred to this statutory provision as imposing a maximum $1,000,000 "per day, per violation" Penalty and has directed that the ERO must ensure that in the U.S. such a Penalty amount ($1,000,000), in such a manner ("per day, per violation"), can be imposed for a violation of the Reliability Standards should the conduct at issue so warrant.

Some Reliability Standards may not support the assessment of Penalties on a "per day, per violation" basis, but instead should have Penalties calculated based on an alternative Penalty frequency or duration. Where NERC or the Regional Entity deems that a monetary Penalty is warranted, or where NERC or the Regional Entity is monetizing (Section 3.19) the value of a non-monetary sanction, for the violation of such a Reliability Standard NERC or the Regional Entity shall determine the Penalty or monetized amount consistent with the following:

Multiple Instances of Violation on One Day

The nature of some Reliability Standards includes the possibility that a Registered Entity could violate the same Requirement two or more times on the same day. In this instance NERC or the Regional Entity is not limited to penalizing the violator a maximum of $1,000,000 per day. As NERC or the Regional Entity deems appropriate NERC or the Regional Entity may deem that there have

been multiple violations that occurred on the same day, each of which is subject to the maximum potential Penalty of $1,000,000 per violation, per day. Also, NERC or the Regional Entity is not constrained to assessing the same Penalty amount for each of the multiple violations, irrespective of their proximity in time.

Cumulative Over Time

Certain Requirements of the Reliability Standards are measured not on the basis of discrete acts, but of cumulative acts over time. Reliability Standards that fall into this category are generally those involving measurements based on averages over a given period. Where a violation of such a Reliability Standard has occurred the element of averaging performance over a period of time introduces the difficulty to NERC or the Regional Entity of reasonably identifying (i) what date the violation should be deemed to have occurred and (ii) its duration.

If a Reliability Standard Requirement measured by an average over time can only be violated once per applicable period, then there is risk that a disproportionately mild Penalty might be levied in a situation where the violation was serious and the effects on the Bulk Power System severe. In the future, each Reliability Standard Requirement that is based on an average over time will specify the minimum period in which a violation could occur and how to determine when a violation arises, which may be other than once per applicable period[6]. In the interim until relevant Reliability Standards are so modified, any ambiguity on this point will be construed conservatively, meaning that where a Registered Entity has not complied with such a Reliability Standard NERC or the Regional Entity will generally consider that only one violation occurred per measurement period. However, notwithstanding this general principle of one violation per measurement period, if an average must be measured by a span of time greater than a month, each month of that span shall constitute at a minimum one violation.

Periodically Monitored Discrete Violation

Some Reliability Standards may involve discrete events which are only monitored periodically or which are reported by exception. If a Requirement of such a Reliability Standard states that a discrete event constitutes a violation, then (i) a violation arises when that event occurs and (ii) that violation continues until remedied; furthermore, (iii) the violation is deemed to have occurred at the point that the Registered Entity entered into noncompliance with the Reliability Standard regardless of the monitoring period for the activity or its date of discovery or reporting. For example, if a task required by a Reliability Standard Requirement has not been done by the required date, it is irrelevant that monitoring for compliance for the Requirement occurs only on a yearly or other periodic basis; NERC or the Regional Entity will deem a violation to have occurred on the first day of noncompliance and each day thereafter until compliance is effectuated. Similarly, if a discrete event occurs and is not remedied on the date of occurrence, then NERC or the Regional Entity will deem a violation to have occurred on the day of the first instance of the noncompliance and each day, or portion thereof thereafter until compliance is effectuated.

Non-compliance with a Reliability Standard of this type will subject the violator to the potential maximum monetary Penalty of $1,000,000 per violation per day in violation.

NERC or the Regional Entity is not constrained to assessing the same Penalty amount for each day that the Registered Entity was in violation of the Reliability Standard Requirement in question.

[6] Para. 41; FERC Order on Clarification and Rehearing [Docket No. RR06-1-006]

4. Determination of Monetary Penalties

The following describes the steps that NERC or the Regional Entity will follow to determine the monetary Penalty for a violation[7]. The determination of non-monetary sanctions is discussed in Section 5 of this document; Section 6 discusses remedial action.

Step 1. The Base Penalty Amount for the violation will be set as discussed in Sections 4.1 and 4.2, below.

Step 2. The Base Penalty Amount set in Step 1 will be reviewed pursuant to Section 4.3, below. This will result in the Adjusted Penalty Amount.

Step 3. The Adjusted Penalty Amount determined in Step 2 may be reviewed in light of the violator's financial ability to pay the Penalty. Also, where applicable NERC or the Regional Entity will reconfirm that the Penalty set will disgorge unjust profits or economic benefits associated with an economic choice to violate[8]. At the conclusion of this review the Final Penalty Amount will be set.

Unless NERC or the Regional Entity deems alternative frequency or duration is warranted Penalties shall be assessed on a per violation per day basis. Where NERC or the Regional Entity deems that alternative Penalty frequency or duration is warranted the Notice of Penalty associated with the violation will clearly identify this and provide the rationale for it. Where NERC or the Regional Entity deems that alternative Penalty frequency or duration is warranted, Penalties shall be determined in accordance with section 3.21 of the Sanction Guidelines.

4.1 Initial Value Range of the Base Penalty Amount

NERC or the Regional Entity will determine an initial value range for the Base Penalty Amount by considering two factors regarding the violation: the Violation Risk Factor (VRF) of the Requirement violated and the Violation Severity Level (VSL) assessed for the violation. Using the Base Penalty Amount Table provided in Appendix A NERC or the Regional Entity will look up the initial value range for the Base Penalty Amount by finding the intersection of the violation's VRF and VSL on the table[9].

4.1.1 Violation Risk Factor

Each Requirement set out within NERC's Reliability Standards has been assigned a Violation Risk Factor (VRF) through the NERC Reliability Standards development process. The factors have been defined and approved through the Reliability Standards development process and are assigned to Requirements to provide clear, concise and comparative association between the violation of a Requirement and the expected or potential impact of the violation to the reliability of the Bulk Power System. One of three defined levels of risk is assigned to each Reliability Standards Requirement: lower Violation Risk Factor, or; medium Violation Risk Factor, or; high Violation Risk Factor. Definitions of the factors can be found in appropriate Reliability Standards development process documentation.

4.1.2 Violation Severity Level

Violation Severity Levels (VSLs) are defined measurements of the degree to which a violator violated a Requirement of a Reliability Standard. Whereas Violation Risk Factors are determined pre-violation and indicate the relative potential impacts that violations of each

[7] The text in this section discusses the determination of a single Penalty for an individual violation; however, the process laid out is also applicable to determining the individual Penalties, or a single aggregate Penalty, for multiple violations that are associated with each other as discussed in Section 3 Part 3.1 of this document.
[8] Reference: Section 3 Parts 3.15 and 3.16.
[9] As discussed in Section 3 Part 3.1 of this document where there is more than one violation in play, but the violations are sufficiently associated, NERC or the Regional Entity may set a single initial value range that is appropriate in light of the individual VRF/VSL combinations of the violations.

Reliability Standard could pose to the reliability of the Bulk Power System, the Violation Severity Level is assessed post-violation and is an indicator of how severely the violator actually violated the Reliability Standard(s) Requirement(s) in question.

These guidelines utilize the Violation Severity Levels that have been established[10] by NERC for Requirements of the Reliability Standards. Up to four levels can be defined for each Requirement; the levels have been designated as: lower, moderate, high, and severe.

4.2 Setting of the Base Penalty Amount

NERC or the Regional Entity will set the Base Penalty Amount for the violation. The Base Penalty Amount set for the violation may be set at the highest figure of the initial value range determined pursuant to Section 4.1, above. However, NERC or the Regional Entity may set the Base Penalty Amount at or below the lowest figure of the initial value range in light of two specific circumstances regarding the violation and the violator, specifically:

a. The applicability of the Violation Risk Factor of the violation to the specific circumstances[11] of violator.

b. Whether this is an inconsequential first violation by the violator of the Reliability Standard(s) in question.

As noted in Section 3.12 NERC or the Regional Entity will consider the time horizon involved with the violation when setting the Base Penalty Amount for the violation. As also noted in Section 3.12 this consideration will be documented for inclusion in the Notice of Penalty issued for the violation.

The Penalty amount resulting from this review will be the Base Penalty Amount that is used as the basis for further adjustment pursuant to the factors discussed in the next section (4.3) of this document.

4.2.1 Applicability of the Violation Risk Factor

Violation Risk Factors are assigned to Reliability Standards' Requirements as indicators of the expected risk or harm to the Bulk Power System posed by the violation of a Requirement by a typical or median Registered Entity that is required to comply. NERC or the Regional Entity may consider the specific circumstances of the violator to determine if the violation of the Requirement in question actually produced the degree of risk or harm anticipated by the Violation Risk Factor. If that expected risk or harm was not or would not have been produced, NERC or the Regional Entity may set the Base Penalty Amount to a value it (i) deems appropriate and (ii) is within the initial value range set above pursuant to Section 4.1.

4.2.2 First Violation

If the actual or foreseen impact of the violation is judged to be inconsequential by NERC or the Regional Entity and the violation is the first incidence of violation of the Requirement in question by the violator, NERC or the Regional Entity may at its discretion: (i) set the Base Penalty Amount to a value it deems appropriate within the initial value range set above pursuant to Section 4.1, or (ii) excuse the Penalty for the violation (i.e. set the Base Penalty Amount to 0$).

This relief will generally not be afforded to the violator if NERC or the Regional Entity determines that the violator has a poor compliance record; e.g. the circumstances discussed in

[10] Assignment of these levels will be complete and filed with the Commission by March 1, 2008 in accordance with FERC Order on Compliance Filing dated June 7, 2007 [Docket No. RR06-1-007] .

[11] The circumstances of the violator will include but not be limited to, as appropriate: the violator's aggregate and net Load~~load~~; interconnections characteristics such as voltage class and transfer ratings.

Section 4.3.1 have been an aggravating factor in one or more previous Penalties assessed to the violator.

This relief will not be available for consideration in instances where the violator has concealed or attempted to conceal the violation, failed or refused to comply with compliance directives from NERC or the Regional Entity, or intentionally violated for purposes other than a demonstrably good faith effort to avoid a significant and greater threat to the immediate reliability of the Bulk Power System.

4.3 Application of Adjustment Factors

Adjustment factors provide the opportunity to NERC or the Regional Entity to adjust the Base Penalty Amount to reflect the specific facts and circumstances material to each violation and violator.

These guidelines recognize and require that, as a minimum, NERC or the Regional Entity consider the following:

a. Repetitive violations and the violator's compliance history

b. Failure of the violator to comply with compliance directives

c. Self-disclosure and voluntary corrective action by the violator

d. Degree and quality of cooperation by the violator in the violation investigation and in any remedial action directed for the violation

e. The presence and quality of the violator's compliance program quality

f. Any attempt by the violator to conceal the violation

g. Intentional violations

h. Extenuating circumstances

Two documents issued by United States regulatory agencies will be instructive to NERC and the Regional Entities when they are determining Penalties for violations of the Reliability Standards: the FERC's Policy Statement on Enforcement issued on October 20, 2005 under Docket No. PL06-00, and; U.S Securities and Exchange Commission (SEC) Release No. 44969 under the Securities and Exchange Act of 1934, issued on October 23 2001, also concurrently issued by the SEC as Release No. 1470 under Accounting and Auditing Enforcement.

NERC or the Regional Entity may also consider other additional factors it deems appropriate under the circumstances as long as their use is clearly identified and adequately justified. The effect of using these factors will also be fully and clearly disclosed.

4.3.1 Repetitive Violations and Compliance History

A bulleted point under Paragraph 20 of the FERC Policy Statement on Enforcement highlights repeat offenses by a violator. If a violator has had repetitive infractions of the same or a closely-related Reliability Standard Requirement, particularly within a time frame defined within the Reliability Standard(s) or deemed appropriate by NERC or the Regional Entity in the absence of the Reliability Standard(s) defining the time frame, NERC or the Regional Entity shall consider some increase to the Penalty.

The term "violation reset time period" of a Reliability Standards Requirement may be defined or implied within a given Reliability Standard to describe the period of time generally required for a violator to continue operations without incidence of further violation(s) of the Reliability Standards, particularly of the initial or a similar Reliability Standard violated, in order to avoid or minimize consideration of the violator's previous violation history for sanctioning purposes in the event of a subsequent violation(s). NERC and the Regional

Entities shall exercise appropriate judgment and discretion in this regard as warranted, particularly where no reset time period is specifically set within the Reliability Standard violated. Repeat violations within violation reset time periods are aggravating factors in the determination of sanctioning. Accordingly, a violation history of no violations will produce no mitigation of the Penalty otherwise determined; a violation history of infrequent minor violations of lesser risk Requirements assessed lower Violation Severity Levels may result in small or no increase; a history of more frequent violations or previous violations of higher risk Requirements assessed more severe Violation Severity Levels will generally incur commensurately larger increases.

4.3.2 Failure to Comply with Compliance Directives

If the violator has violated Reliability Standard Requirements notwithstanding having received related compliance directives, such as for remedial action from NERC or the Regional Entity, NERC or the Regional Entity shall consider some increase to the Penalty.

4.3.3 Self-Disclosure and Voluntary Corrective Action

NERC or the Regional Entity shall consider whether a violator self-disclosed the violation prior to detection or intervention by NERC or the Regional Entity, and any action undertaken by the violator to correct the situation. NERC or the Regional Entity will be instructed in their consideration of these factors by the text of Paragraphs 24 and 25 of the FERC Policy Statement on Enforcement. As they deem warranted, NERC or the Regional Entity may reduce the violator's Penalty consistent with the cited sections of the FERC policy.

4.3.4 Degree and Quality of Cooperation in Violation Investigation and Remedial Action

NERC or the Regional Entity shall consider the degree and quality of the violator's cooperation with NERC or the Regional Entity in the investigation of the violation and any remedial action arising from it. NERC or the Regional Entity will be instructed in making their determination on this by the text of Paragraphs 26 and 27 of the FERC Policy Statement on Enforcement. NERC or the Regional Entity may adjust the violator's Penalty as they deem warranted commensurate with the cited sections of the FERC policy statement. This may result in an increase, a decrease or no change to the Penalty.

4.3.5 Presence and Quality of Compliance Program

NERC or the Regional Entity shall consider the presence and quality of the violator's compliance program. NERC or the Regional Entity will be instructed in making their determination on this factor by the text of Paragraphs 22 and 23 of the FERC Policy Statement on Enforcement. As they deem warranted, NERC or the Regional Entity may reduce the violator's Penalty consistent with the cited sections of the FERC policy. Consistent with the FERC policy NERC or the Regional Entity may not increase a violator's Penalty specifically on the grounds that the violator has no program or a poor quality program.

4.3.6 Violation Concealment

Two bulleted points under Paragraph 20 of the FERC Policy Statement on Enforcement highlight misrepresentation of material facts and resistance or impediment to inquiry of a violation. When determining a Penalty NERC or the Regional Entity shall consider any concealment or attempt to conceal the violation, or information needed to investigate the violation, on the part of the violator. If the violator concealed or attempted to conceal, some significant increase to the Penalty shall be considered; doubling of the Penalty otherwise determined is suggested. Conduct of this nature on more than one occasion regarding one violation, or with respect to more than one violation, should incur an even larger increase to the Penalty otherwise determined.

4.3.7 Intentional Violation

Another bulleted point under Paragraph 20 of the FERC Policy Statement on Enforcement highlights offenses as willful action by a violator. When determining a Penalty NERC or the Regional Entity shall consider if the violator intentionally violated without just cause; i.e., for purposes other than a demonstrably good faith effort to avoid a significant and greater threat to the immediate reliability of the Bulk Power System. If the violator engaged in such conduct, some significant increase to the Penalty shall be considered; doubling of the Penalty otherwise determined is suggested. If conduct of this nature has been detected on more than one occasion, NERC or the Regional Entity should assess an even larger increase to the Penalty otherwise determined.

NERC or the Regional Entity will consider violations attributable to an economic choice to violate as intentional violations. Consistent with the FERC Policy Statement on Enforcement any Penalty issued involving conduct of this manner shall as a minimum disgorge any profits or economic benefits acquired as a consequence of the behavior, whenever and to the extent that they can be determined or reasonably estimated.

4.3.8 Extenuating Circumstances

NERC or the Regional Entity will consider if there are extenuating circumstances regarding the violation that justify reduction or elimination of the Penalty otherwise determined.

Consideration of adjusting a Penalty for this factor would be inconsistent with NERC or the Regional Entity increasing a Penalty after consideration of any other factor included in this section of these guidelines, such as intentional violation without justifiable cause or concealment or attempt to conceal.

4.4 Setting of the Final Penalty Amount

The Adjusted Penalty Amount determined in Step 2 may be reviewed in light of the violator's financial ability to pay the Penalty. Also, if the violation was an economic choice, NERC or the Regional Entity will reconfirm that the Penalty set will disgorge any unjust profits or economic benefits. At the conclusion of this review the Final Penalty Amount will be set.

4.4.1 Violator's Financial Ability to Pay[12]

At the written request of the violator NERC or the Regional Entity will review the Penalty determined in Step 2 in light of relevant, verifiable information that the violator provides regarding their financial ability to pay. At the conclusion of this review NERC or the Regional Entity may:

1. Reduce the Penalty payable to an amount that NERC or the Regional Entity, as applicable, deems the violator has the financial ability to pay, or;
2. Excuse the Penalty amount payable, or;
3. Sustain the Penalty amount determined in Step 2.

Where the Penalty amount has been reduced or excused, NERC or the Regional Entity shall consider the assessment of appropriate non-monetary sanction(s) as a substitute or an alternative for the Penalty amount that has been excused or by which the Penalty has been reduced.

[12] NERC anticipates that this will be the primary vehicle for addressing the ability to pay of "not-for-profit" and other similar organizations.

4.4.2 Reconfirmation of Disgorgement of Unjust Profit or Gain

Notwithstanding the application of any other consideration or factor applicable to the determination of a just and reasonable Penalty for the violation, if the violation in question involved an economic choice to violate NERC or the Regional Entity shall reconfirm that the Penalty set meets the requirements set forth in Parts 3.15 and 3.16 of Section 3 of this document.

5. Determination of Non-Monetary Sanctions

The imposition of sanctions is not bounded to monetary Penalties. Non-monetary sanctions applied must be applied with the objective of promoting reliability and compliance with the Reliability Standards. Non-monetary sanctions may include, but not be limited to, the following:

a. Limitations on activities, functions, or operations

b. Placing an entity on a reliability watch list composed of major violators

6. Remedial Action Directives

6.1 Definition and Anticipated Use

Remedial Action Directives are directives that may be issued to a Bulk Power System owner, operator, or user to resolve an Alleged Violation of a Reliability Standard by addressing conditions, practices, or any other relevant action or activity that is immediately necessary to terminate or correct to protect the reliability of the Bulk Power System from an imminent threat. A Remedial Action Directive will be issued when NERC or the Regional Entity identifies an Alleged Violation of a Reliability Standard that must be corrected immediately to protect the reliability of the Bulk Power System from the imminent threat that NERC or the Regional Entity has identified.

NERC or the Regional Entity will generally employ Remedial Action Directives where they deem it necessary to clearly specify minimum corrective actions that the subject of the Remedial Action Directive must take; additionally or alternatively a Remedial Action Directive may clearly specify timelines within which the Registered Entity must take specified actions, complete specified tasks, or achieve specified outcomes. Also, to the extent NERC or the Regional Entity is authorized to do so, a Remedial Action Directive may communicate Penalties, sanctions, or further Remedial Action Directives that may be imposed should the specific Remedial Action Directive not be complied with by those to whom it has been issued. As a rule of thumb, Remedial Action Directives will be of use to NERC or the Regional Entity whenever any significant combination of specificity, clarity, or time is of the essence to address a threat to the reliability of the Bulk Power System brought on by lack of or inadequate compliance to the Reliability Standards.

6.2 Compliance Requirements

In the United States, the Commission has concluded that owners, operators, or users of the Bulk Power System must comply with Remedial Action Directives issued to them by NERC or a Regional Entity. Noncompliance with a Remedial Action Directive may result in a substantially increased Penalty or sanction.

Remedial Action Directives issued by NERC or the Regional Entity will include a deadline by which time the owner, operator, or user must complete requirements set out in the Remedial Action Directive, and by which time the Registered Entity must demonstrate compliance to the Remedial Action Directive to NERC or the Regional Entity that issued it. Failure or refusal to meet the requirements or deadlines set out in a Remedial Action Directive may itself result in further Remedial Action Directives or significantly increased Penalties or sanctions by NERC or the Regional Entity.

6.3 No Obligation to Issue

NERC or the Regional Entity may, but is not obligated, to issue Remedial Action Directives. Lack of being issued a Remedial Action Directive does not relieve a Bulk Power System owner, operator, or user from any responsibilities they otherwise have to comply or maintain compliance with Requirements of the Reliability Standards. Remedial Action Directives will be used by NERC or the Regional Entities only as they deem warranted, when they deem warranted.

6.4 Scope of Application

The scope of Remedial Action Directives issued by NERC or the Regional Entity will be limited to conditions, practices, or any other relevant actions or activities resulting in noncompliance, or that NERC or the Regional Entity considers at significant risk of becoming noncompliant, to Requirements of the Reliability Standards, and that present an imminent threat to the reliability of the Bulk Power System. However, beyond merely directing compliance or improved compliance with Reliability Standards' Requirements, where NERC or the Regional Entity is authorized to do so, the Remedial Action Directive may also stipulate how compliance or the improvement to compliance is to be achieved.

6.5 Availability

In the United States, the Commission has interpreted the Federal Power Act to authorize the NERC or the Regional Entity can issue a Remedial Action Directive prior to completion of the confirmation review of a probable violation, or prior to the determination of a Penalty or sanction for that violation. The Commission also concluded it is not necessary for NERC or the Regional Entity to acquire the Commission's or other regulators' approval prior to issuing Remedial Action Directives. Accordingly, NERC or the Regional Entity may issue Remedial Action Directives to Registered Entities in the United States whenever they deem it necessary or otherwise warranted to do so. Also, NERC or the Regional Entity may issue Remedial Action Directives to Registered Entities in the United States regarding a violation that is immediately necessary to terminate or correct to protect the reliability of the Bulk Power System from an imminent threat, irrespective of whether that violation is ultimately verified or dismissed by NERC or the Regional Entity's investigation of the violation.

6.6 No Impact on Confirmation of Violation, or Penalties or Sanctions

Remedial Action Directives issued regarding a violation, in particular any costs incurred by the violator to comply with any such Remedial Action Directive, will not be considered when reviewing whether the aggregate of any Penalties and sanctions levied for that violation bear a reasonable relation to the seriousness of the violation. Also, any Remedial Action Directives issued with respect to a violation will not influence the outcome of the confirmation review of that violation nor the determination of Penalties or sanctions for that violation; ordering a violator to correct what needs correcting anyway is no grounds for dispelling a violation nor reducing or eliminating a Penalty or sanction that would otherwise be determined appropriate for the violator for that violation.

6.7 Types of Remedial Actions

NERC or the Regional Entities may issue Remedial Action Directives to correct compliance with NERC or Regional Reliability Standards and reduce or eliminate imminent threats to the reliability of the Bulk Power System. Examples of Remedial Action Directives include:

a. Specifying operating or planning criteria, limits, or limitations

b. Requiring specific system studies

c. Defining operating practices or guidelines

d. Requiring confirmation of data, practices, or procedures through inspection testing or other methods

e. Requiring specific training for personnel

f. Requiring development of specific operating plans

Appendix A: Base Penalty Amount Table

The following lists the Base Penalty amounts corresponding to combinations of Violation Risk Factor and Violation Severity Level.

Violation Risk Factor	Violation Severity Level							
	Lower		Moderate		High		Severe	
	Range Limits		Range Limits		Range Limits		Range Limits	
	Low	High	Low	High	Low	High	Low	High
Lower	$1,000	$3,000	$2,000	$7,500	$3,000	$15,000	$5,000	$25,000
Medium	$2,000	$30,000	$4,000	$100,000	$6,000	$200,000	$10,000	$335,000
High	$4,000	$125,000	$8,000	$300,000	$12,000	$625,000	$20,000	$1,000,000

NOTE: This table describes the amount of Penalty that could be applied for each day that a violation continues, subject to the considerations of Section 3.21 regarding frequency and duration of violations.

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF REVISIONS TO ITS RULES OF PROCEDURE
TO ADOPT A BULK ELECTRIC SYSTEM EXCEPTION PROCEDURE

ATTACHMENT 6A

REVISED APPENDIX 5B OF THE RULES OF PROCEDURE,

STATEMENT OF COMPLIANCE REGISTRY CRITERIA

CLEAN VERSION

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Proposed Revisions 1-9-2012
[Incorporates revisions filed with FERC on November 29, 2011]

Appendix 5B

Statement of Compliance Registry Criteria

Revision 5.0 — Approved: NERC Board of Trustees July 30, 2008

Effective: October 16, 2008

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Statement of Compliance Registry Criteria (Revision 5.0)

Summary

Since becoming the Electric Reliability Organization (ERO), NERC has initiated a program to identify candidate organizations for its Compliance Registry. The program, conducted by NERC and the Regional Entities[1], will also confirm the functions and information now on file for currently-registered organizations. NERC and the Regional Entities have the obligation to identify and register all entities that meet the criteria for inclusion in the Compliance Registry, as further explained in the balance of this document.

This document describes how NERC will identify organizations that may be candidates for Registration and assign them to the Compliance Registry.

Organizations will be responsible to register and to comply with approved Reliability Standards to the extent that they are owners, operators, and users of the Bulk Power System, perform a function listed in the functional types identified in Section II of this document, and are material to the Reliable Operation of the interconnected Bulk Power System as defined by the criteria and notes set forth in this document. NERC will apply the following principles to the Compliance Registry:

- In order to carry out its responsibilities related to enforcement of Reliability Standards, NERC must identify the owners, operators, and users of the Bulk Power System who have a material impact[2] on the Bulk Power System through a Compliance Registry. NERC and the Regional Entities will make their best efforts to identify all owners, users and operators who have a material reliability impact on the Bulk Power System in order to develop a complete and current Compliance Registry list. The Compliance Registry will be updated as required and maintained on an on-going basis.
- Organizations listed in the Compliance Registry are responsible and will be monitored for compliance with applicable mandatory Reliability Standards. They will be subject to NERC's and the Regional Entities' Compliance Monitoring and Enforcement Programs.

[1] The term “Regional Entities” includes Cross-Border Regional Entities.
[2] The criteria for determining whether an entity will be placed on the Compliance Registry are set forth in the balance of this document. At any time a person may recommend in writing, with supporting reasons, to the Director of Compliance that an organization be added to or removed from the Compliance Registry, pursuant to NERC ROP 501.1.3.5.

- NERC and Regional Entities will not monitor nor hold those not in the Compliance Registry responsible for compliance with the Reliability Standards. An entity which is not initially placed on the Compliance Registry, but which is identified subsequently as having a material reliability impact, will be added to the Compliance Registry. Such entity will not be subject to a sanction or Penalty by NERC or the Regional Entity for actions or inactions prior to being placed on the Compliance Registry, but may be required to comply with a Remedial Action Directive or Mitigation Plan in order to become compliant with applicable Reliability Standards. After such entity has been placed on the Compliance Registry, it shall be responsible for complying with Reliability Standards and may be subject to sanctions or Penalties as well as any Remedial Action Directives and Mitigation Plans required by the Regional Entities or NERC for future violations, including any failure to follow a Remedial Action Directive or Mitigation Plan to become compliant with Reliability Standards.
- Required compliance by a given organization with the Reliability Standards will begin the later of (i) inclusion of that organization in the Compliance Registry and (ii) approval by the Applicable Governmental Authority of mandatory Reliability Standards applicable to the Registered Entity.

Entities responsible for funding NERC and the Regional Entities have been identified in the budget documents filed with FERC. Presence on or absence from the Compliance Registry has no bearing on an entity's independent responsibility for funding NERC and the Regional Entities.

Background

In 2005, NERC and the Regional Entities conducted a voluntary organization registration program limited to Balancing Authorities, Planning Authorities, regional reliability organizations, Reliability Coordinators, Transmission Operators, and Transmission Planners. The list of the entities that were registered constitutes what NERC considered at that time as its Compliance Registry.

NERC has recently initiated a broader program to identify additional organizations potentially eligible to be included in the Compliance Registry and to confirm the information of organizations currently on file. NERC believes this is a prudent activity at this time because:

- As of July 20, 2006, NERC was certified as the ERO created for the U.S. by the Energy Policy Act of 2005 (EPAct) and FERC Order 672. NERC has also filed with Canadian authorities for similar recognition in their respective jurisdictions.
- FERC's Order 672 directs that owners, operators and users of the Bulk Power System shall be registered with the ERO and the appropriate Regional Entities.
- As the ERO, NERC has filed its current Reliability Standards with FERC and with Canadian authorities. A s accepted and approved by FERC and appropriate Canadian authorities, the Reliability Standards are no longer voluntary, and organizations that do not fully comply with them may face Penalties or other sanctions determined and levied by NERC or the Regional Entities.

- NERC's Reliability Standards include compliance Requirements for additional reliability function types beyond the six types registered by earlier registration programs.
- Based on selection as the ERO, the extension and expansion of NERC's current Registration program[3] is the means by which NERC and the Regional Entities will plan, manage and execute Reliability Standard compliance oversight of owners, operators, and users of the Bulk Power System.
- Organizations listed in the Compliance Registry are subject to NERC's and the Regional Entities' Compliance Monitoring and Enforcement Programs.

Statement of Issue

As the ERO, NERC intends to comprehensively and thoroughly protect the reliability of the grid. To support this goal NERC will include in its Compliance Registry each entity that NERC concludes can materially impact the reliability of the Bulk Power System. However, the potential costs and effort of ensuring that every organization potentially within the scope of "owner, operator, and user of the Bulk Power System" becomes registered while ignoring their impact upon reliability, would be disproportionate to the improvement in reliability that would reasonably be anticipated from doing so.

NERC wishes to identify as many organizations as possible that may need to be listed in its Compliance Registry. Identifying these organizations is necessary and prudent at this time for the purpose of determining resource needs, both at the NERC and Regional Entity level, and to begin the process of communication with these entities regarding their potential responsibilities and obligations. NERC and the Regional Entities believe that primary candidate entities can be identified at this time, while other entities can be identified later, as and when needed. Selection principles and criteria for the identification of these initial entities are required. This list will become the "Initial Non-binding Organization Registration List". With FERC having made the approved Reliability Standards enforceable, this list becomes the NERC Compliance Registry.

Resolution

NERC and the Regional Entities have identified two principles they believe are key to the entity selection process. These are:

1. There needs to be consistency between Regions and across the continent with respect to which entities are registered, and;
2. Any entity reasonably deemed material to the reliability of the Bulk Bower System will be registered, irrespective of other considerations.

To address the second principle the Regional Entities, working with NERC, will identify and register any entity they deem material to the reliability of the Bulk Power System.

In order to promote consistency, NERC and the Regional Entities intend to use the following criteria as the basis for determining whether particular entities should be identified as candidates

[3] See: NERC ERO Application; Exhibit C; Section 500 – Organization Registration and Certification.

for Registration. All organizations meeting or exceeding the criteria will be identified as candidates.

The following four groups of criteria (Sections I-IV) plus the statements in Section V will provide guidance regarding an entity's Registration status:

- Section I determines if the entity is an owner, operator, or user of the Bulk Power System and, hence, a candidate for organization Registration.
- Section II uses NERC's current functional type definitions to provide an initial determination of the functional types for which the entities identified in Section I should be considered for Registration.
- Section III lists the criteria regarding smaller entities; these criteria can be used to forego the Registration of entities that were selected to be considered for Registration pursuant to Sections I and II and, if circumstances change, for later removing entities from the Registration list that no longer meet the relevant criteria.
- Section IV — additional criteria for joint Registration. Joint Registration criteria may be used by joint action agencies, generation and transmission cooperatives and other entities which agree upon a clear division of compliance responsibility for Reliability Standards by written agreement. Pursuant to FERC's directive in paragraph 107 of Order No. 693, rules pertaining to joint Registration and Joint Registration Organizations will now be found in Sections 501 and 507 of the NERC Rules of Procedure.

I. Entities that use, own or operate Elements of the Bulk Electric System as established by NERC's approved definition of Bulk Electric System below are (i) owners, operators, and users of the Bulk Power System and (ii) candidates for Registration:

"Bulk Electric System" or "BES" means unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. This does not include facilities used in the local distribution of electric energy.

Inclusions:

- ***I1*** *- Transformers with the primary terminal and at least one secondary terminal operated at 100 kV or higher unless excluded under Exclusion E1 or E3.*
- ***I2*** *- Generating resource(s) with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.*
- ***I3*** *- Blackstart Resources identified in the Transmission Operator's restoration plan.*
- ***I4*** *- Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above.*
- ***I5*** *–Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a*

dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.

Exclusions:

- ***E1*** *- Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher and:*
  a) Only serves Load. Or,
  b) Only includes generation resources, not identified in Inclusion I3, with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,
  c) Where the radial system serves Load and includes generation resources, not identified in Inclusion I3, with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

  Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.
- ***E2*** *- A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail Load with electric energy if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.*
- ***E3*** *- Local networks (LN): A group of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the interconnected system. LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The LN is characterized by all of the following:*
  a) Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating);
  b) Power flows only into the LN and the LN does not transfer energy originating outside the LN for delivery through the LN; and
  c) Not part of a Flowgate or transfer path: The LN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
- ***E4*** *– Reactive Power devices owned and operated by the retail customer solely for its own use.*

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

II. Entities identified in Part I above will be categorized as Registration candidates who may be subject to Registration under one or more appropriate Functional Entity types based on a comparison of the functions the entity normally performs against the following function type definitions:

Function Type	**Acronym**	**Definition/Discussion**
Balancing Authority	BA	The responsible entity that integrates resource plans ahead of time, maintains Load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real-time.
Distribution Provider	DP	Provides and operates the "wires" between the transmission system and the end-use customer. For those end-use customers who are served at transmission voltages, the Transmission Owner also serves as the Distribution Provider. Thus, the Distribution Provider is not defined by a specific voltage, but rather as performing the distribution function at any voltage.
Generator Operator	GOP	The entity that operates generating unit(s) and performs the functions of supplying energy and Interconnected Operations Services.
Generator Owner	GO	Entity that owns and maintains generating units.
Interchange Authority	IA	The responsible entity that authorizes implementation of valid and balanced Interchange Schedules between Balancing Authority Areas, and ensures communication of Interchange information for reliability assessment purposes.
Load-Serving Entity	LSE	Secures energy and Transmission Service (and related Interconnected Operations Services) to serve the electrical demand and energy requirements of its end-use customers.
Planning Authority	PA	The responsible entity that coordinates and integrates transmission Facilities and service plans, resource plans, and Protection Systems.
Purchasing-Selling Entity	PSE	The entity that purchases, or sells, and takes title to, energy, capacity, and Interconnected Operations Services. PSE may be affiliated or unaffiliated merchants and may or may not own generating Facilities.

Function Type	Acronym	Definition/Discussion
Reliability Coordinator	RC	The entity that is the highest level of authority who is responsible for the Reliable Operation of the Bulk Electric System, has the Wide Area view of the Bulk Electric System, and has the operating tools, processes and procedures, including the authority to prevent or mitigate emergency operating situations in both next-day analysis and real-time operations. The Reliability Coordinator has the purview that is broad enough to enable the calculation of Interconnection Reliability Operating Limits, which may be based on the operating parameters of transmission systems beyond any Transmission Operator's vision.
Reserve Sharing Group	RSG	A group whose members consist of two or more Balancing Authorities that collectively maintain, allocate, and supply operating reserves required for each Balancing Authority's use in recovering from contingencies within the group. Scheduling energy from an Adjacent Balancing Authority to aid recovery need not constitute reserve sharing provided the transaction is ramped in over a period the supplying party could reasonably be expected to load generation in (e.g., ten minutes). If the transaction is ramped in quicker, (e.g., between zero and ten minutes), then, for the purposes of disturbance control performance, the areas become a Reserve Sharing Group.
Resource Planner	RP	The entity that develops a long-term (generally one year and beyond) plan for the resource adequacy of specific Loads (customer demand and energy requirements) within a Planning Authority area.
Transmission Owner	TO	The entity that owns and maintains transmission Facilities.
Transmission Operator	TOP	The entity responsible for the reliability of its local transmission system and operates or directs the operations of the transmission Facilities.
Transmission Planner	TP	The entity that develops a long-term (generally one year and beyond) plan for the reliability (adequacy) of the interconnected bulk electric transmission systems within its portion of the Planning Authority area.

Function Type	Acronym	Definition/Discussion
Transmission Service Provider	TSP	The entity that administers the transmission tariff and provides Transmission Service to Transmission Customers under applicable Transmission Service agreements.

III. Entities identified in Part II above as being subject to Registration as an LSE, DP, GO, GOP, TO, or TOP should be excluded from the Compliance Registry for these functions if they do not meet any of the criteria listed below:

III (a)Load-Serving Entity:

III.a.1 Load-Serving Entity peak Load is > 25 MW and is directly connected to the Bulk Power (>100 kV) System, or;

III.a.2 Load-Serving Entity is designated as the responsible entity for Facilities that are part of a required underfrequency Load shedding (UFLS) program designed, installed, and operated for the protection of the Bulk Power System, or;

III.a.3 Load-Serving Entity is designated as the responsible entity for Facilities that are part of a required undervoltage Load shedding (UVLS) program designed, installed, and operated for the protection of the Bulk Power System.

[Exclusion: A Load-Serving Entity will not be registered based on these criteria if responsibilities for compliance with approved NERC Reliability Standards or associated Requirements including reporting have been transferred by written agreement to another entity that has registered for the appropriate function for the transferred responsibilities, such as a Load-Serving Entity, Balancing Authority, Transmission Operator, generation and transmission cooperative or joint action agency as described in Sections 501 and 507 of the NERC Rules of Procedure.]

III.a.4 Distribution Providers registered under the criteria in III.b.1 or III.b.2 will be registered as a Load Serving Entity (LSE) for all Load directly connected to their distribution facilities.

[Exclusion: A Distribution Provider will not be registered based on this criterion if responsibilities for compliance with approved NERC Reliability Standards or associated Requirements including reporting have been transferred by written agreement to another entity that has registered for the appropriate function for the transferred responsibilities, such as a Load-Serving Entity, Balancing Authority, Transmission Operator, generation and transmission cooperative, or joint action agency as described in Sections 501 and 507 of the NERC Rules of Procedure.]

III(b) Distribution Provider:

III.b.1 Distribution Provider system serving >25 MW of peak Load that is directly connected to the Bulk Power System.

[Exclusion: A Distribution Provider will not be registered based on this criterion if responsibilities for compliance with approved NERC Reliability Standards or associated Requirements including reporting have been transferred by written agreement to another entity that has registered for the appropriate function for the transferred responsibilities, such as a Load-Serving Entity, Balancing Authority, Transmission Operator, generation and transmission cooperative, or joint action agency as described in Sections 501 and 507 of the NERC Rules of Procedure.] or;

III.b.2 Distribution Provider is the responsible entity that owns, controls, or operates Facilities that are part of any of the following Protection Systems or programs designed, installed, and operated for the protection of the Bulk Power System:

- a required UFLS program.
- a required UVLS program.
- a required Special Protection System.
- a required transmission Protection System.

[Exclusion: A Distribution Provider will not be registered based on these criteria if responsibilities for compliance with approved NERC Reliability Standards or associated Requirements including reporting have been transferred by written agreement to another entity that has registered for the appropriate function for the transferred responsibilities, such as a Load-Serving Entity, Balancing Authority, Transmission Operator, generation and transmission cooperative, or joint action agency as described in Sections 501 and 507 of the NERC Rules of Procedure.]

III(c) Generator Owner/Operator:

III.c.1 Individual generating unit > 20 MVA (gross nameplate rating) and is directly connected to the Bulk Power System, or;

III.c.2 Generating plant/facility > 75 MVA (gross aggregate nameplate rating) or when the entity has responsibility for any facility consisting of one or more units that are connected to the Bulk Power System at a common bus with total generation above 75 MVA gross nameplate rating, or;

III.c.3 Any generator, regardless of size, that is a Blackstart Resource material to and designated as part of a Transmission Operator entity's restoration plan, or;

III.c.4 Any generator, regardless of size, that is material to the reliability of the Bulk Power System.

[Exclusions:

A Generator Owner/Operator will not be registered based on these criteria if responsibilities for compliance with approved NERC Reliability Standards or associated Requirements including reporting have been transferred by written agreement to another entity that has registered for the appropriate function for the transferred responsibilities, such as a Load-Serving Entity, generation and transmission cooperative or joint action agency as described in Sections 501 and 507 of the NERC Rules of Procedure.

As a general matter, a customer-owned or operated generator/generation that serves all or part of retail Load with electric energy on the customer's side of the retail meter may be excluded as a candidate for Registration based on these criteria if (i) the net capacity provided to the Bulk Power System does not exceed the criteria above or the Regional Entity otherwise determines the generator is not material to the Bulk Power System and (ii) standby, back-up and maintenance power services are provided to the generator or to the retail Load pursuant to a binding obligation with another Generator Owner/Operator or under terms approved by the local regulatory authority or the Federal Energy Regulatory Commission, as applicable.]

III(d) Transmission Owner/Operator:

III.d.1 An entity that owns/operates an integrated transmission Element associated with the Bulk Power System 100 kV and above, or lower voltage as defined by the Regional Entity necessary to provide for the Reliable Operation of the interconnected transmission grid; or

III.d.2 An entity that owns/operates a transmission Element below 100 kV associated with a Facility that is included on a critical Facilities list that is defined by the Regional Entity.

[Exclusion: A Transmission Owner/Operator will not be registered based on these criteria if responsibilities for compliance with approved NERC Reliability Standards or associated Requirements including reporting have been transferred by written agreement to another entity that has registered for the appropriate function for the transferred responsibilities, such as a Load-Serving Entity, generation and transmission cooperative or joint action agency as described in Sections 501 and 507 of the NERC Rules of Procedure.

IV. Joint Registration Organization and applicable Member Registration.

Pursuant to FERC's directive in paragraph 107 of Order No. 693, NERC's rules pertaining to joint Registrations and Joint Registration Organizations are now found in Section 501 and 507 of the NERC Rules of Procedure.

V. If NERC or a Regional Entity encounters an organization that is not listed in the Compliance Registry, but which should be subject to the Reliability Standards, NERC or

the Regional Entity is obligated and will add that organization to the Compliance Registry, subject to that organization's right to challenge as provided in Section 500 of NERC's Rules of Procedure and as described in Note 3 below.

Notes to the above Criteria

1. The above are general criteria only. The Regional Entity considering Registration of an organization not meeting (e.g., smaller in size than) the criteria may propose Registration of that organization if the Regional Entity believes and can reasonably demonstrate[4] that the organization is a Bulk Power System owner, or operates, or uses Bulk Power System assets, and is material to the reliability of the Bulk Power System. Similarly, the Regional Entity may exclude an organization that meets the criteria described above as a candidate for Registration if it believes and can reasonably demonstrate to NERC that the Bulk Power System owner, operator, or user does not have a material impact on the reliability of the Bulk Power System.

2. An organization not identified using the criteria, but wishing to be registered, may request that it be registered. For further information refer to: NERC Rules of Procedure, Section 500 – Organization Registration and Certification; Part 1.3.

3. An organization may challenge its Registration within the Compliance Registry. NERC or the Regional Entity will provide the organization with all information necessary to timely challenge that determination including notice of the deadline for contesting the determination and the relevant procedures to be followed as described in the NERC Rules of Procedure; Section 500 – Organization Registration and Certification.

4. If an entity is part of a class of entities excluded based on the criteria above as individually being unlikely to have a material impact on the reliability of the Bulk Power System, but that in aggregate have been demonstrated to have such an impact it may be registered for applicable Reliability Standards and Requirements irrespective of other considerations.

[4] The reasonableness of any such demonstration will be subject to review and remand by NERC itself, or by any Applicable Governmental Authority.

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF REVISIONS TO ITS RULES OF PROCEDURE
TO ADOPT A BULK ELECTRIC SYSTEM EXCEPTION PROCEDURE

ATTACHMENT 6B

REVISED APPENDIX 5B OF THE RULES OF PROCEDURE,

STATEMENT OF COMPLIANCE REGISTRY CRITERIA

REDLINED VERSION

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Proposed Revisions 1-9-2012
[Incorporates revisions filed with FERC on November 29, 2011]

Appendix 5B

Statement of Compliance Registry Criteria

Revision 5.0 — Approved: NERC Board of Trustees July 30, 2008

Effective: October 16, 2008

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Statement of Compliance Registry Criteria (Revision 5.0)

Summary

Since becoming the Electric Reliability Organization (ERO), NERC has initiated a program to identify candidate organizations for its Compliance Registry. The program, conducted by NERC and the Regional Entities[1], will also confirm the functions and information now on file for currently-registered organizations. NERC and the Regional Entities have the obligation to identify and register all entities that meet the criteria for inclusion in the Compliance Registry, as further explained in the balance of this document.

This document describes how NERC will identify organizations that may be candidates for Registration and assign them to the Compliance Registry.

Organizations will be responsible to register and to comply with approved Reliability Standards to the extent that they are owners, operators, and users of the Bulk Power System, perform a function listed in the functional types identified in Section II of this document, and are material to the Reliable Operation of the interconnected Bulk Power System as defined by the criteria and notes set forth in this document. NERC will apply the following principles to the Compliance Registry:

- In order to carry out its responsibilities related to enforcement of Reliability Standards, NERC must identify the owners, operators, and users of the Bulk Power System who have a material impact[2] on the Bulk Power System through a Compliance Registry. NERC and the Regional Entities will make their best efforts to identify all owners, users and operators who have a material reliability impact on the Bulk Power System in order to develop a complete and current Compliance Registry list. The Compliance Registry will be updated as required and maintained on an on-going basis.
- Organizations listed in the Compliance Registry are responsible and will be monitored for compliance with applicable mandatory Reliability Standards. They will be subject to NERC's and the Regional Entities' Compliance Monitoring and Enforcement Programs.

[1] The term “Regional Entities” includes Cross-Border Regional Entities.
[2] The criteria for determining whether an entity will be placed on the Compliance Registry are set forth in the balance of this document. At any time a person may recommend in writing, with supporting reasons, to the Director of Compliance that an organization be added to or removed from the Compliance Registry, pursuant to NERC ROP 501.1.3.5.

- NERC and Regional Entities will not monitor nor hold those not in the Compliance Registry responsible for compliance with the Reliability Standards. An entity which is not initially placed on the Compliance Registry, but which is identified subsequently as having a material reliability impact, will be added to the Compliance Registry. Such entity will not be subject to a sanction or Penalty by NERC or the Regional Entity for actions or inactions prior to being placed on the Compliance Registry, but may be required to comply with a Remedial Action Directive or Mitigation Plan in order to become compliant with applicable Reliability Standards. After such entity has been placed on the Compliance Registry, it shall be responsible for complying with Reliability Standards and may be subject to sanctions or Penalties as well as any Remedial Action Directives and Mitigation Plans required by the Regional Entities or NERC for future violations, including any failure to follow a Remedial Action Directive or Mitigation Plan to become compliant with Reliability Standards.
- Required compliance by a given organization with the Reliability Standards will begin the later of (i) inclusion of that organization in the Compliance Registry and (ii) approval by the Applicable Governmental Authority of mandatory Reliability Standards applicable to the Registered Entity.

Entities responsible for funding NERC and the Regional Entities have been identified in the budget documents filed with FERC. Presence on or absence from the Compliance Registry has no bearing on an entity's independent responsibility for funding NERC and the Regional Entities.

Background

In 2005, NERC and the Regional Entities conducted a voluntary organization registration program limited to Balancing Authorities, Planning Authorities, regional reliability organizations, Reliability Coordinators, Transmission Operators, and Transmission Planners. The list of the entities that were registered constitutes what NERC considered at that time as its Compliance Registry.

NERC has recently initiated a broader program to identify additional organizations potentially eligible to be included in the Compliance Registry and to confirm the information of organizations currently on file. NERC believes this is a prudent activity at this time because:

- As of July 20, 2006, NERC was certified as the ERO created for the U.S. by the Energy Policy Act of 2005 (EPAct) and FERC Order 672. NERC has also filed with Canadian authorities for similar recognition in their respective jurisdictions.
- FERC's Order 672 directs that owners, operators and users of the Bulk Power System shall be registered with the ERO and the appropriate Regional Entities.
- As the ERO, NERC has filed its current Reliability Standards with FERC and with Canadian authorities. A s accepted and approved by FERC and appropriate Canadian authorities, the Reliability Standards are no longer voluntary, and organizations that do not fully comply with them may face Penalties or other sanctions determined and levied by NERC or the Regional Entities.

- NERC's Reliability Standards include compliance Requirements for additional reliability function types beyond the six types registered by earlier registration programs.
- Based on selection as the ERO, the extension and expansion of NERC's current Registration program[3] is the means by which NERC and the Regional Entities will plan, manage and execute Reliability Standard compliance oversight of owners, operators, and users of the Bulk Power System.
- Organizations listed in the Compliance Registry are subject to NERC's and the Regional Entities' Compliance Monitoring and Enforcement Programs.

Statement of Issue

As the ERO, NERC intends to comprehensively and thoroughly protect the reliability of the grid. To support this goal NERC will include in its Compliance Registry each entity that NERC concludes can materially impact the reliability of the Bulk Power System. However, the potential costs and effort of ensuring that every organization potentially within the scope of "owner, operator, and user of the Bulk Power System" becomes registered while ignoring their impact upon reliability, would be disproportionate to the improvement in reliability that would reasonably be anticipated from doing so.

NERC wishes to identify as many organizations as possible that may need to be listed in its Compliance Registry. Identifying these organizations is necessary and prudent at this time for the purpose of determining resource needs, both at the NERC and Regional Entity level, and to begin the process of communication with these entities regarding their potential responsibilities and obligations. NERC and the Regional Entities believe that primary candidate entities can be identified at this time, while other entities can be identified later, as and when needed. Selection principles and criteria for the identification of these initial entities are required. This list will become the "Initial Non-binding Organization Registration List". With FERC having made the approved Reliability Standards enforceable, this list becomes the NERC Compliance Registry.

Resolution

NERC and the Regional Entities have identified two principles they believe are key to the entity selection process. These are:

1. There needs to be consistency between Regions and across the continent with respect to which entities are registered, and;
2. Any entity reasonably deemed material to the reliability of the Bulk Bower System will be registered, irrespective of other considerations.

To address the second principle the Regional Entities, working with NERC, will identify and register any entity they deem material to the reliability of the Bulk Power System.

In order to promote consistency, NERC and the Regional Entities intend to use the following criteria as the basis for determining whether particular entities should be identified as candidates

[3] See: NERC ERO Application; Exhibit C; Section 500 – Organization Registration and Certification.

for Registration. All organizations meeting or exceeding the criteria will be identified as candidates.

The following four groups of criteria (Sections I-IV) plus the statements in Section V will provide guidance regarding an entity's Registration status:

- Section I determines if the entity is an owner, operator, or user of the Bulk Power System and, hence, a candidate for organization Registration.
- Section II uses NERC's current functional type definitions to provide an initial determination of the functional types for which the entities identified in Section I should be considered for Registration.
- Section III lists the criteria regarding smaller entities; these criteria can be used to forego the Registration of entities that were selected to be considered for Registration pursuant to Sections I and II and, if circumstances change, for later removing entities from the Registration list that no longer meet the relevant criteria.
- Section IV — additional criteria for joint Registration. Joint Registration criteria may be used by joint action agencies, generation and transmission cooperatives and other entities which agree upon a clear division of compliance responsibility for Reliability Standards by written agreement. Pursuant to FERC's directive in paragraph 107 of Order No. 693, rules pertaining to joint Registration and Joint Registration Organizations will now be found in Sections 501 and 507 of the NERC Rules of Procedure.

I. Entities that use, own or operate Elements of the Bulk Electric System as established by NERC's approved definition of Bulk Electric System below are (i) owners, operators, and users of the Bulk Power System and (ii) candidates for Registration:

"Bulk Electric System" or "BES" means unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. This does not include facilities used in the local distribution of electric energy.

Inclusions:

- ***I1*** *- Transformers with the primary terminal and at least one secondary terminal operated at 100 kV or higher unless excluded under Exclusion E1 or E3.*
- ***I2*** *- Generating resource(s) with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.*
- ***I3*** *- Blackstart Resources identified in the Transmission Operator's restoration plan.*
- ***I4*** *- Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above.*
- ***I5*** *–Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a*

dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.

Exclusions:

- ***E1*** *- Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher and:*
  - *a) Only serves Load. Or,*
  - *b) Only includes generation resources, not identified in Inclusion I3, with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,*
  - *c) Where the radial system serves Load and includes generation resources, not identified in Inclusion I3, with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).*

  Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.
- ***E2*** *- A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail Load with electric energy if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.*
- ***E3*** *- Local networks (LN): A group of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the interconnected system. LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The LN is characterized by all of the following:*
  - *a) Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating);*
  - *b) Power flows only into the LN and the LN does not transfer energy originating outside the LN for delivery through the LN; and*
  - *c) Not part of a Flowgate or transfer path: The LN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).*
- ***E4*** *– Reactive Power devices owned and operated by the retail customer solely for its own use.*

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process. ~~*"As defined by the Regional Entity, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated*~~

~~*equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition.*[4]"~~

II. Entities identified in Part I above will be categorized as Registration candidates who may be subject to Registration under one or more appropriate Functional Entity types based on a comparison of the functions the entity normally performs against the following function type definitions:

Function Type	Acronym	Definition/Discussion
Balancing Authority	BA	The responsible entity that integrates resource plans ahead of time, maintains Load~~load~~-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real-time.
Distribution Provider	DP	Provides and operates the "wires" between the transmission system and the end-use customer. For those end-use customers who are served at transmission voltages, the Transmission Owner also serves as the Distribution Provider. Thus, the Distribution Provider is not defined by a specific voltage, but rather as performing the distribution function at any voltage.
Generator Operator	GOP	The entity that operates generating unit(s) and performs the functions of supplying energy and Interconnected Operations Services.
Generator Owner	GO	Entity that owns and maintains generating units.
Interchange Authority	IA	The responsible entity that authorizes implementation of valid and balanced Interchange Schedules between Balancing Authority Areas, and ensures communication of Interchange information for reliability assessment purposes.
Load-Serving Entity	LSE	Secures energy and Transmission Service (and related Interconnected Operations Services) to serve the electrical demand and energy requirements of its end-use customers.

[4] ~~However, ownership of radial transmission Facilities intended to be covered by the vegetation management standard (applicable to transmission lines 200 kV and above) would be included in this definition.~~

Function Type	Acronym	Definition/Discussion
Planning Authority	PA	The responsible entity that coordinates and integrates transmission Facilities and service plans, resource plans, and Protection Systems.
Purchasing-Selling Entity	PSE	The entity that purchases, or sells, and takes title to, energy, capacity, and Interconnected Operations Services. PSE may be affiliated or unaffiliated merchants and may or may not own generating Facilities.
Reliability Coordinator	RC	The entity that is the highest level of authority who is responsible for the Reliable Operation of the Bulk Electric System, has the Wide Area view of the Bulk Electric System, and has the operating tools, processes and procedures, including the authority to prevent or mitigate emergency operating situations in both next-day analysis and real-time operations. The Reliability Coordinator has the purview that is broad enough to enable the calculation of Interconnection Reliability Operating Limits, which may be based on the operating parameters of transmission systems beyond any Transmission Operator's vision.
Reserve Sharing Group	RSG	A group whose members consist of two or more Balancing Authorities that collectively maintain, allocate, and supply operating reserves required for each Balancing Authority's use in recovering from contingencies within the group. Scheduling energy from an Adjacent Balancing Authority to aid recovery need not constitute reserve sharing provided the transaction is ramped in over a period the supplying party could reasonably be expected to load generation in (e.g., ten minutes). If the transaction is ramped in quicker, (e.g., between zero and ten minutes), then, for the purposes of disturbance control performance, the areas become a Reserve Sharing Group.
Resource Planner	RP	The entity that develops a long-term (generally one year and beyond) plan for the resource adequacy of specific Loads~~loads~~ (customer demand and energy requirements) within a Planning Authority area.
Transmission Owner	TO	The entity that owns and maintains transmission Facilities.

Function Type	Acronym	Definition/Discussion
Transmission Operator	TOP	The entity responsible for the reliability of its local transmission system and operates or directs the operations of the transmission Facilities.
Transmission Planner	TP	The entity that develops a long-term (generally one year and beyond) plan for the reliability (adequacy) of the interconnected bulk electric transmission systems within its portion of the Planning Authority area.
Transmission Service Provider	TSP	The entity that administers the transmission tariff and provides Transmission Service to Transmission Customers under applicable Transmission Service agreements.

III. Entities identified in Part II above as being subject to Registration as an LSE, DP, GO, GOP, TO, or TOP should be excluded from the Compliance Registry for these functions if they do not meet any of the criteria listed below:

III (a)Load-Serving Entity:

III.a.1 Load-Serving Entity peak Load~~load~~ is > 25 MW and is directly connected to the Bulk Power (>100 kV) System, or;

III.a.2 Load-Serving Entity is designated as the responsible entity for Facilities that are part of a required underfrequency Load~~load~~ shedding (UFLS) program designed, installed, and operated for the protection of the Bulk Power System, or;

III.a.3 Load-Serving Entity is designated as the responsible entity for Facilities that are part of a required undervoltage Load~~load~~ shedding (UVLS) program designed, installed, and operated for the protection of the Bulk Power System.

[Exclusion: A Load-Serving Entity will not be registered based on these criteria if responsibilities for compliance with approved NERC Reliability Standards or associated Requirements including reporting have been transferred by written agreement to another entity that has registered for the appropriate function for the transferred responsibilities, such as a Load-Serving Entity, Balancing Authority, Transmission Operator, generation and transmission cooperative or joint action agency as described in Sections 501 and 507 of the NERC Rules of Procedure.]

III.a.4 Distribution Providers registered under the criteria in III.b.1 or III.b.2 will be registered as a Load Serving Entity (LSE) for all Load~~load~~ directly connected to their distribution facilities.

[Exclusion: A Distribution Provider will not be registered based on this criterion if responsibilities for compliance with approved NERC Reliability Standards or associated Requirements including reporting have been transferred by written agreement to another entity that has registered for the appropriate function for the transferred responsibilities, such as a Load-Serving Entity, Balancing Authority, Transmission Operator, generation and transmission cooperative, or joint action agency as described in Sections 501 and 507 of the NERC Rules of Procedure.]

III(b) Distribution Provider:

III.b.1 Distribution Provider system serving >25 MW of peak Load~~load~~ that is directly connected to the Bulk Power System.

[Exclusion: A Distribution Provider will not be registered based on this criterion if responsibilities for compliance with approved NERC Reliability Standards or associated Requirements including reporting have been transferred by written agreement to another entity that has registered for the appropriate function for the transferred responsibilities, such as a Load-Serving Entity, Balancing Authority, Transmission Operator, generation and transmission cooperative, or joint action agency as described in Sections 501 and 507 of the NERC Rules of Procedure.] or;

III.b.2 Distribution Provider is the responsible entity that owns, controls, or operates Facilities that are part of any of the following Protection Systems or programs designed, installed, and operated for the protection of the Bulk Power System:

- a required UFLS program.
- a required UVLS program.
- a required Special Protection System.
- a required transmission Protection System.

[Exclusion: A Distribution Provider will not be registered based on these criteria if responsibilities for compliance with approved NERC Reliability Standards or associated Requirements including reporting have been transferred by written agreement to another entity that has registered for the appropriate function for the transferred responsibilities, such as a Load-Serving Entity, Balancing Authority, Transmission Operator, generation and transmission cooperative, or joint action agency as described in Sections 501 and 507 of the NERC Rules of Procedure.]

III(c) Generator Owner/Operator:

III.c.1 Individual generating unit > 20 MVA (gross nameplate rating) and is directly connected to the Bulk Power System, or;

III.c.2 Generating plant/facility > 75 MVA (gross aggregate nameplate rating) or when the entity has responsibility for any facility consisting of one or

more units that are connected to the Bulk Power System at a common bus with total generation above 75 MVA gross nameplate rating, or;

III.c.3 Any generator, regardless of size, that is a Blackstart Resource material to and designated as part of a Transmission Operator entity's restoration plan, or;

III.c.4 Any generator, regardless of size, that is material to the reliability of the Bulk Power System.

[Exclusions:

A Generator Owner/Operator will not be registered based on these criteria if responsibilities for compliance with approved NERC Reliability Standards or associated Requirements including reporting have been transferred by written agreement to another entity that has registered for the appropriate function for the transferred responsibilities, such as a Load-Serving Entity, generation and transmission cooperative or joint action agency as described in Sections 501 and 507 of the NERC Rules of Procedure.

As a general matter, a customer-owned or operated generator/generation that serves all or part of retail Load ~~load~~ with electric energy on the customer's side of the retail meter may be excluded as a candidate for Registration based on these criteria if (i) the net capacity provided to the Bulk Power System does not exceed the criteria above or the Regional Entity otherwise determines the generator is not material to the Bulk Power System and (ii) standby, back-up and maintenance power services are provided to the generator or to the retail Load~~load~~ pursuant to a binding obligation with another Generator Owner/Operator or under terms approved by the local regulatory authority or the Federal Energy Regulatory Commission, as applicable.]

III(d) Transmission Owner/Operator:

III.d.1 An entity that owns/operates an integrated transmission Element associated with the Bulk Power System 100 kV and above, or lower voltage as defined by the Regional Entity necessary to provide for the Reliable Operation of the interconnected transmission grid; or

III.d.2 An entity that owns/operates a transmission Element below 100 kV associated with a Facility that is included on a critical Facilities list that is defined by the Regional Entity.

[Exclusion: A Transmission Owner/Operator will not be registered based on these criteria if responsibilities for compliance with approved NERC Reliability Standards or associated Requirements including reporting have been transferred by written agreement to another entity that has registered for the appropriate function for the transferred responsibilities, such as a Load-Serving Entity, generation and transmission cooperative

or joint action agency as described in Sections 501 and 507 of the NERC Rules of Procedure.

IV. Joint Registration Organization and applicable Member Registration.

Pursuant to FERC's directive in paragraph 107 of Order No. 693, NERC's rules pertaining to joint Registrations and Joint Registration Organizations are now found in Section 501 and 507 of the NERC Rules of Procedure.

V. If NERC or a Regional Entity encounters an organization that is not listed in the Compliance Registry, but which should be subject to the Reliability Standards, NERC or the Regional Entity is obligated and will add that organization to the Compliance Registry, subject to that organization's right to challenge as provided in Section 500 of NERC's Rules of Procedure and as described in Note 3 below.

Notes to the above Criteria

1. The above are general criteria only. The Regional Entity considering Registration of an organization not meeting (e.g., smaller in size than) the criteria may propose Registration of that organization if the Regional Entity believes and can reasonably demonstrate[5] that the organization is a Bulk Power System owner, or operates, or uses Bulk Power System assets, and is material to the reliability of the Bulk Power System. Similarly, the Regional Entity may exclude an organization that meets the criteria described above as a candidate for Registration if it believes and can reasonably demonstrate to NERC that the Bulk Power System owner, operator, or user does not have a material impact on the reliability of the Bulk Power System.

2. An organization not identified using the criteria, but wishing to be registered, may request that it be registered. For further information refer to: NERC Rules of Procedure, Section 500 – Organization Registration and Certification; Part 1.3.

3. An organization may challenge its Registration within the Compliance Registry. NERC or the Regional Entity will provide the organization with all information necessary to timely challenge that determination including notice of the deadline for contesting the determination and the relevant procedures to be followed as described in the NERC Rules of Procedure; Section 500 – Organization Registration and Certification.

4. If an entity is part of a class of entities excluded based on the criteria above as individually being unlikely to have a material impact on the reliability of the Bulk Power System, but that in aggregate have been demonstrated to have such an impact it may be registered for applicable Reliability Standards and Requirements irrespective of other considerations.

[5] The reasonableness of any such demonstration will be subject to review and remand by NERC itself, or by any Applicable Governmental Authority.

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF REVISIONS TO ITS RULES OF PROCEDURE
TO ADOPT A BULK ELECTRIC SYSTEM EXCEPTION PROCEDURE

ATTACHMENT 7A

REVISED APPENDIX 6 OF THE RULES OF PROCEDURE,

SYSTEM OPERATOR CERTIFICATION PROGRAM MANUAL

CLEAN VERSION

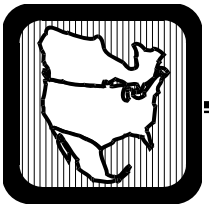
Proposed Revisions 1-9-2012
[Incorporates revisions filed with FERC on November 29, 2011]

System Operator Certification

Program Manual

August 2006

Approved by the Personnel Certification Governance Committee
Approved by the NERC Board of Trustees
May 2006



North American Electric Reliability Council
Updated: August 14, 2006

Program Manual Changes

No.	Date	Section	Page	Description	Version
1	05/2005	All	All	Initial white paper expanded SOC Program to include CE hours	0
2	02/2006	All	All	Program Manual	1
3	06/2006	I and II	4, 17	Fees	1.1
4	06/2006	All	All	CEH to CE hours	1.1
5	08/2006	III	16	Training Providers retaining documentation	1

Table of Contents

Program Manual Changes ..... **ii**
Executive Summary **1**
Section I — Certification Examinations **2**
Overview 2
Earning a Credential 2
Examinations 2
Applying for Certification Examinations 3
Eligibility Period 3
Fees 4
Scheduling an Examination 4
Examination Content Outline 4
Day of the Examination 5
Testing Center Requirements 6
Cancellations and No-shows 7
Minimum Time Between Examinations 7
Special Accommodations/Disabilities 7
Withdrawal from Examination Process 7
Examination Change Request 8
Results and Awarding of Certificates 8
System Operator Certificate Numbering Convention 9
Credential Designations 9
Confirmation of Credential to Third Parties 9
Section II — Credential Maintenance **10**
Overview 10
When to Start Accumulating CE Hours 11
Specifics of the Credential Maintenance Program 11
Certificate 12
Deficits of CE Hours for Credential Holders 12
Carry-Over Hours 13
Reporting of CE Hours Earned by Certified System Operators 13
Application for Credential Maintenance 13
Procedure for applying for Credential Maintenance 13
Hardship Clause 14
Changing Certification Levels 14
Transition Plan — 5-year Program to 3-year Program 15
Section III — Program Rules **16**
Rules for NERC-Certified System Operator 16
Recognized Learning Activities 16
Provider Access to Database 16
System Operator Access to Database 16
Retain Documentation 16
Learning Activity Credit Only Once Per Year 16
Learning Activity Approved Status Revoked after CE Hours Granted 16
Instructor Credits 17
Treatment of Disputes Between Certified System Operator and Providers 17
Fees 17
Section IV — Dispute Resolution **18**
Section V — Disciplinary Action **20**
Glossary **23**
Appendix A — Recognized Operator Training Topics **25**

Executive Summary

Maintaining the reliability of the Bulk Electric System through implementation of the Reliability Standards requires skilled, trained and qualified system operators. The System Operator Certification Program provides the mechanism to ensure system operators are provided the education and training necessary to obtain the essential knowledge and skills and are therefore qualified to operate the Bulk Electric System.

The System Operator Certification Program provides the framework for the examinations used to obtain initial Certification in one of four NERC Credentials: transmission operator, balancing and interchange operator, balancing, interchange and transmission operator, and reliability operator. A system operator Credential is a personal Credential issued to a person for successfully passing a NERC system operator Certification exam. The Credential is maintained by accumulating a specified number of Continuing Education Hours within a specified period of time. The program will allow system operators to maintain their Credential through continuing education rather than to recertify by retaking an examination.

The NERC Personnel Certification Governance Committee (PCGC) is the governing body that establishes the policies, sets fees, and monitors the performance of the System Operator Certification Program. As program administrator, NERC maintains databases, records, and applications, collects fees, maintains contracts with vendors, and provides reports on system operator Certification related activities. The PCGC is responsible for ensuring the program is not-for-profit and financially sound, and annually reviews the program to ensure that it is adequately funded.

Section I — Certification Examinations

Overview

The System Operator Certification Program awards Certification Credentials to those individuals who demonstrate that they have attained sufficient knowledge relating to NERC Reliability Standards as well as the basic principles of Bulk Power System operations by passing one of four specialty examinations. A certificate is issued to a candidate who successfully completes an examination. Certificates issued prior to the implementation of the new Continuing Education Hours requirement will be valid for five years. Certificates issued after the implementation of this requirement will be valid for three years.

The members of the Examination Working Group (EWG) represent each of the specialty areas tested in the examinations. The EWG develops the examinations under the guidance of a psychometric consultant. The examinations are based on content outlines that were developed through a job analysis. Prior to being used in the scoring process, each question is 'piloted' (not scored) for one full examination cycle (eighteen months), and the performance of each question is continually tracked. The direct involvement of system operators, supervisors, and trainers in the examination development process will remain a primary requirement of future NERC system operator Certification examinations.

Earning a Credential

Examinations

There are four specialty examinations: reliability operator, balancing and interchange operator, transmission operator, and balancing, interchange, and transmission operator. Each of the examinations has its own content outline that can be accessed from the Program's web page. The specifics of the individual examinations can be obtained from the table below. The individual content outlines for each of the specialty examinations can be obtained by clicking on the name of the exam.

Examination Title	Total Questions	Scored Questions	Passing Score (# of answers correct)	Passing Score (% of answers correct)
Reliability operator Certification examination	150	125	93	74.4
Balancing, interchange, and transmission operator Certification examination	150	125	93	74.4
Transmission operator Certification examination	125	100	76	76
Balancing and interchange operator Certification examination	125	100	76	76

Applying for Certification Examinations

1. You must first establish a NERC.net user account. Once you are registered, you can access the on-line application form.

   a. If you do not have a NERC.net user account, please click here (https://soc.nerc.net/registration/default.aspx) to set up your free account.

2. If you already have a NERC.net user account, please click here (https://soc.nerc.net/default.aspx) to sign-in to your NERC.net user account to access the on-line examination application form.

   a. If you have forgotten your user name or password, contact the NERC office at phone number (609) 452-8060 (Mon–Fri, 8:00 a.m.–4:00 p.m. Eastern).

3. Select *Exam Application Form*
4. Select the examination you wish to take then click *SUBMIT*
5. You may submit your payment either by selecting credit card (VISA or MasterCard only) or invoice for check payments. A copy of the invoice and check or money order must be mailed to NERC to complete your examination application process.

North American Electric Reliability Corporation
System Operator Certification Program
116-390 Village Boulevard
Princeton, New Jersey 08540-5731

Applications are accepted year round. Allow two weeks for the processing of your application and receipt of notification that you are approved to take the examination.

An application is considered complete and processed only when all required information is provided and fees are received. After the application is processed, the authorization-to-test (ATT) letter containing the assigned ATT number is sent to each eligible candidate by e-mail followed by regular mail.

Eligibility Period

Eligibility to take the examination remains in effect for one year from the date the ATT number is issued. Candidates are encouraged to schedule an appointment to sit for the examination promptly. If a candidate fails to schedule and take the examination during the one-year eligibility period, the candidate shall forfeit all payments made to NERC. Candidates who fail to take the examination within the one-year eligibility must submit a new application and pay the full fee to be considered for eligibility again.

Fees

Fee Schedule	
Application to test	$350
Application to retest	$350
Application to withdraw	$50
Bad check/credit	$25

**All funds shall be payable in U.S. dollars.

Before scheduling an examination, please do the following:

- Review all parts of this Program Manual.
- Complete and submit the application to NERC, along with the appropriate fee.
- Receive an ATT letter containing the assigned ATT number by e-mail and regular mail from NERC declaring that you are eligible to take the examination. The letter will also provide instructions on how you may arrange the location, date, and time of your examination. The ATT number will be needed when you contact Prometric to schedule your test appointment.

Scheduling an Examination

NERC will send you an ATT letter by e-mail and regular mail with instructions about the identification items to bring with you on the day of the examination. To select your examination location, date, and time go to the Prometric website at http://www.prometric.com. All attempts should be made to schedule your examination as soon as possible because testing center appointments are in high demand by other professions. Waiting to schedule your appointment may significantly limit the locations, dates, and times available. Examinations may be administered on any Monday through Saturday. Examinations may be taken on any day that accommodates your schedule and where and when examination space is available.

During the scheduling process, you will be required to confirm your ATT number and your first and last name. You will be advised of available testing locations, dates, and times.

Note: When you schedule your test date, you will receive a confirmation number from Prometric. Please retain this number, as it will be useful should you have to use Prometric's automated cancellation system or if there is a conflict with the test center appointment. Prometric will not mail you a confirmation notice.

Examination Content Outline

The computer-based examination consists of objective, multiple-choice questions. The questions are based on the published Content Outline for each of the NERC system operator Certification examinations.

Day of the Examination

Time at Testing Center — Plan to arrive at the testing center at least thirty minutes early to sign in. You should allocate at least four hours to accommodate the total time you might be at the testing center. This includes:

Examination Time Allocation	
Examination Stages	**Time Allocation**
Administration & Review of Candidate Identification	30 minutes
Computer-Based Tutorial	15 minutes
Examination	2 hours & 45 minutes
Post-Examination Survey	15 minutes
Total Time to be Allocated	**3 hours & 45 minutes**

Computer Familiarization — A fifteen-minute tutorial on operating instructions for the computer-based examination will be provided before the start of each examination. The tutorial is self-explanatory, and no prior computer knowledge is needed. You may bypass this feature if you wish (not recommended).

Computer-based testing allows you to skip questions, mark, and return to them at a later time. During the examination, you may change your answer to any question. A clock is on the screen at all times indicating the time remaining. Before exiting the examination, the computer will indicate any question(s) you have marked for review or those that remain unanswered.

Post-Examination Survey — At the completion of the examination, you will be invited to complete a brief questionnaire on your reactions to the examination experience and the quality of the testing center staff and services. ***This is also your opportunity to comment on the content of the examination and to challenge any particular examination questions or answers***.

Comments — Comments on the examination process or questions will be collected in the post-examination survey. All comments will be forwarded to NERC.

Testing Center Requirements

Required Methods of Identification — You will be required to show two forms of identification before being admitted to the examination. You will be required to show at least one primary form of identification and either another primary or a secondary form of identification.

- Primary identification — Primary identification is a government-issued form of identification and must have **both** your picture **and** your signature on it. Some examples of primary identification are: a driver's license (if it has both your picture and your signature), a passport, or a military ID.
- Secondary identification — Secondary identification must have **either** your picture **or** your signature **or** both. Acceptable forms of secondary ID are: a second government-issued ID as above, or an employment ID, or a credit card or debit card.

Identification(s) that have been altered or damaged will not be accepted at the Prometric Test Center. If there is any discrepancy between the name on the identification presented to the test center staff and the NERC registration, the candidate will not be admitted to test and will be marked as a no-show. All no-shows forfeit all funds paid – no refunds are granted to no-shows.

Testing Center Regulations

- Candidates who arrive late for the examination might not be seated for the examination, depending on the criteria established by that testing center. Late arrivals that are not permitted to take the examination will be considered a no-show and must reapply and pay the full test fee to take the examination.
- No reference materials, calculators, or recording equipment may be taken into the examination. Candidates will be provided a keyed locker to store personal items while taking the examination.
- No test materials, documents, notes, or scratch paper of any sort may be taken from the examination.
- Visitors are not permitted during the examination.
- Testing center staff is instructed to answer questions about testing procedures only. They cannot respond to inquiries regarding the examination's content.
- During the examination, candidates may use the rest rooms for a biological break; however, the examination clock will continue running during such times.
- Candidates may not leave the testing center until they have finished the examination.
- Smoking is not permitted in any testing center.
- Any candidate giving or receiving assistance, or making a disturbance, will be required to turn in their examination materials, exit the examination room, and leave the testing center. Your test will be scored whether you have completed it or not. The disciplinary action procedure will be initiated upon notification by Prometric to NERC that such activity had occurred.
- Any instances of cheating, or attempts to impersonate another candidate, will be dealt with through the disciplinary action procedure.

Cancellations and No-shows

You may cancel and reschedule an examination appointment either by calling Prometric at the toll free number listed in your ATT letter or through their website (http://www.prometric.com). Your request to cancel must be no later than noon, local test center time, two days (Monday–Saturday excluding local holidays) before the examination date. You may reschedule the examination date within your period of eligibility without paying an additional fee. If you are late in canceling your examination appointment, do not appear for it, or arrive late, you will be considered a no-show. All no-shows will have to reapply to take the examination and pay the full test fee. Refunds will not be issued to no-shows.

Minimum Time Between Examinations

Candidates who fail the examination must wait 42 days from the date of the failed examination to retest. Candidates who pass one of the NERC system operator Certification examinations may take the examination thirty-six months after the date they were last certified (this only applies to those certificates valid for five years that were issued prior to the implementation of Continuing Education Hours as a means of Credential Maintenance).

Special Accommodations/Disabilities

Allowance will be made for all documented requests for special testing conditions. Applicants must notify NERC by e-mail or telephone. The Certification coordinator will contact the applicant with further instructions. Disability requests must be supported by a letter (original copy) from a recognized health care provider and be signed by a physician or psychologist. All other requests must be similarly supported. NERC will review each request and provide appropriate accommodations. The decision will be included in the notice of eligibility/ registration approval sent to the applicant.

Note: All testing centers are in compliance with the regulations governing the Americans with Disabilities Act (ADA).

Withdrawal from Examination Process

As described in the *Eligibility Period* section of this Program Manual, the eligibility period is one year from the date the ATT number is issued. If a candidate wishes to withdraw from the process within the stated period for any reason, they must complete the candidate withdrawal request on the system operator Certification website on or before the last eligibility day. Candidates who submit the request within the time period will be reimbursed for the fees submitted to NERC less the withdrawal fee in effect at the time of the application. Failure to properly withdraw will result in the candidate forfeiting all submitted fees.

If you have already scheduled an appointment with Prometric to take the exam, you must first cancel that Prometric appointment or you will be charged a no-show fee.

To access the Exam Withdrawal
On the System Operator Certification Program homepage, logon to your NERC.net account:

- Enter User name and Password
- Click on Logon
- Click on Exam Withdrawal
- Select the exam you are registered to take and from which you wish to withdraw, then click on Submit

Examination Change Request

If a candidate wishes to change the examination (i.e., from BI to TO, or from RC to BIT, etc.) that they are registered to take, they must use the Program's website. An examination change request will not change the candidate's eligibility period. The eligibility period will remain valid for one year from the date that the original ATT number was issued. This change request must be submitted at least thirty days prior to the expiration of the candidate's eligibility period.

To access the Examination Change
On the System Operator Certification Program homepage, logon to your NERC.net account:

- Enter User Name and Password
- Click on Logon
- Click on Exam Change
- Select the exam for which you are authorized then click on Submit
- Select the desired exam from the drop-down list, then click on Submit

You will be issued a new ATT number with the original expiration date. After receiving your new ATT you must schedule/reschedule an appointment with Prometric to take the exam.

Results and Awarding of Certificates

Candidates can view pass/fail results on the computer screen when the examination is terminated. Before exiting the Prometric Testing Center, a copy of this display will be provided. This is an unofficial summary of the examination.

After grading and analysis of the examination results, NERC will mail an official summary. This will take about ten to twelve weeks. The official summary will include the grade achieved and the percentage of correctly answered questions in each content outline category.

Candidates who pass the examination will receive the appropriate NERC-certified system operator certificate based on the examination taken and signed by the President of NERC. The date on the certificate will be the day the candidate took the examination.

System Operator Certificate Numbering Convention

Numbering certificates for certified system operators follows a specific convention. There have been two numbering conventions used since the start of the program.

The original Credential, issued from 1998 into 2002, was the NERC certified system operator. These certificates were assigned the letter N followed by four digits indicating the year the candidate registered, followed by a four digit sequential number.

> Example: N19980109 = NERC certified system operator that registered in 1998 and was the 109th system operator registered in the program.

When the specialty Credentials were implemented in late 2002, a new numbering convention was implemented. The new numbering convention consists of a two-letter designation of the Credential type, followed by six digits that indicate year and month the Credential was awarded, followed by a three digit sequential number in that month.

> Example: RA200306109 = NERC certified reliability operator certified in June of 2003 and was the 109th system operator certified in that month.

Credential Designations

N/RA/RC	Reliability operator
BT	Combined balancing and interchange/transmission operator
BA	Balancing and interchange operator
TO	Transmission operator

Confirmation of Credential to Third Parties

NERC will confirm to an employer that an individual holds a valid NERC system operator certificate (including releasing the certificate number and the issuance date) in response to a written request, on the employer's letterhead (or e-mail), providing the name of the individual. NERC will release the certificate numbers and issuance dates for individuals holding a current NERC system operator certificate to the Regional Entity Compliance Staff or designated agents of those Regional Entities in which an individual's employer operates in response to a written request, submitted on organization letterhead (or e-mail), that provides the names of the individuals for whom information is sought. No further information will be provided.

NERC will confirm to an employment search firm, or a potential employer, whether an individual holds a valid NERC system operator certificate (including releasing the certificate number and the issuance date) if the search firm has a release from the individual. No further information will be provided.

Section II — Credential Maintenance

Effective Date: October 1, 2006

Overview

The System Operator Certification Program incorporates a requirement to use Continuing Education Hours (CE Hours) to maintain a Credential that is valid for three years. Successfully passing an examination earns a Credential and a certificate that is valid for three years. Accumulation of the proper number and type of CE Hours from NERC-approved learning activities within that three-year period maintains the validity of that Credential for the next three years. A new certificate is issued indicating the new expiration date.

The program provides that:

1. System operators seeking to obtain a Credential will have to pass an examination to earn a Credential.
2. A certificate, valid for three years, will be issued to successful candidates.
3. A certified system operator must accumulate a minimum number of CE Hours, in specific training topics, before their certificate expires to maintain their Credential. The minimum number of CE Hours is based on each Credential:
    a. 200 CE Hours for reliability operator
    b. 160 CE Hours for balancing, interchange, and transmission operator
    c. 140 CE Hours for balancing and interchange operator
    d. 140 CE Hours for transmission operator
4. A minimum of 30 CE Hours must focus on content and/or implementation of NERC Reliability Standards.
5. A minimum of 30 CE Hours must be in simulations (i.e., table-top exercises, training simulators, emergency drills, practice emergency procedures, restoration, blackstart, etc.).
6. CE Hours can concurrently count for both NERC Reliability Standards and simulations but will only be counted once for the total CE Hours requirement.
    a. For example: A one-hour simulation learning activity that focuses on NERC Standards can count towards the requirements for both NERC Reliability Standards and simulation. However, the Credential holder will only be awarded a total of one CE Hour toward the total CE Hours requirement. In other words, the CE Hours will not be double counted.
7. Retaking the examination is not an option for Credential Maintenance.
8. If a certified system operator does not accumulate enough CE Hours to maintain their current Credential prior to the certificate expiration date, their Credential will be Suspended for a maximum of one year. At the end of the suspension period, their Credential will be Revoked.
9. If, prior to the end of the one-year suspension, the certified system operator accumulates the proper number and type of CE Hours, their Credential will be reinstated with the original expiration date (three years after the previous expiration date).

10. A system operator with a Revoked Credential will have to pass an examination to become certified.

When to Start Accumulating CE Hours

CE Hours earned (date of learning activity) in the six months prior to the implementation date will be recognized if they are earned from an approved learning activity that meets the Certification program requirements. Each learning activity will have to be approved for use for Credential Maintenance prior to the CE Hours being issued.

Specifics of the Credential Maintenance Program

Certified system operators are required to accumulate CE Hours through the NERC Continuing Education Program in recognized training topics for Credential Maintenance. See *Appendix A* for the list of recognized training topics. Described below are the requirements for each of the four Credentials:

Transmission Operator Certification
To maintain a valid transmission operator Credential, system operators must earn **140 CE Hours** within the 3-year period preceding the expiration date of their certificate.

The 140 CE Hours must include:

- A minimum of 30 CE Hours must focus on content and/or implementation of NERC Reliability Standards.
- A minimum of 30 CE Hours must utilize simulations (i.e., table-top exercises, dispatcher/operator training simulators, emergency drills, or practice emergency procedures, restoration, blackstart or other reliability-based scenarios).

Balancing and Interchange Operator Certification
To maintain a valid balancing and interchange operator Credential, system operators must earn **140 CE Hours** within the 3-year period preceding the expiration date of their certificate.

The 140 CE Hours must include:

- A minimum of 30 CE Hours must focus on content and/or implementation of NERC Reliability Standards.
- A minimum of 30 CE Hours must utilize simulations (i.e., table-top exercises, dispatcher/operator training simulators, emergency drills, or practice emergency procedures, restoration, blackstart or other reliability-based scenarios).

Balancing, Interchange, and Transmission Operator Certification
To maintain a valid balancing, interchange, and transmission operator Credential, system operators must earn **160 CE Hours** within the 3-year period preceding the expiration date of their certificate.

The 160 CE Hours must include:

- A minimum of 30 CE Hours must focus on content and/or implementation of NERC Reliability Standards.

- A minimum of 30 CE Hours must utilize simulations (i.e., table-top exercises, dispatcher/operator training simulators, emergency drills, or practice emergency procedures, restoration, blackstart or other reliability-based scenarios).

Reliability Operator Certification
To maintain a valid reliability operator credential, system operators must earn **200 CE Hours** within the three-year period preceding the expiration date of their certificate.

The 200 CE Hours must include:

- A minimum of 30 CE Hours must focus on content and/or implementation of NERC Reliability Standards.
- A minimum of 30 CE Hours must utilize simulations (i.e., table-top exercises, dispatcher/operator training simulators, emergency drills, or practice emergency procedures, restoration, blackstart or other reliability-based scenarios).

Certificate

System operators that have: 1) completed the Credential Maintenance application, 2) satisfied the CE Hours requirements, and 3) paid the required fee will be issued a certificate valid for three years.

Deficits of CE Hours for Credential Holders

The Credential of a certified system operator who does not accumulate the required number and balance of CE Hours within the three-year period will be Suspended. A system operator with a Suspended certificate cannot perform any task that requires an operator to be NERC-certified. The system operator with a Suspended Credential will have up to twelve months to acquire the necessary CE Hours.

During the time of suspension, the original anniversary date will be maintained. Therefore, should the system operator accumulate the required number of CE Hours within the twelve-month suspension period, they will be issued a certificate that will be valid for three years from the previous expiration date. The system operator will be required to accumulate the required number of CE Hours prior to the current expiration date.

At the end of the twelve-month suspension period, if the system operator has not accumulated the required number of CE Hours, the Credential will be Revoked and all CE Hours earned will be forfeited. After a Credential is Revoked, the system operator will be required to pass an examination to become certified.

For example, a system operator whose Credential expires on July 31, 2009 does not accumulate the required number of CE Hours prior to that date:

1. The Credential will be Suspended on August 1, 2009.
2. If the system operator then accumulates and submits the required number of CE Hours by March 1, 2010, the Credential will be reinstated on March 1, 2010, and will be valid until July 31, 2012.

3. The system operator will have to accumulate the required number of CE Hours prior to July 31, 2012 or the Credential will be Suspended again.
4. CE Hours previously used to maintain the Credential cannot be reused for Credential Maintenance.
5. A record of the suspension between August 1, 2009 and March 1, 2010 will be maintained.

Carry-Over Hours

For all Credentials, up to 30 CE Hours accumulated in the six months prior to the certificate expiration date and not used for Credential Maintenance may be carried over to the next three-year period.

CE Hours will be allocated on a first-in, first-out basis. In other words, CE Hours from a learning activity occurring first according to the calendar will be used to satisfy the CE Hours requirement first and continuing sequentially by the date of the learning activities.

Reporting of CE Hours Earned by Certified System Operators

Normally, the Providers will make the submittals of electronically into the NERC system operator Certification database. However, should some conflict occur, the certified system operator must be able to submit proof of having acquired the necessary CE Hours from the Continuing Education Program Provider's approved learning activities.

System operators will be able to track their status/progress towards maintaining their Credential through the NERC system operator Certification website. Certified system operators should review their CE Hours records at least 90 days before their certificate expiration date to allow sufficient time to acquire CE Hours prior to the system operator's certificate expiration date should there be a deficit.

If a Provider does not submit the CE Hours, the certified system operator must submit proof of sufficient CE Hours to the NERC Manager of Personnel Certification no less than 30 days before the system operator's certificate expiration date. NERC staff may be able to process/resolve discrepancies in Credential holder CE Hours records in less than 30 days; however, submissions received at NERC within the 30-day window may not be credited to the system operator's account in time to prevent the Credential from being Suspended. Suspended Credentials based on incomplete data will be reinstated retroactively once proof of completion is verified.

For system operators who meet the CE Hours requirements, and upon receipt of an application and necessary fees, NERC will issue a new certificate with an expiration date three years from the previous expiration date (a new certificate will be mailed to the address on record).

Application for Credential Maintenance

Procedure for applying for Credential Maintenance

Application procedure will be completed after the software is developed.

Hardship Clause

It is understood that, due to unforeseen events and extenuating circumstances, a certified system operator may be unable to accumulate the necessary CE Hours in the time frame required by the Program to maintain the Credential. In such an event, an individual must submit a written request containing a thorough explanation of the circumstance and supporting information to:

Manager–Personnel Certification
NERC
116-390 Village Boulevard
Princeton, New Jersey 08540

The PCGC retains the right to invoke this hardship clause and deviate from the Program rules, as it deems appropriate, to address such events or circumstances. Examples of extenuating circumstances would include, but not limited to, extended military service, extended illness of the system operator or within the system operator's immediate family, or system operator temporary disability that results in an extended period of time away from work.

Changing Certification Levels

Certified system operators that want to transition to a lower Credential can do so. Many system operators hold a reliability operator Credential but are not working in a reliability operator capacity. Those certified system operators could easily transition to a Credential that more closely matches the work they perform without taking an examination. However, system operators currently holding a transmission operator or balancing and interchange operator Credential will have to pass an examination to move to a higher Credential such as the combined balancing, interchange, and transmission operator Credential or the reliability operator Credential.

A certified system operator can change the type of their Credential by indicating their desire on their Credential Maintenance application. A system operator has the following options:

To change a Credential from:

- Balancing and interchange operator to any other NERC Credential: the system operator must pass the examination for that Credential.
- Transmission operator to any other NERC Credential: the system operator must pass the examination for that Credential.
- Balancing, interchange, and transmission operator to reliability operator: the system operator must pass the examination for that Credential.
- Reliability operator to any other NERC Credential: the system operator must submit the proper number and type of CE Hours for the new Credential.
- Balancing, interchange, and transmission operator to transmission operator or balancing and interchange operator: the system operator must submit proper number and type of CE Hours for the new Credential.

Transition Plan — 5-year Program to 3-year Program

A certified system operator whose certificate expires during the first three years after implementation of this Program has the option to either accumulate the required number of CE Hours according to the rules stated previously or pass the examination for the desired Credential. Certified system operators who accumulate the required number and balance of CE Hours will receive a certificate that will be valid for three years from the expiration date on their current certificate. System operators who pass an examination will receive a certificate valid for three years from the date they pass the examination.

Certified system operators whose certificate expires after the third anniversary of the implementation of this Program, must accumulate the required number of CE Hours prior to the expiration date of their certificate regardless of the issuance date of their certificate.

Section III — Program Rules

Rules for NERC-Certified System Operator

Recognized Learning Activities

CE Hours will be recognized for Credential Maintenance only for training topics/learning activities listed in *Appendix A* and where Providers have complied with the Continuing Education Program rules.

Provider Access to Database

Providers will be able to access the database to upload certified system operator CE Hours activity. The process for doing this will be determined after the database is developed.

System Operator Access to Database

Certified system operators will be able to access the database to track their CE Hour activity. The process for doing this will be determined after the database is developed.

Retain Documentation

The certified system operator is responsible for retaining appropriate documentation for proof of Credential Maintenance. Documentation includes:

- Name and contact information of the Provider
- Title and identification number of the learning activity and description of its content
- Date(s) of the learning activity
- Location (if applicable)
- Number and type of CE Hours
- System operator's NERC certificate number

Providers shall retain comparable documentation. Electronic forms of documentation are acceptable.

Learning Activity Credit Only Once Per Year

CE Hours for a particular course or learning activity will not be recognized for Credential Maintenance more than once a year based on the Credential anniversary. (i.e., during the twelve-month period preceding the system operator's Credential anniversary)

Exception: CE Hours for courses dealing with emergency operations will be recognized no more than two times per year based on the Credential anniversary. (i.e., during the 12-month period preceding the system operator's Credential anniversary)

Learning Activity Approved Status Revoked after CE Hours Granted

CE Hours granted for a course or learning activity that had been approved for Credential Maintenance will still be recognized if, subsequent to the system operator attending the course or learning activity, the approved status is Revoked.

Instructor Credits

For those instructors who are also certified system operators, 1.0 CE Hour for each CE Hours of a learning activity delivered will be recognized towards the instructor's system operator Credential Maintenance. CE Hours for a particular course or learning activity will not be recognized for Credential Maintenance more than once a year based on the Credential anniversary. (i.e., during the twelve-month period preceding the system operator's Credential anniversary)
Exception: CE Hours for courses dealing with emergency operations will be recognized no more than two times per year based on the Credential anniversary. (i.e., during the twelve-month period preceding the system operator's Credential anniversary)

Treatment of Disputes Between Certified System Operator and Providers

Disputes between a Provider and a certified system operator must be resolved between the Provider and the certified system operator. NERC will not become involved in resolving the dispute. Additionally, it is the obligation of the certified system operator to periodically review their CE Hours' records in the NERC system operator Certification database and to maintain their own training records to provide proof that CE Hour requirements have been achieved.

Fees

Fee Schedule**	
Application to test	$350
Application to maintain or change Credential using CE Hours	$350
Application to retest	$350
Application to withdraw	$50
Bad check/credit application	$25

**All funds must be payable in U.S. dollars.

The Program must be financially independent as well as not-for-profit. The on-going expenses to develop and maintain the examinations and the management and administrative costs associated with both the examination process and Credential Maintenance necessitate these fees. These fees will be periodically reviewed and adjusted accordingly.

Section IV — Dispute Resolution

1. Applicability

Any dispute arising under the NERC agreement establishing a *NERC System Operator Certification Program* or from the establishment of any NERC rules, policies, or procedures dealing with any segment of the Certification process shall be subject to the NERC system operator certification dispute resolution process (hereafter called the "Process"). The Process is for the use of persons who hold an operator Certification or persons wishing to be certified to dispute the validity of the examination, the content of the test, the content outlines, or the registration process. The Process is not for trainers or certified persons disputing CE Hours.

2. Dispute Resolution Process

The dispute resolution process consists of three steps.

a. **NERC System Operator Certification Program Staff**
The first step in the process is for the person with a dispute to contact the NERC System Operator Certification Program staff. Contact may be made by a phone call or e-mail to the program staff. This first step can usually resolve the issues without further actions. It is expected that most disputes will be resolved at this step.

Any dispute that requires resolution will first be brought to the NERC System Operator Certification Program staff. Should the issue(s) not be resolved to the satisfaction of the parties involved, the issue can be brought to the Personnel Certification Governance Committee (PCGC) Dispute Resolution Task Force.

b. **Personnel Certification Governance Dispute Resolution Task Force**
If the NERC staff did not resolve the issue(s) to the satisfaction of the parties involved, a written request should be submitted to the chairman of the PCGC through NERC staff explaining the issue(s) and requesting further action. Upon receipt of the letter, the PCGC chairman will present the request to the PCGC Dispute Resolution Task Force for action. This task force consists of three current members of the PCGC. The PCGC Dispute Resolution Task Force will investigate and consider the issue(s) presented and make a decision. This decision will then be communicated to the submitting party, the PCGC chairman, and the NERC staff within 45 calendar days of receipt of the request.

If a French-Canadian or Mexican party raises a dispute, the PCGC shall appoint a French-Canadian speaking or Spanish-speaking interpreter, respectively, as requested.

c. **Personnel Certification Governance Committee**
If the PCGC Dispute Resolution Task Force's decision did not resolve the issue(s) to the satisfaction of the parties involved, the final step in the process is for the issue(s) to be brought before the PCGC. The disputing party shall submit a written request to the PCGC chairman through NERC staff requesting that the issue(s) be brought before the

PCGC for resolution. The chairman shall see that the necessary documents and related data are provided to the PCGC members as soon as practicable. The PCGC will then meet or conference to discuss the issue(s) and make their decision within 60 calendar days of the chairman's receipt of the request. The decision will be provided to the person bringing the issue(s) and the NERC staff. The PCGC is the governing body of the Certification Program and its decision is final.

3. Process Expenses

All individual expenses associated with the Process, including salaries, meetings, or consultant fees, shall be the responsibility of the individual parties incurring the expense.

4. Decision Process

Robert's Rules of Order shall be used as a standard of conduct for the Process. A simple majority vote of the members present will decide all issues. The vote will be taken in a closed session. No one on the PCGC may participate in the dispute resolution process, other than as a party or witness, if he or she has an interest in the particular matter.

A stipulation of invoking the appeals process is that the entity requesting the appeal agrees that neither NERC (its Members, Board of Trustees, committees, subcommittees, and staff), any person assisting in the appeals process, nor any company employing a person assisting in the appeals process, shall be liable, and they shall be held harmless against the consequences of or any action or inaction or of any agreement reached in resolution of the dispute or any failure to reach agreement as a result of the appeals proceeding. This "hold harmless" clause does not extend to matters constituting gross negligence, intentional misconduct, or a breach of confidentiality.

Section V — Disciplinary Action

1. Purpose

This disciplinary action procedure is necessary to protect the integrity of the system operator Credential. Should an individual act in a manner that is inconsistent with expectations, this procedure describes the process to investigate and take action necessary to protect the Credential.

2. Grounds for Action

The following shall serve as grounds for disciplinary action:

a. Willful, gross, and/or repeated violation of the NERC Reliability Standards as determined by a NERC investigation.

   i. Both the organization and the certified system operator are bound by the NERC Reliability Standards. If a certified system operator, either in concert with the organization or on his or her own initiative, performs a willful, gross, and/or repeated violation of the NERC Reliability Standards, he or she is liable for those actions and disciplinary actions may be taken against him or her.

b. Willful, gross, and/or repeated negligence in performing the duties of a certified system operator as determined by a NERC investigation.

c. Intentional misrepresentation of information provided on a NERC application for a system operator Certification exam or to maintain a system operator Credential using CE Hours.

d. Intentional misrepresentation of identification in the exam process.

   i. This includes, but is not limited to, a person identifying himself or herself as another person to obtain Certification for the other person.

e. Any form of cheating during a Certification exam.

   i. This includes, but is not limited to, bringing unauthorized reference material in the form of notes, crib sheets, or other methods of cheating into the testing center.

f. A certified system operator's admission to or conviction of any felony or misdemeanor directly related to their duties as a system operator.

3. Hearing and Appeals Process

Upon report to NERC of a candidate's or certified system operator's alleged misconduct, the NERC Personnel Certification Governance Committee (PCGC) Credential Review Task Force will convene for the determination of facts. An individual, government agency, or other investigating authority can file reports.

Unless the task force initially determines that the report of alleged misconduct is without merit, the candidate or certified system operator will be given the right to notice of the allegation. A hearing will be held and the charged candidate or certified system operator will be given an opportunity to be heard and present further relevant information. The task force may seek out information from other involved parties. The hearing will not be open to the public, but it will be

open to the charged candidate or certified system operator and his or her representative. The task force will deliberate in a closed session, but the task force cannot receive any evidence during the closed session that was not developed during the course of the hearing. The task force's decision will be unanimous and will be in writing with inclusion of the facts and reasons for the decision. The task force's written decision will be delivered to the PCGC and by certified post to the charged candidate or certified system operator. In the event that the task force is unable to reach a unanimous decision, the matter shall be brought to the full committee for a decision.

The task force's decision will be one of the below:

a. No Action
Allegation of misconduct was determined to be unsubstantiated or inconsequential to the Credential.

b. Probation
A letter will be sent from NERC to the offender specifying:

i. The length of time of the probationary period (to be determined by the PCGC).

(a) Credential will remain valid during the probationary period.

(b) The probationary period does not affect the expiration date of the current certificate.

ii. During the probationary period, a subsequent offense of misconduct, as determined through the same process as described above, may be cause for more serious consequences.

(a) Extension of Probation,

(b) Revocation for cause, or

(c) Termination of Credential.

c. Revoke for Cause
A letter will be sent from NERC to the offender specifying:

i. The length of time of the revocation period (to be determined by the PCGC).

(a) Credential is no longer valid.

(b) Successfully passing an exam will be required to become certified.

(c) An exam will not be authorized until the revocation period expires.

d. Termination of Credential
A letter will be sent from NERC to the offender specifying:

i. Permanent removal of Credential.

4. Appeal Process

The decision of the task force may be appealed using the NERC system operator certification dispute resolution process.

5. Credential Review Task Force

The Credential Review Task Force shall be comprised of three active members of the PCGC assigned by the Chairman of the PCGC on an ad hoc basis. No one on the Credential Review Task Force may have an interest in the particular matter.

The task force will meet in a venue determined by the task force chairman.

If a French-Canadian or Mexican party raises a dispute, the PCGC shall appoint a French-Canadian speaking or Spanish-speaking interpreter, respectively, as requested.

Glossary

Capitalized terms used in this Appendix shall have the definitions set forth in Appendix 2 of the Rules of Procedure. For convenience of reference, definitions used in this Appendix are also set forth below:

G01. **Continuing Education Hour or CE Hour**: Sixty minutes of participation in a group, independent study, or self-study learning activity as approved by the NERC Continuing Education Program.

G02. **Continuing Education Program Provider or Provider**: The individual or organization offering a learning activity to participants and maintaining documentation required by these criteria.

G03. **Certification:** An official recognition that indicates the recipient has passed a NERC exam or completed a specified number of Continuing Education Hours.

G04. **Credential:** NERC designation that indicates the level of qualification achieved (i.e., reliability operator; balancing, interchange, and transmission operator; balancing and interchange operator; and transmission operator).

G05. **Credential Maintenance:** Meet NERC CE Hours' requirements to maintain a valid NERC-issued system operator Credential.

G06. **NERC-Approved Learning Activity**: Training that maintains or improves professional competence and has been approved by NERC for use in its Continuing Education Program.

G07. **Probation:** A step in the disciplinary process during which the certificate is still valid. During the probationary period, a subsequent offense of misconduct, as determined through the same process as described above, may be cause for more serious consequences.

G08. **Revoked:** A NERC certificate which has been Suspended for more than twelve months. While in this state, a certificate holder can not perform any task that requires an operator to be NERC-certified. The certificate holder will be required to pass an exam to be certified again. Any CE Hours accumulated prior to or during the revocation period will not be counted towards Credential Maintenance.

G09. **Revoke for Cause:** A step in the disciplinary process during which the certificate is no longer valid and requiring successfully passing an exam to become certified. However, an exam will not be authorized until the revocation period expires. CE Hours earned before or during this revocation period will not be counted for maintaining a Credential.

G10. **Suspended:** Certificate status due to an insufficient number of CE Hours being submitted prior to the expiration of a certificate. While in this state, a certificate holder can not perform any task that requires an operator to be NERC-certified.

G11. **Termination of Credential:** A step in the disciplinary process whereby a Credential is permanently Revoked.

G12. **Type of CE Hours:** NERC-Approved Learning Activity covering topics from Appendix A, NERC Reliability Standards and/or simulations for which there is a minimum requirement for Credential Maintenance.

Appendix A — Recognized Operator Training Topics

1. **Basic Concepts**
   a. Basic electricity including capacitance, inductance, impedance, Real and Reactive Power
   b. Single phase & three phase power systems
   c. Transmission line and transformer characteristics
   d. Substation layouts including the advantages and disadvantages of substation bus schemes

2. **Production & Transfer of Electric Energy**
   a. How generators produce electricity
   b. Types of generators including advantages and disadvantages of each type
   c. Economic operation of generators
   d. Real and Reactive Power flow

3. **System Protection**
   a. Transmission line, transformer, and bus protection principles
   b. Generator protection principles
   c. Types of relays used in different protection schemes
   d. The role of communication systems in system protection

4. **Interconnected Power System Operations**
   a. Voltage control
   b. Frequency control
   c. Power system stability
   d. Facility outage response
   e. Automatic generator control (AGC) including the different modes of AGC
   f. Extra high voltage (EHV) operation
   g. Energy accounting
   h. Inadvertent energy

5. **Emergency Operations**
   a. Loss of generation resource
   b. Operating reserves
   c. Contingency reserves
   d. Line loading relief
   e. Loop flow
   f. Load shedding
   g. Voltage and reactive flows during emergencies
   h. Loss of critical transmission facilities

6. **Power System Restoration**
   a. Restoration philosophies
   b. Facility restoration
   c. Blackstart restoration
   d. Load shedding
   e. Under-frequency Load shedding
   f. Under-voltage Load shedding

7. **Market Operations**
   a. Standards of conduct
   b. Tariffs
   c. Transmission reservations and transmission priorities
   d. Transaction tagging

8. **Tools**
   a. Supervisory control and data acquisition
   b. Automatic generation control application
   c. Power flow application
   d. State estimator application
   e. Contingency analysis application
   f. P-V curves
   g. Load forecasting application
   h. Energy accounting application
   i. OASIS application
   j. E-Tag application
   k. Voice and data communication systems

9. **Operator Awareness**
   a. Identifying loss of facilities
   b. Recognizing loss of communication facilities
   c. Recognizing telemetry problems
   d. Recognizing and identifying contingency problems
   e. Communication with appropriate entities including the Reliability Coordinator

10. **Policies & Procedures**
    a. NERC Reliability Standards
    b. ISO/RTO operational and emergency policies and procedures
    c. Regional operational and emergency policies and procedures
    d. Local & company specific policies and procedures
    e. Emergency operating plans
    f. Line loading relief procedures
    g. Physical and cyber sabotage procedures
    h. Outage management and switching procedures

11. **NERC Reliability Standards**
    a. Application and/or implementation of NERC Reliability Standards

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF REVISIONS TO ITS RULES OF PROCEDURE
TO ADOPT A BULK ELECTRIC SYSTEM EXCEPTION PROCEDURE

ATTACHMENT 7B

REVISED APPENDIX 6 OF THE RULES OF PROCEDURE,

SYSTEM OPERATOR CERTIFICATION PROGRAM MANUAL

REDLINED VERSION

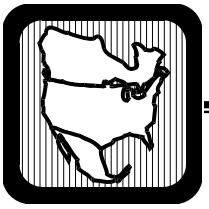
Proposed Revisions 1-9-2012
[Incorporates revisions filed with FERC on November 29, 2011]

System Operator Certification

Program Manual

August 2006

Approved by the Personnel Certification Governance Committee
Approved by the NERC Board of Trustees
May 2006



North American Electric Reliability Council
Updated: August 14, 2006

Program Manual Changes

No.	Date	Section	Page	Description	Version
1	05/2005	All	All	Initial white paper expanded SOC Program to include CE hours	0
2	02/2006	All	All	Program Manual	1
3	06/2006	I and II	4, 17	Fees	1.1
4	06/2006	All	All	CEH to CE hours	1.1
5	08/2006	III	16	Training Providers retaining documentation	1

Table of Contents

Program Manual Changes ..... **ii**
Executive Summary **1**
Section I — Certification Examinations **2**
Overview 2
Earning a Credential 2
Examinations 2
Applying for Certification Examinations 3
Eligibility Period 3
Fees 4
Scheduling an Examination 4
Examination Content Outline 4
Day of the Examination 5
Testing Center Requirements 6
Cancellations and No-shows 7
Minimum Time Between Examinations 7
Special Accommodations/Disabilities 7
Withdrawal from Examination Process 7
Examination Change Request 8
Results and Awarding of Certificates 8
System Operator Certificate Numbering Convention 9
Credential Designations 9
Confirmation of Credential to Third Parties 9
Section II — Credential Maintenance **10**
Overview 10
When to Start Accumulating CE Hours 11
Specifics of the Credential Maintenance Program 11
Certificate 12
Deficits of CE Hours for Credential Holders 12
Carry-Over Hours 13
Reporting of CE Hours Earned by Certified System Operators 13
Application for Credential Maintenance 13
Procedure for applying for Credential Maintenance 13
Hardship Clause 14
Changing Certification Levels 14
Transition Plan — 5-year Program to 3-year Program 15
Section III — Program Rules **16**
Rules for NERC-Certified System Operator 16
Recognized Learning Activities 16
Provider Access to Database 16
System Operator Access to Database 16
Retain Documentation 16
Learning Activity Credit Only Once Per Year 16
Learning Activity Approved Status Revoked after CE Hours Granted 16
Instructor Credits 17
Treatment of Disputes Between Certified System Operator and Providers 17
Fees 17
Section IV — Dispute Resolution **18**
Section V — Disciplinary Action **20**
Glossary **23**
Appendix A — Recognized Operator Training Topics **25**

Executive Summary

Maintaining the reliability of the Bulk Electric System through implementation of the Reliability Standards requires skilled, trained and qualified system operators. The System Operator Certification Program provides the mechanism to ensure system operators are provided the education and training necessary to obtain the essential knowledge and skills and are therefore qualified to operate the Bulk Electric System.

The System Operator Certification Program provides the framework for the examinations used to obtain initial Certification in one of four NERC Credentials: transmission operator, balancing and interchange operator, balancing, interchange and transmission operator, and reliability operator. A system operator Credential is a personal Credential issued to a person for successfully passing a NERC system operator Certification exam. The Credential is maintained by accumulating a specified number of Continuing Education Hours within a specified period of time. The program will allow system operators to maintain their Credential through continuing education rather than to recertify by retaking an examination.

The NERC Personnel Certification Governance Committee (PCGC) is the governing body that establishes the policies, sets fees, and monitors the performance of the System Operator Certification Program. As program administrator, NERC maintains databases, records, and applications, collects fees, maintains contracts with vendors, and provides reports on system operator Certification related activities. The PCGC is responsible for ensuring the program is not-for-profit and financially sound, and annually reviews the program to ensure that it is adequately funded.

Section I — Certification Examinations

Overview

The System Operator Certification Program awards Certification Credentials to those individuals who demonstrate that they have attained sufficient knowledge relating to NERC Reliability Standards as well as the basic principles of Bulk Power System operations by passing one of four specialty examinations. A certificate is issued to a candidate who successfully completes an examination. Certificates issued prior to the implementation of the new Continuing Education Hours requirement will be valid for five years. Certificates issued after the implementation of this requirement will be valid for three years.

The members of the Examination Working Group (EWG) represent each of the specialty areas tested in the examinations. The EWG develops the examinations under the guidance of a psychometric consultant. The examinations are based on content outlines that were developed through a job analysis. Prior to being used in the scoring process, each question is 'piloted' (not scored) for one full examination cycle (eighteen months), and the performance of each question is continually tracked. The direct involvement of system operators, supervisors, and trainers in the examination development process will remain a primary requirement of future NERC system operator Certification examinations.

Earning a Credential

Examinations

There are four specialty examinations: reliability operator, balancing and interchange operator, transmission operator, and balancing, interchange, and transmission operator. Each of the examinations has its own content outline that can be accessed from the Program's web page. The specifics of the individual examinations can be obtained from the table below. The individual content outlines for each of the specialty examinations can be obtained by clicking on the name of the exam.

Examination Title	Total Questions	Scored Questions	Passing Score (# of answers correct)	Passing Score (% of answers correct)
Reliability operator Certification examination	150	125	93	74.4
Balancing, interchange, and transmission operator Certification examination	150	125	93	74.4
Transmission operator Certification examination	125	100	76	76
Balancing and interchange operator Certification examination	125	100	76	76

Applying for Certification Examinations

1. You must first establish a NERC.net user account. Once you are registered, you can access the on-line application form.

   a. If you do not have a NERC.net user account, please click here (https://soc.nerc.net/registration/default.aspx) to set up your free account.

2. If you already have a NERC.net user account, please click here (https://soc.nerc.net/default.aspx) to sign-in to your NERC.net user account to access the on-line examination application form.

   a. If you have forgotten your user name or password, contact the NERC office at phone number (609) 452-8060 (Mon–Fri, 8:00 a.m.–4:00 p.m. Eastern).

3. Select *Exam Application Form*
4. Select the examination you wish to take then click *SUBMIT*
5. You may submit your payment either by selecting credit card (VISA or MasterCard only) or invoice for check payments. A copy of the invoice and check or money order must be mailed to NERC to complete your examination application process.

North American Electric Reliability Corporation
System Operator Certification Program
116-390 Village Boulevard
Princeton, New Jersey 08540-5731

Applications are accepted year round. Allow two weeks for the processing of your application and receipt of notification that you are approved to take the examination.

An application is considered complete and processed only when all required information is provided and fees are received. After the application is processed, the authorization-to-test (ATT) letter containing the assigned ATT number is sent to each eligible candidate by e-mail followed by regular mail.

Eligibility Period

Eligibility to take the examination remains in effect for one year from the date the ATT number is issued. Candidates are encouraged to schedule an appointment to sit for the examination promptly. If a candidate fails to schedule and take the examination during the one-year eligibility period, the candidate shall forfeit all payments made to NERC. Candidates who fail to take the examination within the one-year eligibility must submit a new application and pay the full fee to be considered for eligibility again.

Fees

Fee Schedule	
Application to test	$350
Application to retest	$350
Application to withdraw	$50
Bad check/credit	$25

**All funds shall be payable in U.S. dollars.

Before scheduling an examination, please do the following:

- Review all parts of this Program Manual.
- Complete and submit the application to NERC, along with the appropriate fee.
- Receive an ATT letter containing the assigned ATT number by e-mail and regular mail from NERC declaring that you are eligible to take the examination. The letter will also provide instructions on how you may arrange the location, date, and time of your examination. The ATT number will be needed when you contact Prometric to schedule your test appointment.

Scheduling an Examination

NERC will send you an ATT letter by e-mail and regular mail with instructions about the identification items to bring with you on the day of the examination. To select your examination location, date, and time go to the Prometric website at http://www.prometric.com. All attempts should be made to schedule your examination as soon as possible because testing center appointments are in high demand by other professions. Waiting to schedule your appointment may significantly limit the locations, dates, and times available. Examinations may be administered on any Monday through Saturday. Examinations may be taken on any day that accommodates your schedule and where and when examination space is available.

During the scheduling process, you will be required to confirm your ATT number and your first and last name. You will be advised of available testing locations, dates, and times.

Note: When you schedule your test date, you will receive a confirmation number from Prometric. Please retain this number, as it will be useful should you have to use Prometric's automated cancellation system or if there is a conflict with the test center appointment. Prometric will not mail you a confirmation notice.

Examination Content Outline

The computer-based examination consists of objective, multiple-choice questions. The questions are based on the published Content Outline for each of the NERC system operator Certification examinations.

Day of the Examination

Time at Testing Center — Plan to arrive at the testing center at least thirty minutes early to sign in. You should allocate at least four hours to accommodate the total time you might be at the testing center. This includes:

Examination Time Allocation	
Examination Stages	**Time Allocation**
Administration & Review of Candidate Identification	30 minutes
Computer-Based Tutorial	15 minutes
Examination	2 hours & 45 minutes
Post-Examination Survey	15 minutes
Total Time to be Allocated	**3 hours & 45 minutes**

Computer Familiarization — A fifteen-minute tutorial on operating instructions for the computer-based examination will be provided before the start of each examination. The tutorial is self-explanatory, and no prior computer knowledge is needed. You may bypass this feature if you wish (not recommended).

Computer-based testing allows you to skip questions, mark, and return to them at a later time. During the examination, you may change your answer to any question. A clock is on the screen at all times indicating the time remaining. Before exiting the examination, the computer will indicate any question(s) you have marked for review or those that remain unanswered.

Post-Examination Survey — At the completion of the examination, you will be invited to complete a brief questionnaire on your reactions to the examination experience and the quality of the testing center staff and services. ***This is also your opportunity to comment on the content of the examination and to challenge any particular examination questions or answers***.

Comments — Comments on the examination process or questions will be collected in the post-examination survey. All comments will be forwarded to NERC.

Testing Center Requirements

Required Methods of Identification — You will be required to show two forms of identification before being admitted to the examination. You will be required to show at least one primary form of identification and either another primary or a secondary form of identification.

- Primary identification — Primary identification is a government-issued form of identification and must have **both** your picture **and** your signature on it. Some examples of primary identification are: a driver's license (if it has both your picture and your signature), a passport, or a military ID.
- Secondary identification — Secondary identification must have **either** your picture **or** your signature **or** both. Acceptable forms of secondary ID are: a second government-issued ID as above, or an employment ID, or a credit card or debit card.

Identification(s) that have been altered or damaged will not be accepted at the Prometric Test Center. If there is any discrepancy between the name on the identification presented to the test center staff and the NERC registration, the candidate will not be admitted to test and will be marked as a no-show. All no-shows forfeit all funds paid – no refunds are granted to no-shows.

Testing Center Regulations

- Candidates who arrive late for the examination might not be seated for the examination, depending on the criteria established by that testing center. Late arrivals that are not permitted to take the examination will be considered a no-show and must reapply and pay the full test fee to take the examination.
- No reference materials, calculators, or recording equipment may be taken into the examination. Candidates will be provided a keyed locker to store personal items while taking the examination.
- No test materials, documents, notes, or scratch paper of any sort may be taken from the examination.
- Visitors are not permitted during the examination.
- Testing center staff is instructed to answer questions about testing procedures only. They cannot respond to inquiries regarding the examination's content.
- During the examination, candidates may use the rest rooms for a biological break; however, the examination clock will continue running during such times.
- Candidates may not leave the testing center until they have finished the examination.
- Smoking is not permitted in any testing center.
- Any candidate giving or receiving assistance, or making a disturbance, will be required to turn in their examination materials, exit the examination room, and leave the testing center. Your test will be scored whether you have completed it or not. The disciplinary action procedure will be initiated upon notification by Prometric to NERC that such activity had occurred.
- Any instances of cheating, or attempts to impersonate another candidate, will be dealt with through the disciplinary action procedure.

Cancellations and No-shows

You may cancel and reschedule an examination appointment either by calling Prometric at the toll free number listed in your ATT letter or through their website (http://www.prometric.com). Your request to cancel must be no later than noon, local test center time, two days (Monday–Saturday excluding local holidays) before the examination date. You may reschedule the examination date within your period of eligibility without paying an additional fee. If you are late in canceling your examination appointment, do not appear for it, or arrive late, you will be considered a no-show. All no-shows will have to reapply to take the examination and pay the full test fee. Refunds will not be issued to no-shows.

Minimum Time Between Examinations

Candidates who fail the examination must wait 42 days from the date of the failed examination to retest. Candidates who pass one of the NERC system operator Certification examinations may take the examination thirty-six months after the date they were last certified (this only applies to those certificates valid for five years that were issued prior to the implementation of Continuing Education Hours as a means of Credential Maintenance).

Special Accommodations/Disabilities

Allowance will be made for all documented requests for special testing conditions. Applicants must notify NERC by e-mail or telephone. The Certification coordinator will contact the applicant with further instructions. Disability requests must be supported by a letter (original copy) from a recognized health care provider and be signed by a physician or psychologist. All other requests must be similarly supported. NERC will review each request and provide appropriate accommodations. The decision will be included in the notice of eligibility/ registration approval sent to the applicant.

Note: All testing centers are in compliance with the regulations governing the Americans with Disabilities Act (ADA).

Withdrawal from Examination Process

As described in the *Eligibility Period* section of this Program Manual, the eligibility period is one year from the date the ATT number is issued. If a candidate wishes to withdraw from the process within the stated period for any reason, they must complete the candidate withdrawal request on the system operator Certification website on or before the last eligibility day. Candidates who submit the request within the time period will be reimbursed for the fees submitted to NERC less the withdrawal fee in effect at the time of the application. Failure to properly withdraw will result in the candidate forfeiting all submitted fees.

If you have already scheduled an appointment with Prometric to take the exam, you must first cancel that Prometric appointment or you will be charged a no-show fee.

To access the Exam Withdrawal
On the System Operator Certification Program homepage, logon to your NERC.net account:

- Enter User name and Password
- Click on Logon
- Click on Exam Withdrawal
- Select the exam you are registered to take and from which you wish to withdraw, then click on Submit

Examination Change Request

If a candidate wishes to change the examination (i.e., from BI to TO, or from RC to BIT, etc.) that they are registered to take, they must use the Program's website. An examination change request will not change the candidate's eligibility period. The eligibility period will remain valid for one year from the date that the original ATT number was issued. This change request must be submitted at least thirty days prior to the expiration of the candidate's eligibility period.

To access the Examination Change
On the System Operator Certification Program homepage, logon to your NERC.net account:

- Enter User Name and Password
- Click on Logon
- Click on Exam Change
- Select the exam for which you are authorized then click on Submit
- Select the desired exam from the drop-down list, then click on Submit

You will be issued a new ATT number with the original expiration date. After receiving your new ATT you must schedule/reschedule an appointment with Prometric to take the exam.

Results and Awarding of Certificates

Candidates can view pass/fail results on the computer screen when the examination is terminated. Before exiting the Prometric Testing Center, a copy of this display will be provided. This is an unofficial summary of the examination.

After grading and analysis of the examination results, NERC will mail an official summary. This will take about ten to twelve weeks. The official summary will include the grade achieved and the percentage of correctly answered questions in each content outline category.

Candidates who pass the examination will receive the appropriate NERC-certified system operator certificate based on the examination taken and signed by the President of NERC. The date on the certificate will be the day the candidate took the examination.

System Operator Certificate Numbering Convention

Numbering certificates for certified system operators follows a specific convention. There have been two numbering conventions used since the start of the program.

The original Credential, issued from 1998 into 2002, was the NERC certified system operator. These certificates were assigned the letter N followed by four digits indicating the year the candidate registered, followed by a four digit sequential number.

> Example: N19980109 = NERC certified system operator that registered in 1998 and was the 109th system operator registered in the program.

When the specialty Credentials were implemented in late 2002, a new numbering convention was implemented. The new numbering convention consists of a two-letter designation of the Credential type, followed by six digits that indicate year and month the Credential was awarded, followed by a three digit sequential number in that month.

> Example: RA200306109 = NERC certified reliability operator certified in June of 2003 and was the 109th system operator certified in that month.

Credential Designations

N/RA/RC	Reliability operator
BT	Combined balancing and interchange/transmission operator
BA	Balancing and interchange operator
TO	Transmission operator

Confirmation of Credential to Third Parties

NERC will confirm to an employer that an individual holds a valid NERC system operator certificate (including releasing the certificate number and the issuance date) in response to a written request, on the employer's letterhead (or e-mail), providing the name of the individual. NERC will release the certificate numbers and issuance dates for individuals holding a current NERC system operator certificate to the Regional Entity Compliance Staff or designated agents of those Regional Entities in which an individual's employer operates in response to a written request, submitted on organization letterhead (or e-mail), that provides the names of the individuals for whom information is sought. No further information will be provided.

NERC will confirm to an employment search firm, or a potential employer, whether an individual holds a valid NERC system operator certificate (including releasing the certificate number and the issuance date) if the search firm has a release from the individual. No further information will be provided.

Section II — Credential Maintenance

Effective Date: October 1, 2006

Overview

The System Operator Certification Program incorporates a requirement to use Continuing Education Hours (CE Hours) to maintain a Credential that is valid for three years. Successfully passing an examination earns a Credential and a certificate that is valid for three years. Accumulation of the proper number and type of CE Hours from NERC-approved learning activities within that three-year period maintains the validity of that Credential for the next three years. A new certificate is issued indicating the new expiration date.

The program provides that:

1. System operators seeking to obtain a Credential will have to pass an examination to earn a Credential.
2. A certificate, valid for three years, will be issued to successful candidates.
3. A certified system operator must accumulate a minimum number of CE Hours, in specific training topics, before their certificate expires to maintain their Credential. The minimum number of CE Hours is based on each Credential:
    a. 200 CE Hours for reliability operator
    b. 160 CE Hours for balancing, interchange, and transmission operator
    c. 140 CE Hours for balancing and interchange operator
    d. 140 CE Hours for transmission operator
4. A minimum of 30 CE Hours must focus on content and/or implementation of NERC Reliability Standards.
5. A minimum of 30 CE Hours must be in simulations (i.e., table-top exercises, training simulators, emergency drills, practice emergency procedures, restoration, blackstart, etc.).
6. CE Hours can concurrently count for both NERC Reliability Standards and simulations but will only be counted once for the total CE Hours requirement.
    a. For example: A one-hour simulation learning activity that focuses on NERC Standards can count towards the requirements for both NERC Reliability Standards and simulation. However, the Credential holder will only be awarded a total of one CE Hour toward the total CE Hours requirement. In other words, the CE Hours will not be double counted.
7. Retaking the examination is not an option for Credential Maintenance.
8. If a certified system operator does not accumulate enough CE Hours to maintain their current Credential prior to the certificate expiration date, their Credential will be Suspended for a maximum of one year. At the end of the suspension period, their Credential will be Revoked.
9. If, prior to the end of the one-year suspension, the certified system operator accumulates the proper number and type of CE Hours, their Credential will be reinstated with the original expiration date (three years after the previous expiration date).

10. A system operator with a Revoked Credential will have to pass an examination to become certified.

When to Start Accumulating CE Hours

CE Hours earned (date of learning activity) in the six months prior to the implementation date will be recognized if they are earned from an approved learning activity that meets the Certification program requirements. Each learning activity will have to be approved for use for Credential Maintenance prior to the CE Hours being issued.

Specifics of the Credential Maintenance Program

Certified system operators are required to accumulate CE Hours through the NERC Continuing Education Program in recognized training topics for Credential Maintenance. See *Appendix A* for the list of recognized training topics. Described below are the requirements for each of the four Credentials:

Transmission Operator Certification
To maintain a valid transmission operator Credential, system operators must earn **140 CE Hours** within the 3-year period preceding the expiration date of their certificate.

The 140 CE Hours must include:

- A minimum of 30 CE Hours must focus on content and/or implementation of NERC Reliability Standards.
- A minimum of 30 CE Hours must utilize simulations (i.e., table-top exercises, dispatcher/operator training simulators, emergency drills, or practice emergency procedures, restoration, blackstart or other reliability-based scenarios).

Balancing and Interchange Operator Certification
To maintain a valid balancing and interchange operator Credential, system operators must earn **140 CE Hours** within the 3-year period preceding the expiration date of their certificate.

The 140 CE Hours must include:

- A minimum of 30 CE Hours must focus on content and/or implementation of NERC Reliability Standards.
- A minimum of 30 CE Hours must utilize simulations (i.e., table-top exercises, dispatcher/operator training simulators, emergency drills, or practice emergency procedures, restoration, blackstart or other reliability-based scenarios).

Balancing, Interchange, and Transmission Operator Certification
To maintain a valid balancing, interchange, and transmission operator Credential, system operators must earn **160 CE Hours** within the 3-year period preceding the expiration date of their certificate.

The 160 CE Hours must include:

- A minimum of 30 CE Hours must focus on content and/or implementation of NERC Reliability Standards.

- A minimum of 30 CE Hours must utilize simulations (i.e., table-top exercises, dispatcher/operator training simulators, emergency drills, or practice emergency procedures, restoration, blackstart or other reliability-based scenarios).

Reliability Operator Certification
To maintain a valid reliability operator credential, system operators must earn **200 CE Hours** within the three-year period preceding the expiration date of their certificate.

The 200 CE Hours must include:

- A minimum of 30 CE Hours must focus on content and/or implementation of NERC Reliability Standards.
- A minimum of 30 CE Hours must utilize simulations (i.e., table-top exercises, dispatcher/operator training simulators, emergency drills, or practice emergency procedures, restoration, blackstart or other reliability-based scenarios).

Certificate

System operators that have: 1) completed the Credential Maintenance application, 2) satisfied the CE Hours requirements, and 3) paid the required fee will be issued a certificate valid for three years.

Deficits of CE Hours for Credential Holders

The Credential of a certified system operator who does not accumulate the required number and balance of CE Hours within the three-year period will be Suspended. A system operator with a Suspended certificate cannot perform any task that requires an operator to be NERC-certified. The system operator with a Suspended Credential will have up to twelve months to acquire the necessary CE Hours.

During the time of suspension, the original anniversary date will be maintained. Therefore, should the system operator accumulate the required number of CE Hours within the twelve-month suspension period, they will be issued a certificate that will be valid for three years from the previous expiration date. The system operator will be required to accumulate the required number of CE Hours prior to the current expiration date.

At the end of the twelve-month suspension period, if the system operator has not accumulated the required number of CE Hours, the Credential will be Revoked and all CE Hours earned will be forfeited. After a Credential is Revoked, the system operator will be required to pass an examination to become certified.

For example, a system operator whose Credential expires on July 31, 2009 does not accumulate the required number of CE Hours prior to that date:

1. The Credential will be Suspended on August 1, 2009.
2. If the system operator then accumulates and submits the required number of CE Hours by March 1, 2010, the Credential will be reinstated on March 1, 2010, and will be valid until July 31, 2012.

3. The system operator will have to accumulate the required number of CE Hours prior to July 31, 2012 or the Credential will be Suspended again.
4. CE Hours previously used to maintain the Credential cannot be reused for Credential Maintenance.
5. A record of the suspension between August 1, 2009 and March 1, 2010 will be maintained.

Carry-Over Hours

For all Credentials, up to 30 CE Hours accumulated in the six months prior to the certificate expiration date and not used for Credential Maintenance may be carried over to the next three-year period.

CE Hours will be allocated on a first-in, first-out basis. In other words, CE Hours from a learning activity occurring first according to the calendar will be used to satisfy the CE Hours requirement first and continuing sequentially by the date of the learning activities.

Reporting of CE Hours Earned by Certified System Operators

Normally, the Providers will make the submittals of electronically into the NERC system operator Certification database. However, should some conflict occur, the certified system operator must be able to submit proof of having acquired the necessary CE Hours from the Continuing Education Program Provider's approved learning activities.

System operators will be able to track their status/progress towards maintaining their Credential through the NERC system operator Certification website. Certified system operators should review their CE Hours records at least 90 days before their certificate expiration date to allow sufficient time to acquire CE Hours prior to the system operator's certificate expiration date should there be a deficit.

If a Provider does not submit the CE Hours, the certified system operator must submit proof of sufficient CE Hours to the NERC Manager of Personnel Certification no less than 30 days before the system operator's certificate expiration date. NERC staff may be able to process/resolve discrepancies in Credential holder CE Hours records in less than 30 days; however, submissions received at NERC within the 30-day window may not be credited to the system operator's account in time to prevent the Credential from being Suspended. Suspended Credentials based on incomplete data will be reinstated retroactively once proof of completion is verified.

For system operators who meet the CE Hours requirements, and upon receipt of an application and necessary fees, NERC will issue a new certificate with an expiration date three years from the previous expiration date (a new certificate will be mailed to the address on record).

Application for Credential Maintenance

Procedure for applying for Credential Maintenance

Application procedure will be completed after the software is developed.

Hardship Clause

It is understood that, due to unforeseen events and extenuating circumstances, a certified system operator may be unable to accumulate the necessary CE Hours in the time frame required by the Program to maintain the Credential. In such an event, an individual must submit a written request containing a thorough explanation of the circumstance and supporting information to:

Manager–Personnel Certification
NERC
116-390 Village Boulevard
Princeton, New Jersey 08540

The PCGC retains the right to invoke this hardship clause and deviate from the Program rules, as it deems appropriate, to address such events or circumstances. Examples of extenuating circumstances would include, but not limited to, extended military service, extended illness of the system operator or within the system operator's immediate family, or system operator temporary disability that results in an extended period of time away from work.

Changing Certification Levels

Certified system operators that want to transition to a lower Credential can do so. Many system operators hold a reliability operator Credential but are not working in a reliability operator capacity. Those certified system operators could easily transition to a Credential that more closely matches the work they perform without taking an examination. However, system operators currently holding a transmission operator or balancing and interchange operator Credential will have to pass an examination to move to a higher Credential such as the combined balancing, interchange, and transmission operator Credential or the reliability operator Credential.

A certified system operator can change the type of their Credential by indicating their desire on their Credential Maintenance application. A system operator has the following options:

To change a Credential from:

- Balancing and interchange operator to any other NERC Credential: the system operator must pass the examination for that Credential.
- Transmission operator to any other NERC Credential: the system operator must pass the examination for that Credential.
- Balancing, interchange, and transmission operator to reliability operator: the system operator must pass the examination for that Credential.
- Reliability operator to any other NERC Credential: the system operator must submit the proper number and type of CE Hours for the new Credential.
- Balancing, interchange, and transmission operator to transmission operator or balancing and interchange operator: the system operator must submit proper number and type of CE Hours for the new Credential.

Transition Plan — 5-year Program to 3-year Program

A certified system operator whose certificate expires during the first three years after implementation of this Program has the option to either accumulate the required number of CE Hours according to the rules stated previously or pass the examination for the desired Credential. Certified system operators who accumulate the required number and balance of CE Hours will receive a certificate that will be valid for three years from the expiration date on their current certificate. System operators who pass an examination will receive a certificate valid for three years from the date they pass the examination.

Certified system operators whose certificate expires after the third anniversary of the implementation of this Program, must accumulate the required number of CE Hours prior to the expiration date of their certificate regardless of the issuance date of their certificate.

Section III — Program Rules

Rules for NERC-Certified System Operator

Recognized Learning Activities

CE Hours will be recognized for Credential Maintenance only for training topics/learning activities listed in *Appendix A* and where Providers have complied with the Continuing Education Program rules.

Provider Access to Database

Providers will be able to access the database to upload certified system operator CE Hours activity. The process for doing this will be determined after the database is developed.

System Operator Access to Database

Certified system operators will be able to access the database to track their CE Hour activity. The process for doing this will be determined after the database is developed.

Retain Documentation

The certified system operator is responsible for retaining appropriate documentation for proof of Credential Maintenance. Documentation includes:

- Name and contact information of the Provider
- Title and identification number of the learning activity and description of its content
- Date(s) of the learning activity
- Location (if applicable)
- Number and type of CE Hours
- System operator's NERC certificate number

Providers shall retain comparable documentation. Electronic forms of documentation are acceptable.

Learning Activity Credit Only Once Per Year

CE Hours for a particular course or learning activity will not be recognized for Credential Maintenance more than once a year based on the Credential anniversary. (i.e., during the twelve-month period preceding the system operator's Credential anniversary)

Exception: CE Hours for courses dealing with emergency operations will be recognized no more than two times per year based on the Credential anniversary. (i.e., during the 12-month period preceding the system operator's Credential anniversary)

Learning Activity Approved Status Revoked after CE Hours Granted

CE Hours granted for a course or learning activity that had been approved for Credential Maintenance will still be recognized if, subsequent to the system operator attending the course or learning activity, the approved status is Revoked.

Instructor Credits

For those instructors who are also certified system operators, 1.0 CE Hour for each CE Hours of a learning activity delivered will be recognized towards the instructor's system operator Credential Maintenance. CE Hours for a particular course or learning activity will not be recognized for Credential Maintenance more than once a year based on the Credential anniversary. (i.e., during the twelve-month period preceding the system operator's Credential anniversary)
Exception: CE Hours for courses dealing with emergency operations will be recognized no more than two times per year based on the Credential anniversary. (i.e., during the twelve-month period preceding the system operator's Credential anniversary)

Treatment of Disputes Between Certified System Operator and Providers

Disputes between a Provider and a certified system operator must be resolved between the Provider and the certified system operator. NERC will not become involved in resolving the dispute. Additionally, it is the obligation of the certified system operator to periodically review their CE Hours' records in the NERC system operator Certification database and to maintain their own training records to provide proof that CE Hour requirements have been achieved.

Fees

Fee Schedule**	
Application to test	$350
Application to maintain or change Credential using CE Hours	$350
Application to retest	$350
Application to withdraw	$50
Bad check/credit application	$25

**All funds must be payable in U.S. dollars.

The Program must be financially independent as well as not-for-profit. The on-going expenses to develop and maintain the examinations and the management and administrative costs associated with both the examination process and Credential Maintenance necessitate these fees. These fees will be periodically reviewed and adjusted accordingly.

Section IV — Dispute Resolution

1. Applicability

Any dispute arising under the NERC agreement establishing a *NERC System Operator Certification Program* or from the establishment of any NERC rules, policies, or procedures dealing with any segment of the Certification process shall be subject to the NERC system operator certification dispute resolution process (hereafter called the "Process"). The Process is for the use of persons who hold an operator Certification or persons wishing to be certified to dispute the validity of the examination, the content of the test, the content outlines, or the registration process. The Process is not for trainers or certified persons disputing CE Hours.

2. Dispute Resolution Process

The dispute resolution process consists of three steps.

a. **NERC System Operator Certification Program Staff**
The first step in the process is for the person with a dispute to contact the NERC System Operator Certification Program staff. Contact may be made by a phone call or e-mail to the program staff. This first step can usually resolve the issues without further actions. It is expected that most disputes will be resolved at this step.

Any dispute that requires resolution will first be brought to the NERC System Operator Certification Program staff. Should the issue(s) not be resolved to the satisfaction of the parties involved, the issue can be brought to the Personnel Certification Governance Committee (PCGC) Dispute Resolution Task Force.

b. **Personnel Certification Governance Dispute Resolution Task Force**
If the NERC staff did not resolve the issue(s) to the satisfaction of the parties involved, a written request should be submitted to the chairman of the PCGC through NERC staff explaining the issue(s) and requesting further action. Upon receipt of the letter, the PCGC chairman will present the request to the PCGC Dispute Resolution Task Force for action. This task force consists of three current members of the PCGC. The PCGC Dispute Resolution Task Force will investigate and consider the issue(s) presented and make a decision. This decision will then be communicated to the submitting party, the PCGC chairman, and the NERC staff within 45 calendar days of receipt of the request.

If a French-Canadian or Mexican party raises a dispute, the PCGC shall appoint a French-Canadian speaking or Spanish-speaking interpreter, respectively, as requested.

c. **Personnel Certification Governance Committee**
If the PCGC Dispute Resolution Task Force's decision did not resolve the issue(s) to the satisfaction of the parties involved, the final step in the process is for the issue(s) to be brought before the PCGC. The disputing party shall submit a written request to the PCGC chairman through NERC staff requesting that the issue(s) be brought before the

PCGC for resolution. The chairman shall see that the necessary documents and related data are provided to the PCGC members as soon as practicable. The PCGC will then meet or conference to discuss the issue(s) and make their decision within 60 calendar days of the chairman's receipt of the request. The decision will be provided to the person bringing the issue(s) and the NERC staff. The PCGC is the governing body of the Certification Program and its decision is final.

3. Process Expenses

All individual expenses associated with the Process, including salaries, meetings, or consultant fees, shall be the responsibility of the individual parties incurring the expense.

4. Decision Process

Robert's Rules of Order shall be used as a standard of conduct for the Process. A simple majority vote of the members present will decide all issues. The vote will be taken in a closed session. No one on the PCGC may participate in the dispute resolution process, other than as a party or witness, if he or she has an interest in the particular matter.

A stipulation of invoking the appeals process is that the entity requesting the appeal agrees that neither NERC (its Members, Board of Trustees, committees, subcommittees, and staff), any person assisting in the appeals process, nor any company employing a person assisting in the appeals process, shall be liable, and they shall be held harmless against the consequences of or any action or inaction or of any agreement reached in resolution of the dispute or any failure to reach agreement as a result of the appeals proceeding. This "hold harmless" clause does not extend to matters constituting gross negligence, intentional misconduct, or a breach of confidentiality.

Section V — Disciplinary Action

1. Purpose

This disciplinary action procedure is necessary to protect the integrity of the system operator Credential. Should an individual act in a manner that is inconsistent with expectations, this procedure describes the process to investigate and take action necessary to protect the Credential.

2. Grounds for Action

The following shall serve as grounds for disciplinary action:

a. Willful, gross, and/or repeated violation of the NERC Reliability Standards as determined by a NERC investigation.

   i. Both the organization and the certified system operator are bound by the NERC Reliability Standards. If a certified system operator, either in concert with the organization or on his or her own initiative, performs a willful, gross, and/or repeated violation of the NERC Reliability Standards, he or she is liable for those actions and disciplinary actions may be taken against him or her.

b. Willful, gross, and/or repeated negligence in performing the duties of a certified system operator as determined by a NERC investigation.

c. Intentional misrepresentation of information provided on a NERC application for a system operator Certification exam or to maintain a system operator Credential using CE Hours.

d. Intentional misrepresentation of identification in the exam process.

   i. This includes, but is not limited to, a person identifying himself or herself as another person to obtain Certification for the other person.

e. Any form of cheating during a Certification exam.

   i. This includes, but is not limited to, bringing unauthorized reference material in the form of notes, crib sheets, or other methods of cheating into the testing center.

f. A certified system operator's admission to or conviction of any felony or misdemeanor directly related to their duties as a system operator.

3. Hearing and Appeals Process

Upon report to NERC of a candidate's or certified system operator's alleged misconduct, the NERC Personnel Certification Governance Committee (PCGC) Credential Review Task Force will convene for the determination of facts. An individual, government agency, or other investigating authority can file reports.

Unless the task force initially determines that the report of alleged misconduct is without merit, the candidate or certified system operator will be given the right to notice of the allegation. A hearing will be held and the charged candidate or certified system operator will be given an opportunity to be heard and present further relevant information. The task force may seek out information from other involved parties. The hearing will not be open to the public, but it will be

open to the charged candidate or certified system operator and his or her representative. The task force will deliberate in a closed session, but the task force cannot receive any evidence during the closed session that was not developed during the course of the hearing. The task force's decision will be unanimous and will be in writing with inclusion of the facts and reasons for the decision. The task force's written decision will be delivered to the PCGC and by certified post to the charged candidate or certified system operator. In the event that the task force is unable to reach a unanimous decision, the matter shall be brought to the full committee for a decision.

The task force's decision will be one of the below:

a. No Action
Allegation of misconduct was determined to be unsubstantiated or inconsequential to the Credential.

b. Probation
A letter will be sent from NERC to the offender specifying:

i. The length of time of the probationary period (to be determined by the PCGC).

(a) Credential will remain valid during the probationary period.

(b) The probationary period does not affect the expiration date of the current certificate.

ii. During the probationary period, a subsequent offense of misconduct, as determined through the same process as described above, may be cause for more serious consequences.

(a) Extension of Probation,

(b) Revocation for cause, or

(c) Termination of Credential.

c. Revoke for Cause
A letter will be sent from NERC to the offender specifying:

i. The length of time of the revocation period (to be determined by the PCGC).

(a) Credential is no longer valid.

(b) Successfully passing an exam will be required to become certified.

(c) An exam will not be authorized until the revocation period expires.

d. Termination of Credential
A letter will be sent from NERC to the offender specifying:

i. Permanent removal of Credential.

4. Appeal Process

The decision of the task force may be appealed using the NERC system operator certification dispute resolution process.

5. Credential Review Task Force

The Credential Review Task Force shall be comprised of three active members of the PCGC assigned by the Chairman of the PCGC on an ad hoc basis. No one on the Credential Review Task Force may have an interest in the particular matter.

The task force will meet in a venue determined by the task force chairman.

If a French-Canadian or Mexican party raises a dispute, the PCGC shall appoint a French-Canadian speaking or Spanish-speaking interpreter, respectively, as requested.

Glossary

Capitalized terms used in this Appendix shall have the definitions set forth in Appendix 2 of the Rules of Procedure. For convenience of reference, definitions used in this Appendix are also set forth below:

G01. **Continuing Education Hour or CE Hour**: Sixty minutes of participation in a group, independent study, or self-study learning activity as approved by the NERC Continuing Education Program.

G02. **Continuing Education Program Provider or Provider**: The individual or organization offering a learning activity to participants and maintaining documentation required by these criteria.

G03. **Certification:** An official recognition that indicates the recipient has passed a NERC exam or completed a specified number of Continuing Education Hours.

G04. **Credential:** NERC designation that indicates the level of qualification achieved (i.e., reliability operator; balancing, interchange, and transmission operator; balancing and interchange operator; and transmission operator).

G05. **Credential Maintenance:** Meet NERC CE Hours' requirements to maintain a valid NERC-issued system operator Credential.

G06. **NERC-Approved Learning Activity**: Training that maintains or improves professional competence and has been approved by NERC for use in its Continuing Education Program.

G07. **Probation:** A step in the disciplinary process during which the certificate is still valid. During the probationary period, a subsequent offense of misconduct, as determined through the same process as described above, may be cause for more serious consequences.

G08. **Revoked:** A NERC certificate which has been Suspended for more than twelve months. While in this state, a certificate holder can not perform any task that requires an operator to be NERC-certified. The certificate holder will be required to pass an exam to be certified again. Any CE Hours accumulated prior to or during the revocation period will not be counted towards Credential Maintenance.

G09. **Revoke for Cause:** A step in the disciplinary process during which the certificate is no longer valid and requiring successfully passing an exam to become certified. However, an exam will not be authorized until the revocation period expires. CE Hours earned before or during this revocation period will not be counted for maintaining a Credential.

G10. **Suspended:** Certificate status due to an insufficient number of CE Hours being submitted prior to the expiration of a certificate. While in this state, a certificate holder can not perform any task that requires an operator to be NERC-certified.

G11. **Termination of Credential:** A step in the disciplinary process whereby a Credential is permanently Revoked.

G12. **Type of CE Hours:** NERC-Approved Learning Activity covering topics from Appendix A, NERC Reliability Standards and/or simulations for which there is a minimum requirement for Credential Maintenance.

Appendix A — Recognized Operator Training Topics

1. **Basic Concepts**
   a. Basic electricity including capacitance, inductance, impedance, Real and Reactive Power ~~real and reactive power~~
   b. Single phase & three phase power systems
   c. Transmission line and transformer characteristics
   d. Substation layouts including the advantages and disadvantages of substation bus schemes
2. **Production & Transfer of Electric Energy**
   a. How generators produce electricity
   b. Types of generators including advantages and disadvantages of each type
   c. Economic operation of generators
   d. Real and Reactive Power ~~reactive power~~ flow
3. **System Protection**
   a. Transmission line, transformer, and bus protection principles
   b. Generator protection principles
   c. Types of relays used in different protection schemes
   d. The role of communication systems in system protection
4. **Interconnected Power System Operations**
   a. Voltage control
   b. Frequency control
   c. Power system stability
   d. Facility outage response
   e. Automatic generator control (AGC) including the different modes of AGC
   f. Extra high voltage (EHV) operation
   g. Energy accounting
   h. Inadvertent energy
5. **Emergency Operations**
   a. Loss of generation resource
   b. Operating reserves
   c. Contingency reserves
   d. Line loading relief
   e. Loop flow
   f. Load shedding
   g. Voltage and reactive flows during emergencies
   h. Loss of critical transmission facilities
6. **Power System Restoration**
   a. Restoration philosophies
   b. Facility restoration
   c. Blackstart restoration
   d. Load shedding
   e. Under-frequency Load~~load~~ shedding
   f. Under-voltage Load~~load~~ shedding

7. **Market Operations**
   a. Standards of conduct
   b. Tariffs
   c. Transmission reservations and transmission priorities
   d. Transaction tagging

8. **Tools**
   a. Supervisory control and data acquisition
   b. Automatic generation control application
   c. Power flow application
   d. State estimator application
   e. Contingency analysis application
   f. P-V curves
   g. Load forecasting application
   h. Energy accounting application
   i. OASIS application
   j. E-Tag application
   k. Voice and data communication systems

9. **Operator Awareness**
   a. Identifying loss of facilities
   b. Recognizing loss of communication facilities
   c. Recognizing telemetry problems
   d. Recognizing and identifying contingency problems
   e. Communication with appropriate entities including the Reliability Coordinator

10. **Policies & Procedures**
    a. NERC Reliability Standards
    b. ISO/RTO operational and emergency policies and procedures
    c. Regional operational and emergency policies and procedures
    d. Local & company specific policies and procedures
    e. Emergency operating plans
    f. Line loading relief procedures
    g. Physical and cyber sabotage procedures
    h. Outage management and switching procedures

11. **NERC Reliability Standards**
    a. Application and/or implementation of NERC Reliability Standards

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF REVISIONS TO ITS RULES OF PROCEDURE
TO ADOPT A BULK ELECTRIC SYSTEM EXCEPTION PROCEDURE

ATTACHMENT 8A

REVISED APPENDIX 8 OF THE RULES OF PROCEDURE,

NERC BLACKOUT AND DISTURBANCE RESPONSE PROCEDURES

CLEAN VERSION

Appendix 8

Proposed Revisions 1-9-2012
[Incorporates revisions filed with FERC on November 29, 2011]

NERC Blackout and Disturbance Response Procedures

Effective October 18, 2007

North American Electric Reliability Corporation

NERC Blackout and Disturbance Response Procedures

Introduction

NERC, through its professional staff and the Regional Entities and their members, provide the best source of technical and managerial expertise for responding to major events that affect the Bulk Power System.

NERC's role following a blackout or other major Bulk Electric System disturbance or emergency is to provide leadership, coordination, technical expertise, and assistance to the industry in responding to the event. Working closely with the Regional Entities and Reliability Coordinators, NERC will coordinate efforts among industry participants, and with state, federal, and provincial governments in the United States and Canada to support the industry's response.

When responding to any event where physical or cyber security is suspected as a cause or contributing factor to an event, NERC will immediately notify appropriate government agencies and coordinate its analysis with them.

During the conduct of some NERC-level analyses, assistance may be needed from government agencies. Collaborative analysis with certain government agencies may be appropriate in some cases; e.g., collaborating with the Nuclear Regulatory Commission technical staff when a system event involves a nuclear unit. This assistance could include: authority to require data reporting from affected or involved parties; communications with other agencies of government; analyses related to possible criminal or terrorist involvement in the event; resources for initial data gathering immediately after the event; authority to call meetings of affected or involved parties; and technical and analytical resources for studies. If a federal or multi-national government analysis is called for, government agencies should work in primarily an oversight and support role, in close coordination with the NERC analysis.

It is critical to establish, up front, a clear delineation of roles, responsibilities, and coordination requirements among industry and government for the analysis and reporting of findings, conclusions, and recommendations related to major blackouts, disturbances, or other emergencies affecting the Bulk Power System.

Depending on the severity and of the event and the area impacted, the event analysis may be conducted either by NERC or by the impacted Regional Entity. If the analysis is conducted by the Regional Entity, NERC staff, at least one member of the NERC Event Analysis Working Group (in addition to the Event Analysis Working Group member from the impacted Regional Entity), and other appropriate technical experts from the NERC community will participate as members of the Regional Entity analysis team.

A Regional Entity may request NERC to elevate an analysis to a NERC-level. In such cases, all team responsibilities will shift to NERC, and the Regional Entity may continue to participate in the analysis on appropriate teams.

These procedures do not represent a "cookbook" to be followed blindly. They provide a framework to guide NERC's response to events that may have multiregional, national, or

international implications. Experienced industry leadership would still be required to tailor the response to the specific circumstances of the event.

Responding to major blackouts and other system disturbances can be divided into four phases:

1. situation assessment and communications;
2. situation tracking and communications;
3. data collection, investigation, analysis and reporting; and
4. follow-up on recommendations.

Phase 1 — Situation Assessment and Communications

NERC's primary roles in Phase 1 are to:

- conduct an initial situation assessment;
- call for the collection of and analyze necessary initial data and information for the event;
- assist the Regional Entity-lead analysis with determining the need for supplemental technical expertise from the NERC community;
- issue initial findings, conclusions, and recommendations;
- maintain detailed data records (not subject to Freedom of Information Act);
- assist government agencies in criminal analyses when relevant;
- provide technical expertise for modeling and analyzing the event; and
- follow up on recommendations.

While conducting its initial situation assessment, NERC will make an early determination as to whether the cause of the event may be related to physical or cyber security, and communicate as appropriate with government agencies.

Notice of a event is typically received by the NERC Electricity Sector Information Sharing and Analysis Center (ESISAC) person on duty and relayed to other appropriate NERC personnel.[1] NERC performs an initial situation assessment by contacting the appropriate Reliability Coordinator(s), and makes a decision on whether to activate its crisis communications plan. At the initial stage in gathering information about an incident, it is critical to minimize interference with Bulk Electric System operators who are in the process of restoring the system. To minimize interference with their work, NERC, in its capacity as the ESISAC, should serve as the primary communications link with government agencies.

The ESISAC Concept of Operations (ConOps) specifies the operations plan, communications procedures, and logistics NERC will follow during normal conditions, emergencies, and national security special events. The ConOps includes the primary points of contact (24x7) for the Federal Energy Regulatory Commission, U.S. Department of Energy, U.S. Department of Homeland Security, U.S. Nuclear Regulatory Commission, and Public Safety and Emergency Preparedness Canada.

It is important that during these early hours the ESISAC, in coordination with government agencies, determine whether this event was caused by the actions of criminal or terrorist parties. The results of this criminal assessment are essential to operators because if there is a possibility that the "attack" is still ongoing, restoration and response actions would need to be tailored to

[1] NERC maintains 24x7 contact information for its key personnel to facilitate such contacts.

these circumstances. If NERC and government agencies deem it necessary for further criminal analyses, NERC will issue a formal notice to affected systems to retain all relevant information gathered during this and subsequent phases of an analysis.

The specific criteria for reporting disturbances and other events are described in NERC Reliability Standard EOP-004-1. These criteria and procedures are intended to provide a common basis for consistent reporting of abnormal system conditions and events that occur in North America. All entities responsible for the reliability of Bulk Power Systems in North America must ensure that sufficient information is submitted to NERC within the time frame required. Reliability Coordinators will use the Reliability Coordinator Information System (RCIS) as the primary method of communications to NERC. The ESISAC duty person is responsible for monitoring the RCIS for such notifications.

Depending on the scope and magnitude of the event, NERC will issue media advisories through its crisis communications plan.

Phase 2 — Situation Tracking and Communications

Based on the nature and severity of the event, in Phase 2 NERC will continue to track progress in restoring the Bulk Power System and service to customers, and keep industry, government agencies, and the public informed. The most important thing to recognize in this phase is that the primary focus of Reliability Coordinators and Transmission Operators is the prompt restoration of the Bulk Electric System. NERC will coordinate requests by government agencies for information from Reliability Coordinators and Transmission Operators, and serve as a conduit and coordinator between industry and government for regular status reports on the restoration.

As events continue, NERC will determine whether a detailed analysis of the event should be conducted, and start to identify manpower requirements, data collection and retention requirements, and at what level the analysis should be conducted. If the event is localized within a Region, NERC will participate in the event analysis of the Regional Entity.

Phase 3 — Data Collection, Investigation, Analysis, and Reporting

Based on the scope, magnitude, and impact of an event, during Phase 3 NERC may:

1. perform an overview analysis of system and generator response;
2. rely on one of its Regional Entities to conduct the analysis and monitor the analysis results;
3. work with a Regional Entity in its analysis; or
4. conduct a NERC-level analysis.

The NERC CEO will decide, based on the initial situation assessment and consultation with the NERC technical committee officers[2], if a NERC-level analysis is warranted. If a NERC-level analysis is to be conducted, the NERC CEO will appoint the Director of Events Analysis and Information Exchange to lead the analysis and assemble a high-level technical steering group to provide guidance and support throughout the analysis.

[2] NERC will maintain a list of 24x7 contact information for its technical committee officers.

NERC reserves the right to elevate or augment an analysis performed by a Regional Entity pending the results of the Regional Entity analysis. Additional requests for analyses or supporting data may be made by NERC at any time in the investigation process.

A Regional Entity may request NERC to elevate an analysis to a NERC-level. In such cases, all team responsibilities will shift to NERC, and the Regional Entity may continue to participate in the analysis on appropriate teams.

If the analysis is to be led by one of the Regional Entities, a member of the NERC staff, at least one member of the NERC Event Analysis Working Group (in addition to an Event Analysis Working Group member from the impacted Regional Entity), and other appropriate technical experts from the NERC community will participate as a triage team. The triage team will participate as members of the Regional Entity analysis team. The triage team will also will assist the Regional Entity with determining if additional technical expertise from the NERC community are needed for the analysis.

For NERC-level analyses, the first task of the Director of Events Analysis and Information Exchange would be to identify what technical and other resources and data would be needed from staff, the industry, and government, and to issue those requests immediately. This task will include identification of any special managerial, forensic, or engineering skills needed for the analysis. Secondly, the Director of Events Analysis and Information Exchange must issue requests for those resources and information. Third, the Director of Events Analysis and Information Exchange must organize the teams that will conduct and report on the analysis.

The teams needed for a particular analysis will vary with the nature and scope of the event. Attachment A describes the typical teams that would be required for a NERC-level analysis, and Attachment B provides suggested guidelines for the NERC-level analysis team scopes. Individuals that participate on these teams will be expected to sign an appropriate confidentiality agreement. NERC uses a standard (pro forma) confidentiality agreement (Attachment C) for participants in event analyses, which it will adapt for specific analyses.

The Blackout and Disturbance Analysis Objectives, Approach, Schedule, and Status (Attachment D) and Guidelines for NERC Reports on Blackouts and Disturbances (Attachment E) are used to guide and manage analysis and reporting on major blackouts and disturbances.

A NERC-level analysis will comprise (a) collecting pertinent event data; (b) constructing a detailed sequence of events leading to and triggering the disturbance; (c) assembling system models and data and conducting detailed system analysis to simulate pre- and post-event conditions; and (d) issuing findings, conclusions, and recommendations. The details of these four phases of the analysis are:

a. Collecting Pertinent Event Data

- Collect all pertinent event logs, disturbance recorders, operator transcripts, and other system data.

b. Detailed Sequence of Events

- Construct a detailed sequence of events leading to and triggering the event. Reconcile event logs, disturbance recorders, operator transcripts, and other system data to create an accurate sequence of events.
- Enter and preserve all data in a secure data warehouse.

c. Detailed System Analysis

- Assess the sequence of events to determine critical times for study.
- Assemble the necessary system models and data from Regional Entity and operating entities to accurately model (with power flow and dynamic simulations) the pre-event conditions.[3] Determine pre-event conditions at critical times prior to event initiation, including an assessment of reliability margins in the pre-event time frame.
- Analyze data from phasor measurement units, high-speed data recorders, digital fault recorders, digital relays, and system relay targets.[4]
- Analyze generator and Load performance, including underfrequency and undervoltage relay actions.
- Use the model information and sequence of events to dynamically model the trigger events and the outage sequence. Identify the system phenomena that propagated the failure. Provide graphical results showing the nature of the cascade. Conduct additional analyses as initial findings identify the need for further study.

d. Findings, Conclusions, and Recommendations

- Identify and assess failures contributing to the event, including possible instability conditions, system protection mis-operations, generator actions, etc.
- Either identify or rule out man-made/criminal cyber or physical attacks on the electric system.
- Determine if the system was being operated within equipment and system design criteria at the time of the outage.
- Assess the qualifications, training, SCADA/EMS tools, and communications available to system operators and Reliability Coordinators, and how effective these were leading up to and during the event.
- Assess the adequacy of communications system and communications among system operators.
- Identify any issues regarding maintenance or equipment conditions that may have contributed to the outage.
- Determine whether system restoration procedures were available and adequate. Identify any issues that caused unexpected delays in the restoration of generators and Loads.
- Identify the root causes[5] and contributing factors of the Cascading outage.

---

[3] NERC is developing standards for data and model validation that will facilitate modeling activities in future blackout analyses.

[4] NERC is developing standards for dynamic monitoring equipment and the deployment of such equipment at critical locations in the Bulk Electric System.

[5] NERC will rely on root cause analysis experts, both from within the industry and outside consultants, to conduct these analyses.

- Recommend actions to prevent Cascading outages in the future and to improve system reliability.
- Determine whether the system is adequately designed.
- All compliance issues will be referred to the NERC Director of Compliance.

Phase 4 — Follow-up on Recommendations

For Phase 4 NERC and the Regional Entities will follow up on specific recommendations coming from all analyses, whether done at the Regional Entity or NERC level. In certain cases, where government agencies have taken a direct role in the analysis, reports will be made to those agencies on progress in addressing the recommendations.

Attachment A

Typical Team Assignments for Analysis of Blackouts or Disturbances[6]

Fact-Finding Teams

- Physical and/or cyber security (if needed)
- On-site interviews
- System data collection (frequency, voltages, generation and Loads)[7]
- System protection and control information
- System restoration
- Coordination with Regional Entity teams

Assessment and Analysis Teams

- Performance of generation and transmission Protection Systems
- Frequency analysis
- Equipment maintenance
- SCADA/EMS/Tools
- Operator training
- Reliability Standards compliance
- System planning
- System operation
- System restoration
- Root cause analysis
- System simulation
- Interregional coordination
- Vegetation management
- Recommendations for future actions
- Security and law enforcement liaison

Data Management Teams

- Data requests
- Data collection
- Data warehouse – entry, logging, retention, and maintenance[8]
- Data release[9]

Report Writing Teams

- Text
- Graphics
- Presentations

---

[6] The analysis team leader will specify the tasks required of each team.
[7] Standard forms and procedures for the collection of data and information will be adapted for particular circumstances.
[8] Experience with data warehousing and access procedures gained during the investigation of the August 2003 blackout will be used in future investigations.
[9] Data release procedures will prevent inappropriate disclosure of information.

Communications Teams

- Press releases
- Interface with government agencies
- Interviews

Attachment B

NERC Blackout and Disturbance Response Procedures
Guidelines for Analysis Team Scopes

Each blackout or disturbance is unique and will therefore demand a customized approach to its analysis. The following guidelines for analysis team scopes are suggestive rather than definitive. Not all the teams listed may be needed for a particular analysis.

Data Requests and Management — This team organizes large volumes of raw data and value-added information produced by analysts in support of the blackout analysis into a data warehouse. The team issues data requests from affected entities, catalogs and stores all data received, and provides secure and confidential access to teams and personnel supporting the analysis. The team serves as the single point for issuing data requests, receiving and storing data, and managing data queries by the analysts, and is responsible for assuring consistency, security, and confidentiality of the data and minimizing redundant data requests.

Sequence of Events — A precise, accurate sequence of events is a building block for all other aspects of the analysis, and is a starting point for the root cause analysis. It is the basis for developing computer models to simulate system conditions and evaluate steady state and stability conditions in the period leading to blackout. The sequence of events is the foundation of facts upon which all other aspects of the analysis can proceed.

System Modeling and Simulation Analysis — System modeling and simulation allows the investigators to replicate system conditions leading up to the blackout. While the sequence of events provides a precise description of discrete events, it does not describe the overall state of the electric system and how close it was to various steady state, voltage stability, and power angle stability limits. An accurate computer model of the system, benchmarked to actual conditions at selected critical times, allows analysts to conduct a series of sensitivity studies to determine if the system was stable and within limits at each point in time leading up to the blackout, and at what point the system became unstable. It also allows analysts to test different solutions to prevent Cascading. Although it is not possible recreate the entire blackout sequence, simulation methods will reveal the mode(s) of failure initiating the blackout and propagating through the system.

Root Cause Analysis — Root cause analysis guides the overall analysis process by providing a systematic approach to evaluating root causes and contributing factors leading to the blackout or disturbance. This team works closely with the technical analysis teams and draws on other data sources as needed to record verified facts regarding conditions and actions (or inactions) that contributed to the blackout or disturbance. The root cause analysis guides the overall analysis by indicating areas requiring further inquiry and other areas that may be of interest regarding lessons learned, but are not causal to the blackout. Root cause analysis enables the analysis process develop a factual record leading to logical and defensible conclusions in the final report regarding the causes of the blackout.

Operations Tools, SCADA/EMS, Communications, and Operations Planning — This team will assess the observability of the electric system to operators and Reliability Coordinators, and the availability and effectiveness of operational (real-time and day-ahead)

reliability assessment tools, including redundancy of views and the ability to observe the "big picture" regarding Bulk Electric System conditions. The team also investigates the operating practices and effectiveness of those practices of operating entities and Reliability Coordinators in the affected area. This team investigates all aspects of the blackout related to operator and Reliability Coordinator knowledge of system conditions, action or inactions, and communications.

Frequency/ACE — This team will analyze potential frequency anomalies that may have occurred, as compared to typical interconnection operations, to determine if there were any unusual issues with control performance and frequency and any effects they may have had related to the blackout.

System Planning, Design, and Studies — This team will analyze the responsibilities, procedures, and design criteria used in setting System Operating Limits, and compare them to good utility practice. The team will review the actual limits in effect on day of the blackout and whether these limits were being observed. The team will review voltage schedules and guides, and reactive management practices in the affected areas, including use of static and dynamic reactive reserves. The team will analyze the tagged and scheduled transactions to determine if inter-regional transfer limits were understood and observed. The team will analyze system planning and design studies completed in the affected areas to determine if operating conditions were consistent with the assumptions of those studies and whether the planning and design studies were sufficient and effective.

Transmission System Performance, Protection, Control, Maintenance, and Damage — This team investigates the causes of all transmission Facility automatic operations (trips and reclosures) leading up to the blackout on all Facilities greater than 100 kV. This review includes relay protection and remedial action schemes, identifying the cause of each operation, and any misoperations that may have occurred. The team also assesses transmission Facility maintenance practices in the affected area as compared to good utility practice and identifies any transmission equipment that was damaged in any way as a result of the blackout. The team will assess transmission line rating practices and the impact that ambient temperature and wind speeds had on the transmission line performance in terms of the design temperature of the transmission conductors. The team shall report any patterns and conclusions regarding what caused transmission Facilities to trip; why the blackout extended as far as it did and not further into other systems; why the transmission separated where it did; any misoperations and the effect those misoperations had on the blackout; and any transmission equipment damage. The team will also report on the transmission Facility maintenance practices of entities in the affected area compared to good utility practice. Vegetation management practices are excluded here and covered in a different team.

Generator Performance, Protection, Controls, Maintenance and Damage — This team will investigate the cause of generator trips for all generators with a 10 MW or greater nameplate rating leading to and through the end of the blackout. The review shall include the cause for the generator trips, relay targets, unit power runbacks, and voltage/Reactive Power excursions. The team shall report any generator equipment that was damaged as a result of the blackout. The team shall report on patterns and conclusions regarding what caused generation Facilities to trip. The team shall identify any unexpected performance anomalies or unexplained events. The team shall assess generator maintenance practices in the affected area as compared

to good utility practice. The team will analyze the coordination of generator under-frequency settings with transmission settings, such as under-frequency Load shedding. The team will gather and analyze data on affected nuclear units and work with the Nuclear Regulatory Commission to address nuclear unit issues.

Vegetation/ROW — This team investigates the practices of transmission Facility owners in the affected areas for vegetation management and ROW maintenance. These practices will be compared with accepted utility practices in general, and with NERC Reliability Standards. The team will evaluate whether the affected parties were within their defined procedures at the time of the blackout and will investigate historical patterns in the area related to outages caused by contact with vegetation.

Analysis Process and Procedures Review — This team will review the process and procedures used in the analysis of the blackout, make recommendations for improvement, and develop recommendations for appropriate processes, procedures, forms, etc. to guide and expedite future analyses including coordination and cooperation between NERC, its Regional Entities, and government agencies.

Restoration Review — All entities operating portions of the Bulk Electric System in North America are required by NERC Reliability Standards to maintain system restoration plans and black start plans, and Reliability Coordinators are required to coordinate the implementation of those plans. This team will review the appropriateness and effectiveness of the restoration plans implemented and the effectiveness of the coordination of these plans.

NERC and RE Standards/Procedures and Compliance — This team reviews the adequacy of NERC Reliability Standards, Regional Reliability Standards and Regional Entity procedures, and the Compliance Monitoring and Enforcement Program to address issues leading to the blackout. The team also reviews the compliance of the affected operating entities with Reliability Standards. For less significant event analyses, this team may not be needed. However, all compliance issues will be referred to the NERC Director of Compliance.

Attachment C

NERC CONFIDENTIALITY AGREEMENT
FOR
ANALYSIS OF BLACKOUTS AND DISTURBANCES

This Confidentiality Agreement ("Agreement"), dated _____, is between the North American Electric Reliability Corporation ("NERC"), and

_____, a member of the NERC Event Analysis Team ("Team Member")(collectively referred to as "Parties").

WHEREAS, NERC is conducting an analysis of the power event that occurred in _____ on _____ and related matters ("Event"); and

WHEREAS, NERC has established a team to carry out that analysis ("Event Analysis Team"); and

WHEREAS, in order for the Event Analysis Team to fulfill its objectives, it is necessary for the Event Analysis Team have access to confidential or business sensitive information from operating entities within the _____ and to be able to conduct open and unconstrained discussions among team members,

The Parties therefore agree as follows:

1. The term "Event Analysis Information" means all information related in any way to the Event that operating entities within the _____ or their representatives have furnished or are furnishing to NERC in connection with NERC's analysis of the Event, whether furnished before or after the date of this Agreement, whether tangible or intangible, and in whatever form or medium provided (including, without limitation, oral communications), as well as all information generated by the Event Analysis Team or its representatives that contains, reflects or is derived from the furnished Event Analysis Information; provided, however, the term "Event Analysis Information" shall not include information that (i) is or becomes generally available to the public other than as a result of acts by the undersigned Parties or anyone to whom the undersigned Parties supply the Information, or (ii) is known to or acquired by the Team Member separate from receiving the information from the Event Analysis Team.

2. The Team Member understands and agrees that the Event Analysis Information is being made available solely for purposes of the Event Analysis and that the Event Analysis Information shall not be used in any manner to further the commercial interests of any person or entity. The Team Member further understands and agrees that he or she will not disclose Event Analysis Information to any person who has not signed this Agreement except as such disclosure may be required by law or judicial or regulatory order.

3. If Team Member's employing organization has signed the NERC Confidentiality Agreement for Electric System Security Data ("NERC Security Data Agreement"), paragraph 2 shall not be deemed to prohibit Team Member from disclosing Event Analysis Information to

other employees of that organization, but only to the extent that "security data" as defined in the NERC Security Data Agreement is shared within the organization.

4. The Parties expressly agree that Event Analysis Information shall otherwise only be disclosed through official releases and reports as authorized by NERC.

5. It shall not be a violation of the NERC Confidentiality Agreement for Electric System Security Data for a Reliability Coordinator to furnish Event Analysis Information to an Event Analysis Team Member who has signed this Agreement.

6. This Agreement shall be for sole benefit of the parties hereto. This Agreement may be modified or waived only by a separate writing signed by the Parties. If any clause or provision of this Agreement is illegal, or unenforceable, then it is the intention of the Parties hereto that the remainder of this Agreement shall not be affected thereby, and it is also the intention of the Parties that in lieu of each clause or provision that is illegal, invalid or unenforceable, there be added as part of this Agreement a clause or provision as similar in terms to such illegal, invalid or unenforceable clause or provision as may be possible and be legal, valid and enforceable. This Agreement will be governed and construed in accordance with the laws of the State of New Jersey, except for any choice of law requirement that otherwise may apply the law from another jurisdiction.

7. This Agreement shall have a term of two (2) years from the date hereof, except that the obligations of paragraphs 2, 3, and 4 shall continue for five (5) years from the date hereof.

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

By: _____

Printed: _____

Title: _____

NERC EVENT ANALYSIS TEAM MEMBER

Signed: _____

Printed: _____

Attachment D

NERC Blackout and Disturbance Analysis Objectives, Analysis Approach, Schedule, and Status

Analysis Objective	Analysis Approach	Schedule	Status
Pre-Event Conditions			
1. What was the precursor sequence of events leading to the event?	• Assemble data/alarm logs and time-stamped sequence information. • Develop and maintain an expanding database of log and time-stamped sequence information. • Develop a precursor sequence of high-level, events relevant to, and leading to event initiation. • Reconcile the precursor sequence of events with those emerging from Regional Entities, RTOs, and operating entities.		
2. What time frames are relevant for pre-event assessment of system conditions? What points in time should be used to establish a baseline set of study conditions when the system was last known to be stable and within normal operating criteria?	• Referencing precursor sequence of events, determine relevant times to develop base case conditions (stable and within normal operating criteria). • Verify relevant time horizons and availability of system data at those times with Regional Entities, RTOs, and operating entities.		
3. What models and data can best simulate system conditions prior to and during the event? What is the relevant scope of the system for detailed study (what is considered the boundary of the study system and what is considered neighboring or external systems?)	• Identify up-to-date power system model(s) appropriate for powerflow and transient and dynamic simulations (determine if detailed eastern Interconnection model is needed or multi-regional model(s) are needed. • Identify what models are available in Regional Entities, RTOs, and operating entities. • Identify who will actually perform power flow, transient and dynamic simulations; hire contractor(s) as needed. • Identify and assemble data required for these models. • Develop and maintain a system data repository.		

Analysis Objective	Analysis Approach	Schedule	Status
4. What system conditions existed in the precursor time horizon leading up to the event (at the times identified in 1.)?	• Obtain and manage data for powerflow: system configuration, planned and unplanned outages, unit commitment and dispatch, interchange schedules, congestion conditions, reserves, Loads, state estimator snapshots, deratings and limitations, frequency, etc. Identify who will maintain and run powerflow simulations. • Work with Regional Entities, RTOs, and operating entities to develop powerflow cases defining the base conditions for each relevant time, ensuring the powerflows model each critical juncture leading up to the event. • Identify and review results of additional studies completed by Reliability Coordinators, RTOs and operating entities. • Assess the powerflow results with respect to steady state operating criteria (was the system within all known limits at each precursor time)?		
5. Were there any prior-existing abnormalities, instabilities, reliability criteria violations, or reliability issues in the precursor sequence time horizon? Prior to event initiation were there any latent instability conditions that would suggest the system was at risk? Were the precursor conditions ones that had been previously studied by the entities involved? Were there adequate reserves with effective distribution? Were planned outages effectively coordinated?	• Work with Regional Entities, RTOs, and operating entities to obtain and manage transient and dynamic models for simulations. • Identify who will conduct transient and dynamic simulations and if external contractor(s) are required. • Conduct transient and dynamic simulations at each of the precursor study times. • Assess the stability of the system at each of these times and identify any latent reliability issues prior to blackout initiation. • Consider creating a visual map of system conditions. • Document the limitations and assumptions of simulations affecting the certainty of the simulation results.		
Blackout Sequence of Events			
6. What was the sequence of system events leading to and directly triggering the blackout?	• Evaluate data logs, fault recorder data disturbance recorder data, and synchro-phasor measurement to establish a detailed sequence of events that initiated the event. • Identify the sequence of events that directly led to the event. • Review and reconcile these trigger events with Regional Entities, RTOs, and operating entity analyses.		

Analysis Objective	Analysis Approach	Schedule	Status
7. What was the sequence of events during the event?	• Evaluate logs and disturbance recorder data to establish sequence during the blackout. (The event sequence may follow multiple tracks.) • Review and reconcile this sequence with those constructed by Regional Entities, RTOs, and operating entities. • Consider developing 3-D, time-lapse visualization of the blackout (U. of Minnesota and/or U. of Wisconsin).		
8. What was the cause of the event in terms of electrical conditions and other related events? Generally describe any system breakups, islanding, etc. Were there conditions of voltage or frequency collapse, or unstable oscillations? Was the sequence strictly a sequential "domino" effect of Facility trips? What were the system conditions (snapshots) at key points during the event?	• Assess triggering sequence and blackout sequence to establish the causes for the blackout in terms of electrical conditions and events. • Select key points in sequence for simulation that are relevant for study and that can be accurately modeled. (It may not be possible to reconcile data sufficiently to recreate system conditions during the blackout.) • To the extent possible, conduct simulations and assess results at each point during the blackout. • Review and reconcile results with Regional Entities, and operating entities.		
9. Why did the event extend as far as it did? What arrested the event from extending further into other systems?	• Using advanced analysis techniques, assess where and why the event was arrested.		
10. How did affected non-nuclear generators respond during the event? Were trips as expected and required by procedures and standards? Did non-nuclear generators remain connected and support the power system in the manner they should have? Did any generator action, generator control functions, or generator protection systems contribute to the event?	• Prepare a table of affected generators and actions they made leading up to and during the event, including time-stamped unit trips, relays initiating unit trips, MW and MVar outputs, voltages, and frequency, etc. • Analyze the automatic (including relay trips) and operator-initiated actions of non-nuclear generators to determine whether actions were correct under the conditions or not. • Reconcile non-nuclear generator data and analysis with that of the Regional Entities, RTOs, and operating entities.		
11. How did nuclear generators respond leading up to and during the blackout? Were trips as expected and required by procedures and standards? Were there any nuclear safety issues identified?	• Work with NRC to develop a table of sequence of actions and issues regarding affected nuclear generators (both ones that tripped and those that did not). • Refer nuclear issues to NRC for analysis, assisting in their analyses where appropriate.		
12. What was the sequence and amount of Load lost? What directly caused Load loss (e.g. under-frequency Load shed, loss of transmission source, voltage collapse, relay actions, under/over frequency protection or stalls, etc.)	• Work Regional Entities, RTOs, and operating entities to develop a description of Load lost/impacted, by area. • Analyze and report the cause for Load loss in each area.		

Analysis Objective	Analysis Approach	Schedule	Status
13. How did system protection and automated controls operate during the event? Did they operate correctly or not?	• Assess each automatic trip of a transmission or generator Facility for proper or improper relay actions. • Assemble and review Regional Entity and operating entity reviews of logs, disturbance reports, and relay targets/logs and reconcile with NERC data.		
14. Was any equipment damaged during the event?	• Request information from Regional Entities, and companies on equipment damage, as appropriate. • Assess any transmission or generation Facilities sustaining damage during the event, and extent of damage.		
15. Did SCADA/EMS and data communications systems operate correctly during the event? What problems were noted?	• Request information from Regional Entities, and companies. • Identify and analyze any problems with SCADA/EMS and data communications at regional and company levels.		
Reliability Standards/Procedures			
16. What NERC Reliability Standards were applicable to the event? What violations occurred? Were NERC Reliability Standards and policies sufficient?	• Compliance Staff review NERC Reliability Standards relevant to the event and perform a compliance review.		
17. What Regional Reliability Standards were applicable to the event? What violations occurred? Were Regional Reliability Standards and Regional Entity policies sufficient?	• Request Regional Entities to review applicable Regional Reliability Standards and report compliance with those Regional Reliability Standards during the event.		
18. Were any special operating procedures or other operating guidelines in effect and being observed leading up to the event? Were these procedures sufficient?	• Review and analyze loop flow procedures with involved Regional Entities and companies, and report analysis results.		
19. What other RTO, Transmission Owner, CA procedures were applicable? What violations occurred? Were the procedures sufficient?	• Request RTOs, Transmission Owners, CAs to review applicable Reliability Standards and compliance with existing reliability procedures and Reliability Standards during the event, and report results.		
Maintenance			
20. Are there any indications that maintenance of transmission or generation Facilities may have contributed to the event?	• Assess whether equipment or maintenance issues (e.g. tree trimming) contributed to the blackout and investigate specifics in areas of concern. • Review Regional Entity assessments of maintenance issues that may have contributed to the event.		

Personnel, Procedures, and Communications			
21. What conditions were operators and Reliability Coordinators aware of leading up to and during the event? What information did they have to warn them of unsafe system conditions? What problems or concerns did they have? What did they observe during the event? Were human errors made that contributed to the event? If there were, what were the causes of the errors?	• Develop an interview guide to address procedural and operational issues. • Conduct onsite interviews with operating personnel and Reliability Coordinators involved. • Analyze interview data to corroborate with technical data and report conclusions.		
22. Were lines of authority clearly understood and respected in the time leading up to and during the event, as well as during the restoration period?	• Identify critical instructions given and evaluate results. • Review documentation and effectiveness of assignments of operating and reliability authorities.		
23. What communications occurred among operating entities?	• Review voice communications logs. • Evaluate logs relevant to the blackout and identify key interactions. Report conclusions.		
24. What were the qualifications (including Certification status) and training of all operating personnel involved in the event and their supervisors?	• Request Certification status of all operating personnel from involved operating entities. • Conduct onsite review of training materials and records. • Conduct onsite review of operating procedures and tools		
25. Was the role and performance of the Reliability Coordinators as expected?	• Review the adequacy of reliability plans for the affected Regional Entities. • Review the actions of the affected Reliability Coordinators to determine if they performed according to plans. • Assess whether inter-area communications were effective, both at the control area and Reliability Coordinator levels.		
System Restoration			
26. Were blackstart and restoration procedures available and adequate in each area? Were they followed and were they adequate to the restoration task? Were pre-defined authorities respected during the restoration?	• Onsite audit of blackstart and restoration procedures and plans. • Analyze whether the plans and procedures were used and whether they were sufficient for this outage.		
27. What issues were encountered in the restoration that created unexpected challenges or delays? What lessons were learned in the restoration (both things that went well and things that did not).	• Solicit information from operating entities and Regional Entities regarding unexpected challenges and delays in restoration, and lessons learned. • Analyze what worked well and what did not in the restoration.		

System Planning and Design			
28. Were the conditions leading up to the event within the design and planning criteria for the transmission systems involved?	• Request Transmission Owners and Regional Entities involved to report any violations of design or planning criteria prior to or leading up to the blackout.		
Conclusions and Recommendations			
29. From a technical perspective, what are the root causes of this event? What additional technical factors contributed to making the event possible?	• Conduct a root cause analysis on the findings and data. Categorize results as "root cause" or "contributing factor". Focus on technical aspects.		
30. What are the significant findings and lessons learned resulting from the analysis regarding technical failures leading to the event? What actions are recommended to avoid similar future events and improve Bulk Electric System reliability? What issues may be inconclusive and require future analysis?	• Draft report of significant findings, lessons learned, and recommendations.		
31. Final Report	• Prepare and coordinate publication of final report.		

Attachment E

Guidelines for NERC Reports on Blackouts and Disturbances[10]

Introduction and Purpose

Executive Summary of Blackout or Disturbance

Conclusions & Recommendations

Actions to Minimize the Possibility of Future Blackouts and Disturbances

Detailed Analysis of Event

1. Sequence of Events

1.1. Sequence of transmission and generation events
- 1.1.1. Reasons for each trip
- 1.1.2. Sequence of loss of Load
- 1.1.3. Description of Cascading and islanding

2. System Modeling

2.1. Model and assumptions
- 2.1.1. Equipment ratings and limits
- 2.1.2. Steady state, system dynamics, and other analyses
- 2.1.3. Degree of simulation success
- 2.1.4. Simulation results
- 2.1.5. Conclusions and lessons learned

2.2. Pre-event Conditions
- 2.2.1. Load levels
  - 2.2.1.1.Forecast vs. Actual
  - 2.2.1.2.Comparison with planning and operational models
- 2.2.2. Generation dispatch
  - 2.2.2.1.Forecast vs. actual
  - 2.2.2.2.Comparison with day ahead studies
  - 2.2.2.3.Reporting of scheduled and forced outages
- 2.2.3. Reserve capacity
  - 2.2.3.1.Location of MW reserves
  - 2.2.3.2.Planned vs. actual
- 2.2.4. Transmission configurations
  - 2.2.4.1.Planned vs. actual
  - 2.2.4.2.Comparison with day ahead studies
  - 2.2.4.3.Reporting of scheduled and forced outages

[10] Each blackout or disturbance is unique and will therefore demand a customized approach to its investigation and reporting. These guidelines for NERC reports are suggestive rather than definitive. Not all investigations and reports will require covering all of these topics.

2.2.5. Interregional transactions
2.2.5.1.Calculated transfer limits
2.2.5.2.Basis for limits – thermal, voltage, and stability
2.2.5.3.Seasonal assessments – Assumptions vs. actual
2.2.5.4.Actual schedules vs. Tagged schedules
2.2.5.4.1. AIE Survey
2.2.5.4.2. Tag Survey
2.2.6. System voltages (profile) and reactive supplies
2.2.6.1.Coordination of reactive supplies and voltage schedules
2.2.6.2.Reactive supply with power transfers

2.3. Event Key Parameters
2.3.1. System voltages (profile) and reactive supplies
2.3.2. Power flows and equipment loadings
2.3.3. System dynamic effects

3. Transmission system performance
3.1. Equipment ratings
3.2. Protective relay actions
3.3. Equipment maintenance
3.4. Equipment damage

4. Generator performance
4.1. Generator control actions
4.2. Generator protection
4.2.1. Underfrequency
4.2.2. Overspeed
4.2.3. Excitation systems
4.2.4. Other systems
4.3. Equipment maintenance
4.4. Equipment protection
4.5. Dynamic effects of generators

5. System frequency
5.1. Frequency excursions – pre event
5.1.1. Analysis of frequency anomalies
5.1.2. Effect of time error correction
5.2. Frequency analysis of the event
5.2.1. Remaining interconnection
5.2.2. Islands remaining

6. Operations
6.1. Operational visibility and actions
6.1.1. Reliability Coordinators
6.1.1.1.Delegation and authority
6.1.1.2.Monitoring capabilities
6.1.1.2.1. Scope of coverage and system visibility

6.1.1.2.2. Monitoring tools
6.1.1.2.3. Data availability and use
6.1.1.3.Operations planning capability
6.1.1.3.1. Operational planning tools
6.1.1.3.2. Coordination
6.1.1.4.Operating procedures
6.1.1.4.1. Emergency operations
6.1.1.4.2. Loss of monitoring system or components
6.1.1.4.3. Communication procedures
6.1.1.5.Operating qualifications and training
6.1.1.5.1. Qualification of operators
6.1.1.5.2. Training provided
6.1.1.5.3. Simulation of emergencies
6.1.2. Transmission Operators
6.1.2.1.Authority to take action
6.1.2.2.Monitoring capabilities
6.1.2.2.1. Scope of coverage and system visibility
6.1.2.2.2. Monitoring tools
6.1.2.2.3. Data availability and use
6.1.2.3.Operations planning capability
6.1.2.3.1. Operational planning tools
6.1.2.3.2. Coordination
6.1.2.4.Operating procedures
6.1.2.4.1. Emergency operations
6.1.2.4.2. Loss of monitoring system or components
6.1.2.4.3. Communication procedures
6.1.2.5.Operating qualifications and training
6.1.2.5.1. Qualification of operators
6.1.2.5.2. Training provided
6.1.2.5.3. Simulation of emergencies

7. System Planning and Design

7.1. Establishing operating limits
7.1.1. Responsibility for setting limits
7.1.2. ATC and TTC calculations
7.1.3. Planning studies
7.1.3.1.·Wide-Area simultaneous transfer limits
7.1.3.1.1. Determination of limits
7.1.3.1.2. Monitoring of limits
7.1.3.1.3. Basis for limits – thermal, voltage, and stability
7.1.3.1.4. Regional Entity assessments
7.1.3.1.5. Other system studies in affected areas
7.1.3.2.Reactive planning
7.1.3.2.1. Reactive reserve planning
7.1.3.2.2. Active vs. static resources
7.1.3.2.3. Voltage stability analysis

7.1.3.3.Regional Criteria and/or NERC Reliability Standards used for planning
7.1.3.3.1. Compliance to these planning Regional Criteria and/or Reliability Standards

8. Reliability Standards and Compliance

8.1. Audits
8.1.1. Reliability Coordinators
8.1.1.1.Previous audits and results
8.1.1.1.1. Compliance with NERC Reliability Standards
8.1.1.2.Updated findings based on analysis
8.1.1.3.Post blackout audit results and findings
8.1.1.4.Recommendations for future audits
8.1.2. Balancing Authorities
8.1.2.1.Regional Entity audits
8.1.2.1.1. Compliance with NERC Reliability Standards and Regional Reliability Standards
8.1.2.2.Updated findings based on analysis
8.1.2.3.Post blackout audit results and findings
8.1.2.4.Recommendations for future audits
8.2. Regional Criteria and/or NERC Reliability Standards used for operations
8.2.1. Compliance to these operating Regional Criteria and/or Reliability Standards
8.3. Reliability Standards
8.3.1. Improvements needed
8.3.2. Potential new Reliability Standards

9. Actions to Minimize the Possibility of Future Widespread Events

9.1. Reliability Standards and compliance to Reliability Standards
9.2. Availability of planned Facilities as scheduled
9.3. Automatic Load shedding programs
9.4. Controlled separation and islanding
9.5. Improved data collection and system monitoring
9.6. Studies of impacts of severe events

10. Restoration of Service

10.1. Restoration procedures
10.1.1. RTOs and ISOs
10.1.2. Transmission Operators
10.1.3. Generator Operators
10.1.4. Distribution Providers

10.2. Restoring service
10.2.1. Transmission line restoration
10.2.1.1. Within control area/ISO/RTO
10.2.1.2. Interarea tie lines
10.2.1.3. Impediments and other issues

10.2.2. Generation restoration
10.2.2.1. Utility-owned generation
10.2.2.2. Independent generation
10.2.2.3. Fuel supply adequacy
10.2.2.4. Fossil units
10.2.2.5. Nuclear units
10.2.2.6. Capacity reserves
10.2.2.7. Coordination with transmission
10.2.2.8. Coordination with Load and other generation
10.2.2.9. Impediments and other issues
10.2.3. Coordination and communications
10.2.3.1. Within control area/ISO/RTO
10.2.3.2. With outside control areas/ISOs/RTOs
10.2.3.3. Wide-Area coverage
10.2.3.4. Impediments and other issues

10.3. Review of restoration procedures
10.3.1. Time to restore customers
10.3.2. Need for modifications
10.3.3. Availability of procedures to necessary participants
10.3.4. Need for training and practice drills
10.3.5. Comparison with other control areas/ISOs/RTOs

11. Analysis Process

11.1. Description of process
11.1.1. Organization
11.1.2. Coordination with US-Canada task force
11.1.3. Coordination with Regional Entities and RTOs
11.1.4. Recommended process improvements
11.1.4.1. Use for other events – near misses, etc.
11.2. Data management
11.2.1. Data collection processes
11.2.1.1. Data request process
11.2.1.2. Data forms used
11.2.2. Data received
11.2.2.1. Quality and usefulness of data
11.2.3. Data warehousing
11.2.3.1. Data warehouse structure
11.2.3.2. Accessibility of data
11.2.4. Data forms and process for future analyses

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF REVISIONS TO ITS RULES OF PROCEDURE
TO ADOPT A BULK ELECTRIC SYSTEM EXCEPTION PROCEDURE

ATTACHMENT 8B

REVISED APPENDIX 3D OF THE RULES OF PROCEDURE

NERC BLACKOUT AND DISTURBANCE RESPONSE PROCEDURES

REDLINED VERSION

Appendix 8

Proposed Revisions 1-9-2012
[Incorporates revisions filed with FERC on November 29, 2011]

NERC Blackout and Disturbance Response Procedures

Effective October 18, 2007

North American Electric Reliability Corporation

NERC Blackout and Disturbance Response Procedures

Introduction

NERC, through its professional staff and the Regional Entities and their members, provide the best source of technical and managerial expertise for responding to major events that affect the Bulk Power System.

NERC's role following a blackout or other major Bulk Electric System disturbance or emergency is to provide leadership, coordination, technical expertise, and assistance to the industry in responding to the event. Working closely with the Regional Entities and Reliability Coordinators, NERC will coordinate efforts among industry participants, and with state, federal, and provincial governments in the United States and Canada to support the industry's response.

When responding to any event where physical or cyber security is suspected as a cause or contributing factor to an event, NERC will immediately notify appropriate government agencies and coordinate its analysis with them.

During the conduct of some NERC-level analyses, assistance may be needed from government agencies. Collaborative analysis with certain government agencies may be appropriate in some cases; e.g., collaborating with the Nuclear Regulatory Commission technical staff when a system event involves a nuclear unit. This assistance could include: authority to require data reporting from affected or involved parties; communications with other agencies of government; analyses related to possible criminal or terrorist involvement in the event; resources for initial data gathering immediately after the event; authority to call meetings of affected or involved parties; and technical and analytical resources for studies. If a federal or multi-national government analysis is called for, government agencies should work in primarily an oversight and support role, in close coordination with the NERC analysis.

It is critical to establish, up front, a clear delineation of roles, responsibilities, and coordination requirements among industry and government for the analysis and reporting of findings, conclusions, and recommendations related to major blackouts, disturbances, or other emergencies affecting the Bulk Power System.

Depending on the severity and of the event and the area impacted, the event analysis may be conducted either by NERC or by the impacted Regional Entity. If the analysis is conducted by the Regional Entity, NERC staff, at least one member of the NERC Event Analysis Working Group (in addition to the Event Analysis Working Group member from the impacted Regional Entity), and other appropriate technical experts from the NERC community will participate as members of the Regional Entity analysis team.

A Regional Entity may request NERC to elevate an analysis to a NERC-level. In such cases, all team responsibilities will shift to NERC, and the Regional Entity may continue to participate in the analysis on appropriate teams.

These procedures do not represent a "cookbook" to be followed blindly. They provide a framework to guide NERC's response to events that may have multiregional, national, or

international implications. Experienced industry leadership would still be required to tailor the response to the specific circumstances of the event.

Responding to major blackouts and other system disturbances can be divided into four phases:

1. situation assessment and communications;
2. situation tracking and communications;
3. data collection, investigation, analysis and reporting; and
4. follow-up on recommendations.

Phase 1 — Situation Assessment and Communications

NERC's primary roles in Phase 1 are to:

- conduct an initial situation assessment;
- call for the collection of and analyze necessary initial data and information for the event;
- assist the Regional Entity-lead analysis with determining the need for supplemental technical expertise from the NERC community;
- issue initial findings, conclusions, and recommendations;
- maintain detailed data records (not subject to Freedom of Information Act);
- assist government agencies in criminal analyses when relevant;
- provide technical expertise for modeling and analyzing the event; and
- follow up on recommendations.

While conducting its initial situation assessment, NERC will make an early determination as to whether the cause of the event may be related to physical or cyber security, and communicate as appropriate with government agencies.

Notice of a event is typically received by the NERC Electricity Sector Information Sharing and Analysis Center (ESISAC) person on duty and relayed to other appropriate NERC personnel.[1] NERC performs an initial situation assessment by contacting the appropriate Reliability Coordinator(s), and makes a decision on whether to activate its crisis communications plan. At the initial stage in gathering information about an incident, it is critical to minimize interference with Bulk Electric System operators who are in the process of restoring the system. To minimize interference with their work, NERC, in its capacity as the ESISAC, should serve as the primary communications link with government agencies.

The ESISAC Concept of Operations (ConOps) specifies the operations plan, communications procedures, and logistics NERC will follow during normal conditions, emergencies, and national security special events. The ConOps includes the primary points of contact (24x7) for the Federal Energy Regulatory Commission, U.S. Department of Energy, U.S. Department of Homeland Security, U.S. Nuclear Regulatory Commission, and Public Safety and Emergency Preparedness Canada.

It is important that during these early hours the ESISAC, in coordination with government agencies, determine whether this event was caused by the actions of criminal or terrorist parties. The results of this criminal assessment are essential to operators because if there is a possibility that the "attack" is still ongoing, restoration and response actions would need to be tailored to

[1] NERC maintains 24x7 contact information for its key personnel to facilitate such contacts.

these circumstances. If NERC and government agencies deem it necessary for further criminal analyses, NERC will issue a formal notice to affected systems to retain all relevant information gathered during this and subsequent phases of an analysis.

The specific criteria for reporting disturbances and other events are described in NERC Reliability Standard EOP-004-1. These criteria and procedures are intended to provide a common basis for consistent reporting of abnormal system conditions and events that occur in North America. All entities responsible for the reliability of Bulk Power Systems in North America must ensure that sufficient information is submitted to NERC within the time frame required. Reliability Coordinators will use the Reliability Coordinator Information System (RCIS) as the primary method of communications to NERC. The ESISAC duty person is responsible for monitoring the RCIS for such notifications.

Depending on the scope and magnitude of the event, NERC will issue media advisories through its crisis communications plan.

Phase 2 — Situation Tracking and Communications

Based on the nature and severity of the event, in Phase 2 NERC will continue to track progress in restoring the Bulk Power System and service to customers, and keep industry, government agencies, and the public informed. The most important thing to recognize in this phase is that the primary focus of Reliability Coordinators and Transmission Operators is the prompt restoration of the Bulk Electric System. NERC will coordinate requests by government agencies for information from Reliability Coordinators and Transmission Operators, and serve as a conduit and coordinator between industry and government for regular status reports on the restoration.

As events continue, NERC will determine whether a detailed analysis of the event should be conducted, and start to identify manpower requirements, data collection and retention requirements, and at what level the analysis should be conducted. If the event is localized within a Region, NERC will participate in the event analysis of the Regional Entity.

Phase 3 — Data Collection, Investigation, Analysis, and Reporting

Based on the scope, magnitude, and impact of an event, during Phase 3 NERC may:

1. perform an overview analysis of system and generator response;
2. rely on one of its Regional Entities to conduct the analysis and monitor the analysis results;
3. work with a Regional Entity in its analysis; or
4. conduct a NERC-level analysis.

The NERC CEO will decide, based on the initial situation assessment and consultation with the NERC technical committee officers[2], if a NERC-level analysis is warranted. If a NERC-level analysis is to be conducted, the NERC CEO will appoint the Director of Events Analysis and Information Exchange to lead the analysis and assemble a high-level technical steering group to provide guidance and support throughout the analysis.

[2] NERC will maintain a list of 24x7 contact information for its technical committee officers.

NERC reserves the right to elevate or augment an analysis performed by a Regional Entity pending the results of the Regional Entity analysis. Additional requests for analyses or supporting data may be made by NERC at any time in the investigation process.

A Regional Entity may request NERC to elevate an analysis to a NERC-level. In such cases, all team responsibilities will shift to NERC, and the Regional Entity may continue to participate in the analysis on appropriate teams.

If the analysis is to be led by one of the Regional Entities, a member of the NERC staff, at least one member of the NERC Event Analysis Working Group (in addition to an Event Analysis Working Group member from the impacted Regional Entity), and other appropriate technical experts from the NERC community will participate as a triage team. The triage team will participate as members of the Regional Entity analysis team. The triage team will also will assist the Regional Entity with determining if additional technical expertise from the NERC community are needed for the analysis.

For NERC-level analyses, the first task of the Director of Events Analysis and Information Exchange would be to identify what technical and other resources and data would be needed from staff, the industry, and government, and to issue those requests immediately. This task will include identification of any special managerial, forensic, or engineering skills needed for the analysis. Secondly, the Director of Events Analysis and Information Exchange must issue requests for those resources and information. Third, the Director of Events Analysis and Information Exchange must organize the teams that will conduct and report on the analysis.

The teams needed for a particular analysis will vary with the nature and scope of the event. Attachment A describes the typical teams that would be required for a NERC-level analysis, and Attachment B provides suggested guidelines for the NERC-level analysis team scopes. Individuals that participate on these teams will be expected to sign an appropriate confidentiality agreement. NERC uses a standard (pro forma) confidentiality agreement (Attachment C) for participants in event analyses, which it will adapt for specific analyses.

The Blackout and Disturbance Analysis Objectives, Approach, Schedule, and Status (Attachment D) and Guidelines for NERC Reports on Blackouts and Disturbances (Attachment E) are used to guide and manage analysis and reporting on major blackouts and disturbances.

A NERC-level analysis will comprise (a) collecting pertinent event data; (b) constructing a detailed sequence of events leading to and triggering the disturbance; (c) assembling system models and data and conducting detailed system analysis to simulate pre- and post-event conditions; and (d) issuing findings, conclusions, and recommendations. The details of these four phases of the analysis are:

a. Collecting Pertinent Event Data

- Collect all pertinent event logs, disturbance recorders, operator transcripts, and other system data.

b. Detailed Sequence of Events

- Construct a detailed sequence of events leading to and triggering the event. Reconcile event logs, disturbance recorders, operator transcripts, and other system data to create an accurate sequence of events.
- Enter and preserve all data in a secure data warehouse.

c. Detailed System Analysis

- Assess the sequence of events to determine critical times for study.
- Assemble the necessary system models and data from Regional Entity and operating entities to accurately model (with power flow and dynamic simulations) the pre-event conditions.[3] Determine pre-event conditions at critical times prior to event initiation, including an assessment of reliability margins in the pre-event time frame.
- Analyze data from phasor measurement units, high-speed data recorders, digital fault recorders, digital relays, and system relay targets.[4]
- Analyze generator and Load~~load~~ performance, including underfrequency and undervoltage relay actions.
- Use the model information and sequence of events to dynamically model the trigger events and the outage sequence. Identify the system phenomena that propagated the failure. Provide graphical results showing the nature of the cascade. Conduct additional analyses as initial findings identify the need for further study.

d. Findings, Conclusions, and Recommendations

- Identify and assess failures contributing to the event, including possible instability conditions, system protection mis-operations, generator actions, etc.
- Either identify or rule out man-made/criminal cyber or physical attacks on the electric system.
- Determine if the system was being operated within equipment and system design criteria at the time of the outage.
- Assess the qualifications, training, SCADA/EMS tools, and communications available to system operators and Reliability Coordinators, and how effective these were leading up to and during the event.
- Assess the adequacy of communications system and communications among system operators.
- Identify any issues regarding maintenance or equipment conditions that may have contributed to the outage.
- Determine whether system restoration procedures were available and adequate. Identify any issues that caused unexpected delays in the restoration of generators and Loads~~loads~~.
- Identify the root causes[5] and contributing factors of the Cascading outage.

---

[3] NERC is developing standards for data and model validation that will facilitate modeling activities in future blackout analyses.
[4] NERC is developing standards for dynamic monitoring equipment and the deployment of such equipment at critical locations in the Bulk Electric System.
[5] NERC will rely on root cause analysis experts, both from within the industry and outside consultants, to conduct these analyses.

- Recommend actions to prevent Cascading outages in the future and to improve system reliability.
- Determine whether the system is adequately designed.
- All compliance issues will be referred to the NERC Director of Compliance.

Phase 4 — Follow-up on Recommendations

For Phase 4 NERC and the Regional Entities will follow up on specific recommendations coming from all analyses, whether done at the Regional Entity or NERC level. In certain cases, where government agencies have taken a direct role in the analysis, reports will be made to those agencies on progress in addressing the recommendations.

Attachment A

Typical Team Assignments for Analysis of Blackouts or Disturbances[6]

Fact-Finding Teams

- Physical and/or cyber security (if needed)
- On-site interviews
- System data collection (frequency, voltages, generation and Loads ~~loads~~)[7]
- System protection and control information
- System restoration
- Coordination with Regional Entity teams

Assessment and Analysis Teams

- Performance of generation and transmission Protection Systems
- Frequency analysis
- Equipment maintenance
- SCADA/EMS/Tools
- Operator training
- Reliability Standards compliance
- System planning
- System operation
- System restoration
- Root cause analysis
- System simulation
- Interregional coordination
- Vegetation management
- Recommendations for future actions
- Security and law enforcement liaison

Data Management Teams

- Data requests
- Data collection
- Data warehouse – entry, logging, retention, and maintenance[8]
- Data release[9]

Report Writing Teams

- Text
- Graphics
- Presentations

---

[6] The analysis team leader will specify the tasks required of each team.
[7] Standard forms and procedures for the collection of data and information will be adapted for particular circumstances.
[8] Experience with data warehousing and access procedures gained during the investigation of the August 2003 blackout will be used in future investigations.
[9] Data release procedures will prevent inappropriate disclosure of information.

Communications Teams

- Press releases
- Interface with government agencies
- Interviews

Attachment B

NERC Blackout and Disturbance Response Procedures
Guidelines for Analysis Team Scopes

Each blackout or disturbance is unique and will therefore demand a customized approach to its analysis. The following guidelines for analysis team scopes are suggestive rather than definitive. Not all the teams listed may be needed for a particular analysis.

Data Requests and Management — This team organizes large volumes of raw data and value-added information produced by analysts in support of the blackout analysis into a data warehouse. The team issues data requests from affected entities, catalogs and stores all data received, and provides secure and confidential access to teams and personnel supporting the analysis. The team serves as the single point for issuing data requests, receiving and storing data, and managing data queries by the analysts, and is responsible for assuring consistency, security, and confidentiality of the data and minimizing redundant data requests.

Sequence of Events — A precise, accurate sequence of events is a building block for all other aspects of the analysis, and is a starting point for the root cause analysis. It is the basis for developing computer models to simulate system conditions and evaluate steady state and stability conditions in the period leading to blackout. The sequence of events is the foundation of facts upon which all other aspects of the analysis can proceed.

System Modeling and Simulation Analysis — System modeling and simulation allows the investigators to replicate system conditions leading up to the blackout. While the sequence of events provides a precise description of discrete events, it does not describe the overall state of the electric system and how close it was to various steady state, voltage stability, and power angle stability limits. An accurate computer model of the system, benchmarked to actual conditions at selected critical times, allows analysts to conduct a series of sensitivity studies to determine if the system was stable and within limits at each point in time leading up to the blackout, and at what point the system became unstable. It also allows analysts to test different solutions to prevent Cascading. Although it is not possible recreate the entire blackout sequence, simulation methods will reveal the mode(s) of failure initiating the blackout and propagating through the system.

Root Cause Analysis — Root cause analysis guides the overall analysis process by providing a systematic approach to evaluating root causes and contributing factors leading to the blackout or disturbance. This team works closely with the technical analysis teams and draws on other data sources as needed to record verified facts regarding conditions and actions (or inactions) that contributed to the blackout or disturbance. The root cause analysis guides the overall analysis by indicating areas requiring further inquiry and other areas that may be of interest regarding lessons learned, but are not causal to the blackout. Root cause analysis enables the analysis process develop a factual record leading to logical and defensible conclusions in the final report regarding the causes of the blackout.

Operations Tools, SCADA/EMS, Communications, and Operations Planning — This team will assess the observability of the electric system to operators and Reliability Coordinators, and the availability and effectiveness of operational (real-time and day-ahead)

reliability assessment tools, including redundancy of views and the ability to observe the "big picture" regarding Bulk Electric System conditions. The team also investigates the operating practices and effectiveness of those practices of operating entities and Reliability Coordinators in the affected area. This team investigates all aspects of the blackout related to operator and Reliability Coordinator knowledge of system conditions, action or inactions, and communications.

Frequency/ACE — This team will analyze potential frequency anomalies that may have occurred, as compared to typical interconnection operations, to determine if there were any unusual issues with control performance and frequency and any effects they may have had related to the blackout.

System Planning, Design, and Studies — This team will analyze the responsibilities, procedures, and design criteria used in setting System Operating Limits, and compare them to good utility practice. The team will review the actual limits in effect on day of the blackout and whether these limits were being observed. The team will review voltage schedules and guides, and reactive management practices in the affected areas, including use of static and dynamic reactive reserves. The team will analyze the tagged and scheduled transactions to determine if inter-regional transfer limits were understood and observed. The team will analyze system planning and design studies completed in the affected areas to determine if operating conditions were consistent with the assumptions of those studies and whether the planning and design studies were sufficient and effective.

Transmission System Performance, Protection, Control, Maintenance, and Damage — This team investigates the causes of all transmission Facility automatic operations (trips and reclosures) leading up to the blackout on all Facilities greater than 100 kV. This review includes relay protection and remedial action schemes, identifying the cause of each operation, and any misoperations that may have occurred. The team also assesses transmission Facility maintenance practices in the affected area as compared to good utility practice and identifies any transmission equipment that was damaged in any way as a result of the blackout. The team will assess transmission line rating practices and the impact that ambient temperature and wind speeds had on the transmission line performance in terms of the design temperature of the transmission conductors. The team shall report any patterns and conclusions regarding what caused transmission Facilities to trip; why the blackout extended as far as it did and not further into other systems; why the transmission separated where it did; any misoperations and the effect those misoperations had on the blackout; and any transmission equipment damage. The team will also report on the transmission Facility maintenance practices of entities in the affected area compared to good utility practice. Vegetation management practices are excluded here and covered in a different team.

Generator Performance, Protection, Controls, Maintenance and Damage — This team will investigate the cause of generator trips for all generators with a 10 MW or greater nameplate rating leading to and through the end of the blackout. The review shall include the cause for the generator trips, relay targets, unit power runbacks, and voltage/Reactive Power~~reactive power~~ excursions. The team shall report any generator equipment that was damaged as a result of the blackout. The team shall report on patterns and conclusions regarding what caused generation Facilities to trip. The team shall identify any unexpected performance anomalies or unexplained events. The team shall assess generator maintenance practices in the

affected area as compared to good utility practice. The team will analyze the coordination of generator under-frequency settings with transmission settings, such as under-frequency Load~~load~~ shedding. The team will gather and analyze data on affected nuclear units and work with the Nuclear Regulatory Commission to address nuclear unit issues.

Vegetation/ROW — This team investigates the practices of transmission Facility owners in the affected areas for vegetation management and ROW maintenance. These practices will be compared with accepted utility practices in general, and with NERC Reliability Standards. The team will evaluate whether the affected parties were within their defined procedures at the time of the blackout and will investigate historical patterns in the area related to outages caused by contact with vegetation.

Analysis Process and Procedures Review — This team will review the process and procedures used in the analysis of the blackout, make recommendations for improvement, and develop recommendations for appropriate processes, procedures, forms, etc. to guide and expedite future analyses including coordination and cooperation between NERC, its Regional Entities, and government agencies.

Restoration Review — All entities operating portions of the Bulk Electric System in North America are required by NERC Reliability Standards to maintain system restoration plans and black start plans, and Reliability Coordinators are required to coordinate the implementation of those plans. This team will review the appropriateness and effectiveness of the restoration plans implemented and the effectiveness of the coordination of these plans.

NERC and RE Standards/Procedures and Compliance — This team reviews the adequacy of NERC Reliability Standards, Regional Reliability Standards and Regional Entity procedures, and the Compliance Monitoring and Enforcement Program to address issues leading to the blackout. The team also reviews the compliance of the affected operating entities with Reliability Standards. For less significant event analyses, this team may not be needed. However, all compliance issues will be referred to the NERC Director of Compliance.

Attachment C

NERC CONFIDENTIALITY AGREEMENT
FOR
ANALYSIS OF BLACKOUTS AND DISTURBANCES

This Confidentiality Agreement ("Agreement"), dated _____, is between the North American Electric Reliability Corporation ("NERC"), and

_____, a member of the NERC Event Analysis Team ("Team Member")(collectively referred to as "Parties").

WHEREAS, NERC is conducting an analysis of the power event that occurred in _____ on _____ and related matters ("Event"); and

WHEREAS, NERC has established a team to carry out that analysis ("Event Analysis Team"); and

WHEREAS, in order for the Event Analysis Team to fulfill its objectives, it is necessary for the Event Analysis Team have access to confidential or business sensitive information from operating entities within the _____ and to be able to conduct open and unconstrained discussions among team members,

The Parties therefore agree as follows:

1. The term "Event Analysis Information" means all information related in any way to the Event that operating entities within the _____ or their representatives have furnished or are furnishing to NERC in connection with NERC's analysis of the Event, whether furnished before or after the date of this Agreement, whether tangible or intangible, and in whatever form or medium provided (including, without limitation, oral communications), as well as all information generated by the Event Analysis Team or its representatives that contains, reflects or is derived from the furnished Event Analysis Information; provided, however, the term "Event Analysis Information" shall not include information that (i) is or becomes generally available to the public other than as a result of acts by the undersigned Parties or anyone to whom the undersigned Parties supply the Information, or (ii) is known to or acquired by the Team Member separate from receiving the information from the Event Analysis Team.

2. The Team Member understands and agrees that the Event Analysis Information is being made available solely for purposes of the Event Analysis and that the Event Analysis Information shall not be used in any manner to further the commercial interests of any person or entity. The Team Member further understands and agrees that he or she will not disclose Event Analysis Information to any person who has not signed this Agreement except as such disclosure may be required by law or judicial or regulatory order.

3. If Team Member's employing organization has signed the NERC Confidentiality Agreement for Electric System Security Data ("NERC Security Data Agreement"), paragraph 2 shall not be deemed to prohibit Team Member from disclosing Event Analysis Information to

other employees of that organization, but only to the extent that "security data" as defined in the NERC Security Data Agreement is shared within the organization.

4. The Parties expressly agree that Event Analysis Information shall otherwise only be disclosed through official releases and reports as authorized by NERC.

5. It shall not be a violation of the NERC Confidentiality Agreement for Electric System Security Data for a Reliability Coordinator to furnish Event Analysis Information to an Event Analysis Team Member who has signed this Agreement.

6. This Agreement shall be for sole benefit of the parties hereto. This Agreement may be modified or waived only by a separate writing signed by the Parties. If any clause or provision of this Agreement is illegal, or unenforceable, then it is the intention of the Parties hereto that the remainder of this Agreement shall not be affected thereby, and it is also the intention of the Parties that in lieu of each clause or provision that is illegal, invalid or unenforceable, there be added as part of this Agreement a clause or provision as similar in terms to such illegal, invalid or unenforceable clause or provision as may be possible and be legal, valid and enforceable. This Agreement will be governed and construed in accordance with the laws of the State of New Jersey, except for any choice of law requirement that otherwise may apply the law from another jurisdiction.

7. This Agreement shall have a term of two (2) years from the date hereof, except that the obligations of paragraphs 2, 3, and 4 shall continue for five (5) years from the date hereof.

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

By: _____

Printed: _____

Title: _____

NERC EVENT ANALYSIS TEAM MEMBER

Signed: _____

Printed: _____

Attachment D

NERC Blackout and Disturbance Analysis Objectives, Analysis Approach, Schedule, and Status

Analysis Objective	Analysis Approach	Schedule	Status
Pre-Event Conditions			
1. What was the precursor sequence of events leading to the event?	• Assemble data/alarm logs and time-stamped sequence information. • Develop and maintain an expanding database of log and time-stamped sequence information. • Develop a precursor sequence of high-level, events relevant to, and leading to event initiation. • Reconcile the precursor sequence of events with those emerging from Regional Entities, RTOs, and operating entities.		
2. What time frames are relevant for pre-event assessment of system conditions? What points in time should be used to establish a baseline set of study conditions when the system was last known to be stable and within normal operating criteria?	• Referencing precursor sequence of events, determine relevant times to develop base case conditions (stable and within normal operating criteria). • Verify relevant time horizons and availability of system data at those times with Regional Entities, RTOs, and operating entities.		
3. What models and data can best simulate system conditions prior to and during the event? What is the relevant scope of the system for detailed study (what is considered the boundary of the study system and what is considered neighboring or external systems?)	• Identify up-to-date power system model(s) appropriate for powerflow and transient and dynamic simulations (determine if detailed eastern Interconnection model is needed or multi-regional model(s) are needed. • Identify what models are available in Regional Entities, RTOs, and operating entities. • Identify who will actually perform power flow, transient and dynamic simulations; hire contractor(s) as needed. • Identify and assemble data required for these models. • Develop and maintain a system data repository.		

Analysis Objective	Analysis Approach	Schedule	Status
4. What system conditions existed in the precursor time horizon leading up to the event (at the times identified in 1.)?	• Obtain and manage data for powerflow: system configuration, planned and unplanned outages, unit commitment and dispatch, interchange schedules, congestion conditions, reserves, Loads~~loads~~, state estimator snapshots, deratings and limitations, frequency, etc. Identify who will maintain and run powerflow simulations. • Work with Regional Entities, RTOs, and operating entities to develop powerflow cases defining the base conditions for each relevant time, ensuring the powerflows model each critical juncture leading up to the event. • Identify and review results of additional studies completed by Reliability Coordinators, RTOs and operating entities. • Assess the powerflow results with respect to steady state operating criteria (was the system within all known limits at each precursor time)?		
5. Were there any prior-existing abnormalities, instabilities, reliability criteria violations, or reliability issues in the precursor sequence time horizon? Prior to event initiation were there any latent instability conditions that would suggest the system was at risk? Were the precursor conditions ones that had been previously studied by the entities involved? Were there adequate reserves with effective distribution? Were planned outages effectively coordinated?	• Work with Regional Entities, RTOs, and operating entities to obtain and manage transient and dynamic models for simulations. • Identify who will conduct transient and dynamic simulations and if external contractor(s) are required. • Conduct transient and dynamic simulations at each of the precursor study times. • Assess the stability of the system at each of these times and identify any latent reliability issues prior to blackout initiation. • Consider creating a visual map of system conditions. • Document the limitations and assumptions of simulations affecting the certainty of the simulation results.		
Blackout Sequence of Events			
6. What was the sequence of system events leading to and directly triggering the blackout?	• Evaluate data logs, fault recorder data disturbance recorder data, and synchro-phasor measurement to establish a detailed sequence of events that initiated the event. • Identify the sequence of events that directly led to the event. • Review and reconcile these trigger events with Regional Entities, RTOs, and operating entity analyses.		

Analysis Objective	Analysis Approach	Schedule	Status
7. What was the sequence of events during the event?	• Evaluate logs and disturbance recorder data to establish sequence during the blackout. (The event sequence may follow multiple tracks.) • Review and reconcile this sequence with those constructed by Regional Entities, RTOs, and operating entities. • Consider developing 3-D, time-lapse visualization of the blackout (U. of Minnesota and/or U. of Wisconsin).		
8. What was the cause of the event in terms of electrical conditions and other related events? Generally describe any system breakups, islanding, etc. Were there conditions of voltage or frequency collapse, or unstable oscillations? Was the sequence strictly a sequential "domino" effect of Facility trips? What were the system conditions (snapshots) at key points during the event?	• Assess triggering sequence and blackout sequence to establish the causes for the blackout in terms of electrical conditions and events. • Select key points in sequence for simulation that are relevant for study and that can be accurately modeled. (It may not be possible to reconcile data sufficiently to recreate system conditions during the blackout.) • To the extent possible, conduct simulations and assess results at each point during the blackout. • Review and reconcile results with Regional Entities, and operating entities.		
9. Why did the event extend as far as it did? What arrested the event from extending further into other systems?	• Using advanced analysis techniques, assess where and why the event was arrested.		
10. How did affected non-nuclear generators respond during the event? Were trips as expected and required by procedures and standards? Did non-nuclear generators remain connected and support the power system in the manner they should have? Did any generator action, generator control functions, or generator protection systems contribute to the event?	• Prepare a table of affected generators and actions they made leading up to and during the event, including time-stamped unit trips, relays initiating unit trips, MW and MVar outputs, voltages, and frequency, etc. • Analyze the automatic (including relay trips) and operator-initiated actions of non-nuclear generators to determine whether actions were correct under the conditions or not. • Reconcile non-nuclear generator data and analysis with that of the Regional Entities, RTOs, and operating entities.		
11. How did nuclear generators respond leading up to and during the blackout? Were trips as expected and required by procedures and standards? Were there any nuclear safety issues identified?	• Work with NRC to develop a table of sequence of actions and issues regarding affected nuclear generators (both ones that tripped and those that did not). • Refer nuclear issues to NRC for analysis, assisting in their analyses where appropriate.		
12. What was the sequence and amount of Load~~load~~ lost? What directly caused Load~~load~~ loss (e.g. under-frequency Load~~load~~ shed, loss of transmission source, voltage collapse, relay actions, under/over frequency protection or stalls, etc.)	• Work Regional Entities, RTOs, and operating entities to develop a description of Load~~load~~ lost/impacted, by area. • Analyze and report the cause for Load~~load~~ loss in each area.		

Analysis Objective	Analysis Approach	Schedule	Status
13. How did system protection and automated controls operate during the event? Did they operate correctly or not?	• Assess each automatic trip of a transmission or generator Facility for proper or improper relay actions. • Assemble and review Regional Entity and operating entity reviews of logs, disturbance reports, and relay targets/logs and reconcile with NERC data.		
14. Was any equipment damaged during the event?	• Request information from Regional Entities, and companies on equipment damage, as appropriate. • Assess any transmission or generation Facilities sustaining damage during the event, and extent of damage.		
15. Did SCADA/EMS and data communications systems operate correctly during the event? What problems were noted?	• Request information from Regional Entities, and companies. • Identify and analyze any problems with SCADA/EMS and data communications at regional and company levels.		
Reliability Standards/Procedures			
16. What NERC Reliability Standards were applicable to the event? What violations occurred? Were NERC Reliability Standards and policies sufficient?	• Compliance Staff review NERC Reliability Standards relevant to the event and perform a compliance review.		
17. What Regional Reliability Standards were applicable to the event? What violations occurred? Were Regional Reliability Standards and Regional Entity policies sufficient?	• Request Regional Entities to review applicable Regional Reliability Standards and report compliance with those Regional Reliability Standards during the event.		
18. Were any special operating procedures or other operating guidelines in effect and being observed leading up to the event? Were these procedures sufficient?	• Review and analyze loop flow procedures with involved Regional Entities and companies, and report analysis results.		
19. What other RTO, Transmission Owner, CA procedures were applicable? What violations occurred? Were the procedures sufficient?	• Request RTOs, Transmission Owners, CAs to review applicable Reliability Standards and compliance with existing reliability procedures and Reliability Standards during the event, and report results.		
Maintenance			
20. Are there any indications that maintenance of transmission or generation Facilities may have contributed to the event?	• Assess whether equipment or maintenance issues (e.g. tree trimming) contributed to the blackout and investigate specifics in areas of concern. • Review Regional Entity assessments of maintenance issues that may have contributed to the event.		

Personnel, Procedures, and Communications			
21. What conditions were operators and Reliability Coordinators aware of leading up to and during the event? What information did they have to warn them of unsafe system conditions? What problems or concerns did they have? What did they observe during the event? Were human errors made that contributed to the event? If there were, what were the causes of the errors?	• Develop an interview guide to address procedural and operational issues. • Conduct onsite interviews with operating personnel and Reliability Coordinators involved. • Analyze interview data to corroborate with technical data and report conclusions.		
22. Were lines of authority clearly understood and respected in the time leading up to and during the event, as well as during the restoration period?	• Identify critical instructions given and evaluate results. • Review documentation and effectiveness of assignments of operating and reliability authorities.		
23. What communications occurred among operating entities?	• Review voice communications logs. • Evaluate logs relevant to the blackout and identify key interactions. Report conclusions.		
24. What were the qualifications (including Certification status) and training of all operating personnel involved in the event and their supervisors?	• Request Certification status of all operating personnel from involved operating entities. • Conduct onsite review of training materials and records. • Conduct onsite review of operating procedures and tools		
25. Was the role and performance of the Reliability Coordinators as expected?	• Review the adequacy of reliability plans for the affected Regional Entities. • Review the actions of the affected Reliability Coordinators to determine if they performed according to plans. • Assess whether inter-area communications were effective, both at the control area and Reliability Coordinator levels.		
System Restoration			
26. Were blackstart and restoration procedures available and adequate in each area? Were they followed and were they adequate to the restoration task? Were pre-defined authorities respected during the restoration?	• Onsite audit of blackstart and restoration procedures and plans. • Analyze whether the plans and procedures were used and whether they were sufficient for this outage.		
27. What issues were encountered in the restoration that created unexpected challenges or delays? What lessons were learned in the restoration (both things that went well and things that did not).	• Solicit information from operating entities and Regional Entities regarding unexpected challenges and delays in restoration, and lessons learned. • Analyze what worked well and what did not in the restoration.		

System Planning and Design			
28. Were the conditions leading up to the event within the design and planning criteria for the transmission systems involved?	• Request Transmission Owners and Regional Entities involved to report any violations of design or planning criteria prior to or leading up to the blackout.		
Conclusions and Recommendations			
29. From a technical perspective, what are the root causes of this event? What additional technical factors contributed to making the event possible?	• Conduct a root cause analysis on the findings and data. Categorize results as "root cause" or "contributing factor". Focus on technical aspects.		
30. What are the significant findings and lessons learned resulting from the analysis regarding technical failures leading to the event? What actions are recommended to avoid similar future events and improve Bulk Electric System reliability? What issues may be inconclusive and require future analysis?	• Draft report of significant findings, lessons learned, and recommendations.		
31. Final Report	• Prepare and coordinate publication of final report.		

Attachment E

Guidelines for NERC Reports on Blackouts and Disturbances[10]

Introduction and Purpose

Executive Summary of Blackout or Disturbance

Conclusions & Recommendations

Actions to Minimize the Possibility of Future Blackouts and Disturbances

Detailed Analysis of Event

1. Sequence of Events

1.1. Sequence of transmission and generation events
- 1.1.1. Reasons for each trip
- 1.1.2. Sequence of loss of Load~~load~~
- 1.1.3. Description of Cascading and islanding

2. System Modeling

2.1. Model and assumptions
- 2.1.1. Equipment ratings and limits
- 2.1.2. Steady state, system dynamics, and other analyses
- 2.1.3. Degree of simulation success
- 2.1.4. Simulation results
- 2.1.5. Conclusions and lessons learned

2.2. Pre-event Conditions
- 2.2.1. Load levels
  - 2.2.1.1.Forecast vs. Actual
  - 2.2.1.2.Comparison with planning and operational models
- 2.2.2. Generation dispatch
  - 2.2.2.1.Forecast vs. actual
  - 2.2.2.2.Comparison with day ahead studies
  - 2.2.2.3.Reporting of scheduled and forced outages
- 2.2.3. Reserve capacity
  - 2.2.3.1.Location of MW reserves
  - 2.2.3.2.Planned vs. actual
- 2.2.4. Transmission configurations
  - 2.2.4.1.Planned vs. actual
  - 2.2.4.2.Comparison with day ahead studies
  - 2.2.4.3.Reporting of scheduled and forced outages

[10] Each blackout or disturbance is unique and will therefore demand a customized approach to its investigation and reporting. These guidelines for NERC reports are suggestive rather than definitive. Not all investigations and reports will require covering all of these topics.

2.2.5. Interregional transactions
2.2.5.1.Calculated transfer limits
2.2.5.2.Basis for limits – thermal, voltage, and stability
2.2.5.3.Seasonal assessments – Assumptions vs. actual
2.2.5.4.Actual schedules vs. Tagged schedules
2.2.5.4.1. AIE Survey
2.2.5.4.2. Tag Survey
2.2.6. System voltages (profile) and reactive supplies
2.2.6.1.Coordination of reactive supplies and voltage schedules
2.2.6.2.Reactive supply with power transfers

2.3. Event Key Parameters
2.3.1. System voltages (profile) and reactive supplies
2.3.2. Power flows and equipment loadings
2.3.3. System dynamic effects

3. Transmission system performance
3.1. Equipment ratings
3.2. Protective relay actions
3.3. Equipment maintenance
3.4. Equipment damage

4. Generator performance
4.1. Generator control actions
4.2. Generator protection
4.2.1. Underfrequency
4.2.2. Overspeed
4.2.3. Excitation systems
4.2.4. Other systems
4.3. Equipment maintenance
4.4. Equipment protection
4.5. Dynamic effects of generators

5. System frequency
5.1. Frequency excursions – pre event
5.1.1. Analysis of frequency anomalies
5.1.2. Effect of time error correction
5.2. Frequency analysis of the event
5.2.1. Remaining interconnection
5.2.2. Islands remaining

6. Operations
6.1. Operational visibility and actions
6.1.1. Reliability Coordinators
6.1.1.1.Delegation and authority
6.1.1.2.Monitoring capabilities
6.1.1.2.1. Scope of coverage and system visibility

6.1.1.2.2. Monitoring tools
6.1.1.2.3. Data availability and use
6.1.1.3.Operations planning capability
6.1.1.3.1. Operational planning tools
6.1.1.3.2. Coordination
6.1.1.4.Operating procedures
6.1.1.4.1. Emergency operations
6.1.1.4.2. Loss of monitoring system or components
6.1.1.4.3. Communication procedures
6.1.1.5.Operating qualifications and training
6.1.1.5.1. Qualification of operators
6.1.1.5.2. Training provided
6.1.1.5.3. Simulation of emergencies
6.1.2. Transmission Operators
6.1.2.1.Authority to take action
6.1.2.2.Monitoring capabilities
6.1.2.2.1. Scope of coverage and system visibility
6.1.2.2.2. Monitoring tools
6.1.2.2.3. Data availability and use
6.1.2.3.Operations planning capability
6.1.2.3.1. Operational planning tools
6.1.2.3.2. Coordination
6.1.2.4.Operating procedures
6.1.2.4.1. Emergency operations
6.1.2.4.2. Loss of monitoring system or components
6.1.2.4.3. Communication procedures
6.1.2.5.Operating qualifications and training
6.1.2.5.1. Qualification of operators
6.1.2.5.2. Training provided
6.1.2.5.3. Simulation of emergencies

7. System Planning and Design

7.1. Establishing operating limits
7.1.1. Responsibility for setting limits
7.1.2. ATC and TTC calculations
7.1.3. Planning studies
7.1.3.1.·Wide-Area simultaneous transfer limits
7.1.3.1.1. Determination of limits
7.1.3.1.2. Monitoring of limits
7.1.3.1.3. Basis for limits – thermal, voltage, and stability
7.1.3.1.4. Regional Entity assessments
7.1.3.1.5. Other system studies in affected areas
7.1.3.2.Reactive planning
7.1.3.2.1. Reactive reserve planning
7.1.3.2.2. Active vs. static resources
7.1.3.2.3. Voltage stability analysis

7.1.3.3.Regional Criteria and/or NERC Reliability Standards used for planning
7.1.3.3.1. Compliance to these planning Regional Criteria and/or Reliability Standards

8. Reliability Standards and Compliance
8.1. Audits
8.1.1. Reliability Coordinators
8.1.1.1.Previous audits and results
8.1.1.1.1. Compliance with NERC Reliability Standards
8.1.1.2.Updated findings based on analysis
8.1.1.3.Post blackout audit results and findings
8.1.1.4.Recommendations for future audits
8.1.2. Balancing Authorities
8.1.2.1.Regional Entity audits
8.1.2.1.1. Compliance with NERC Reliability Standards and Regional Reliability Standards
8.1.2.2.Updated findings based on analysis
8.1.2.3.Post blackout audit results and findings
8.1.2.4.Recommendations for future audits
8.2. Regional Criteria and/or NERC Reliability Standards used for operations
8.2.1. Compliance to these operating Regional Criteria and/or Reliability Standards
8.3. Reliability Standards
8.3.1. Improvements needed
8.3.2. Potential new Reliability Standards

9. Actions to Minimize the Possibility of Future Widespread Events
9.1. Reliability Standards and compliance to Reliability Standards
9.2. Availability of planned Facilities as scheduled
9.3. Automatic Load~~load~~ shedding programs
9.4. Controlled separation and islanding
9.5. Improved data collection and system monitoring
9.6. Studies of impacts of severe events

10. Restoration of Service
10.1. Restoration procedures
10.1.1. RTOs and ISOs
10.1.2. Transmission Operators
10.1.3. Generator Operators
10.1.4. Distribution Providers

10.2. Restoring service
10.2.1. Transmission line restoration
10.2.1.1. Within control area/ISO/RTO
10.2.1.2. Interarea tie lines
10.2.1.3. Impediments and other issues

10.2.2. Generation restoration
10.2.2.1. Utility-owned generation
10.2.2.2. Independent generation
10.2.2.3. Fuel supply adequacy
10.2.2.4. Fossil units
10.2.2.5. Nuclear units
10.2.2.6. Capacity reserves
10.2.2.7. Coordination with transmission
10.2.2.8. Coordination with Load~~load~~ and other generation
10.2.2.9. Impediments and other issues
10.2.3. Coordination and communications
10.2.3.1. Within control area/ISO/RTO
10.2.3.2. With outside control areas/ISOs/RTOs
10.2.3.3. Wide-Area coverage
10.2.3.4. Impediments and other issues

10.3. Review of restoration procedures
10.3.1. Time to restore customers
10.3.2. Need for modifications
10.3.3. Availability of procedures to necessary participants
10.3.4. Need for training and practice drills
10.3.5. Comparison with other control areas/ISOs/RTOs

11. Analysis Process

11.1. Description of process
11.1.1. Organization
11.1.2. Coordination with US-Canada task force
11.1.3. Coordination with Regional Entities and RTOs
11.1.4. Recommended process improvements
11.1.4.1. Use for other events – near misses, etc.
11.2. Data management
11.2.1. Data collection processes
11.2.1.1. Data request process
11.2.1.2. Data forms used
11.2.2. Data received
11.2.2.1. Quality and usefulness of data
11.2.3. Data warehousing
11.2.3.1. Data warehouse structure
11.2.3.2. Accessibility of data
11.2.4. Data forms and process for future analyses

PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF REVISIONS TO ITS RULES OF PROCEDURE
TO ADOPT A BULK ELECTRIC SYSTEM EXCEPTION PROCEDURE

ATTACHMENT 9

"THE DEVELOPMENT PROCESS AND BASIS FOR THE RoP TEAM'S

RECOMMENDED PROVISIONS – HOW STAKEHOLDER COMMENTS WERE

CONSIDERED AND ADDRESSED"

PREPARED BY THE BES RULES OF PROCEDURE TEAM

The development process and basis for the RoP Team's recommended provisions--including how stakeholder comments were considered and addressed

Background

On November 18, 2010, the Federal Energy Regulatory Commission ("FERC" or the "Commission") issued an Order (No. 743) directing NERC to revise the definition of Bulk Electric System to address the Commission's technical and other concerns as identified in the Order. Concurrent with the development of the revised Bulk Electric System definition, NERC was also directed to develop a process for granting specific facilities exemptions from the Bulk Electric System definition. FERC subsequently clarified certain aspects of its directives in Order No. 743-A.

The goal of the combined efforts was to develop a definition and exemption process sufficient to ensure that all facilities necessary for operating an interconnected electric transmission network are included in the bulk electric system under Section 215 authority. In the Orders, the Commission described in large part its technical and other concerns as:

- Inconsistencies and ambiguities exist across 8 regions with respect to the definition of the Bulk Electric System
- A backstop review process does not exist for resolving such inconsistencies and ambiguities
- Facilities exist that could significantly affect reliability but that because of inconsistencies in the definition are not subject to mandatory reliability rules, and thus the ERO lacks authority to require such entities to mitigate reliability risks

Through Orders 743 and 743-A the Commission proposed to:

- Eliminate regional discretion
- Maintain a bright-line definition of the Bulk Electric System as including facilities operating at 100kV and above
- Establish an exemption process and criteria that was NERC developed and FERC approved

NERC was given the latitude to develop a solution as effective as or more effective than the Commission's proposal in the Order.

Executive Summary

A team of industry stakeholders[1], with participation from NERC and regional staff, was assigned the task[2] to develop a process for granting exceptions to the definition of the Bulk Electric System. This Rules of Procedure (or "RoP") team was to coordinate closely with the standards

[1] The RoP roster is listed at: http://www.nerc.com/docs/standards/dt/BESROP_ROSTER_08312011.pdf . The team was selected from stakeholder names submitted for participation on the Project 2010-017, standard drafting team to bring a good mixture of technical, policy, and industry views.

[2] Standards Announcement: Bulk Electric System Definition Revision Status - http://www.nerc.com/docs/standards/dt/Project_2010-17_Standards_Announcement_040611.pdf

development efforts of the drafting team and, through stakeholder participation, propose a modification to the NERC Rules of Procedure that could be filed with the Commission for approval in response to the directives in Orders 743 and 743-A.

Believing that the set of electrical elements that comprise the Bulk Electric System generally will be appropriately determined through a hierarchical application of the newly proposed definition which includes detailed inclusions and exclusions to provide additional bright-line specificity beyond just the originally proposed 100kV threshold, the team expects that a practical exceptions process for specific facilities mischaracterized by the definition should be less frequently invoked and therefore less burdensome administratively than was envisioned by the Commission's original proposal for exemptions from a more broad-brush 100kV approach.[3] The exceptions process is intended to be consistent, repeatable, and verifiable while allowing sufficient flexibility for circumstances specific to each case to dictate the proper outcome in the interest of reliability.

Interested stakeholders were provided multiple opportunities to participate in the development of the process through open meetings as well as extensive use of e-mail,[4] web postings,[5] and informational and question-and-answer presentations held jointly with the definition drafting team[6]. Members of the Rules of Procedure team worked with Canadian entities to address consistent treatment of transmission lines that cross the border to address FERC's stated concerns and to alleviate Canadian concerns about a "one-size-fits-all" approach.

Several process attributes considered by the team during development were:

- Maintain the exemption for facilities used in the local distribution of electric energy as well as radial facilities
- The exception procedure including the criteria[7] for allowing exceptions should be clear, objective, transparent, and uniformly applicable
- The process should allow any registered entity to utilize the process to seek an exception either for its own facilities or for others' facilities with respect to which it has ERO-related reliability responsibilities
- NERC should be the ultimate decision-maker in order to retain facility-by-facility oversight of the objective and uniform application of the exception criteria
- The process should provide a procedure for revoking a previously granted exception if a facility no longer qualifies for such special treatment
- The records of all exception requests should be ready-for-audit by Commission staff

---

[3] *Revision to Electric Reliability Organization Definition of Bulk Electric System*, Notice of Proposed Rulemaking, 75 FR 14097 (Mar. 24, 2010), FERC Stats. & Regs. ¶ 32,654 (2010).

[4] The RoP e-mail distribution list was combined with the Project 2010-017 drafting team roster and any interested participant was allowed to join a "plus" list that was used extensively.

[5] A project team webpage was created and hyperlinked to the standards under development webpage for information.

[6] The NERC Members Representatives Committee was briefed on several occasions throughout 2011, two joint NERC Webinars with Q&A were presented, and one joint presentation at a NERC Standards workshop.

[7] The leadership of the BES Definition SDT and of the Rules of Procedure team met with the leadership of the Standards Program and the Standards Committee and determined that the BES Definition SDT would assume responsibility for working with stakeholders to identify what evidence will be needed to support a request for an exception to the BES definition.

Several significant issues were identified during the development of the process that needed to be addressed. The issues were not considered to be intractable nor threatening to reliability, but nonetheless were important to the stakeholders. The issues generally fell into the following categories:

- Who is eligible to initiate and/or participate in the process by which an Exception is granted? What is the role of state regulators?
- What should be the scope of the Elements that can be contained in a single Request?
- Should an entity unable to determine the status of an element by applying the bright line BES definition be able to obtain a determination of its status through the exception process?
- What is the appropriate balance between allowing open access to the process and ensuring administrative time is spent analyzing and processing valid, permissible requests?
- What is the appropriate balance between facility-by-facility case-specific flexibility and an appropriate level of consistency, respecting the varied roles and proper exercise of discretion by each participant?
- How transparent should the process be? Should entities other than the Regional Entity, NERC, FERC, or Canadian Provincial authorities be allowed access to facility-specific Exception-related information filed by an entity?
- What should be the status for compliance purposes of an Element during the pendency of the request?

Summary of the Development Process

The Rules of Procedure Exceptions process was developed through stakeholder participation as described in the executive summary. Additionally, interested stakeholders were asked to provide feedback on the proposed amendments through a special electronic comment form on two separate occasions.

A 30 day posting for comment was held from May 10, 2011 through June 10, 2011, in conjunction with the first posting of the draft definition. There were 70 sets of comments on this first posting, including comments from more than 176 different people from approximately 131 companies representing 10 of the 10 Industry Segments.

After considering all comments received from the first posting, the team made substantial revisions to the proposed amendments, and a second posting with a 45-day public comment period was conducted from September 13, 2011 through October 27, 2011, in conjunction with the second posting and initial ballot of the draft definition. There were 72 sets of comments on this second posting, including comments from more than 134 different people from approximately 86 companies representing 9 of the 10 Industry Segments.

After consideration of this second set of comments, the Rules of Procedure team made further revisions, mostly to clarify and fine-tune the process. Many of the comments received expressed concerns about the outside edges of the process which represented a worst-case scenario. While such a scenario certainly must be considered, it is important to note that such provisions were included in the exception process in order to anticipate situations that might be encountered occasionally or even infrequently during the administration of the process (e.g., uncorrectable insufficiencies in the form of a Request), but that most requests are not expected

to present such situations and therefore will be processed to a definitive conclusion in fewer steps but still in a fair, efficient and effective manner. Additional information may be found at: http://www.nerc.com/filez/standards/Rules_of_Procedure-BES.html

Some commenters noted, with appreciation, that the development process for these amendments offered them more opportunity for review and comment than has traditionally been available for revisions to the Rules of Procedure. Additionally, commenters expressed that communication outreach efforts by the team such as through webinars was very helpful. The RoP team also has benefited from the additional input afforded by the two-step process.

Proposal

The RoP Team believes that the proposed process establishes a fair and efficient resolution to a majority of the Exception Requests that will be presented, yet provides the necessary processes to address special circumstances that may arise in the process of arriving at a technically sound determination. In essence, in most circumstances, the process is a fairly simple and direct process of discrete steps:

1. An entity applies the definition to an element, but nonetheless believes that an element should either be included in or excluded from the Bulk Electric System contrary to its characterization by the definition, and therefore submits an Exception Request to the region where the Element is located.
2. The region receives the request, and
    a. The region conducts an initial screening looking for three items to determine if it is a valid request for processing:
        - Is the request from an eligible submitter?
        - Is the request for an exception to the Definition?
        - Is the required information provided with the request?

    If the initial answer to each question is yes, the request is moved forward to a substantive review. If not, the submitter has an opportunity to fix the request before the region rejects the request as deficient.
    b. The region substantively evaluates the request and makes a recommendation to NERC.
3. NERC reviews the request and all information developed at the regional level, and either approves or disapproves the exception request.
4. The Entity either accepts or appeals NERC's decision.

Additional checks and balances exist to address special situations, such as when a region itself submits an Exception Request or when a region either intends to reject a request as insufficient or recommend to NERC that an exception request be denied. In such circumstances, measures to give extra consideration to the submitter's or owner's position necessarily create additional levels of complexity, but they also provide important safeguards to ensure the best technical result for reliability.

The RoP team believes the proposed amendments represent a process that:

- Balances the need for effective and efficient reliability administration with due process and clarity of expectations.
- Is consistent, repeatable, and verifiable.
- Supports consistent treatment of transmission lines that cross international borders.
- Helps alleviate concerns about a "one-size fits all" approach.
- Allowed commenters to raise and address a number of their substantive concerns.

Consideration of Comments

Effective and efficient reliability administration vs. due process and clarity of expectations

Commenters were divided on how successfully the proposed procedure achieves this balance and on what procedural elements need to be added or should be eliminated. The RoP Team wishes to emphasize that the industry, the regions, and NERC each have responsibilities under the proposed process, and while these responsibilities do revolve around the processing of a single request, they are distinct and different steps that are discrete and manageable. The process sets a framework by which entities exercise their responsibilities together to effectively analyze a request and produce a technically justified conclusion. Where specific work-product or deliverables are detailed in the process, it is done to ensure consistency. It is expected that each participant in the process use its discretion where appropriate to maximize the efficiency and effectiveness of its individual obligations in the process.

A two-stage review (screening and substantive review) is included to ensure that requests are appropriately submitted prior to accepting them into the process of detailed technical review. In practice, a properly submitted request will flow through the initial review and on into substantive review without delay, and the minor administrative action of screening is more than counterbalanced by the time and resource savings gained by focusing technical work only on those requests that are complete and ready for substantive review. The process should not result in properly submitted exception requests being denied a technical review, and in the unlikely case of an improper rejection on arbitrary grounds, a process exists for a submitter to turn to NERC, which can direct the substantive review of a request.

Status of an Element for compliance purposes

There continues to be a desire among some commenters for a reduction in the exposure to compliance monitoring and enforcement activities during the pendency of exception requests. The RoP team notes that the Commission has already addressed this issue[8] and the team has provided a mechanism for ongoing transition issues to be identified and addressed in consultation with the Regional Entity as necessary in the exceptions process.

The concept of "commercial operations" was included in section 10.2(a) to provide a reference point in future time from which to judge exception requests for newly planned but not yet constructed elements. In addition, although the BES definition implementation plan proposes a 24 month implementation period for application of the definition, Section 10.2(b) addresses the circumstance where an exception request is not resolved by the end of the "bright line" implementation period. The intent of both provisions is that for a new element (or for one which is not currently within the BES for compliance) which would be included under the new definition, if the owner believes it should be granted an exception from inclusion, the request for that exception should be submitted in sufficient time prior to its being placed into service (or

---

[8] From Order No. 743:
132. While the Commission is sensitive to commenters' concerns regarding non-compliance during the transition period, the Commission will not provide a trial period, as we declined to do in Order No. 693, with respect to those facilities that are subject to Commission-approved Reliability Standards for the first time. We expect that the transition periods will be long enough for exemption requests to be processed and to allow entities to bring newly-included facilities into compliance prior to the mandatory enforcement date. Additionally, the ERO and Regional Entities may exercise their enforcement discretion during the transition period.

prior to the end of the implementation period) that a decision can be reached, a negative decision can be mitigated, and the element brought into compliance without requiring what might have been unnecessary compliance expenses to be incurred in advance.

Some commenters expressed concern about a situation in which a new standard requirement could begin to apply to an element that was the subject of an exception request, thereby causing the owner to incur additional compliance costs. The team declined to address this case because the standards development process allows significant opportunity to address applicability and effective dates, and this is not unlike the situation already addressed by the Commission in Order 693 concerning the transition to ERO enforcement of mandatory reliability standards generally.

Composition and selection of panels of experts

The composition and selection of panels of experts at different points in the process was questioned by some commenters, and the RoP team has made some clarifying adjustments in its proposed procedure. The composition and selection of the regional-level Technical Review Panel (in section 5.3) was adjusted from a minimum of 5 to a minimum of 3 in order to allow for more efficient utilization of technical resources. A minimum of three persons was still considered necessary in order to allow the possibility of a minority view to be expressed without grid-locking the panel. Additionally, the RoP team gave the Regional Entity senior executive (President, General Manager, CEO, etc.) the authority to appoint the technical review panel without being constrained to particular membership criteria as long as technical expertise and independence is honored. For example, the regional executives may collectively choose, for consistency and peer collaboration, to assign the role of the Technical Review Panel to a group made up of other regional staff responsible for processing another region's individual regional exception requests. Such a group also could provide a standing pool of peer experts providing this service to each region and promote consistent recommendations to NERC. The intent is that the Technical Review Panel will render an independent opinion on any request for which the region intends to issue a Rejection or a recommendation of disapproval. Such an opinion would be part of the record for NERC to consider in its evaluation, so a staff member of the RE that is making the recommendation should not be a member of the panel reviewing their own recommendation or rejection.

Region acting as a Submitting Entity

In response to a variety of comments expressing concern and some confusion over the situation in which the region was itself submitting an exception request, the RoP provided additional detail regarding those elements of the procedure at the regional level that would continue to be applicable in order to protect the owner's due process, enable the development of a complete factual record for NERC's evaluation, and allow the expertise and distinct roles the region and NERC each have in processing exception requests to be followed.

Transparency and participation in the process

Several commenters expressed concern about the appropriate degree of transparency in the process, especially when an exception decision might become precedence for decisions made on later requests --- including requests in other regions. Some commenters even expressed an interest in allowing expanded participation by third parties (such as state regulators, trade associations, neighboring utilities, etc.) in the processing of individual exception requests.

The RoP team continues to believe that the exception process should be one based on the technical reliability issues of the specific case presented and that consistency in application of the process is most enhanced by having a single decision-making entity, NERC, whose expertise is in electric reliability. As stated before[9], the RoP Team believes that if there were no limitation on interventions, the exception process may not be effective and efficient and could be lengthy. To establish a procedure that encouraged or even only invited multi-party filings would unduly complicate the process without any concomitant benefit in reliability.

The team specifically provided that (1) detailed notice of any request would be provided to every Registered Entity with reliability oversight obligation for the Element subject to the Request and (2) general information about the request will be publicly posted. The RoP team believes that it has achieved sufficient balance between the protection of CEII and other confidential information and the need to have a process as transparent as possible to ensure consistency. The RoP Team believes that third parties (including state regulatory agencies) will have adequate opportunity to provide comments regarding the request without formally participating in the process.

In response to comments about access to the record, the RoP team clarified that the Submitting Entity or Owner will have access to the information upon which NERC's final decision is based and otherwise ensured that a full record will be created and maintained for later audit and/or appeal.

Inability to provide supporting information

A comment was received regarding the ability of a submitting entity to obtain and provide the Section III, Required Information to support its request. The procedure is designed such that the submitting entity has the burden to establish a compelling argument that an element should be considered in or out of the BES contrary to the definition because the element is or is not, as the case may be, necessary for the reliable operation of the interconnected transmission network. However, the RoP Team concurs with the response used by the SDT pertaining to the concept of a base case and what to do if there is difficulty gaining access to needed data to support an Exception Request:

> In response to the comment about an appropriate Base Case, the SDT expects the entity seeking an exception to supply an appropriate base case that the Regional Entity will acknowledge as appropriate. Not indicating the explicit types of studies or base cases to be provided and how to interpret the information in the application process does not fail to provide a basis for the Regional Entity to determine what constitutes an acceptable submittal.
>
> The SDT recommends that each submitting entity work with its Regional Entity to resolve issues with information availability or access and, in the event such information is not available, whether suitable replacement data is acceptable. The SDT further recommends that where information is unavailable, the submitting entity state such in the comment area and provide the reason for this unavailability. This will signal the Regional Entity that an issue concerning information availability will need to be resolved as part of the review process.

[9] Consideration of Comments located at: http://www.nerc.com/docs/standards/sar/Project_2010-17_BES_ROP_Consideration_of_Comments.pdf

Consistency of results

Several commenters expressed concern with the consistency of the exceptions process, largely because of the heavy involvement of regions in performing a substantive review and issuing a recommendation. However, Order 743 recognized that differences properly may exist across North America with respect to a particular type of element and its effect on reliable operations, and directed the ERO to develop an exceptions process at least in part to address such differences.

The RoP team considered that not only how an element is connected to the bulk power system but also how it's use impacts reliable operation. To a large extent, therefore, the **Detailed information to Support an Exception Request** can best be evaluated in context and developed at a regional level. Such regionally developed information then will be used along with its separate engineering judgment by a single decider (NERC) to arrive at a technically sound determination. Undoubtedly, clarity and effectiveness of the process will improve with use. The RoP Team concurs with the SDT revisions to Section III of the **Detailed information to Support an Exception Request** and notes their response to comments regarding concerns that there may be insufficient technical or other criteria to determine whether varying results are arbitrary or based on meaningful distinctions.

> The SDT understands the concerns raised by the commenters in not receiving hard and fast [technical] guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.
>
> There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel...Moreover, Appendix 5C of the proposed NERC Rules of Procedure, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request.
>
> On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and

fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication.

Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

The RoP team also notes that the draft SAR for Phase II of this Project 2010-017 calls for a review of the process after 12 months of experience. If at that time, experience has shown that additional elements have been consistently useful factors, they can be added as additional detail to the process.

The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase I of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem.

Start-up issues

The RoP team suggests that NERC and the regions develop and share with the industry, as needed, some guideline and tools to help them administrate the Exception Process during start-up. This should include regular reporting of exceptions considered and either approved or disapproved, with as much detail as appropriate for public posting. It should be understood, however, that the outcome of what may be perceived to be similar requests may be different due to the specific operating facts and circumstances involved, and BES reliability remains the final goal of the whole process.

Some commenters requested that the Exception Process be postponed until Phase II of the definition process has been concluded. The RoP team does not agree and recommends to move forward with the proposed Exception Process in coordination with the implementation of the revised definition. The only alternative would appear to be to apply the Definition without any exceptions for some period of time, which would result in unnecessary inclusions and undesirable exclusions of elements from the BES, neither of which would benefit reliability.

In response to comments suggesting procedures for the tracking of Exceptions as they are processed, the RoP team believes this to be an administrative matter for NERC and the regions to address.

Recertification of Exceptions

Some question was raised regarding the frequency with which an Exception which has been granted must be recertified, with some commenters proposing 3 or 5 years rather than the 2 years in the proposed procedure. The continued application of an exception to a facility for which an exception is no longer warranted could have negative effects on reliability, so a shorter rather than longer time between reviews seems warranted. Moreover, the certification process being proposed on this schedule is more of an information update than anything especially onerous. Only if NERC obtains information suggesting the Exception may no longer be appropriate is a more detailed substantive review conducted.

Consistency with existing procedures

Some commenters expressed a concern about consistency with the existing NERC RoP. However, in drafting the exception process, the team leveraged existing administrative rules where possible. Particularly, the appeals process is drafted to parallel the appeals process for PRC-023 in Section 1702. This process efficiency takes advantage of existing industry time and resources expended in understanding and commenting on an administrative process and increases the predictability and consistency of NERC procedures. The team also notes that the Exception Process may be amended as appropriate upon the adoption of any related changes elsewhere in the Rules of Procedure or in the Definition or the **Detailed information to Support an Exception Request**, whether under Phase II of the standards development project 2010-017 or thereafter.

Consider the whole record

Some commenters requested that the expression “No single piece of evidence should be dispositive” should be removed from the description of NERC’s consideration of the request. The RoP Team agreed and changed the wording consistent with the SDT comments to allow an entity to submit any additional information it feels relevant. Because the definition provides bright-line threshold criteria for exclusions and inclusions, the exception process will likely use a blend of quantitative and qualitative thresholds encompassed in engineering judgment to arrive at a determination. With respect to the jurisdictional boundary between distribution and transmission, the team notes that Rules of Procedure at Section 314 already addresses Conflicts with Statutes, Regulations, and Orders and that the exception process should focus on facilities necessary for the reliable operation of the interconnected bulk-power system.

Lines that cross international borders

The RoP team adopted new language in Section 1.2 that we believe address the stated concerns.

Conclusion

The RoP team believes the process as proposed will enable fair yet efficient and effective determinations with respect to requests that specific elements be excepted from application of the BES Definition. In order to accomplish this, we believe the procedure needs to be approved and put into place concurrently with the effective date of the new definition, with sufficient lead time before compliance obligations are imposed on newly included elements to allow exception requests properly and thoroughly to be considered. The two year implementation period proposed by the SDT seems to be sufficient in most cases to allow industry participants to identify possible exceptions and prepare requests and for the regions and NERC to follow the procedure proposed here to completion.

The exception procedure proposed here is not intended to be a frequently utilized method for determining the status of great numbers of elements or facilities across the country. Nor should it need to be in light of the detailed Inclusions and Exclusions that are part of the Bulk Electric System definition, which should clearly and appropriately serve to characterize the vast majority of elements and facilities. Only the tough cases will need to be reviewed through this process, and it is for those tough cases that the procedure has been designed to provide sufficient procedural detail to be consistent, repeatable and verifiable, yet also to allow the flexibility to evaluate the technical issues presented by each request in context. Opinions can and do differ regarding the best balance between the countervailing interests in a speedy, decisive process (which may risk over-simplicity) and full consideration of sometimes complex technical issues (which may risk unnecessarily expanding steps and slowing down the process), but the RoP team believes its proposal presents a framework in which those requests that can be decided straightforwardly will be decided quickly and efficiently but those more difficult requests can receive the attention they need and deserve in order to reach the best decision for reliability.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

PROJECT 2010-17 DEFINITION OF BES (PHASE 2)

Meeting Notes

Administration

1. **Introduction**
   The Chair brought the meeting to order at 8:00 a.m. on Tuesday, January 24, 2012 at the offices of Nevada Energy in Las Vegas, NV. Meeting participants were:

Members		
Jennifer Dering, NYPA	Brian Evans-Mongeon, Utility Services	Phil Fedora, NPCC
Ajay Garg, Hydro One	Pete Heidrich, FRCC, Chair	John Hughes, ELCON
Barry Lawson, NRECA, Vice Chair	Jeff Mitchell, RFC	Rich Salgo, Sierra Pacific
Jason Snodgrass, GTC	Jonathan Sykes, PG&E	Ed Dobrowolski, NERC Coordinator
Observers		
Richard Dearman, TVA	Tom Duffy, Central Hudson	Jeff Gindling, Duke
Bill Harm, PJM	Jonathan Hayes, SPP	Bill Hughes, City of Redding
Marcus Lotto, SCE	Russ Noble, Cowlitz	David O'Connor, FERC
Alain Pageau, HQ	Ken Shortt, Pacificorp	Tim Soles, Occidental
Bob Stroh, FERC	Phil Tatro, NERC	

2. **Determination of Quorum**
   Quorum was achieved for this meeting.
3. **NERC Antitrust Compliance Guidelines and Public Announcement**
   The NERC Antitrust Compliance Guidelines and conference call warning were delivered.
4. **Membership Changes and Roster Updates**
   Joel Mickey, ERCOT, will be unable to continue with the Phase 2 efforts due to a change in job responsibilities. ERCOT has stated that they are comfortable following Phase 2 through the comment process so Joel will not be replaced on the SDT.
5. **Review Meeting Agenda and Objectives**

No changes were made to the agenda. The objectives of this meeting were to start work on the guidance document and to make assignments for responding to the SAR comments.

Agenda

1. **Update on Phase 2 SAR – Pete Heidrich**

   The SAR was posted on schedule and the comment period will close on February 3, 2012. Comments will be addressed at the next meeting.

   The NERC Board of Trustees approved the SDT's Phase 1 work on January 18, 2012 and the FERC filing for Phase 1 was made on time on January 25, 2012.

2. **Update on NERC OC/PC Assistance with Phase 2 – Pete Heidrich**

   A conference call has been scheduled for February 3, 2012 between the SDT leadership and the NERC Operating and Planning Committee leadership. On this call, Pete and Barry will define the scope of activities that the SDT wants the committees to provide assistance with. Comments on the SAR aren't due until after this call so some flexibility will need to be present as to the final assignments. However, it is not anticipated that any major changes in these assignments will take place due to comments. Goals will need to be clear in order to direct the analysis.

   Four members of the SDT are also members of the NERC Planning Committee so natural liaisons exist. However, the SDT wants to embed SDT members in whatever group works on the assignments.

   It needs to be clear to all concerned that Phase 2 is not about re-defining the BES. It is about justifications for variables and thresholds which could in some cases support possible revisions to the BES definition. It also needs to be understood that the actual definition could be altered by FERC rulings on the filing.

   Responding to FERC comments and the mandatory review of the effectiveness of the exception form will be part of the SDT workload and will affect the actual work on Phase 2.

   The SDT will work exclusively with the Operating and Planning Committees (OC/PC) and will depend on those committees to reach out to any other groups such as the North American Transmission Forum for additional assistance. All official studies will be conducted by the Operating and Planning Committees.

   The SDT reviewed the items in the SAR to determine which of them should be allocated to the Operating and Planning Committees:

   - Thresholds for Real and Reactive Power – This item will be turned over to the OC/PC. It is obvious from the preliminary work done by the SDT and from received comments that this is a complex task best left to those who do this type of work on a regular basis.

- Contiguity of the BES – The SDT feels that it can handle this item.
- Associated equipment supporting the BES – The terminology is used in the definition of Transmission and is open to interpretation. The SDT will need to clear this up. The bullet in the SAR should be revised to clear up any confusion as to what the SDT is going to do. This item will be handled by the SDT.
- Automatic interrupting devices in Exclusions E1 and E3 – The industry needs to know the demarcation point. The guidance document may help with that issue. This item will be handled by the SDT for now but may need to be farmed out to the OC/PC as more information is gathered.
- Blackstart Resources and Cranking Paths – The issue is whether Blackstart Resources need to be included in the BES since they are only utilized in that role during restoration and not normal operations. The inclusion of Cranking Paths could fall out of the contiguity discussions. This item will be handled by the SDT.
- 100 kV bright-line – OC/PC support will be requested for this item but it is hard to visualize what type of studies could help with this discussion. There should be no initial bias to the 100 kV limit as it has never been justified. There is a possibility that the correct answer to this question could be different on an Interconnection basis. Another way to look at this is to question whether kV is the correct measure or whether any threshold is needed with the inclusions and exclusions in the revised definition.
- Power flow out of local networks – There could be a need for a time element in this exclusion and OC/PC assistance will be needed to analyze this.

3. **Develop Guidance Document for Phase 1**

This document is not a technical justification. It is for clarification and explanation. It is based on the filed definition so it may have to be changed once FERC issues a final ruling. It will be illustrative and non-binding and the list of diagrams will not be exhaustive.

FRCC did some work in this area earlier and Pete supplied several diagrams that can be used as a template moving forward.

The SDT guidance must be consistent with the information provided during Phase 1 so comment responses should be a primary source of information for this document.

This document will represent a consensus of the SDT.

The SDT was divided into sub-groups to work on the document text and diagrams for each inclusion and exclusion.

Inclusion I1 – Jeff Mitchell and Ken Shortt

Changes were requested to the radial configuration diagram to provide additional clarity. The BES box in figure 1 is not needed but a non-BES box on the tertiary winding

is required. It was pointed out that Exclusion E3 will need to show both > 300 kV and < 300 kV examples.

Inclusion I2 – Jennifer Dering, Bill Harm, and, Ajay Garg

There is a need to clarify the single site concept and to add a note for the switchyard. Example 4 needs to be expanded for < 75 MVA. The protocol is to review single units for inclusion first and then to go to the aggregate review. Therefore, any single unit > 20 MVA is in the BES regardless of whether it is a single unit at a single site or if it is part of a multiple unit aggregation at a site. This means that if multiple units at a site aggregate < 75 MVA but one of the aggregated units is > 20 MVA, that >20 MVA unit is in the BES while the other units at the site are not. When aggregating units, only those units with a step-up transformer connected at 100 kV or greater are counted. For purposes of applying the BES definition, the 'step-up transformer' is the first transformer a generator connects to.

Inclusion I3 – This item will not appear in the guidance document as it is straightforward and no additional information is required.

Inclusion I4 – Phil Fedora, Brian Evans-Mongeon, Russ Noble

Transmission is not included, just the resources. Reference to the interconnection agreements might help to simplify this issue.

Inclusion I5 – Jason Snodgrass and Jeff Gindling

Need to show a non-BES example as well as the BES example. An example is needed for a dynamic device. All options must be explained in text.

Exclusion E1 – Jonathan Sykes, Marcus Lotto, Barry Lawson, Alain Pageau

The point of emanation is where the radial starts. The tap does not break the continuity of the BES line or bus. In the diagram, the closed switch must be located on < 100 kV [facilities or elements] . Examples for a normally open switch are needed as well as a normally closed switch above the transformers.

Exclusion E2 – John Hughes and Tim Soles

Need to show the meter in the diagram. The first diagram should show that it qualifies for the exclusion as it is < 75 MVA. A second diagram should be added to show an example where it does not qualify since it is > 75 MVA. Need to define that the demarcation is customer-owned equipment.

Exclusion E3 – Rich Salgo, Richard Dearman, and Bill Hughes

The diagrams need to be clear without the use of colors. Diagram 1 needs to have a box showing the local network. The text should point to the arrows indicating flow into the local network. Voltage levels internal to the local network should be provided. Voltages on both sides of transformers need to be shown. Diagram 2 shows that the exclusion can't be utilized due to the size of the generation. The 30 MVA units shown in the diagram is not a BES unit since no power leaves the local network. Need to adapt diagram 1 by flipping one arrow to show flow leaving the local network and thus it doesn't qualify for the exclusion.

Exclusion E4 – Pete Heidrich, Jonathan Hayes, and Tom Duffy

This item needs to align with Exclusion E2 and should mirror the diagrams there but with a reactive device shown. The device can be on the supply side.

4. **Next Steps**

   a. Assignments and Schedule to Continue Work on Guidance Document

   Additional work is needed by the sub-teams on Inclusions I2, I4, and I5 and for Exclusions E1 and E3. All others are considered to be complete.

   Pete will take the text and diagrams and put them in the correct format. They will then be placed in a formatted document for SDT review.

   b. Assignments and Schedule to Develop Draft Responses for Phase 2 SAR

   Questions will be handled the same way they were done in Phase 1. Each question will be assigned to an SDT member. That member will review the comments and prepare draft responses. Those responses needing group discussion will be presented at the next meeting. Following the meeting, members will be given one week to finalize responses based on the meeting comments. They will then publish the responses through the e-mail list and members will have one week to comment. Every attempt will be made to reconcile those comments via e-mail. Assignments were made as follows:

   - Q1 - Brian Evans-Mongeon
   - Q2 – Jennifer Dering
   - Q3 – Jeff Mitchell

- Q4 – Jason Snodgrass
- Q5 – Jonathan Sykes
- Q6 – Phil Fedora
- Q7 – Ajay Garg
- Q8 – Rich Salgo
- Q9 – Barry Lawson
- Q10 – Pete Heidrich
- Q11 – Ed Dobrowolski

Several of the questions contain a second part on technical justification. Any comments received on the second part of the questions will be treated as information only and the SDT is not required to provide individual responses to each comment.

5. **Phase 2 Schedule**

   The SDT feels that an 18 month schedule starting at SAR approval should be reasonable. However, SAR comments might change that idea. For the discussions with the NERC Operating and Planning Committees, the 18 month concept will be utilized. Based on that timeframe, the committees will be asked to complete their work by the end of the calendar year.

6. **Future meeting**

   The next meeting will be Tuesday, February 21, 2012 at 1:00 p.m. through Thursday, February 23, 2012 at 5:00 p.m. in the PG&E offices in San Francisco, CA. Details will follow. Due to room size limitations, only 10 observers will be allowed to attend this meeting. Given the attendance at this meeting, it is anticipated that this will not be a problem.

7. **Action Item Review**

   Sub-team leaders will forward their items to Ed Dobrowolski no later than Friday, February 3, 2012.

8. **Adjourn**

   The Chair thanked Nevada Energy for their hospitality and adjourned the meeting at 12:00 p.m. on Thursday, January 26, 2012.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

PROJECT 2010-17 DEFINITION OF BES (PHASE 2)

Conference Call Notes

Project 2010-17 Definition of BES (Phase 2)

Administrative

1. **Introduction**

   Pete Heidrich called the group to order at 10:00 a.m. on Friday, February 3, 2012. Call participants were:

   From the DBESSDT – Pete Heidrich, FRCC, Chair; Barry Lawson, NRECA, Vice Chair; and Ed Dobrowolski, NERC Staff Coordinator

   From the NERC Operating Committee – Tom Bowe, PJM, Chair; and Jim Castle, NYISO, Vice Chair

   From the NERC Planning Committee – Jeff Mitchell, RFC, Chair; and Ben Crisp, Progress Energy Florida, Vice Chair

   From NERC – Mark Lauby

2. **NERC Antitrust Compliance Guidelines and Public Announcement**

   Ed Dobrowolski delivered the NERC Antitrust Compliance Guideline and open conference call warnings.

3. **Review Meeting Agenda and Objectives**

   No changes were made to the agenda.

   The objective of the call was to set up a preliminary plan for addressing the BES definition technical justification issue for Phase 2 of the BES Definition Project.

Agenda

1. **Update on Phase 2 SAR – Pete Heidrich**

   The Phase 2 SAR is posted and comments are due by close of business today. It is possible that industry comments will cause a change in what is to be done in Phase 2 but the big ticket items mentioned in item 2 below are not expected to change. A similar problem could occur once FERC rules on the proposed definition. Therefore, the groups in question will need to anticipate some degree in flexibility with their assignments.

Phase 2 is not looking to change the proposed framework of the core definition or the inclusions/exclusions. It is designed to solely address the variables embedded in the definition (core definition, inclusions and exclusions) to date. The scope and timing of Phase 1 did not allow the SDT to address those issues. When such discussions did take place during Phase 1, it was clear that all parties concerned, from FERC to the NERC Board of Trustees to the NERC Standards Committee, were going to insist on compelling technical justifications before they would entertain any thoughts of allowing changes to be made. And that technical justification must show that the over-all reliability of the BES could not be lessened by the changes. The SDT is looking to the committees for assistance in performing the needed studies to provide the technical justifications. It was noted that interconnection differences would probably be allowed as long as they are part of the established definition and not submitted as regional variances.

There is no Commission deadline for Phase 2 but the SDT wants to complete it in a timely fashion. Ideally, it should be complete before the two year implementation plan for Phase 1 comes to pass. The SDT wants to avoid any compliance confusion similar to what occurred with the multiple versions of the CIP standards.

2. **Technical Justification Issues**

Pete reviewed the four basic issues that the SDT is looking to the committees for assistance with:

- 100 kV bright-line
- Generation thresholds (Inclusions I2 and I4):
    i. Single vs. multiple units
    ii. MW values
    iii. Voltage levels
- Reactive Power sizing parameters (Inclusion I5)
- Maximum value of Power flow out of local networks (Exclusion E3)

3. **Determine the Appropriate Method of Answering the Issue**

The group agreed that it is too early in the process to determine how to answer the questions. The SDT leadership needs to create a problem statement outlining what the SDT needs for each issue. Then the Operating and Planning Committees can organize their sub-groups appropriately and determine the best method for moving forward.

4. **Determine the Parameters/Assumptions Required**

The aforementioned problem statement should provide this information.

5. **Determine the Appropriate Committee to Perform Analysis**

   Once the problem statement is complete, the Operating and Planning Committees can meet to decide which committee will lead the work effort for each issue. It is hoped that this can be accomplished during the joint committee meetings in March 2012.

   SDT members are ready to volunteer to join the various sub-groups working on this effort.

   Mark Lauby will draft an outline for the study work once he has received the problem statement.

6. **Next Steps**

   Pete and Barry will draft a problem statement and distribute it to the group by February 17, 2012. Mark will then draft an outline for the study work and distribute it to the Operating Committee/Planning Committee for discussion at their next joint meeting in March 2012. Following that meeting, the leadership of the affected groups will determine the next course of action.

7. **Future meeting**

   No future meetings were scheduled at this time. Once the Operating Committee/Planning Committee joint meeting has been held, the leadership can decide if, and when, to hold a meeting or conference call. In general, meetings or calls will be held on an as needed basis as decided by the leadership. Everyone was encouraged to include all of the participants in this call on any e-mail threads on the topic. It is important that we all stay on the same page moving forward and that there is only one story being put forth on the topic.

8. **Action Item Review**

   The following action items were developed during the call:

   - Pete and Barry will provided a problem statement detailing the information that the Operating Committee and Planning Committee will need to decide on how to proceed with the assignments. This is due by February 17, 2012.

   - Mark will develop an outline for the study work required to complete the assignment. This will be distributed to the Operating and Planning Committees for discussion at their joint meeting in March 2012.

9. **Adjourn**

   Pete Heidrich adjourned the meeting at 11:15 a.m.

From:	Philip A. Fedora
To:	rcc; jtfc; Philip Raymond
Subject:	Fw: Joint Leadership Conference Call - DBES SDT, OC & PC Meeting Minutes
Date:	Wednesday, February 08, 2012 4:41:43 PM
Attachments:	bes_phase2_oc_pc_meeting_notes_20120203.pdf

FYI - Don - please distribute to the NYSRC-EC FYI.

Thanks,

Phil

Sent from my Verizon Wireless BlackBerry

-----Original Message-----
From: "pheidrich@frcc.com" <pheidrich@frcc.com>
Date: Wed, 8 Feb 2012 15:36:58
To: dbessdt_plus<dbessdt_plus@listserv.nerc.com>
Reply-To: "pheidrich@frcc.com" <pheidrich@frcc.com>
Subject: Joint Leadership Conference Call - DBES SDT, OC & PC Meeting Minutes

Ladies and Gentlemen,

Attached you will find the meeting minutes from the February 3rd Joint Leadership (DBES SDT, NERC OC & PC) conference call. It is important to note that the meeting was very productive in establishing the expectations of everyone involved. We have developed to framework of a collaborative effort to address these issues with technical justification. I will be covering the call in more detail at the next SDT meeting.

Thank you,

Peter A. Heidrich
Manager of Reliability Standards
Florida Reliability Coordinating Council
1408 N. Westshore Blvd., Suite 1002
Tampa, FL 33607-4512
813-207-7994 - office
813-787-7620 - cell

You are curr

From: Wendy Kinnard
To: Wendy Kinnard
Subject: NERC Announcement: Standards Bulletin - December 5-11, 2011
Date: Monday, December 05, 2011 11:49:55 AM

Standards Bulletin
December 5-11, 2011

This weekly bulletin compiles a list of current and upcoming standards, interpretations, and CANs posted for comment, industry review, or ballot, along with a list of upcoming standards-related postings and events. The bulletin is being piloted for the next few weeks, so any feedback on its effectiveness, content, and format is welcome. Please email Monica Benson with questions about standards commenting and balloting, Caroline Clouse with questions about CANs, and Mallory Huggins with feedback on this bulletin.

Now available on the Standards Under Development page.

STANDARDS ITEMS

Current Ballots for Proposed Standards or Interpretations (ballot periods close at 8 p.m. Eastern)

- Project 2007-12: Frequency Response (BAL-003-1) – Open November 30 - December 8, 2011 (Initial Ballot and Non-Binding Poll)

- Project 2009-01: Disturbance and Sabotage Reporting (EOP-004-2) – Open December 2-12, 2011 (Initial Ballot and Non-Binding Poll)

Proposed Standards and Interpretations Posted for Comment (comment periods close at 8 p.m. Eastern)

- Regional Reliability Standard VAR-001-2 WECC Variance – Posted October 20 -

December 5, 2011 (Comment Form)

- Project 2007-12: Frequency Response (BAL-003-1) – Posted October 25 - December 8, 2011 (Comment Form)

- Project 2009-01: Disturbance and Sabotage Reporting (EOP-004-2) – Posted October 28 - December 12, 2011 (Comment Form)

- Regional Reliability Standard PRC-006-NPCC-01 UFLS – Posted November 22 - December 22, 2011 (Comment Form)

- Project 2008-06: Cyber Security Order 706 (Version 5 CIP Standards) – Posted November 7, 2011 - January 6, 2012 (Comment Form)

Join Ballot Pools (ballot pool windows close at 8 a.m. Eastern)

- Project 2008-06: Cyber Security Order 706 (Version 5 CIP Standards) – Open November 7, 2011 - December 15, 2011 (Join Ballot Pool)

Pending Ballots for Proposed Standards or Interpretations (ballot periods close at 8 p.m. Eastern)

- Project 2008-06: Cyber Security Order 706 (Version 5 CIP Standards) – Open December 16, 2011 - January 6, 2012 (Initial Ballots)

Standard Drafting Team Vacancies

- Any industry stakeholder meeting the indicated qualifications for one of the following vacant appointments may submit a self-nomination form to sarcomm@nerc.com. Further instructions can be found on the Drafting Team Vacancies page on NERC's website.

    - Project 2007-06 System Protection Coordination: Seeking an individual from a Canadian entity with experience in coordination of protection systems (new installations and revisions).

    - Project 2007-12 Frequency Response: Seeking an individual representing Transmission Dependent Utilities with experience in analyzing or modeling

frequency response.

OTHER ITEMS

Compliance Application Notices (CANs) Posted for Industry Review

- Comments due by December 14, 2011 to cancomments@nerc.net using the CAN Comment Form:
  - CAN-0027 TOP-003 R2 Coordination of Scheduled Outages (Clean Draft)

Proposed Changes to the NERC Rules of Procedure and Associated Appendices Posted for Comment

- Comments on changes to Sections 100-1600 and associated Appendices 4B, 4C, 5A, and 8 and deletion of Appendices 3C and 6 are posted on NERC's Rules of Procedure webpage – Due by December 22, 2011 to ROPcomments@nerc.net

UPCOMING EVENTS

Compliance Workshop

2011 Compliance Workshop, Atlanta, GA – December 6, 2011, all day (Register)

Standards Committee Meetings

Standards Committee Meeting, Atlanta, GA – December 7, 2011, 8 a.m.-noon (Register)

Standards Committee and Compliance and Certification Committee Combined Meeting, Atlanta, GA – December 7, 2011, noon-5 p.m. (Register)

For more information or assistance, please contact Monica Benson at monica.benson@nerc.net.

3353 Peachtree Road NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

You are currently subscribed to nerc-info as: lpedowicz@npcc.org
To unsubscribe send a blank email to leave-1277647-325654.1ca6f85fb1574a8515cc07df72d3bfe0@listserv.nerc.com

From: Monica Benson
To: monica.benson@nerc.net
Subject: NERC: Standards Bulletin - December 12-18, 2011
Date: Monday, December 12, 2011 10:20:32 AM

Standards Bulletin
December 12-18, 2011

This weekly bulletin compiles a list of current and upcoming standards, interpretations, and CANs posted for comment, industry review, or ballot, along with a list of upcoming standards-related postings and events. The bulletin is being piloted for the next few weeks, so any feedback on its effectiveness, content, and format is welcome. Please email Monica Benson with questions about standards commenting and balloting, Caroline Clouse with questions about CANs, and Mallory Huggins with feedback on this bulletin.

Now available on the Standards Under Development page.

STANDARDS ITEMS

Current Ballots for Proposed Standards or Interpretations (ballot periods close at 8 p.m. Eastern)

- Project 2009-01: Disturbance and Sabotage Reporting (EOP-004-2) – Open December 2-12, 2011 (Initial Ballot and Non-Binding Poll)
- Project 2008-10: Interpretation of CIP-006-1 R1.1 for Progress Energy – Open December 9-19, 2011 (Recirculation Ballot)
- Project 2008-06: Cyber Security Order 706 (Version 5 CIP Standards) – Open December 16, 2011 - January 6, 2012 (Initial Ballots)

Proposed Standards and Interpretations Posted for Comment (comment periods close at 8 p.m. Eastern)

- Project 2009-01: Disturbance and Sabotage Reporting (EOP-004-2) – Posted October 28

- December 12, 2011 (Comment Form)

- Regional Reliability Standard PRC-006-NPCC-01 UFLS – Posted November 22 - December 22, 2011 (Comment Form)

- Project 2008-06: Cyber Security Order 706 (Version 5 CIP Standards) – Posted November 7, 2011 - January 6, 2012 (Comment Form)

Join Ballot Pools (ballot pool windows close at 8 a.m. Eastern)

- Project 2008-06: Cyber Security Order 706 (Version 5 CIP Standards) – Open November 7, 2011 - December 15, 2011 (Join Ballot Pool)

Standard Drafting Team Vacancies

- Any industry stakeholder meeting the indicated qualifications for one of the following vacant appointments may submit a self-nomination form to sarcomm@nerc.com. Further instructions can be found on the Drafting Team Vacancies page on NERC's website.

    - Project 2007-06 System Protection Coordination: Seeking an individual from a Canadian entity with experience in coordination of protection systems (new installations and revisions).

    - Project 2007-12 Frequency Response: Seeking an individual representing Transmission Dependent Utilities with experience in analyzing or modeling frequency response.

    - Project 2010-07 Generator Requirements at the Transmission Interface: Seeking an individual who is a NERC-certified System Operator (preferably for a Transmission Operator or Reliability Coordinator function), or an individual with equivalent experience. The candidate should also be familiar with the history of the GOTO Ad Hoc Group, recent registration activity, and the work of the Project 2010-07 SDT.

OTHER ITEMS

Compliance Application Notices (CANs) Posted for Industry Review

- Comments due by December 14, 2011 to cancomments@nerc.net using the CAN Comment Form:

    - CAN-0027 TOP-003 R2 Coordination of Scheduled Outages (Clean Draft)

Proposed Changes to the NERC Rules of Procedure and Associated Appendices Posted for Comment

- Comments on changes to Sections 100-1600 and associated Appendices 4B, 4C, 5A, and 8 and deletion of Appendices 3C and 6 are posted on NERC's Rules of Procedure webpage – Due by December 22, 2011 to ROPcomments@nerc.net

UPCOMING EVENTS

Webinars

Project 2008-06: Cyber Security Order 706 – December 13, 2011, 1-2 p.m. Eastern (Register)

Project 2009-22: Interpretation of COM-002-2 (Communications and Coordination for the ISO/RTO Council) – December 13, 2011, 1-4:30 p.m. Eastern (Register), December 14, 2011, 10 a.m.-3:30 p.m. Eastern (Register)

For more information or assistance, please contact Monica Benson at monica.benson@nerc.net.

3353 Peachtree Road NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

You are currently subscribed to standards as: lpedowicz@npcc.org
To unsubscribe send a blank email to leave-1278140-171282.3516124aa26cd8bdadcf80768b524b3d@listserv.nerc.com

From: Monica Benson
To: monica.benson@nerc.net
Subject: NERC: Standards Bulletin - December 19-26, 2011
Date: Monday, December 19, 2011 10:46:17 AM

Standards Bulletin
December 19-26, 2011

This weekly bulletin compiles a list of current and upcoming standards, interpretations, and CANs posted for comment, industry review, or ballot, along with a list of upcoming standards-related postings and events. The bulletin is being piloted for the next few weeks, so any feedback on its effectiveness, content, and format is welcome. Please email Monica Benson with questions about standards commenting and balloting, Caroline Clouse with questions about CANs, and Mallory Huggins with feedback on this bulletin.

The bulletin is also available on the Standards Under Development page. Note that next week's bulletin will be released on Tuesday morning rather than Monday morning. Happy holidays from all of us at NERC!

STANDARDS ITEMS

Current Ballots for Proposed Standards or Interpretations (ballot periods close at 8 p.m. Eastern)

- Project 2008-10: Interpretation of CIP-006-1 R1.1 for Progress Energy – Open December 9-19, 2011 (Recirculation Ballot)
- Interpretation 2011-INT-01: Revision of MOD-028 to address FPL Request for Interpretation – Open December 12-22, 2011 (Recirculation Ballot)
- Project 2009-22: Interpretation of COM-002-2 R2 by the IRC – Open December 14-23, 2011 (Recirculation Ballot)
- Project 2010-07: Generator Requirements at the Transmission Interface (FAC-001-1, FAC-003-X, FAC-003-X, and PRC-004-2.1) – Open December 14-23, 2011 (Recirculation Ballot)
- Project 2008-06: Cyber Security Order 706 (Version 5 CIP Standards) – Open December

16, 2011 - January 6, 2012 (Initial Ballots)

Proposed Standards and Interpretations Posted for Comment (comment periods close at 8 p.m. Eastern)

- Regional Reliability Standard PRC-006-NPCC-01 UFLS – Posted November 22 - December 22, 2011 (Comment Form)

- Project 2008-06: Cyber Security Order 706 (Version 5 CIP Standards) – Posted November 7, 2011 - January 6, 2012 (Comment Form)

- Project 2007-03: Real-time Transmission Operations (TOP-001-2, TOP-002-3, and TOP-003-2) – Open December 14, 2011 - January 12, 2012 (Comment Form)

Pending Ballots for Proposed Standards or Interpretations (ballot periods close at 8 p.m. Eastern)

- Project 2007-03: Real-time Transmission Operations (TOP-001-2, TOP-002-3, and TOP-003-2) – Open January 3-12, 2012 (Successive Ballots and Non-Binding Polls)

Standard Drafting Team Vacancies

- Any industry stakeholder meeting the indicated qualifications for one of the following vacant appointments may submit a self-nomination form to sarcomm@nerc.com. Further instructions can be found on the Drafting Team Vacancies page on NERC's website.

    - Project 2007-06 System Protection Coordination: Seeking an individual from a Canadian entity with experience in coordination of protection systems (new installations and revisions).

    - Project 2007-12 Frequency Response: Seeking an individual representing Transmission Dependent Utilities with experience in analyzing or modeling frequency response.

    - Project 2010-07 Generator Requirements at the Transmission Interface: Seeking an individual who is a NERC-certified System Operator (preferably for a

Transmission Operator or Reliability Coordinator function), or an individual with equivalent experience. The candidate should also be familiar with the history of the GOTO Ad Hoc Group, recent registration activity, and the work of the Project 2010-07 SDT.

OTHER ITEMS

Compliance Application Notices (CANs) Posted for Industry Review

- None at this time.

Proposed Changes to the NERC Rules of Procedure and Associated Appendices Posted for Comment

- Comments on changes to Sections 100-1600 and associated Appendices 4B, 4C, 5A, and 8 and deletion of Appendices 3C and 6 are posted on NERC's Rules of Procedure webpage – Due by December 22, 2011 to ROPcomments@nerc.net

UPCOMING EVENTS

There are no major standards events scheduled for this week. Happy holidays!

For more information or assistance, please contact Monica Benson at monica.benson@nerc.net.

3353 Peachtree Road NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

You have received this email because you are a registered representative in the Registered Ballot Body.

From: Eleanor Crouch
To: Eleanor Crouch
Subject: NERC: Standards Bulletin - December 27-January 2, 2012
Date: Tuesday, December 27, 2011 11:54:29 AM

Standards Bulletin: December 27, 2011-January 2, 2012

This weekly bulletin compiles a list of current and upcoming standards, interpretations, and CANs posted for comment, industry review, or ballot, along with a list of upcoming standards-related postings and events. The bulletin is being piloted for the next few weeks, so any feedback on its effectiveness, content, and format is welcome. Please email Monica Benson with questions about standards commenting and balloting, Caroline Clouse with questions about CANs, and Mallory Huggins with feedback on this bulletin.

The bulletin is also available on the Standards Under Development page. Note that next week's bulletin will be released on Tuesday morning rather than Monday morning.
Happy New Year from all of us at NERC!

STANDARDS ITEMS

Current Ballots for Proposed Standards or Interpretations (ballot periods close at 8:00 p.m. Eastern)

- Project 2008-06: Cyber Security Order 706 (Version 5 CIP Standards) – Open December 16, 2011 - January 6, 2012 (Initial Ballots)

Proposed Standards and Interpretations Posted for Comment (comment periods close at 8:00 p.m. Eastern)

- Project 2008-06: Cyber Security Order 706 (Version 5 CIP Standards) – Posted November 7, 2011 - January 6, 2012 (Comment Form)

- Project 2007-03: Real-time Transmission Operations (TOP-001-2, TOP-002-3, and TOP-003-2)

  Open December 14, 2011 - January 12, 2012 (Comment Form)

- Order 754: Request for Data or Information (study of single point of failure on protection systems) – Open December 22, 2011 - February 6, 2012 (Comment Form)

Pending Ballots for Proposed Standards or Interpretations (ballot periods close at 8:00 p.m. Eastern)

- Project 2007-03: Real-time Transmission Operations (TOP-001-2, TOP-002-3, and TOP-003-2)

  Open January 3-12, 2012 (Successive Ballots and Non-Binding Polls)

Standard Drafting Team Vacancies

- Any industry stakeholder meeting the indicated qualifications for one of the following vacant

  appointments may submit a self-nomination form to sarcomm@nerc.com.

  Further instructions can be found on the Drafting Team Vacancies page on NERC's website.

  - Project 2007-06 System Protection Coordination: Seeking an individual from a Canadian entity with experience in coordination of protection systems (new installations and revisions).
  - Project 2007-12 Frequency Response: Seeking an individual representing Transmission Dependent Utilities with experience in analyzing or modeling frequency response.
  - Project 2010-07 Generator Requirements at the Transmission Interface: Seeking an individual who is a NERC-certified System Operator (preferably for a Transmission Operator or Reliability Coordinator function), or an individual with equivalent

experience. The candidate should also be familiar with the history of the GOTO Ad Hoc Group, recent registration activity, and the work of the Project 2010-07 SDT.

For more information or assistance, please contact Monica Benson at monica.benson@nerc.net.

3353 Peachtree Road NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

You have received this email because you are a registered representative in the Registered Ballot Body.

From: Monica Benson
To: monica.benson@nerc.net
Subject: NERC: Standards Bulletin - January 3-8, 2012
Date: Tuesday, January 03, 2012 10:50:31 AM

Standards Bulletin
January 3-8, 2012

This weekly bulletin compiles a list of current and upcoming standards, interpretations, and CANs posted for comment, industry review, or ballot, along with a list of upcoming standards-related postings and events. The bulletin is being piloted for the next few weeks, so any feedback on its effectiveness, content, and format is welcome. Please email Monica Benson with questions about standards commenting and balloting, Caroline Clouse with questions about CANs, and Mallory Huggins with feedback on this bulletin.

The bulletin is also available on the Standards Under Development page.

STANDARDS ITEMS

Current Ballots for Proposed Standards or Interpretations (ballot periods close at 8 p.m. Eastern)

- Project 2008-06: Cyber Security Order 706 (Version 5 CIP Standards) – Open December 16, 2011 - January 6, 2012 (Initial Ballots)

- Project 2007-03: Real-time Transmission Operations (TOP-001-2, TOP-002-3, and TOP-003-2) – Open January 3-12, 2012 (Successive Ballots and Non-Binding Polls)

Proposed Standards and Interpretations Posted for Comment (comment periods close at 8 p.m. Eastern)

- Project 2008-06: Cyber Security Order 706 (Version 5 CIP Standards) – Posted November 7, 2011 - January 6, 2012 (Comment Form)

- Project 2007-03: Real-time Transmission Operations (TOP-001-2, TOP-002-3, and TOP-003-2) – Open December 14, 2011 - January 12, 2012 (Comment Form)

- Order 754: Request for Data or Information in accordance with NERC Rule of Procedure 1600 – Open December 22, 2011 - February 6, 2012 (Comment Form)

Pending Ballots for Proposed Standards or Interpretations (ballot periods close at 8 p.m. Eastern)

- Project 2010-07: Generator Requirements at the Transmission Interface (FAC-001-1 VSLs and VRFs) – Open January 4-13, 2012 (Non-binding Polls)

Standard Drafting Team Vacancies

- Any industry stakeholder meeting the indicated qualifications for one of the following vacant appointments may submit a self-nomination form to sarcomm@nerc.com. Further instructions can be found on the Drafting Team Vacancies page on NERC's website.
    - Project 2007-06 System Protection Coordination: Seeking an individual from a Canadian entity with experience in coordination of protection systems (new installations and revisions).
    - Project 2007-12 Frequency Response: Seeking an individual representing Transmission Dependent Utilities with experience in analyzing or modeling frequency response.
    - Project 2010-07 Generator Requirements at the Transmission Interface: Seeking an individual who is a NERC-certified System Operator (preferably for a Transmission Operator or Reliability Coordinator function), or an individual with equivalent experience. The candidate should also be familiar with the history of the GOTO Ad Hoc Group, recent registration activity, and the work of the Project 2010-07 SDT.

Webinars

Order 754: Request for Data or Information in accordance with NERC Rule of Procedure 1600 – January 5, 2012, 11 a.m.-1 p.m. Eastern (Register)

For more information or assistance, please contact Monica Benson at monica.benson@nerc.net.

3353 Peachtree Road NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

You are currently subscribed to nerc-info as: lpedowicz@npcc.org
To unsubscribe send a blank email to leave-1279187-
325654.1ca6f85fb1574a8515cc07df72d3bfe0@listserv.nerc.com

From: Monica Benson
To: monica.benson@nerc.net
Subject: NERC: Standards Bulletin - January 9-15, 2012
Date: Monday, January 09, 2012 10:11:04 AM

Standards Bulletin
January 9-15, 2012

This weekly bulletin compiles a list of current and upcoming standards, interpretations, and CANs posted for comment, industry review, or ballot, along with a list of upcoming standards-related postings and events. Feedback on the bulletin's effectiveness, content, and format is welcome. Please email Monica Benson with questions about standards commenting and balloting, Caroline Clouse with questions about CANs, and Mallory Huggins with feedback on this bulletin.

The bulletin is also available on the Standards Under Development page.

STANDARDS ITEMS

Current Ballots for Proposed Standards or Interpretations (ballot periods close at 8 p.m. Eastern)

- Project 2007-03: Real-time Transmission Operations (TOP-001-2, TOP-002-3, and TOP-003-2) – Open January 3-12, 2012 (Successive Ballots and Non-Binding Polls)

- Project 2010-07: Generator Requirements at the Transmission Interface (FAC-001-1 VSLs and VRFs) – Open January 4-13, 2012 (Non-binding Polls)

Proposed Standards and Interpretations Posted for Comment (comment periods close at 8 p.m. Eastern)

- Project 2007-03: Real-time Transmission Operations (TOP-001-2, TOP-002-3, and TOP-003-2) – Open December 14, 2011 - January 12, 2012 (Comment Form)

- Order 754: Request for Data or Information in accordance with NERC Rule of Procedure 1600 – Open December 22, 2011 - February 6, 2012 (Comment Form)

- Project 2010-17: Definition of Bulk Electric System (Phase 2) – Open January 4, 2012 - February 3, 2012 (Comment Form)

- Project 2006-06: Reliability Coordination (COM-001-2, COM-002-3, and IRO-001-3)

  Formal Comment Period Open January 9 – Feb 8, 2012.

Standard Drafting Team Vacancies

- Any industry stakeholder meeting the indicated qualifications for one of the following vacant appointments may submit a self-nomination form to sarcomm@nerc.com. Further instructions can be found on the Drafting Team Vacancies page on NERC's website.

  - Project 2007-06 System Protection Coordination: Seeking an individual from a Canadian entity with experience in coordination of protection systems (new installations and revisions).

  - Project 2007-12 Frequency Response: Seeking an individual representing Transmission Dependent Utilities with experience in analyzing or modeling frequency response.

  - Project 2010-07 Generator Requirements at the Transmission Interface: Seeking an individual who is a NERC-certified System Operator (preferably for a Transmission Operator or Reliability Coordinator function), or an individual with equivalent experience. The candidate should also be familiar with the history of the GOTO Ad Hoc Group, recent registration activity, and the work of the Project 2010-07 SDT.

UPCOMING EVENTS

Standards Committee Process Subcommittee Meeting, San Diego, CA – January 10, 2012, 8:00 a.m.-5:00 p.m. Pacific (Agenda)

Standards Committee Communications and Planning Subcommittee Meeting, San Diego, CA – January 10, 2012, 1:00-5:00 p.m. Pacific (Agenda)

Standards Committee Meeting, San Diego, CA – January 11, 2012, 8:00 a.m.-5:00 p.m. Pacific and January 12, 2012, 8 a.m.-3 p.m. Pacific (Agenda)

Regional Standards Group Meeting, San Diego, CA – January 12, 2012, 3:00-6:00 p.m. Pacific (Agenda)

For more information or assistance, please contact Monica Benson at monica.benson@nerc.net.

3353 Peachtree Road NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

You have received this email because you are a registered representative in the Registered Ballot Body.

From: Monica Benson
To: monica.benson@nerc.net
Subject: NERC: Standards Bulletin - January 17-22, 2012
Date: Tuesday, January 17, 2012 8:53:48 AM

Standards Bulletin
January 17-22, 2012

This weekly bulletin compiles a list of current and upcoming standards, interpretations, and CANs posted for comment, industry review, or ballot, along with a list of upcoming standards-related postings and events. Feedback on the bulletin's effectiveness, content, and format is welcome. Please email Monica Benson with questions about standards commenting and balloting, Caroline Clouse with questions about CANs, and Mallory Huggins with feedback on this bulletin.

The bulletin is also available on the Standards Under Development page.

If you would like to be added to the distribution list for a particular standards project to stay informed about drafting team meetings and calls, please email Mallory Huggins.

STANDARDS ITEMS

Current Standards Ballots (ballot periods close at 8 p.m. Eastern)

- Project 2007-03: Real-time Transmission Operations (TOP-001-2, TOP-002-3, and TOP-003-2) – Open January 9-18, 2012 (Non-Binding Polls)

Proposed Standards Items Posted for Comment (comment periods close at 8 p.m. Eastern)

- Order 754: Request for Data or Information in accordance with NERC Rule of Procedure 1600 – Open December 22, 2011 - February 6, 2012 (Comment Form)

- Project 2010-17: Definition of Bulk Electric System (Phase 2) – Open January 4, 2012 - February 3, 2012 (Comment Form)

- Project 2006-06: Reliability Coordination (COM-001-2, COM-002-3, and IRO-001-3) – Open

January 9, 2012 - February 8, 2012 (Comment Form)

Pending Standards Ballots (ballot periods close at 8 p.m. Eastern)

- Project 2006-06: Reliability Coordination (COM-001-2, COM-002-3, and IRO-001-3) – Open January 30, 2012 - February 8, 2012 (Successive Ballots and Non-Binding Polls)

Standard Drafting Team Vacancies

- Any industry stakeholder meeting the indicated qualifications for one of the following vacant appointments may submit a self-nomination form to sarcomm@nerc.com. Further instructions can be found on the Drafting Team Vacancies page on NERC's website.

  - Project 2007-06 System Protection Coordination: Seeking an individual from a Canadian entity with experience in coordination of protection systems (new installations and revisions).

  - Project 2007-12 Frequency Response: Seeking an individual representing Transmission Dependent Utilities with experience in analyzing or modeling frequency response.

  - Project 2010-07 Generator Requirements at the Transmission Interface: Seeking an individual who is a NERC-certified System Operator (preferably for a Transmission Operator or Reliability Coordinator function), or an individual with equivalent experience. The candidate should also be familiar with the history of the GOTO Ad Hoc Group, recent registration activity, and the work of the Project 2010-07 SDT.

UPCOMING EVENTS

Standards Webinars

Order 754: Request for Data or Information in accordance with NERC Rule of Procedure 1600 – January 5, 2012, 11:00 a.m.-1:00 p.m. Eastern (Register)

For more information or assistance, please contact Monica Benson at monica.benson@nerc.net.

3353 Peachtree Road NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

You have received this email because you are a registered representative in the Registered Ballot Body.

From: Monica Benson
To: monica.benson@nerc.net
Subject: NERC: Standards Bulletin - January 23-29, 2012
Date: Monday, January 23, 2012 9:35:19 AM

Standards Bulletin
January 23-29, 2012

This weekly bulletin compiles a list of current and upcoming standards, interpretations, and CANs posted for comment, industry review, or ballot, along with a list of upcoming standards-related postings and events. Feedback on the bulletin's effectiveness, content, and format is welcome. Please email Monica Benson with questions about standards commenting and balloting, Caroline Clouse with questions about CANs, and Mallory Huggins with feedback on this bulletin.

The bulletin is also available on the Standards Under Development page.

If you would like to be added to the distribution list for a particular standards project to stay informed about drafting team meetings and calls, please email Mallory Huggins.

STANDARDS ITEMS

Proposed Standards Items Posted for Comment (comment periods close at 8 p.m. Eastern)

- Order 754: Request for Data or Information in accordance with NERC Rule of Procedure 1600 – Open December 22, 2011 - February 6, 2012 (Comment Form)

- Project 2010-17: Definition of Bulk Electric System (Phase 2) – Open January 4, 2012 - February 3, 2012 (Comment Form)

- Project 2006-06: Reliability Coordination (COM-001-2, COM-002-3, and IRO-001-3) – Open January 9, 2012 - February 8, 2012 (Comment Form)

- Regional Reliability Standard – BAL-001-0.1a WECC Variance, Real Power Balancing Control Performance, Open January 23, 2012 – March 9, 2012, Regional Reliability Standards webpage (documents to be posted this morning).

- Regional Reliability Standard – BAL-004-WECC-02 Automatic Time Error Correction,

Open January 23, 2012 – March 9, 2012, Regional Reliability Standards webpage (documents to be posted this morning).

Pending Standards Ballots (ballot periods close at 8 p.m. Eastern)

- Project 2006-06: Reliability Coordination (COM-001-2, COM-002-3, and IRO-001-3) – Open January 30, 2012 - February 8, 2012 (Successive Ballots and Non-Binding Polls)

Standard Drafting Team Vacancies

- Any industry stakeholder meeting the indicated qualifications for one of the following vacant appointments may submit a self-nomination form to sarcomm@nerc.com. Further instructions can be found on the Drafting Team Vacancies page on NERC's website.
  - Project 2007-06 System Protection Coordination: Seeking an individual from a Canadian entity with experience in coordination of protection systems (new installations and revisions).
  - Project 2007-12 Frequency Response: Seeking an individual representing Transmission Dependent Utilities with experience in analyzing or modeling frequency response.

For more information or assistance, please contact Monica Benson at monica.benson@nerc.net.

3353 Peachtree Road NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

You have received this email because you are a registered representative in the Registered Ballot Body.

From: Monica Benson
To: monica.benson@nerc.net
Subject: NERC: Standards Bulletin - January 30 - February 5, 2012
Date: Monday, January 30, 2012 8:57:33 AM

Standards Bulletin
January 30 – February 5, 2012

This weekly bulletin compiles a list of current and upcoming standards, interpretations and CANs posted for comment, industry review or ballot, along with a list of upcoming standards-related postings and events. Feedback on the bulletin's effectiveness, content, and format is welcome. Please email Monica Benson with questions about standards commenting and balloting, Caroline Clouse with questions about CANs, and Mallory Huggins with feedback on this bulletin.

The bulletin is also available on the Standards Under Development page.

If you would like to be added to the distribution list for a particular standards project to stay informed about drafting team meetings and calls, please email Mallory Huggins.

STANDARDS ITEMS

Current Standards Ballots (ballot periods close at 8 p.m. Eastern)

- Project 2006-06: Reliability Coordination (COM-001-2, COM-002-3, and IRO-001-3) – Open January 30, 2012 - February 8, 2012 (Successive Ballots and Non-Binding Polls)

Proposed Standards Items Posted for Comment (comment periods close at 8 p.m. Eastern)

- Order 754: Request for Data or Information in accordance with NERC Rule of Procedure 1600 – Open December 22, 2011 - February 6, 2012 (Comment Form)

- Project 2010-17: Definition of Bulk Electric System (Phase 2) – Open January 4, 2012 - February 3, 2012 (Comment Form)

- Project 2006-06: Reliability Coordination (COM-001-2, COM-002-3, and IRO-001-3) – Open January 9, 2012 - February 8, 2012 (Comment Form)

- Regional Reliability Standard BAL-001-0.1a WECC Variance (Real Power Balancing Control Performance) – Open January 23, 2012 - March 9, 2012 (Comment Form)

- Regional Reliability Standard BAL-004-WECC-02 (Automatic Time Error Correction) – Open January 23, 2012 - March 9, 2012 (Comment Form)

Standard Drafting Team Vacancies

- Any industry stakeholder meeting the indicated qualifications for one of the following vacant appointments may submit a self-nomination form to sarcomm@nerc.com. Further instructions can be found on the Drafting Team Vacancies page on NERC's website.

  - Project 2007-06 System Protection Coordination: Seeking an individual from a Canadian entity with experience in coordination of protection systems (new installations and revisions).

  - Project 2007-12 Frequency Response: Seeking an individual representing Transmission Dependent Utilities with experience in analyzing or modeling frequency response.

For more information or assistance, please contact Monica Benson at monica.benson@nerc.net.

3353 Peachtree Road NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

You are currently subscribed to nerc-info as: lpedowicz@npcc.org
To unsubscribe send a blank email to leave-1281687-325654.1ca6f85fb1574a8515cc07df72d3bfe0@listserv.nerc.com

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standards Bulletin: February 6-12, 2012

This weekly bulletin compiles a list of current and upcoming standards, interpretations and CANs posted for comment, industry review or ballot, along with a list of upcoming standards-related postings and events. Feedback on the bulletin's effectiveness, content, and format is welcome. Please email Monica Benson with questions about standards commenting and balloting, Caroline Clouse with questions about CANs, and Mallory Huggins with feedback on this bulletin.

The bulletin is available on the Standards Under Development page.

If you would like to be added to the distribution list for a particular standards project to stay informed about drafting team meetings and calls, please email Mallory Huggins.

STANDARDS ITEMS

Current Standards Ballots (ballot periods close at 8 p.m. Eastern)

- Project 2006-06: Reliability Coordination (COM-001-2, COM-002-3, and IRO-001-3) – Open January 30, 2012 - February 8, 2012 (Successive Ballots and Non-Binding Polls)

Proposed Standards Items Posted for Comment (comment periods close at 8 p.m. Eastern)

- Order 754: Request for Data or Information in accordance with NERC Rule of Procedure 1600 – Open December 22, 2011 - February 6, 2012 (Comment Form)
- Project 2006-06: Reliability Coordination (COM-001-2, COM-002-3, and IRO-001-3) – Open January 9, 2012 - February 8, 2012 (Comment Form)
- Regional Reliability Standard BAL-001-0.1a WECC Variance (Real Power Balancing Control Performance) – Open January 23, 2012 - March 9, 2012 (Comment Form)
- Regional Reliability Standard BAL-004-WECC-02 (Automatic Time Error Correction) – Open January 23, 2012 - March 9, 2012 (Comment Form)

Standard Drafting Team Vacancies

- Any industry stakeholder meeting the indicated qualifications for one of the following vacant appointments may submit a self-nomination form to sarcomm@nerc.com. Further instructions can be found on the Drafting Team Vacancies page on NERC's website.
  - Project 2007-06 System Protection Coordination: Seeking an individual from a Canadian entity with experience in coordination of protection systems (new installations and revisions).
  - Project 2007-12 Frequency Response: Seeking an individual representing Transmission Dependent Utilities with experience in analyzing or modeling frequency response.

Glossary of Terms Update

On February 3, 2012, FERC issued an order approving a modified definition of Protection System. The Glossary of Terms will be updated this week to reflect this change.

UPCOMING EVENTS

Member Representatives Committee Meeting, Phoenix, AZ – February 8, 2012, 1:00-5:00 p.m. Mountain (Agenda)

Board of Trustees Meeting, Phoenix, AZ – February 9, 2012, 8:00 a.m.-1:00 p.m. Mountain (Public Agenda)

From:	Guy V. Zito
To:	yujie.lu@us.ngrid.com
Cc:	tfsp
Subject:	RE: FERC Acceptance for Filing in RM12-6-000
Date:	Monday, January 30, 2012 12:38:22 PM

Hi Irene,

I will include this as a discussion item at the joint RSC CC meeting. The CEAP is something done only for new regional standards brought before the stakeholders and Board of Directors at NPCC. I would not advise anyone to not proceed with an aggressive implementation of the Regional Standard, and also consider in that implementation, the potential FERC acceptance of the applicablity of the 100 kV BES Brite Line to this and all standards. I will report the discussion with the joint RSC CC meeting to the TFSP for their information.

Best Regards,

Guy

_____
From: Lu, Yujie I. [YUJIE.LU@us.ngrid.com]
Sent: Friday, January 27, 2012 4:32 PM
To: Guy V. Zito; tfsp
Subject: RE: FERC Acceptance for Filing in RM12-6-000

Hi Guy,

Thank you.

Do you still suggest us to hold on it? And do you think we still should consider a cost-effective study (support for technical justification) at this time?

Regards,
Y. Irene Lu, PE
Principal Engineer
Protection Policy & Supports
National Grid
Waltham, MA
781-907-3227

-----Original Message-----
From: Guy V. Zito [mailto:gzito@npcc.org]
Sent: Thursday, January 26, 2012 12:16 PM
To: tfsp
Subject: FW: FERC Acceptance for Filing in RM12-6-000

TFSP,

See below. The NERC BES filing has been completed so the approach we discussed regarding the NPCC-PRC-002 will have to change. Based on our discussions I was hoping to be able to work with NERC to clarify implementation issues and the applicability issue in this filing.

In March the RSC will meet with the CC to discuss compliance and other

issues pertaining to this standard further, as well as the Directory issue.

Thank you Daren and all for allowing me to attend the meeting and participate. I found the TFSP to be an expecially dedicated and passionate group of professionals and found the meeting very worthwhile. I look forward to working more closely with TFSP in the future to address standards and directory related issues in what certainly will prove to continue to deliver ever increasing challenges and opportunities to us all.

Thanks,

Guy V. Zito

Assistant Vice President-Standards

Northeast Power Coordinating Council, Inc.

1040 Avenue of the Americas, 10 th Floor

New York, NY 10018

212-840-1070

212-302-2782 fax

From: Philip A. Fedora

Sent: Wednesday, January 25, 2012 2:55 PM

To: grpStaff

Subject: FW: FERC Acceptance for Filing in RM12-6-000

FYI - Phil

-----Original Message-----

From: Ed Dobrowolski [mailto:Ed.Dobrowolski@nerc.net]

Sent: Wednesday, January 25, 2012 2:54 PM

To: dbessdt_plus

Subject: FW: FERC Acceptance for Filing in RM12-6-000

Here is the link to the filing.

Edd

Edward J. Dobrowolski

NERC

Standards Development Advisor

1.609.947.3673

Mark Twain: "Travel is fatal to prejudice, bigotry, and narrow-mindedness."

-----Original Message-----

From: MacBride, Owen E. [mailto:omacbride@schiffhardin.com]

Sent: Wednesday, January 25, 2012 2:53 PM

To: David Cook; Herb Schrayshuen; Ed Dobrowolski; Andrew Dressel; Andy Rodriquez; David Taylor; 'Cole, Mark'; 'cedge@serc1.org'; Heidrich, Peter; 'barry.lawson@nreca.coop'

Subject: FW: FERC Acceptance for Filing in RM12-6-000

This is the FERC Notice of Acceptance for Filing of the BES Definition Petition. The filing is directly accessible from the FERC e-library website via the link below.

Owen E. MacBride

(312) 258-5680

(312) 258-5700 fax

omacbride@schiffhardin.com

-----Original Message-----

From: eFiling@ferc.gov [mailto:eFiling@ferc.gov]

Sent: Wednesday, January 25, 2012 1:49 PM

To: MacBride, Owen E.; eFiling@ferc.gov

Subject: FERC Acceptance for Filing in RM12-6-000

Acceptance for Filing

The FERC Office of the Secretary has accepted the following electronic submission for filing (Acceptance for filing does not constitute approval of any application or self-certifying notice):

-Accession No.: 201201255142

-Docket(s) No.: RM12-6-000

-Filed By: North American Electric Reliability Corporation -Signed By: Owen MacBride -Filing Type: Reliability Std. -approval, remand, or modification -Filing Desc: Petition of the North American Electric Reliability Corporation for Approval of a Revised Definition of "Bulk Electric System" in the NERC Glossary of Terms Used in Reliability Standards -Submission Date/Time: 1/25/2012 1:04:36 PM -Filed Date: 1/25/2012 1:04:36 PM

Your submission is now part of the record for the above Docket(s) and available in FERC's eLibrary system at:

http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20120125-5142

If you would like to receive e-mail notification when additional documents are added to the above docket(s), you can eSubscribe by docket at:

https://ferconline.ferc.gov/eSubscription.aspx

There may be a 10 minute delay before the document appears in eLibrary.

Thank you again for using the FERC Electronic Filing System. If you need to contact us for any reason:

E-Mail: efiling@ferc.gov mailto:efiling@ferc.gov (do not send filings to this address) Voice Mail: 202-502-8258.

Tax Matters: To the extent this message or any attachment concerns tax matters, it is not intended or written to be used, and cannot be used by a taxpayer, for the purpose of avoiding penalties that may be imposed on the taxpayer under law.

This message and any attachments may contain confidential information protected by the attorney-client or other privilege.

If you believe that it has been sent to you in error, please reply to the sender that you received the message in error. Then delete it. Thank you.

You are curr

This email and any of its attachments may contain information that is privileged, confidential, classified as CEII, or subject to copyright belonging to NPCC. This email is intended solely for the use of the individual or entity to which it is addressed. If you are not the intended recipient of this email, you are hereby notified that any dissemination, distribution, copying, or action taken in relation to the contents of and attachments to this email is strictly prohibited and may be unlawful. If you receive this email in error, please notify the sender immediately and permanently delete the original and any copy of this email and any printout.

****

This e-mail and any files transmitted with it, are confidential to National Grid and are intended solely for

the use of the individual or entity to whom they are addressed. If you have received this e-mail in error, please reply to this message and let the sender know.

NPCC, Inc.

NORTHEAST POWER COORDINATING COUNCIL, INC.
1515 BROADWAY, NEW YORK, NY 10036-8901 TELEPHONE: (212) 840-1070 FAX: (212) 302-2782

Northeast Power Coordinating Council, Inc.

Regional Reliability Standards Process Manual

Approved by NPCC Board of Directors
XXXX XX, 20XX
Approved by NERC Board Of Trustees XXXX XX, 20XX
Adopted by FERC XXXX XX, 20XX

NPCC

REGIONAL RELIABILITY STANDARDS PROCESS MANUAL

TABLE OF CONTENTS

I.

I. EXECUTIVE SUMMARY

The purpose of the Northeast Power Coordinating Council, Inc. ("NPCC"), is to enhance the reliability of the international, interconnected bulk power system in Northeastern North America through the development of more stringent and specific regional reliability standards and compliance assessment and enforcement of continent-wide and regional reliability standards pursuant to the execution and implementation of a Regional Delegation Agreement with the Electric Reliability Organization ("ERO") and applicable Canadian Memoranda of Understanding that are backstopped by the Federal Energy Regulatory Commission ("FERC") and Canadian Provincial authorities. In the development and enforcement of Regional Reliability Standards, NPCC, to the extent possible, facilitates attainment of fair, effective, efficient, and competitive electric markets.

Comment: Either bulk power system, or bulk electric system should be used throughout the document. The appropriate terminology should be used consistently.

General Membership in NPCC is voluntary and is open to any person or entity, including any entity participating in the Registered Ballot Body of the ERO that has an interest in the reliable operation of the Northeastern North American Bulk Electric System.

This NPCC Regional Reliability Standards Process Manual describes the procedures, policies and practices approved by NPCC members and implemented to ensure an "open, fair, and inclusive" process for the transparent initiation, development, implementation and revision of NPCC Regional Reliability Standards necessary for the reliable operation of the international and interconnected Bulk Electric System in Northeast North America. These Standards will, in all cases, not be inconsistent with or less stringent than any requirements of the North American Electric Reliability Council/Electric Reliability Organization (NERC/ERO) Reliability Standards. Each regional reliability standard shall enable or support one or more NERC/ERO reliability principles[1], thereby ensuring that each standard serves a purpose in support of the reliability of the regional Bulk Electric System. Each standard shall also be consistent with all ~~of~~ pertinent reliability principles~~,~~, thereby ensuring that no standard undermines reliability ~~-~~as an unintended consequence.

II. REGIONAL RELIABILITY STANDARDS PROCESS

1. CHARACTERISTIC ATTRIBUTES

The NPCC Regional Reliability Standards Process is:

- **Open** — The NPCC Regional Reliability Standards Process provides any person or entity that is directly and materially affected by the reliability of the NPCC's Bulk Electric System~~=~~ the ability to participate in the development

1. Available on the NERC Website: www.nerc.com.

and approval of reliability standards. Comments ~~can~~may be submitted by any person or entity. NPCC utilizes a Website to accomplish this. Online posting and review of standards and the real time sharing of comments uploaded to the Website allow complete transparency. There are no undue financial barriers to participation. Participation in the open comment process is not ~~=~~restricted on the basis of technical qualifications or other such requirements.

- **Inclusive** — The NPCC Regional Reliability Standards~~=~~ Process provides any person with a direct and material interest the right to participate by expressing an opinion and its basis; have that position considered; and, in the event they are not satisfied with the response to their opinion, ~~=~~appeal the response through an established appeals process if desired.

- **Balanced** — The NPCC Regional Reliability Standards~~=~~ Process seeks to achieve a balance of interests; ~~=~~shall not be dominated by any two interest categories and no single interest category shall be able to defeat a matter. This will be accomplished through the NPCC Bylaws[2] which define six sectors (categories) for voting. All individuals and entities that are directly and materially affected by the reliability of the NPCC's bulk power system are welcome to participate

- **Fair Due Process** — The NPCC Regional Reliability Standards ~~=~~Process provides for reasonable notice and opportunity for public comment. ~~=~~The procedure includes public notice of the intent to develop a standard; a 45 calendar day public comment period on the proposed standard request or standard; due consideration of those public comments; and responses to those comments to be posted on the NPCC Website. A final draft of the notice of intent to develop the standard or the draft standard itself (both the clean and redline versions) along with the responses to comments will be posted for a 30 calendar day pre-balloting period, after which a ballot of NPCC Members will be conducted. ~~Voting is open to NPCC members only.~~ Upon approval by the NPCC Members, the NPCC Board then votes to approve submittal of the Regional Reliability Standard to NERC.

- **Transparent** — All actions material to the development of Regional Reliability Standards are transparent and information regarding the progress of a standards development action is made available to the public through postings on the NPCC Website as well as~~=~~ through E-mail lists.

In as much as NPCC is one of several regional entities within the Eastern Interconnection of North America, there will be **no** *presumption of validity* by the ERO for any NPCC Regional Reliability Standard. In order to receive the approval of the ERO, the NPCC Reliability Standards Development Process must also achieve the following objectives:

2. Available on the NPCC Website: www.npcc.org

- **No Adverse Impact on Reliability of the Interconnection** —A NPCC Regional Reliability Standard provides a level of Bulk Electric System reliability that is necessary and adequate to protect public health, safety, welfare, and North American security and will not have an adverse impact on the reliability of the Interconnection or other Regions within the Interconnection.

- **Justifiable Difference** — A NPCC Regional Reliability Standard is based on justifiable differences between Regions, such as different electrical systems or facilities, sensitivity of load to disruptions, sensitivity of generation to disruptions, frequency and voltage sensitivity, system operating limit development and facilities ratings process, electrical system interactions, etc. Comment: Given the new 100kV BES definition, will some of these differences persist?
- **Uniformity**- NPCC Regional Reliability Standards shall provide for as much uniformity as possible with reliability standards across the interconnected bulk power system of the North American continent. A NPCC Reliability Standard shall be more stringent than a continent-wide (or interconnection wide?) reliability standard; may include a regional variation that addresses matters that the continent-wide reliability standard does not; or shall be justified by a regional difference necessitated by a physical or operating(?) difference in the northeast's Bulk Electric System[3].

- **No Undue Adverse Impact on Commerce** — An NPCC Regional Reliability Standard will not cause any undue adverse impact on business activities that are not necessary for reliability of the Region and its interconnected Regions. All regional reliability standards shall be consistent with NERC's market principles[4].

Other provisions of the NPCC Regional Reliability Standards Process include:

- **Maintenance of Regional Reliability Standards**-NPCC Regional Reliability Standards will be posted for open process review by the RSC for possible revision at least once every five (5) years after the first regulatory approval and follow the same process as in the case of a new standard. If no changes are warranted, the Regional Standards Committee (RSC) shall recommend to the NPCC Board that the standard be reaffirmed. If the review indicates a need to revise or withdraw a regional standard, a Regional Standard Authorization Request shall be prepared by the RSC and submitted in accordance with the NPCC Regional Reliability Standards Process. The existing, approved standard subject to revision will remain in effect until such

3. The interpretation of the phrase "physical difference" will be consistent with FERC's Order, issued September 22, 2004, Granting Request For Clarification regarding Docket No. PL04-5-000, Policy Statement on Matters Related to bulk Power System Reliability.

4. Available on the NERC Website: www.nerc.com

time as the revised version has received FERC or applicable Canadian Regulatory Authority approvals, as appropriate , at which ~~point~~time it will be retired in accordance with any applicable implementation plan associated with the newly approved regional standard. (Comment: Why can't RSC make errata changes as allowed by NERC for continent-wide reliability standards?)

- **Maintenance of the Regional Reliability Standards Process**-This NPCC Regional Reliability Standards Process will be reviewed for possible revision at least once every five (5) years, or more frequently, if needed, and subject to the same procedure as applies to ~~-~~the development of a regional reliability standard. All such revisions shall be subject to approval by the NPCC Board, NERC, FERC, and ~~could~~may be subject to approval, if required, by applicable authorities in Canada. Comment: Why can't RSC make 'errata' changes as allowed by NERC for continent-wide reliability standards or in regional reliability standards, (see page 9)?

- **Interpretation of Standards**- All persons who are directly and materially affected by the NPCC's Bulk Electric System reliability shall be permitted to request an interpretation of a NPCC regional reliability standard. The person requesting an interpretation shall send a~~-~~ written request to the Manager of Reliability Standards, as noted on the NPCC Website, explaining the specific circumstances surrounding the request and what clarifications are required as applied to those circumstances. The request shall indicate the direct and material impact to the requesting party or others caused by the lack of clarity or a possibly incorrect interpretation of the regional standard. The Manager of Reliability Standards along with guidance from the RSC will forward the request to the~~-~~ Task Force/Drafting Team ~~to whom responsibility was~~ originally assigned ~~for~~to ~~-~~draft~~ing~~ that regional reliability standard. If the original Task Force/Drafting Team is no longer available or assembled, then a new Task Force/Drafting Team shall be assembled and assigned responsibility by the RSC. Through a written response, ~~The~~the Task Force/Drafting Team will address~~, through a written response,~~ the request for clarification as soon as practical, but not more than 45 business days from its receipt by the Task Force. This written interpretation will be posted along with the final approved and adopted regional standard for a 45 day comment period. The Task Force/Drafting Team will respond to the comments and forward the recommendation to the RSC. This recommendation will be either a proposal for revising the standard with an interim~~-temporary~~ clarification, or a clarification. The clarification or interim~~temporary~~ clarification~~-~~ will stand until such time as the regional standard is revised through the normal RSAR process, at which time the regional standard will be modified to incorporate the interim clarifications provided by the interpretation.

2. ELEMENTS OF A REGIONAL RELIABILITY STANDARD

- **Style and Content Elements of a Regional Reliability Standard**
To ensure uniformity of regional reliability standards and avoid inconsistency with NERC continent-wide standards, a regional reliability standard shall consist of the style and content elements identified in this section of the

procedure. These style and content elements are intended to apply a systematic discipline in the development and revision of regional standards. This discipline is necessary for achieving regional standards that are measurable, enforceable, and consistent as well as results oriented;[5,6] i.e.

- Performance-based,
- Risk-based, and
- Capability-based.

The Standard Drafting Team (SDT) should strive to achieve a portfolio of performance, risk, and capability-based mandatory reliability requirements that support an effective defense-in-depth strategy. Each requirement should identify a clear and measurable expected outcome, such as: a) a stated level of reliability performance, b) a reduction in a specified reliability risk, or c) a necessary competency.

a) **Performance-based** - defines a specific reliability objective or outcome that has a direct, observable effect on the reliability of the NPCC bulk power system, i.e. an effect that can be measured using power system data or trends.

b) **Risk-based** - defines actions of entities that reduce a stated risk to the reliability of the NPCC bulk power system and can be measured by evaluating a particular product or outcome resulting from the required actions.

c) **Capability-based** - defines capabilities needed to perform reliability functions and can be measured by demonstrating that the capability exists as required.

Each regional reliability standard shall enable or support one or more of the reliability principles as identified in the most recent set posted on the NERC website. Each reliability standard shall also be consistent with all of the reliability principles. The intent of the set of NPCC regional reliability standards is to deliver an Adequate Level of Reliability as defined by NERC.

Recognizing that Bulk Electric System reliability and electricity markets are inseparable and mutually interdependent, all regional reliability standards shall be consistent with the most recent set of Market Interface Principles as posted on the NERC website. Consideration of the Market Interface Principles is intended to ensure that regional reliability standards are written such that they achieve their reliability objective without ~~causing~~placing undue restrictions or causing adverse impacts on competitive electricity markets.

- **Sections ~~Elements~~ of a Regional Reliability Standard**

5. Results-based Standards see http:www.nerc.com/filez/standards/Project2010-06_Results-based_Reliability_Standards.html.
6. Results-based Standards presentation: http://www.nerc.com/files/Results-Based-Standards-102010.pdf .

A regional reliability standard includes several components designed to work collectively to identify what entities must do to meet their reliability-related obligations as an owner, operator or user of the NPCC bulk power system facilities. The components of a regional reliability standard include mandatory and enforceable sections and informational sections of the standard.

Mandatory and Enforceable Sections of a Standard ~~typically~~ include the following:

Title: A brief, descriptive phrase identifying the topic of the standard.
Number: A unique identification number assigned by NPCC in accordance with a published classification system to facilitate tracking and reference to the standards.
Purpose: The reliability outcome achieved through compliance with the requirements of the standard.
Applicability: (See Applicability Section and Implementation Plan below)
Effective Dates: Identification of when each requirement becomes effective in each jurisdiction.
Requirement: An explicit statement that identifies the functional entity responsible, the action or outcome that must be achieved, any conditions achieving the action or outcome, and the reliability-related benefit of the action or outcome. Each requirement shall be a statement for which compliance is mandatory
Measure: Provides identification of the evidence or types of evidence needed to demonstrate compliance with the associated requirement. Each requirement shall have at least one measure. Each measure shall clearly refer to the requirement(s) to which it applies. Comment: Measures are not enforceable. Auditors do not consider Measures during audits.
Evidence Retention: Identification, for each requirement in the standard, of the entity that is responsible for retaining evidence to demonstrate compliance, and the duration for retention of that evidence.
Variance: A requirement (to be applied in the place of the continent-wide requirement), and its associated measure and compliance information, that is applicable to a specific geographic area or to a specific set of functional entities.

Informational Sections of a Standard

Application Guidelines: Guidelines to support the implementation of the associated standard.
Procedures: Procedures to support implementation of the associated standard.
Time Horizon: The time period an entity has to mitigate an instance of violating the associated requirement.~~4~~
Compliance Enforcement Authority: The entity that is responsible for assessing performance or outcomes to determine if an entity is compliant with the associated standard.

Compliance Monitoring and Assessment Processes: Identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated standard.
Additional Compliance Information: Any other information related to assessing compliance such as the criteria or periodicity for filing specific reports.

Compliance Elements Associated with a Standard

Violation Risk Factors and Violation Severity Levels: Violation risk factors (VRFs) and violation severity levels (VSLs) are used as factors when determining the size of a penalty or sanction associated with the violation of a requirement in an approved reliability standard. Each requirement in each regional standard has an associated VRF and a set of VSLs. VRFs and VSLs are developed by the drafting team, working with NPCC staff, at the same time as the associated regional standard, but are not part of the regional standard. The NPCC Board of Directors is responsible for approving VRFs and VSLs.

Violation Risk Factors
VRFs identify the potential reliability significance of non-compliance with each requirement. Each requirement is assigned a VRF in accordance with the latest approved set of VRF criteria.

Violation Severity Levels
VSLs define the degree to which compliance with a requirement was not achieved. Each requirement shall have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple "degrees" of non-compliant performance and may have only one, two, or three VSLs. Each requirement is assigned one or more VSLs in accordance with the latest approved set of VSL criteria.

The most current version of the approved NERC Reliability Standard template and its associated elements as or if applicable, will be used at the time of the development of the NPCC Regional Reliability Standard to ensure all essential elements are contained therein to achieve consistency and uniformity and meet all statutory requirements.

Applicability Section and Implementation Plan
A regional reliability standard may have either or both of an Applicability Section, with applicability phase-in dates, and as an option an Implementation Plan. The applicability phase-in dates and Implementation Plan shall include effective dates for all of the regional reliability standard's requirements.

Guidance Document(s) and White Papers
A regional reliability standard may have either or both of a Guidance Document and supporting White Paper(s). The purpose of the Guidance Document should be to include added details relating to the requirements and

compliance thereto. Any White Paper(s) may provide technical justifications and explanations supportive of the regional reliability standard.

3. KEY PARTICIPANTS, ROLES, TERMS AND FUNCTIONS

COMMENT: There is no mention of who is to perform aquality review. Need to add this to the appropriate body's role. Is it the RSC's role?

- **NPCC Board of Directors ~~(BOD, Board)~~** - The NPCC Board Of Directors shall consider for adoption regional reliability standards, definitions, variances, interpretations and associated implementation plans that have been processed according to the processes identified in this manual. In addition, the Board shall consider for approval, VRFs and VSLs, Implementation Plans, Guidance Documents and White Papers associated with each member approved regional standard. Once the Board Of Directors adopts a regional reliability standard, definition, variance, interpretation or implementation plan and or White Paper, or once the Board Of Directors approves separate VRFs or VSLs, the Board of Directors shall direct NPCC staff to submit the document(s) for approval ~~by~~to the NERC Board of Trustees.

- **NPCC Members -** The ballot body is comprised of all entities or individuals that qualify for one of the stakeholder sectors within NPCC as stated in ~~-~~the NPCC Bylaws. All General and Full Members of NPCC can participate in the balloting of regional standards. Any entity or person may submit comments during comment periods for standards including non-NPCC members.

- **Regional Standards Committee (RSC)**—A NPCC Board Of Directors appointed committee charged with management and oversight of the NPCC Regional Reliability Standards Process for development of regional standards, VRFs, VSLs, definitions, variances, interpretations, ~~and~~ implementation plans and supporting White Papers in accordance with this manual, under the sector based voting structure described in the NPCC Bylaws.

  RSC membership is open to NPCC members and consists of a balance of stakeholder interests that provide for or are materially impacted by the reliability of the Bulk Electric System. Its responsibilities are defined in detail in the NPCC RSC Scope posted on the NPCC Website

- ~~-~~The NPCC RSC will consider requests for new or revised regional reliability standards and be available ~~for advisement~~ to advise the NPCC Board Of Directors on the regional standards, and standards related issues in general.

  The RSC may not itself modify mandatory and enforceable sections of a regional~~-~~ standard except in the event of minor corrections of a standard such

as errata. The RSC may make revisions to the sections of the regional standard that are not mandatory and enforceable.

The RSC is responsible for ensuring that the regional standards, VRFs, VSLs definitions, variances, interpretations, ~~and~~ implementation plans, and White Papers developed by drafting teams are developed in accordance with the processes in this manual and meet NERC's and FERC's benchmarks for reliability standards including criteria for all governmental approvals.

The RSC disposition regarding the Regional Standard Authorization Request (RSAR), which will in all cases be within 60 calendar days of receipt of a completed RSAR, shall be one ~~fo~~of the following:

- Accept the standard request as a candidate for development of a new standard, revision of an existing standard, or deletion of an existing standard. The RSC may, at its discretion, expand or narrow the scope of the standard request under consideration. The RSC shall prioritize the development of standards in relation to other proposed standards, as may be required based on the volume of requests and resources.

- Reject the standard request. If the RSC rejects a standard request, a written explanation for rejection will be delivered to the requester within 30 calendar days of the decision.

- Remand the standard request back to the requester for additional work. The NPCC standards staff will make reasonable efforts to assist the requester in addressing the deficiencies identified by the RSC. The requester may then resubmit the modified standard request using the process above. The requester may choose to withdraw the standard request from further consideration prior to acceptance by the RSC.

The NPCC Standard Process responsibilities of the RSC include:

- Oversight of all Drafting Team activities. ~~The Drafting Team, a~~After it is assigned by the RCC, the Drafting Team shall report to the RSC.
- Review of NPCC Draft Standards (for such factors as completeness, sufficient detail, rational result, and compatibility with existing NERC and other Regional standards), and clarify standard development issues not specified in this procedure. Under no circumstance will the RSC unilaterally make any substantive changes to the ~~mandatory~~mandatory and enforceable sections of a draft standard.
- Ensure that the drafting team has given due consideration to the comments of all stakeholders ~~and minority objections,~~ in approving a proposed regional reliability standard which is to go to ballot.
- Approve posting of draft standards for pre-ballot ~~posting~~review under a sector based voting structure as described later in the NPCC Bylaws; or
- Remand the draft regional standard back to the Task Force acting as the drafting team for further work or recommend a change in those participating in the drafting team (i.e. a new drafting team).

- **NPCC Standards Staff** — The standards staff, led by the Assistant Vice-President of Standards, is responsible for assisting the RSC in administering NPCC's Regional Reliability Standards Processes in accordance with this manual. The standards staff provides support to the RSC in managing the standards processes and in supporting the work of all regional drafting teams. The standards staff works to ensure the integrity of the standards processes and consistent quality and completeness of the regional standards, through drafting team support and conducting quality reviews. The standards staff facilitates all steps in the development of regional standards, definitions, variances, interpretations and associated implementation plans. The standards staff works with drafting teams in developing VRFs and VSLs for each regional standard.

  The standards staff is responsible for presenting members' approved regional standards, definitions, variances, interpretations and associated implementation plans to the NPCC Board Of Directors for adoption. When presenting standards-related documents to the NPCC Board Of Directors for adoption or approval, the standards staff shall report the results of the associated stakeholder ballot, including identification of unresolved stakeholder objections and an assessment of the documents' practicality and enforceability as well as any polling information obtained during standard development.

- **Reliability Coordinating Committee (RCC)** —The RCC, will support the standards development process through the assignment of NPCC Task Forces to serve as the foundation for Drafting Team formation. The RCC may also perform a technical advisory role in the Regional Reliability Standards process through comments and recommendations.

- **Requester**— A Requester is any individual or an entity (organization, company, government authority, including the RSC, etc.) that submits a completed request for development, revision, or withdrawal of a regional standard. Any person or an entity that is directly and materially affected by an existing standard or the need for a new standard may submit a request for a new standard or revision to a standard. The Requester is assisted by the RSAR drafting team (if one is appointed by the RSC) or NPCC standards staff to complete the drafting of the RSAR prior to it being forwarded to the RSC with a request to draft a regional standard. The Requester is responsible for the RSAR, assisted by the RSAR drafting team or NPCC standards staff, until such time the RSC authorizes development of the standard. The Requester has the option at any time to allow the RSAR drafting team to assume full responsibility for the RSAR. The Requester may choose to participate in subsequent standard drafting efforts related to the RSAR.

- **Task Forces and Working Groups,**—The committees, task forces and working groups within NPCC , serve an active role in the standards process as follows:

• Identify the need for new or modified regional standards.
• Initiate NPCC Standards actions by developing Regional Standard Authorization Requests (RSARs).
• Develop comments (views and objections) to standards actions.
• Participate in NPCC Standard drafting.
• Provide technical oversight in response to changing industry conditions and ERO Requirements.
• Conduct Field Tests, as required

- **NPCC Compliance Committee (CC)**
  - Provide compliance review of technical requirements.
  - Assist the Drafting Team with the development of VSLs and VRFs.
  - Participate in a standard's quality review.

- **Compliance Monitoring and Enforcement Program -** The NERC ~~c~~Compliance ~~m~~Monitoring and ~~e~~Enforcement ~~p~~Program (CMEP) may be used to manage~~s~~ and enforce~~s~~ compliance with approved regional and NERC reliability standards. The compliance program area shall provide feedback to drafting teams during the standards development process to ensure the compliance enforcement program can be practically implemented for the standards under development.

  The ~~c~~ComplianceMontoring and ~~e~~Enforcement ~~p~~Program may be used to conduct field tests or data collection related to compliance elements of proposed standards and may provide assistance with field tests or data collection when requested. The compliance enforcement program shares its observations regarding the need for new or modified requirements with the standards staff for use in identifying the need for new standards projects.

4. PROCEDURE DESCRIPTION

COMMENT: The procedure does not address how someone requests the withdrawal of an existing standard or part thereof.

STEP 1 : REQUEST TO DEVELOP A NEW REGIONAL STANDARD

A Requester may request ~~-~~the development of~~-~~ a new Regional Reliability Standard or revision of an existing standard by submitting a Regional Standard Authorization Request (RSAR) form ~~-~~to the NPCC Manager of Reliability Standards, who will promptly acknowledge receipt. The RSAR is a description of the new or revised regional standard in sufficient detail to clearly define its scope, purpose, and importance~~-~~, impacted parties and other relevant information. A "needs" statement will provide the justification for the development of the standard, including an assessment of the reliability and market interface impacts of implementing or not implementing the standard. The Manager of Reliability Standards~~-~~ shall retain the RSAR form and make it available electronically on the NPCC Website.

The RSAR, as a minimum, shall contain the following information in order to be qualified for consideration. The NPCC Manager of Reliability Standards will assist the Requester to ensure all required information is submitted (on the RSAR):

1. Proposed Title and Date of New RSAR.
2. Requester's Name and Contact Information.
3. Purpose of the Regional Standard.
4. Description of Industry Need.
5. Provide a Brief Description of the Standard.
6. Identification of the Entities in the Functional Model as being responsible to adhere to the standard.
7. Necessary information to assist the drafting the team, to the extent feasible, to allow them to draft the standard.
8. Any existing known cross references to NPCC or NERC documents.
9. Technical background for the RSAR to properly address the need for the standard.

In addition a Cost Benefit Analysis (CBA) for the proposed standard will be performed in accordance with the NPCC Cost Effectiveness Analysis Procedure (CEAP) and be made available for presentation with the RSAR to the RSC.

The Manager of Reliability Standards shall forward all properly completed RSARs and cost benefit information to the RSC. The RSC shall meet at established intervals to review all pending RSARs. The frequency of this review process will depend on workload, but in no case shall a properly completed RSAR wait for RSC action more than 60 calendar days from the date of receipt. The RSC may take one of the following actions:

- Remand the RSAR back to the Manager of Reliability Standards for additional work. In this case, the Manager of Reliability Standards may request additional information or clarification for the RSAR from the Requester and/or RSAR Drafting Team.
- Accept the RSAR as a candidate for a new or revised standard. The Manager of Reliability Standards shall, within 60 calendar days of acceptance, post notification of intent to develop a standard on the NPCC Website, notify the ERO to post the notification on its Website, and notify the requester of the acceptance.
- Reject the RSAR. In this case, the RSC will provide its determination to the Manager of Reliability Standards, who will then provide a written explanation for rejection to the Requester within 60 calendar days of the rejection decision.

STEP 2: RSC ACCEPTS RSAR AND RCC ASSIGNS TF TO DRAFT NEW OR REVISED STANDARD

A RSAR that is accepted by the RSC shall be submitted to the RCC who shall assign the development of the regional standard to a Task Force within 60 calendar days. The Manager of Reliability Standards shall oversee solicitation and recommendation of a list

of additional candidates for appointment to the Drafting Team, and shall submit the list to the RSC. This list shall include the Requester. The RSC may select other individuals to serve in drafting the Standard. The Drafting Team shall consist of a group of people who collectively have the necessary technical expertise and work process skills to effectively and efficiently produce a quality standard. ~~t~~The Drafting Team reports to the RSC. The Drafting Team shall remain in place until such time as the NERC Board Of Trustees adopts the regional standard. Inquiries arising after a standard's development shall be directed by the RSC to the Task Force to which the drafting of the standard was assigned.

Concurrent with the formation of the Drafting Team, a technical group, or individuals may develop a first draft of the standard. This first draft ~~could~~may be posted early in the standards development process for comment to gain industry insights and input early in the standards development process.
Comment: There needs to be closure by indicating when will the role of the technical group or individuals ends and the Drafting Team takes over. There may also be a need to indicate who is to respond to comments from the initial posting--not the technical group or individuals, but the DT.

The Manager of Reliability Standards shall serve, coordinate or assign NPCC staff to assist in the drafting of the standard including compliance measures, process and elements. The drafting of measures and compliance administration aspects of the standard will be coordinated with the NPCC Compliance Staff. When a drafting team begins its work, either in refining an RSAR or in developing or revising a proposed standard, the drafting team shall develop a project schedule and report its progress against that schedule to the RSC as requested, through the Manager of Reliability Standards.

Once the Drafting Team has produced a draft of the regional standard, VRFs, VSLs, variances and its associated implementation plan, NPCC standards staff shall coordinate Quality Review of the draft standard, consisting of technical writing, legal and compliance reviews prior to submission to RSC.

STEP 3: SOLICIT PUBLIC COMMENTS ON DRAFT REGIONAL STANDARD

Once a draft standard has been verified by the RSC to be within the scope and purpose of the RSAR, the ~~m~~Manager of Reliability Standards will post the draft standard for the purpose of soliciting public comments. The posting of the draft standard will be linked to the RSAR for reference by its title. In addition to the standard, an implementation plan shall be posted to provide additional details to the public and aid in their commenting and decision process. This implementation plan will be drafted and posted with draft standards upon the availability of sufficient information, data or targeted survey results to determine a realistic schedule for implementation. Comments on the draft standard will be accepted for a 45 calendar day period from the public notice of posting. Comments will be accepted on-line using the NPCC Open Process web-based application.
Comment: Will VSL's and VRF's, Guidance Documents, etc. also be posted at this time? If not, why not, and when? Response: A draft standard does not necessarily need to include the VRFs and VSLs. A statement should be included to answer this question.

The ~~m~~Manager of Reliability Standards will notify NERC to concurrently post the draft standard and all associated documents~~=~~ on the ERO Website for comments.

STEP 4: OPEN PROCESS POSTING AND ANALYSIS OF THE COMMENTS

The Manager of Reliability Standards~~-~~ will assemble the comments on the new draft standard and associated documents and distribute those comments to the ~~-~~Drafting Team. The Drafting Team shall give prompt consideration to the written views and comments of all participants. All submitted ~~-~~comments shall be addressed, and each commenter shall be advised of the disposition of their comments and the reasons therefore. The Manager of Reliability Standards shall ~~-~~publicly post all of the Drafting Team's responses to stakeholder comments on the NPCC Website.

The ~~-~~Drafting Team shall take one of the following actions:

- Submit the draft standard for RCC endorsement as it stands, along with the comments received and responses to the comments. Based on the comments received, the Drafting Team may include revisions that are not substantive. A substantive change is one that directly and materially affects the application of the standard, including, for example: changing "shall" to "should," changing "should" to "shall"; adding, deleting, or revising requirements; or adding, deleting, or revising measures for which compliance is mandatory.
- Make substantive revisions to the draft standard and reposts it for further open review and comment.
- Drafting Team may recommend~~s~~ Field Testing if necessary, to the RSC.

Requester or the RSC ~~-~~may withdraw the request for the development of the regional standard at any time during the Regional Reliability Standards Process.

Comment: And then what happens? The RSC may want to continue with development of the standard and the Requester may want to appeal the decision not to proceed.

Upon receipt, the RCC submits the proposed regional standard to the RSC along with its recommendation~~-~~, Drafting Team statements and any field test results.

STEP 5: RSC APPROVES OF THE NEW OR REVISED STANDARD FOR POSTING

If the RSC, ~~-~~utilizing the composite sector voting structure, ~~,~~ votes to post the draft regional standard for approval, the draft standard, all comments received, and the responses to those comments shall be posted publicly by the Manager of Reliability Standards on the NPCC Website (www.npcc.org) for a 30 calendar day "pre-ballot review" to be followed by a NPCC member approval ballot. If the RSC decides more work is needed, the draft standard will be remanded back to the Drafting Team. All actions of the RCC, Drafting Teams, and the RSC will be recorded in regular minutes of the group(s) and posted on the NPCC Website. Once the notice for a ballot has been issued, no substantive modifications may be made to the proposed standard unless the revisions are posted and a new notice of the vote is issued.

The Drafting Team, in coordination with the RSC, will determine when no further postings of the standard are required.

Prior to a "pre-ballot" review of a standard, a quality review and a cost effectiveness analysis will be ~~done.~~performed and submitted to the RSC for approval.
Comment: Who will do the cost effectiveness analysis? Who does the quality review?

The Drafting Team working with CC members shall develop draft VSLs and VRFs prior to the quality review.

STEP 6: BALLOT OF STANDARD

Upon notification of a ballot, the Members of NPCC's ~~-~~ballot body will cast their vote consistent with the NPCC Bylaws. This ballot shall commence no sooner than 15 calendar days and no later than 30 calendar days following the notification of ballot. All members of the NPCC are eligible to participate in the voting on proposed, standard revisions or deletions of regional standards. The ballot period will typically begin immediately following the 30 calendar day pre-ballot posting and will last at least 10 business days.

In order for a NPCC Regional Standard to be approved;

- A quorum must be established by at least 50% of the NPCC Members of at least 60% of the Voting Sectors on the roster of Members maintained by NPCC.
- A two-thirds majority of the total weighted sector votes cast must be affirmative. The number of votes cast is the sum of affirmative and negative votes, excluding abstentions, and non-responses. Weighted sector vote will be calculated as follows;
  - Affirmative votes cast in each sector will be divided by the sum of affirmative and negative votes cast, in that same sector, to determine the fractional affirmative vote for each sector. Abstentions and non-responses will not be counted for the purposes of determining the fractional affirmative vote for a sector.
  - The sum of the fractional affirmative votes from all sectors divided by the number of sectors voting will be used to determine if a two-thirds majority has been achieved. (A sector will be considered as "voting" if any member of the sector in the ballot pool casts either an affirmative or a negative vote.)
  - A standard will be approved if the sum of fractional affirmative votes from all sectors divided by the number of voting sectors is at least 2/3.

Ballots will be cast electronically and alternatives are as follows;

- Affirmative
- Affirmative with Comments
- Negative
- Negative with Comments
- Abstain Comment: Could a member vote "Abstain", yet still submit comments?

The ~~-~~Manager of Reliability Standards~~-~~ shall post the final outcome of the ballot process. If the regional standard is ~~rejected~~not approved, it may be withdrawn by either the RSC or the Requester, or the standard may be remanded by the RSC back to the Drafting

Team to address the balloters' comments. In the event the proposed regional standard is withdrawn all comments submitted during the process will be posted and archived for consideration when redrafting the standard ~~upon~~under review.

Once the member ballot approves the regional standard, the Manager of Reliability Standards shall ~~-~~recommend final Regional approval to the NPCC Board. The NPCC BOD may not make substantive modifications to the standard. If the NPCC BOD does not approve the standard it will be remanded back to the RSC and the Drafting Team to address its comments.

STEP 7: IMPLEMENTATION OF THE NPCC REGIONAL STANDARD

Upon approval by the NPCC BOD~~-~~, the Manager of Reliability Standards shall submit the regional standard~~-~~ to the NERC/ERO for approval(s) and subsequent filing with FERC and applicable Canadian Governmental and/or Regulatory Authorities for adoption.

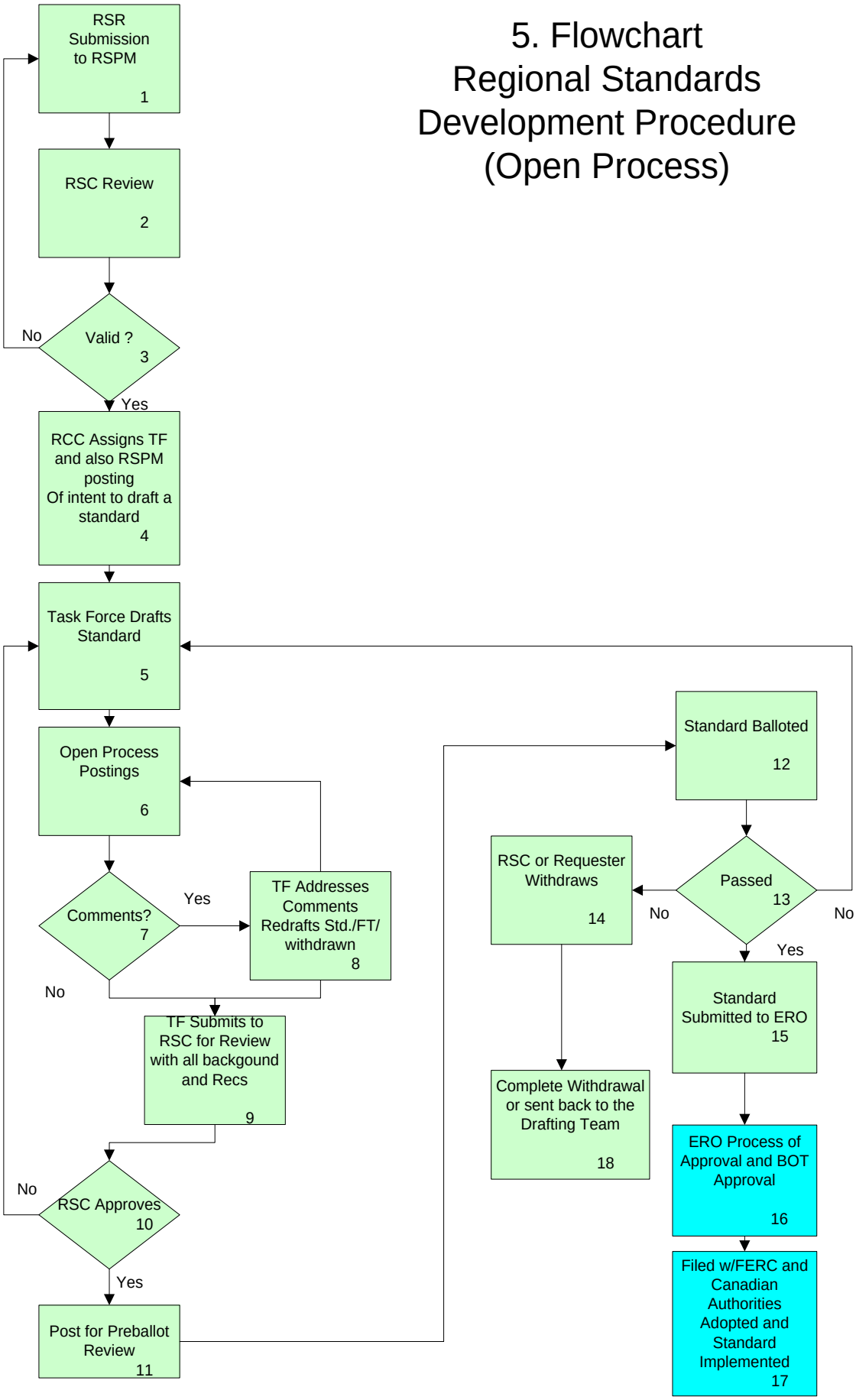
Once a reliability standard is adopted and made effective, all users, owners, planners, and operators of the Bulk Electric ~~-~~System in the NPCC geographic area of the Northeast are required to comply with the standard. The NERC/ERO Board of Trustees has established its ~~Compliance Monitoring and Enforcement Program~~CMEP,~~-~~ administered in the Northeast by NPCC~~-~~, to measure compliance with reliability standards and administer sanctions as appropriate. After adoption of a NPCC Regional Standard, the standard will be included in the NERC/ERO CMEP~~ompliance Monitoring Enforcement Program~~.

STEP 8: WITHDRAWAL OR REMAND OF A REGIONAL STANDARD

The RSC may elect to withdraw the proposed standard or remand it back to the Drafting Team for further work for situations such as ballot failure, cost considerations, etc. (Comment: Should this be a specific, finite list of valid reasons for remand?) The Assistant Vice President-Standards will inform NERC and the industry of the actions taken.

The following flow chart will be revised for the final draft.

5. Flowchart Regional Standards Development Procedure (Open Process)



6. ERO and Regulatory Process and Approvals

- **NERC/ERO Comment Period** — Concurrent with regional posting of final drafts, the final drafts will be forwarded to NERC for posting on the NERC website to ensure full industry awareness of the standard and expedite and coordinate all commenting. NERC/ERO shall publicly notice and request comment on the NPCC Regional Reliability Standard and associated implementation plan, as specified by NERC for comment on NERC's website and actively notify all adjoining Regions. All comments will be responded to electronically by the Drafting Team through a posted response on the NPCC Website or a link on the NERC Website. NPCC shall have an opportunity to resolve any objections identified in the comments and may choose to withdraw the posting for comment; revise the NPCC Regional Reliability Standard and request another posting for comment, or re-submit the NPCC Regional Reliability Standard along with a response to any objections received, for approval by NERC.

- **NERC/ERO Approval of NPCC Regional Reliability Standards** — Proposed regional reliability standards shall be subject to approval by the NERC/ERO who shall have a process to evaluate and recommend whether a proposed non-Interconnection-wide NPCC Regional Reliability Standard has been developed in accordance with all applicable procedural requirements and whether NPCC has considered and addressed stakeholder objections. NPCC BOD, having been notified of the results of the regional ballot concerning a NPCC Regional Reliability Standard, shall vote to submit the Standard to the NERC/ERO Board Of Trustees for approval as a NERC Reliability Standard. The NERC/ERO Board Of Trustees shall consider NPCC's request, the scope and implications of the Standard, the recommendation for action on the Standard, any unresolved stakeholder comments, and NPCC's consideration of comments and unresolved issues, if any, in determining whether to approve the NPCC Regional Reliability Standard as a NERC Reliability Standard.

- **Regulatory Authority Approval** — A NPCC Regional Reliability Standard that has been approved by the NERC/ERO Board Of Trustees shall be filed with FERC and applicable Canadian Governmental and/or Regulatory Authorities for approval and shall become effective and enforceable within the U.S., per Section 215 of the Federal Power Act, only when adopted by FERC in accordance with any associated implementation plan, and within individual Canadian Provinces, only when adopted by applicable Canadian Governmental and/or Regulatory Authorities in accordance with any associated implementation plan. The regional reliability standard, once adopted will be made part of the body of NERC reliability standards and shall be mandatory and enforceable on all applicable bulk power system owners, operators, and users within the NPCC Region in accordance with any associated implementation plan, regardless of membership status.

7. Appeals

- Persons who have directly and materially affected interests and who have been or will be adversely affected by any substantive or procedural action or inaction related to the ~~=~~approval, revision, reaffirmation, or withdrawal of a regional reliability standard (appellant) shall have the right to appeal. This appeals process applies only to the regional reliability standards process as defined in this procedure.

  The burden of proof to show adverse effect shall be on the appellant. Appeals shall be made within 30 calendar days of the date of the action purported to cause the adverse effect, except appeals for inaction, which may be made at any time. In all cases, the request for appeal must be made prior to the next step in the process.

  The final decisions of any appeal shall be documented in writing and made public.

  The appeals process provides two levels, with the goal of expeditiously resolving the issue to the satisfaction of the participants:

  - Level 1 Appeal

  Level 1 is the required first step in the appeals process. The appellant submits a complaint in writing to the Regional Standards Process Manager (RSPM) that describes the substantive or procedural action or inaction associated with a reliability standard or the standards process. The appellant describes in the complaint the actual or potential adverse impact to the appellant. Assisted by any necessary staff and committee resources, the RSPM shall prepare a written response addressed to the appellant as soon as practical, but not more than 45 calendar days after receipt of the complaint. If the appellant accepts the response as a satisfactory resolution of the issue, both the complaint and response will be made a part of the public record associated with the standard and posted with the standard.

  - Level 2 Appeal

  If after the Level 1 Appeal the appellant remains unsatisfied with the resolution, as indicated by the appellant in writing to the RSPM~~egional Standards Process Manager~~, the RSPM shall convene a Level 2 Appeals Panel. This panel shall consist of five members total appointed by the NPCC's Board of Directors.

  In all cases, Level 2 Appeals Panel members shall have no direct affiliation with the participants in the appeal.

  The RSPM shall post the complaint and other relevant materials and provide at least 30 calendar days notice of the meeting of the Level 2 Appeals Panel. In addition to the appellant, any person that is directly and materially affected by the substantive or procedural action or inaction referenced in the complaint shall be heard by the panel. The panel shall not consider any expansion of the scope of the appeal that was not presented in the Level 1 Appeal. The panel

may in its decision find for the appellant and remand the issue to the RSC with a statement of the issues and facts in regard to which unfair and/or inequitable action was ~~not~~ taken, or which fair and/or equitable action was not taken. The panel may find for or against the appellant with a specific statement of the facts that demonstrate fair and equitable treatment of the appellant and the appellant's objections. The panel may not, however, revise, approve, disapprove, or adopt a reliability standard. The actions of the Level 2 Appeals Panel shall be publicly posted.

In addition to the foregoing, a procedural objection that has not been resolved may be submitted to the NPCC Board of Directors for consideration at the time the Board decides whether to adopt a particular reliability standard. The objection must be in writing, signed by an officer of the objecting entity, and contain a concise statement of the relief requested and a clear demonstration of the facts that justify that relief. The objection must be filed no later than 30 calendar days after the announcement of the vote on the standard in question.

Revision History

Version	NPCC Board Of Directors Approval	NERC Board Of Trustees Approval	FERC Approval
Original	9/19/07	10/23/07	3/21/08
Rev 1			

NPCC, Inc.

NORTHEAST POWER COORDINATING COUNCIL, INC.
1515 BROADWAY, NEW YORK, NY 10036-8901 TELEPHONE: (212) 840-1070 FAX: (212) 302-2782

NPCC
Regional Reliability Reference Directory # 10
Verification of Generator
Gross and Net Reactive Power Capability

Task Force on Coordination of Operations Revision Review Record:
December 22, 2008
December 28, 2011

Adopted by the Members of the Northeast Power Coordinating Council, Inc. this December 22, 2008 based on recommendation by the Reliability Coordinating Committee, in accordance with Section VIII of the NPCC Amended and Restated Bylaws dated July 24, 2007 as amended to date.

This document, when downloaded or printed, becomes UNCONTROLLED. Users should check the NPCC website for the current CONTROLLED version of this document.

Version History

Version	Date	Action	Change Tracking (New, Errata or Revisions)
0	12/22/2008		New
1	07/07/2009	Included FAC-008 in Section 3.0	Errata
2	12/28/2011	Phase 2 format	Revisions

Table of Contents

Version History 2
Table of Contents 3
Terms Defined in the Directory 4
A. Introduction 4
1. Title: Verification of Generator Gross and Net Reactive Power Capability 4
2. Directory #: 10 4
3. Objective: 4
4. Effective Date: December 22, 2008 4
5. Background: 4
6. Applicability: 4
B. NERC ERO Reliability Standard Requirements 5
C. NPCC Regional Reliability Standard Requirements 5
D. NPCC "Full Member" More Stringent Criteria Requirements 5
1. Requirements 5
1.1 Developing the List of Generators or Generation Facilities to be Verified 5
1.2 Establishing the Generator Reactive Power Capability Verification Program 6
1.3 Implementing the Generator Reactive Power Capability Verification Program 6
1.4 Verification Criteria for Generator and Generation Facility Reactive Power Capability 7
1.5 Exemption of Generators or Generation Facilities from Seasonal Verification Testing 8
E. Compliance 10
1. Compliance Monitoring Process 10
2. Data Retention 10
Responsible Entities shall keep evidence of compliance for a minimum of five years. A Responsible Entity found non-compliant shall keep information related to the non-compliance until found compliant. 10
Appendix A- Basic Flow Chart for Verification of Generator Gross and Net Reactive Power Capability 11
Appendix B - Generator Reactive Capability Form 12

This document, when downloaded or printed, becomes UNCONTROLLED. Users should check the NPCC website for the current CONTROLLED version of this document.

Terms Defined in the Directory

There are no new terms defined in this Revision. The definitions of terms found in this Directory appearing in bold typeface, can be found in the NPCC *Glossary of Terms.*

A. Introduction

1. **Title:** Verification of Generator Gross and Net Reactive Power Capability

2. **Directory #:** 10

3. **Objective:**

   This Directory presents the minimum criteria requirements for verifying the **Gross Reactive Power Capability** and **Net Reactive Power Capability** of generators or generating facilities.

   Compliance to the criteria requirements set forth in this Directory by each applicable entity assures accuracy of information used in the steady-state models to assess the reliability of the NPCC bulk power system.

   This Directory has been developed to ensure that the requirements specified in NERC Standard MOD-025-1, "Verification of Generator Gross and Net Reactive Power Capability" are met by NPCC and its applicable members responsible for meeting the NERC Reliability Standards.

4. **Effective Date:** **December 22, 2008**

5. **Background:**

   This Directory was developed from the draft NPCC A-14 Verification of Generator Gross and Net Reactive Power Capability Criteria document whose technical content was approved by the Reliability Coordinating Committee on March 5, 2008 for conversion into a Directory. Version 0 of the Directory became effective on December 22, 2008.

6. **Applicability:**
   6.1 Functional Entities (Responsible Entities)
   - Generator Owners
   - Transmission Operators (in whose area the generator or generation facility resides)

This document, when downloaded or printed, becomes UNCONTROLLED. Users should check the NPCC website for the current CONTROLLED version of this document.

B. NERC ERO Reliability Standard Requirements

The NERC ERO Reliability Standards containing requirements that are associated with this Directory include, but may not be limited to:

- MOD-025-1 -Verification of Generator Gross and Net Reactive Power Capability
- TOP-002-2 - Normal Operations Planning
- FAC-008-1 - Facility Ratings Methodology
- FAC-009-1 - Establish and Communicate Facility Ratings

C. NPCC Regional Reliability Standard Requirements

None.

D. NPCC "Full Member" More Stringent Criteria Requirements

1. Requirements

1.1 Developing the List of Generators or Generation Facilities to be Verified

R1. Transmission Operators shall develop and maintain documentation of those generators or generation facilities that must verify the **Gross Reactive Power Capability** and **Net Reactive Power Capability** for the summer and winter capability seasons. The documentation maintained by the Transmission Operator shall include the following:

R1.1 All generators or generation facilities **Declared Gross Reactive Power Capability** and **Declared Net Reactive Power Capability** and seasonal auxiliary load reactive power requirements. (Reference Appendix B).

R1.2 All generators or generation facilities **Verified Gross Reactive Power Capability** and **Verified Net Reactive Power Capability**, verification date and method of verification.

R1.3 Discrepancies between a Generator Owner's declared and verified **Gross Reactive Power Capability** and **Net Reactive Power Capability**, the reason for such discrepancies and the Generator Owner's plan to address the discrepancies.

R1.4 Generator Owner supplied **Gross Reactive Power Capability** and **Net Reactive Power Capability** testing, manufacturer data,

performance tracking or operating historical data, certification documentation, as specified by the Transmission Operator.

R1.5. Generators or generation facilities exempted from the verification requirements and the basis for their exemption (see Section 1.5).

1.2 Establishing the Generator Reactive Power Capability Verification Program

R2. The Transmission Operator shall establish and document a program to periodically verify the **Gross Reactive Power Capability** and **Net Reactive Power Capability** of all generators and generation facilities that are subject to periodic seasonal **Gross Reactive Power Capability** and **Net Reactive Power Capability** verification.

R3. The Transmission Operator shall provide any changes to its verification process to the Generator Owners within 30 calendar days of issue.

R4. The Transmission Operator shall establish and document requirements for a Generator Owner to notify the Transmission Operator within a specified time period when its generator or generation facility cannot achieve the **Declared Gross Reactive Power Capability** or **Declared Net Reactive Power Capability** because of equipment issues.

R5. The Transmission Operator shall establish and document a time frame for the Generator Owner to address equipment issues that result in a generator or generation facility not achieving the **Declared** Gross Reactive Power Capability and **Declared** Net Reactive Power Capability.

R6. The Transmission Operator shall establish and document the real power level at which the verification shall be performed, recognizing that the verification of lagging and leading reactive power capabilities should normally be performed during on-peak and off-peak hours, respectively.

R7. The Transmission Operator shall establish and document those intermittent or small generating units whose capability may be represented by verification results of a single generating unit.

1.3 Implementing the Generator Reactive Power Capability Verification Program

R8. The Transmission Operator shall request Generator Owners to verify the seasonal **Gross Reactive Power Capability** and **Net Reactive Power Capability** of their generators or generation facilities that are subject to periodic seasonal **Gross Reactive Power Capability** and **Net Reactive**

Power Capability verification every five (5) years or more frequently as required by the Transmission Operator. The two (2) capability seasons are defined as summer and winter as specified by the Transmission Operator.

R9. If a Transmission Operator determines that only one seasonal generating capability value is required for NPCC Bulk Power System reliability analysis, then periodic verification will be required only for that particular season.

R10. If a Transmission Operator determines that the difference between the **Declared Gross Reactive Power Capability** and the **Declared Net Reactive Power Capability** of a generator or generation facility is insignificant for NPCC Bulk Power System reliability analysis, then periodic verification will be required for only one numerical value.

R11. If a Transmission Operator determines that only the lagging or leading **Gross Reactive Power** Capability and **Net Reactive Power Capability** of a generator or generation facility is required for NPCC Bulk Power System reliability analysis, then periodic verification will be required only for that specific reactive power capability value.

R12. The Generator Owner shall provide generator or generation facility **Declared Gross Reactive Power Capability** and **Declared Net Reactive Power Capability** to the Transmission Operator.

R13. The Generator Owner shall provide evidence, upon request, to the Transmission Operator that the generator or generation facility **Gross Reactive Power Capability** and **Net Reactive Power Capability** have been verified.

R14. The Generator Owner shall report to the Transmission Operator any discrepancies between Declared and Verified **Gross Reactive Power Capability** and **Net Reactive Power Capability** within a time frame specified by the Transmission Operator and develop and implement a plan to resolve the discrepancies.

R15. The Generator Owner shall determine and report to the Transmission Operator the generator or generation facility reactive power seasonal auxiliary loads (including common station loads).

1.4 Verification Criteria for Generator and Generation Facility Reactive Power Capability

This document, when downloaded or printed, becomes UNCONTROLLED. Users should check the NPCC website for the current CONTROLLED version of this document.

R16. The Generator Owner shall comply with Transmission Operator requests for periodic verification of **Gross Reactive Power Capability** and **Net Reactive Power Capability** of their generators or generation facilities.

R17. The Generator Owner shall verify the **Gross Reactive Power Capability** and **Net Reactive Power Capability** of their generators or generation facilities according to their types. As specified by the Transmission Operator, the verification shall include any of the following:

- Testing,
- Use of operating historical data,
- Commissioning data (for new generators only),
- Performance tracking data acquired during the same seasonal capability period.

R18. The Generator Owner shall verify the Gross Reactive Power Capability and Net Reactive Power Capability of Thermal Generators, Internal Combustion Generators, Gas Turbine Generators, Combined Cycle and Hydro Generators or generators operated as a synchronous condenser on the average leading reactive power output for at least a 15 consecutive minute period and average lagging reactive power output for at least a 60 consecutive minute period.

R19. The Generator Owner shall verify the Gross Reactive Power Capability and Net Reactive Power Capability of Intermittent power resources (wind, tidal or geo-thermal generators) on performance tracking data. Manufacturers' data or commissioning data can be used until sufficient performance tracking data is available to verify generator or generation facilities lagging and leading reactive capabilities.

R20. The Generator Owner shall verify the Gross Reactive Power Capability and Net Reactive Power Capability for multiple generator facilities when limited by common elements on the reactive power capability of the facility and not the sum of the capabilities of the individual generators.

R21. The Generator Owner shall identify any equipment or other factor that will limit the capability of the generator or generation facility to meet its **Declared Gross Reactive Power Capability** or **Declared Net Reactive Power Capability**.

1.5 Exemption of Generators or Generation Facilities from Seasonal Verification Testing

R22. The Generator Owner shall notify the Transmission Operator and request an exemption if it cannot conduct seasonal capability testing of a generator or generation facility for any of the reasons listed below.

- Adverse impact on transmission system reliability
- Potential damage to transmission system or generator equipment
- Environment conditions
- Governmental regulatory or operating license limitations
- An extended outage to the generator or generation facility

R23. The Transmission Operator shall, within 30 calendar days of receiving notification from a Generator Owner that it is requesting an exemption because it cannot perform verification for the required seasonal period, notify the Generator Owner whether its generator will be exempted from the seasonal capability testing. Where the exemption is approved, the Transmission Operator shall coordinate with the Generator Owner to reschedule the verification for the next seasonal verification period.

R24. The Generator Owner for a generator or generation facility exempted from seasonal capability testing shall submit the following to the Transmission Operator:

- For existing generators, generator operation records, manufacturer data, or performance tracking for the previous applicable seasonal verification period for this generator or generation facility.
- Engineering analysis in conjunction with performance tracking data to justify any difference between a generator's or generation facility's **declared capability** and previous applicable seasonal performance tracking data.
- For new generators only, commissioning data.

This document, when downloaded or printed, becomes UNCONTROLLED. Users should check the NPCC website for the current CONTROLLED version of this document.

E. Compliance

1. Compliance Monitoring Process

Compliance with the requirements set forth in this Directory will be in accordance with the NPCC Criteria Compliance and Enforcement Program. (CCEP).

Measures and corresponding Levels of Non Compliance for these requirements are contained within the compliance template associated with this Directory.

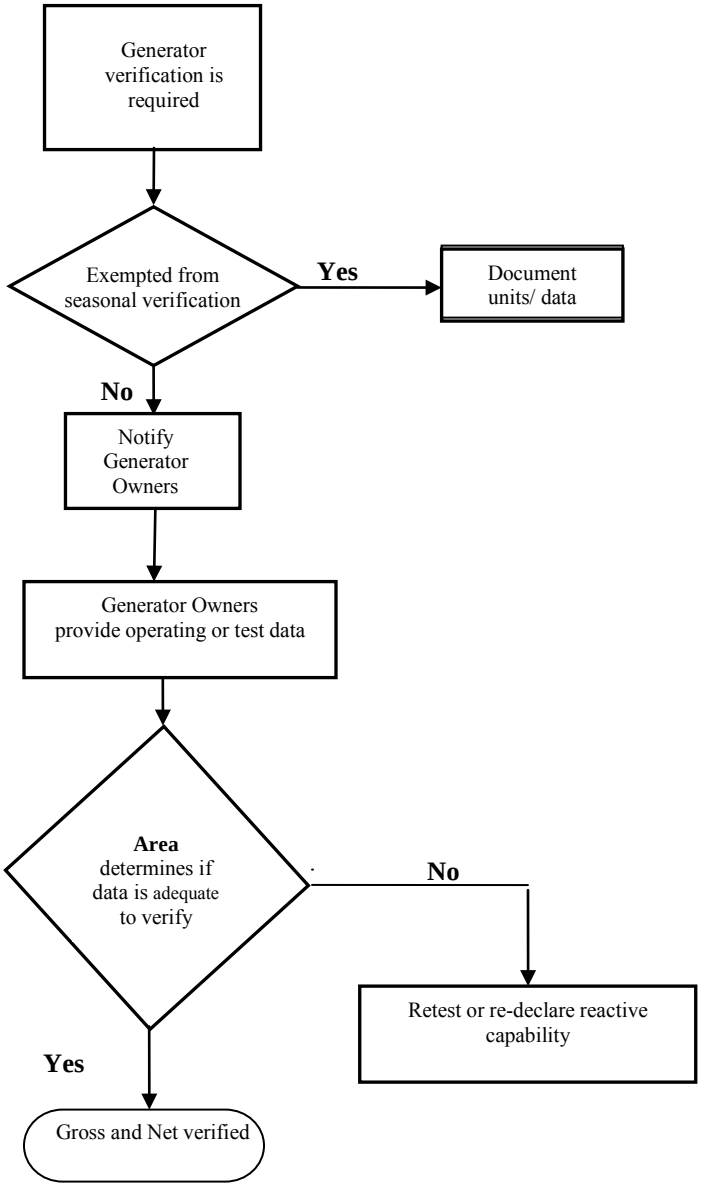
2. Data Retention

Responsible Entities shall keep evidence of compliance for a minimum of five years. A Responsible Entity found non-compliant shall keep information related to the non-compliance until found compliant.

Prepared by:	Task Force on Coordination of Operation
Review and Approval:	Revision to any portion of this Directory will be posted by the lead Task Force in the NPCC Open Process for a 45 day review and comment period. U pon satisfactorily addressing all the comments in this forum, the Directory document will be sent to the remaining Task Forces for their recommendation to seek RCC approval. Upon approval of the RCC, this Directory will be sent to the Full Member Representatives for their final approval if sections pertaining to the Requirements and Criteria portion have been revised. All voting and approvals will be conducted according to the most current "NPCC. Bylaws" in effect at the time the ballots are cast. Revisions pertaining to the Appendices or any other portion of the document such as links, glossary terms, etc., only RCC Members will need to conduct the final approval ballot of the document. This Directory will be updated at least once every three years and as often as necessary to keep it current and consistent with NERC, Regional Reliability Standards and other NPCC documents.
References:	NPCC Glossary of Terms.

This document, when downloaded or printed, becomes UNCONTROLLED. Users should check the NPCC website for the current CONTROLLED version of this document.

Appendix A- Basic Flow Chart for Verification of Generator Gross and Net Reactive Power Capability



This document, when downloaded or printed, becomes UNCONTROLLED. Users should check the NPCC website for the current CONTROLLED version of this document.

Appendix B - Generator Reactive Capability Form

GENERATOR REACTIVE CAPABILITY DATA FORM

1. Data Preparation Documentation*

Generator Facility Name	Unit No.	Facility ID	Generator Owner	Primary Contact
Big Generator Station	1	12234	Big Power	Jim Smith
Prepared By	**Date prepared:**	**Effective Date**	**Contact Tel**	**Contact e-mail**
John Doe	01/05/2007	01/10/2007	XXX-XXX-XXXX	john@bigpower.com

Auxiliary Reactive Power Requirements	Summer MVAR	Winter MVAR
	20	15

Reactive Data*

Seasonal Data	Declared Real and Reactive Capability						Verified Reactive Capability and Season			Verification Method (T, P,C** as applicable)	Date Verified
	Summer			Winter			Winter				Date
	Gross MW	Gross MVAR	Net MVAR	Gross MW	Gross MVAR	Net MVAR	Gross MW	Gross MVAR	Net MVAR		
Lagging Capability	500	120	120	525	100	100	520	110	110	P	03/15/2007
Leading Capability	500	250	230	525	240	225	525	200 (1)	185(1)	T	01/25/2007

Data inputted for illustration purposes,* * T- Testing; P- Performance Tracking; C-Commissioning data*

Notes and Limitations:	(1) Full MVAR capability could not be achieved because of system voltage restriction. Engineering analysis was provided to demonstrate unit was capable of declared values.

Generating unit capability curve. *Please attach a .jpg image from the generating unit capability D curve*

This document, when downloaded or printed, becomes UNCONTROLLED. Users should check the NPCC website for the current CONTROLLED version of this document.

NPCC, Inc.

NORTHEAST POWER COORDINATING COUNCIL, INC.
1515 BROADWAY, NEW YORK, NY 10036-8901 TELEPHONE: (212) 840-1070 FAX: (212) 302-2782

NPCC
Regional Reliability Reference Directory # 9
Verification of Generator
Gross and Net Real Power Capability

Task Force on Coordination of Operations Revision Review Record:
December 22, 2008
December 28, 2011

Adopted by the Members of the Northeast Power Coordinating Council, Inc., this December 22, 2008 based on recommendation by the Reliability Coordinating Committee, in accordance with Section VIII of the NPCC Amended and Restated Bylaws dated July 24, 2007 as amended to date.

This document, when downloaded or printed, becomes UNCONTROLLED. Users should check the NPCC website for the current CONTROLLED version of this document.

Version History

Version	Date	Action	Change Tracking (New, Errata or Revisions)
0	12/22/2008		New
1	07/07/2009	Included FAC-008 in Section 3.0	Errata
2	12/28/2011	Phase 2 format	Revisions

This document, when downloaded or printed, becomes UNCONTROLLED. Users should check the NPCC website for the current CONTROLLED version of this document.

Table of Contents

Version History 2
Table of Contents 3
Terms Defined in the Directory 4
A. Introduction 4
1. Title: Verification of Generator Gross and Net Real Power Capability 4
2. Directory #: 9 4
3. Objective: 4
4. Effective Date: December 22, 2008 4
5. Background: 4
6. Applicability: 4
B. NERC ERO Reliability Standard Requirements 5
C. NPCC Regional Reliability Standard Requirements 5
D. NPCC "Full Member" More Stringent Criteria Requirements 5
1. Requirements 5
1.1 Developing the List of Generators or Generation Facilities to be verified 5
1.2 Establishing the Generator Real Power Capability Verification Program 6
1.3 Implementing the Generator Real Power Capability Verification Program 6
1.4 Verification Criteria for Generator and Generation Facility Real Power Capability 7
1.5 Exemption of Generators or Generation Facilities from Verification Testing 9
E. Compliance 10
1. Compliance Monitoring Process 10
2. Data Retention 10
Responsible Entities shall keep evidence of compliance for a minimum of three years. A Responsible Entity found non-compliant shall keep information related to the non-compliance until found compliant. 10
Appendix A- Basic Flow Chart for Verification of Generator Gross and Net Real Power Capability 12

This document, when downloaded or printed, becomes UNCONTROLLED. Users should check the NPCC website for the current CONTROLLED version of this document.

Terms Defined in the Directory

There are no new terms defined in this Revision. The definitions of terms found in this Directory appearing in bold typeface, can be found in the NPCC *Glossary of Terms.*

A. Introduction

1. **Title:** Verification of Generator Gross and Net Real Power Capability

2. **Directory #:** 9

3. **Objective:**

   This Directory presents the minimum criteria requirements for verifying the **Gross Real Power Capability** and **Net Real Power Capability** of generators or generating facilities.

   Compliance to the criteria requirements set forth in this Directory by each applicable entity assures accuracy of information used in the steady-state models to assess the reliability of the NPCC bulk power system.

   This Directory has been developed to ensure that the requirements specified in NERC Standard MOD-024-1, "Verification of Generator Gross and Net Real Power Capability" are met by NPCC and its applicable members responsible for meeting the NERC Reliability Standards.

4. **Effective Date: 12/22/2008**

5. **Background:**
   This Directory was developed from the draft NPCC A-13 Verification of Generator Gross and Net Real Power Capability Criteria document whose technical content was approved by the Reliability Coordinating Committee on March 5, 2008 for conversion into a Directory. Version 0 of the Directory became effective on December 22, 2008.

6. **Applicability:**

   6.1 Functional Entities (Responsible Entities)
   - Generator Owners
   - Transmission Operators (in whose area the generator or generation facility resides)

This document, when downloaded or printed, becomes UNCONTROLLED. Users should check the NPCC website for the current CONTROLLED version of this document.

B. NERC ERO Reliability Standard Requirements

The NERC ERO Reliability Standards containing requirements that are associated with this Directory include, but may not be limited to:

- MOD-024-1 -Verification of Generator Gross and Net Real Power Capability
- TOP-002-2 - Normal Operations Planning
- FAC-008-1 - Facility Ratings Methodology
- FAC-009-1 - Establish and Communicate Facility Ratings

C. NPCC Regional Reliability Standard Requirements

None.

D. NPCC "Full Member" More Stringent Criteria Requirements

1. Requirements

1.1 Developing the List of Generators or Generation Facilities to be verified

R1. The Transmission Operator shall develop and maintain documentation of those generators or generation facilities that must verify the **Gross Real Power Capability** and **Net Real Power Capability** for the summer and winter capability seasons. The documentation maintained by the Transmission Operator shall include the following:

R1.1 All generators or generation facilities **Declared Gross Real Power Capability** and **Declared Net Real Power Capability**.

R1.2 All generators or generation facilities **Verified Gross Real Power Capability** and **Verified Net Real Power Capability**, verification date and method of verification.

R1.3 Discrepancies between a Generator Owner's declared and verified **Gross Real Power Capability** and **Net Real Power Capability**, the reason for such discrepancies and the Generator Owner's plan to address the discrepancies.

R1.4 Generator Owner supplied **Gross Real Power Capability** and **Net Real Power Capability** testing, manufacturer data, performance tracking or operating historical data, certification documentation, as specified by the Transmission Operator.

This document, when downloaded or printed, becomes UNCONTROLLED. Users should check the NPCC website for the current CONTROLLED version of this document.

R1.5. All generators or generation facilities exempted from the verification requirements and the basis for their exemption (see Section 1.5).

1.2 Establishing the Generator Real Power Capability Verification Program

R2. The Transmission Operator shall establish and document a program to periodically verify the **Gross Real Power Capability** and **Net Real Power Capability** of all generators and generation facilities that are subject to periodic seasonal **Gross Real Power Capability** and **Net Real Power Capability** verification.

R3. The Transmission Operator shall provide any changes to its verification process to the Generator Owners within 30 calendar days of issue.

R4. The Transmission Operator shall establish and document requirements for a Generator Owner to notify the Transmission Operator within a specified time period when its generator or generation facility cannot achieve the **Declared Gross Real Power Capability** or **Declared Net Real Power Capability** because of equipment issues.

R5. The Transmission Operator shall establish and document a time frame for the Generator Owner to address equipment issues that result in a generator or generation facility not achieving the **Declared Gross Real Power Capability** or **Declared Net Real Power Capability**.

R6. The Transmission Operator shall establish and document the ambient conditions that correspond to the summer and winter capability seasons for which the **Gross Real Power Capability** and **Net Real Power Capability** are verified.

R7. The Transmission Operator shall establish and document those intermittent or small generating units whose capability may be represented by verification results of a single generating unit.

1.3 Implementing the Generator Real Power Capability Verification Program

R8. The Transmission Operator shall request Generator Owners to verify the seasonal **Gross Real Power Capability** and **Net Real Power Capability** of their generators or generation facilities that are subject to periodic seasonal **Gross Real Power Capability** and **Net Real Power Capability** verification every three (3) years or more frequently as required by the Transmission Operator. The two (2) capability seasons are defined as summer and winter as specified by the Transmission Operator.

This document, when downloaded or printed, becomes UNCONTROLLED. Users should check the NPCC website for the current CONTROLLED version of this document.

R9. If a Transmission Operator determines that only one seasonal generating capability value is required for NPCC Bulk Power System reliability analysis, then periodic verification will be required only for that particular season.

R10. If a Transmission Operator determines that the difference between the **Declared Gross Real Power** and **Declared Net Real Power Capability** of a generator or generation facility is insignificant for NPCC Bulk Power System reliability analysis, then periodic verification will be required for only one numerical value.

R11. The Generator Owner shall provide generator or generation facility **Declared Gross Real Power Capability** and **Declared Net Real Power Capability** to the Transmission Operator.

R12. The Generator Owner shall provide evidence, upon request, to the Transmission Operator that the generator or generation facility **Gross Real Power Capability** and **Net Real Power Capability** have been verified.

R13. The Generator Owner shall report to the Transmission Operator any discrepancies between declared and verified **Gross Real Power Capability** or **Net Real Power Capability** within a time frame specified by the Transmission Operator and develop and implement a plan to resolve the discrepancies.

R14. The Generator Owner shall determine and report to the Transmission Operator the generator or generation facility real power seasonal auxiliary loads (including common station loads).

1.4 Verification Criteria for Generator and Generation Facility Real Power Capability

R15. The Generator Owner shall comply with Transmission Operator requests for periodic verification of **Gross Real Power Capability** and **Net Real Power Capability** of their generators or generation facilities.

R16. The Generator Owner shall verify the **Gross Real Power Capability** and **Net Real Power Capability** of thermal generators on the basis of operation for no less than one hour.

R16.1. The verification of thermal generator's capability shall include any of the following:

- Testing,

- Use of operating historical data,
- Commissioning data (for new generators only)**,**
- Performance tracking data acquired during the same seasonal capability period.

R17. The Generator Owner shall verify the **Gross Real Power Capability** and **Net Real Power Capability** of internal combustion generators and gas turbine generators. The verification shall correspond to operation for no less than one hour under the ambient conditions established in R6 for which the **Gross Real Power Capability** and **Net Real Power Capability** are being claimed.

R17.1. The verification of internal combustion and gas turbine generators capability shall include any of the following:

- Testing,
- Use of operating historical data,
- Commissioning data (for new generators only),
- Performance tracking data acquired during the same seasonal capability period.

R18. The Generator Owner shall verify the **Gross Real Power Capability** and **Net Real Power Capability** of hydro generators either on a generation facility or on an individual generator basis. The **Gross Real Power Capability** and **Net Real Power Capability** shall be determined on the basis of the availability of sufficient water at an adequate head to provide the output for no less than one hour.

R18.1. The verification of hydro generator's capability shall include any of the following:

- Testing,
- Use of operating historical data,
- Commissioning data (for new generators only),
- Performance tracking data acquired during the same seasonal capability period.

R19. The Generator Owner shall verify the **Gross Real Power Capability** and **Net Real Power Capability** of combined cycle generators on a generation facility, individual generator or on a generator stage basis for no less than one hour under the ambient conditions established by the Transmission Operator in R6 for which the **Gross Real Power Capability** and **Net Real Power Capability** are being claimed.

R19.1 The verification of a combined cycle generator's capability shall include any of the following:

- Testing,

This document, when downloaded or printed, becomes UNCONTROLLED. Users should check the NPCC website for the current CONTROLLED version of this document.

- Use of operating historical data,
- Commissioning data (for new generators only),
- Performance tracking data acquired during the same seasonal capability period.

R20**.** The Generator Owner shall verify the **Gross Real Power Capability** and **Net Real Power Capability** of intermittent power resources (wind, solar, tidal geo-thermal, etc.) using any of the following:

- Manufacturer's data,
- Performance tracking,
- Operating historical data

R21. The Generator Owner shall verify the **Gross Real Power Capability** and **Net Real Power Capability** of multiple generator facilities when limited by common elements based on the real power capability of the facility and not the sum of the capabilities of the individual generators.

R22. The Generator Owner shall identify any equipment or other factor that will limit the capability of the generator or generation facility to meet its **Declared Gross Real Power Capability** or **Declared Net Real Power Capability**.

1.5 Exemption of Generators or Generation Facilities from Verification Testing

R23. The Generator Owner shall notify the Transmission Operator and request an exemption if it cannot conduct seasonal capability testing of a generator or generation facility for any of the reasons listed below.

- Adverse impact on transmission system reliability
- Potential damage to transmission system or generator equipment
- Environment conditions
- Governmental regulatory or operating license limitations
- An extended outage to the generator or generation facility

R24. The Transmission Operator shall, within 30 calendar days of receiving notification from a Generator Owner that it is requesting an exemption because it cannot perform verification for the required seasonal period, notify the Generator Owner whether its generator will be exempted from the seasonal capability testing. Where the exemption is approved, the Transmission Operator shall coordinate with the Generator Owner to reschedule the verification for the next seasonal verification period.

This document, when downloaded or printed, becomes UNCONTROLLED. Users should check the NPCC website for the current CONTROLLED version of this document.

R25. The Generator Owner for a generator or generation facility exempted from seasonal capability testing shall submit the following to the Transmission Operator:

- For existing generators, generator operation records, manufacturer data, or performance tracking for the previous applicable seasonal verification period for this generator or generation facility.
- Engineering analysis in conjunction with performance tracking data to justify any difference between a generators or generation facilities declared capability and previous applicable seasonal performance tracking data.
- For new generators only, commissioning data.

E. Compliance

1. Compliance Monitoring Process

Compliance with the requirements set forth in this Directory will be in accordance with the NPCC Criteria Compliance and Enforcement Program (CCEP).

Measures and corresponding Levels of Non Compliance for these requirements are contained within the compliance template associated with this Directory.

2. Data Retention

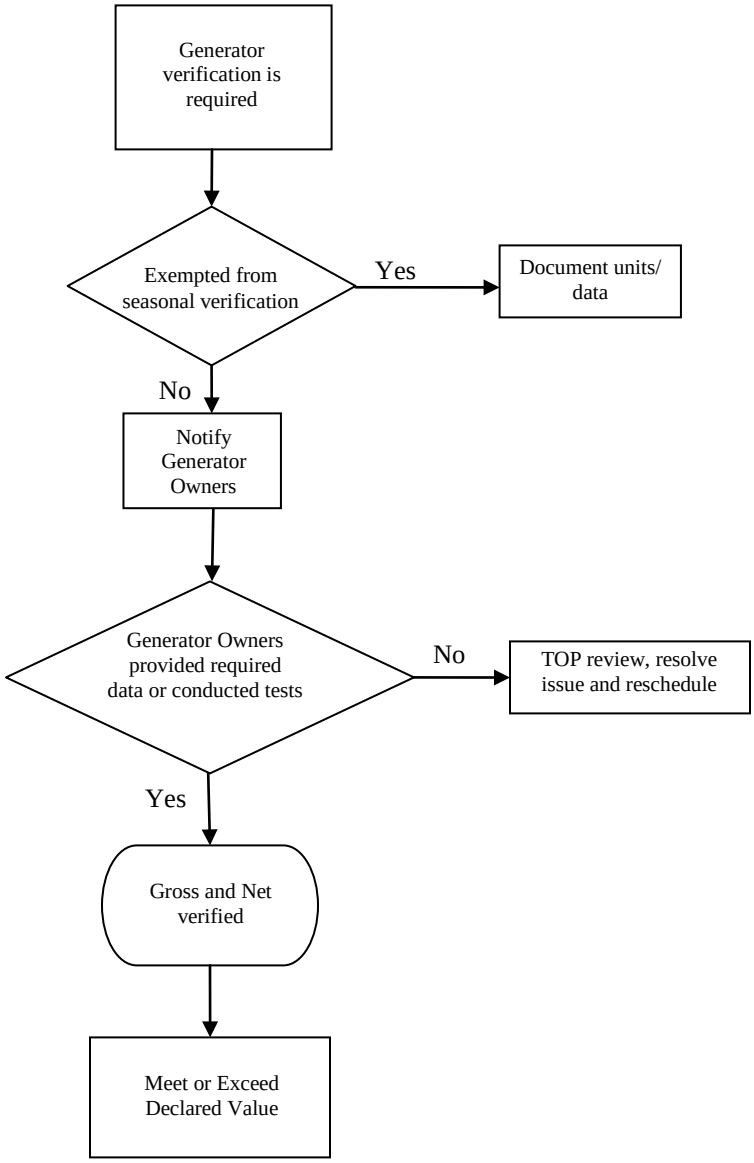
Responsible Entities shall keep evidence of compliance for a minimum of three years. A Responsible Entity found non-compliant shall keep information related to the non-compliance until found compliant.

This document, when downloaded or printed, becomes UNCONTROLLED. Users should check the NPCC website for the current CONTROLLED version of this document.

Prepared by:	Task Force on Coordination of Operation
Review and Approval:	Revision to any portion of this Directory will be posted by the lead Task Force in the NPCC Open Process for a 45 day review and comment period. Upon satisfactorily addressing all the comments in this forum, the Directory document will be sent to the remaining Task Forces for their recommendation to seek RCC approval. Upon approval of the RCC, this Directory will be sent to the Full Member Representatives for their final approval if sections pertaining to the Requirements and Criteria portion have been revised. All voting and approvals will be conducted according to the most current "NPCC. Bylaws" in effect at the time the ballots are cast. Revisions pertaining to the Appendices or any other portion of the document such as links, glossary terms, etc., only RCC Members will need to conduct the final approval ballot of the document. This Directory will be updated at least once every three years and as often as necessary to keep it current and consistent with NERC, Regional Reliability Standards and other NPCC documents.
References:	NPCC Glossary of Terms

This document, when downloaded or printed, becomes UNCONTROLLED. Users should check the NPCC website for the current CONTROLLED version of this document.

Appendix A- Basic Flow Chart for Verification of Generator Gross and Net Real Power Capability



This document, when downloaded or printed, becomes UNCONTROLLED. Users should check the NPCC website for the current CONTROLLED version of this document.

From:	Gerard J. Dunbar
To:	general
Subject:	NPCC Regional Reliability Directory#9 Verification of Gross and Net Real Power and Regional Reliability Directory #10 Verification of Gross and Net Reactive Power----Criteria Section Reformatted (Phase2)---Approved by Full Member Committee
Date:	Wednesday, December 28, 2011 4:13:42 PM

NPCC Members,

On December 28, 2011 the Full Member Committee of NPCC approved revised versions of NPCC Regional Reliability Directory#9 *Verification of Gross and Net Real Power* and Regional Reliability Directory #10 *Verification of Gross and Net Reactive Power* each of which was reformatted in accordance with Phase 2 of the NPCC Directory project.

Phase 2 has been initiated in order to reorganize the criteria section of each Directory into NERC style requirement format which will promote the criteria as more specific or more stringent and also facilitate the NPCC Criteria Compliance Enforcement Program (CCEP).

The revision of both Directories was managed by the Task Force on Coordination of Operation (TFCO) and are the first NPCC Directories to be revised in this manner.

NPCC Directories provide a consistent and comprehensive set of reliability requirements for the Northeast while consolidating related information for NPCC criteria, guidelines, procedures and regional standards into one document.

The revised versions of Directories #9 and #10 as well as the Full Member vote count may be found at:

https://www.npcc.org/Standards/Directories/Forms/Public%20List.aspx

Respectfully,

Gerry Dunbar
Northeast Power Coordinating Council, Inc.
212.840.1070 (p)
212.302.2782 (f)
gdunbar@npcc.org

From: anthony.jablonski@rfirst.org
To: rsg
Subject: ReliabilityFirst Board Action - December 1, 2011 Board Standards Related Highlights
Date: Friday, December 09, 2011 4:46:55 PM

ANNOUNCEMENT: December 1, 2011 Board Standards Related Highlights

The following are the highlights of Standards related action taken during the December 1, 2011 Reliability*First* Board of Directors (Board) meeting in Washington DC:

1. **Concurrence with MOD-024-RFC.1.1 modified Violation Severity Levels (VSLs)** - The Board unanimously concurred with the MOD-024-RFC.1.1 modified Violation Severity Levels (VSLs) as approved by the Ballot Pool back on September 8, 2011. The MOD-024-RFC.1.1 standard with the modified VSLs included can be found on the Reliability*First* RSVP website.

2. **Concurrence with Version 4 of the Reliability Standards Development Procedure (Standards Development Procedure)** - On September 16, 2011, the Standards Committee determined that it is appropriate and in the best interests of Reliability*First* to make a minor change to the Standards Development Procedure to cure inconsistencies with the amended definition of "Regional Reliability Standard" contained within the proposed amended Bylaws and Certificate of Incorporation of Reliability*First*. The amended definition of "Regional Reliability Standard" specifically states that a Regional Reliability Standard is not binding upon any Member or Registered Entity, nor is it effective or enforceable, until the Regional Reliability Standard has been adopted by NERC and approved by the Commission. The Board unanimously concurred with a minor change to Version 4 of the Reliability*First* Standards Development Procedure consistent with the Standards Committee's recommendation. Version 4 of the Standards Development Procedure will be submitted to the NERC Board of Trustees with subsequent filing with the Commission. Version 4 of the Standards Development Procedure along with a background document can be found on the Reliability*First* RSVP website (Please note that Version 4 will not be effective until Commission approval).

3. **Suspension of Regional Standards Drafting Efforts** - The Board unanimously suspended all Reliability*First* regional standards efforts. The Board directed Reliability*First* staff to perform a thorough review of each proposed and existing standard and report back during the Board's February meeting. The focus of the Board's discussion centered more on the need for Regional Standards from an overall Reliability*First* policy perspective rather than technical need for any particular Regional standard.

Thank you and have a great weekend.

Regards,

Anthony Jablonski
Standards Process Manager
Reliability*First* Corporation
Anthony.Jablonski@rfirst.org
Office: (330) 247-3054
Cell: (330) 933-5609

CONFIDENTIALITY NOTICE: This electronic message contains information which may be legally confidential, privileged or subject to copyright belonging to Reliability*First* Corporation. The information is intended solely for the individual or entity named above and access by anyone else is unauthorized. If you are not the intended recipient you are hereby notified that any dissemination, distribution, copying, or action taken in relation to the contents of and attachments to this electronic message is strictly prohibited and may be unlawful. If you have received this message in error, please notify the sender immediately and permanently delete the original and any copy of this electronic message.

Y

Y